The Secret Society: Descendants of Crypto-Jews in the San Antonio Area

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Abstract
The purpose of this article is to uncover a secret Jewish past woven into the culture of San Antonio, Texas. In 1492 Spain issued the Edict of Expulsion which gave Jews three options: convert to Catholicism, leave Spain, or die. Although many of the Jews chose to convert to Catholicism, they did not give up their Jewish traditions, and, in turn, they were scorned and looked down upon by the Old Catholics. To escape persecution many of these New Catholics (also known as crypto-Jews, conversos, or anusim) escaped to the New World and settled in the Texas region. The Jewish traditions were continuously passed down through the generations and, even today, there are San Antonians who identify themselves as Catholic Hispanic but practice mutated Jewish customs. These Jewish traditions have been successfully incorporated into the local Hispanic culture and have proceeded to form another layer of the Hispanic and the Jewish identity. The following paper will prove the crypto-Jewish existence and influence in San Antonio by analyzing historical evidence, cultural evidence, and physical evidence.
Introduction

Everyone has an identity. This should come as no surprise; identity is an intricate and multilayered part of any person. It helps define who a person is, where a person has come from, and sometimes dictates a person’s actions. Some people even have a mysterious secret identity, intentionally hidden from the world, while fewer have a secret identity hidden even to themselves. The latter is a characteristic of the descendants of converso Jews, or crypto-Jews, living in present day San Antonio. Since the majority is Catholics, these conversos are unaware, or just recently aware, that they are practicing Jewish traditions that were passed down through their family from the time of the Spanish Inquisition. Some of these customs of the converso Jews have even become incorporated into the Hispanic culture of South Texas. The conversos are often unaware of the secret life that they lead, so it is important that their story be told.

The history of the converso Jews began in medieval Catholic Spain, which was constantly wracked with anti-Semitism that, many times, led to mass conversions or massacres of the Jewish population. In a final act against the Jewish community, the Catholic Monarchy, King Ferdinand and Queen Isabel, produced the 1492 Edict of Expulsion which decreed that the Jews of Spain were to convert to Catholicism, leave the kingdom, or die. To ensure the conversion of the Jewish population, the court system of the modern Inquisition was instated in mainland Spain in 1478 to terrorize and remove the Jewish culture from Catholic Spanish society. In resistance, many Jews left Spain and relocated to other countries stretching across Europe, Africa, and parts of Asia, but those who decided to stay in the Spanish Empire had to completely accept Christianity or risk death. Life was hard for the conversos in mainland Old World Spain; the Inquisition was on the constant watch for any Jewish activity and the Old Christians of upper society constantly resented the New Christian community. For instance, a common derogatory name used by the Old Christians for their new Christian brethren was marrano, which means “pig” in Spanish. After the discovery of the New World by Christopher Columbus in 1492, many conversos attempted to escape the harsh world of Spain by making the dangerous trip across the Atlantic Ocean to the New World. In a specific event in the late 16th century, over a hundred suspected New Christian families followed Governor Luis Caravajal to the area of Nuevo Reino de Leon, or current day Southwest Texas and Northern Mexico.1 This was the only land grant in New Spain that did not require certification of pure Catholic heritage, so it became a breeding ground for the secret converso Jewish society.2

Many new Christians were reluctant to give up their beliefs and the identity of their ancestors’ Jewish heritage. They risked torture and possible death if convicted by the Inquisition for continuing Jewish practices, but they still continued in secret. Coded or altered Jewish traditions were practiced by these converso families; in some cases only one female member of the family knew the true origin of the customs and why they were practiced.3 The conversos from the Southwest United States are unique because the secret traditions have survived the passage of five centuries and are still being practiced.

1 Stanley M. Hordes, To the End of the Earth, (New York, Columbia University Press, 2005), 72.
2 Ibid, 81.
today. Present day traditions include everything from food to games and funerary practices to holidays.

Recently, crypto-Jews have become more noticed as a cultural phenomenon, and in particular, the conversos of New Mexico have been singled out and studied to a large extent. However, there is a large converso population in San Antonio that has gone largely undocumented and ignored. This is the community that I would like to focus on as the subject of my thesis. It will be more interesting and challenging to research the conversos of San Antonio than those of New Mexico, and since I have lived in San Antonio all my life it will personally be more important to document these local conversos.

The Historical Evidence

King Ferdinand, Queen Isabella, and the Edict of Expulsion

From the time of the Diaspora, Jews had contributed to the prosperity of the Iberian Peninsula, but in 1492 King Ferdinand and Queen Isabella decided they were no longer welcome in the Spanish Empire. The Edict of Expulsion was read throughout the land on March 31, 1492, which decreed that the Jews had to leave the country in four months, convert to Catholicism, or accept death. The actions of the Catholic Monarchy were very peculiar because they had appeared to be protecting their Jewish citizens right up until a few months before the edict was announced. From the large Jewish population of Spain at least half did not have the emotional strength, physical strength, or financial means to leave their homeland, so they converted to Catholicism. This resulted in many of the crypto-Jews who eventually made their way to the New World and settled in the San Antonio region.

The “Catholic Monarchy” is most well known for uniting Spain, funding the exploration of the New World, and for the expulsion of the Jews and Moors. The reign King Ferdinand and Queen Isabella was odd in that many of their actions and policies contradicted one another and one of their largest contradictions was the Edict of Expulsion for the Jews. The king and queen initially protected and defended the Jews and treated them respectfully, and they appointed Jews to higher positions of power within the community and court. In some instances the monarchy even intervened in anti-Semitic disorders, and punished those who were involved to protect their Jewish citizens. Unfortunately, the Jewish community soon discovered that Ferdinand was greedy and Isabella only aimed to please the clergy.

The Edict of Expulsion came as a surprise to the Jewish population. The kingdom had just defeated the last of the Moors, so thoughts were focused on the future stability of the kingdom, and it was not apparent to the Jews that they were a threat. In the spring of 1492 the Edict of Expulsion was distributed throughout the nation and the words of the Monarchy were shouted in the squares:

Having considered the matter with much deliberation, [we] are agreed in ordering that all the said Jews and Jewesses of our realms shall leave and

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4 Ibid, Hordes, To the End of the Earth.
6 Ibid, 129.
never return ... [or] incur the punishment of death and the confiscation of all their property to our exchequer and treasury, and these penalties are incurred by that same fact and law with no other trial nor sentence nor declaration.7

After the announcement of the decree, the Jews of Spain had to make a very hard decision that would alter their future and the future of their descendants: to either leave or convert.

While approximately 50,000 Jews chose to leave the kingdom, about the same number chose to stay and convert. But what were the advantages of staying in a threatening country? It must be kept in mind that Jewish families had lived on the Iberian Peninsula for countless generations and many people had ties to the land and culture. To be thought of by the government as foreigners and strangers in their ancestors’ land probably seemed unbelievable to the Jews. Since they were not given much time to leave, the country it was difficult to sell animals and properties. Also, the Jews were not allowed to “remove gold nor silver nor coined money nor the other things prohibited in the laws of our realms save for items of merchandise that are not forbidden or commerce in bills of exchange.”8 To get off the peninsula, Jews had to either travel extreme distances by land or take ships which were always in danger of sinking or being attacked by pirates. Another challenge was also in finding a nation to travel to. Many European countries such as France, England, Italy, and Germany were not accepting Jewish immigrants.9 Although it was dangerous to stay in the Spanish Empire and publicly convert to Catholicism, many Jews saw this as their best option and took the risk. At further risk to their safety, many of these conversos chose to practice the Jewish traditions, as did those whose descendants still live in San Antonio. However, if they were ever caught “judaizing” by the Inquisition they would be tortured and burned alive.

The Discovery of the New World (aka the Crypto-Jewish Haven)

After analyzing how conversos were created, the next important question is: how did they get to San Antonio? As the Jews were being expelled from the Iberian Peninsula in 1492, Christopher Columbus coincidentally was on the verge of discovering the New World for the Spanish Empire. This new land would later prove to be a haven for the remaining crypto-Jews. In an interesting twist, the New World could not have been discovered without the Jews and there are even suspicions, although controversial, that Columbus himself was a crypto-Jew.10 After the discovery of the new overseas empire, many New Christians saw this as their opportunity to escape the persecution of the Inquisition and start a new life.

Jewish involvement in overseas exploration was invaluable, and with increasing persecution and rumors of expulsion it may not have been merely coincidence. Even Columbus’ translator, Luis de Torres, was a known converso and succeeded in becoming the first European to step foot in the New World.11 (Colombus’ original plan was to sail

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7 Ibid, Beinart, The Expulsion of the Jews From Spain, 50-51.
8 Ibid, 51.
10 M Keysterling, Christopher Columbus and the Participation of the Jews in the Spanish and Portuguese Discoveries, (New York, Longsman, Green, and Co, 1907).
to India so he thought it would be wise to bring someone who could speak Hebrew, as not many people in India spoke Romance languages, but there were Jews who spoke Hebrew.) Another example of New Christian involvement in the first explorations of the New World is the conquistador Hernando Alonso. Despite being one of the first people to the Americas by joining Cortes on his expeditions to Mexico, Alonso was among the first people in the New World burned for reverting back to the Jewish faith.¹²

In Spain, immigration into the New World initially proved difficult since a certificate of “limpieza de sangre,” or “pure blood,” was required by the Spanish government. It was not in the nature of the Spanish Kingdom to allow crypto-Jews to escape to the New World and evade persecution or, even worse, become prosperous. However, despite their feelings toward New Christians, Spain made some compromises to better their own economic situation. In 1509 a deal was made between the conversos and the crown to allow the former to travel to the New World for 20,000 ducats; the deal was withdrawn by Charles V in 1518.¹³ In a similar situation, the New Christians tried to buy their freedom from Philip III in 1601 which would give them “irrevocable permission” to leave the kingdom and go to the New World; this was revoked in 1610.¹⁴ Despite the laws and failed negotiations, and to the displeasure of the Spanish Empire, New Christians managed to make their way across the ocean and flourish. According to the historian Cecil Roth, “judaizers [...] spread in increasing numbers throughout the Spanish Main. They were especially numerous in Mexico, where a group existed in almost every town.”¹⁵

Ironically, the Portuguese conversos were in the opposite position; many were exiled to the New World with the underlying prerogative to help the economic situation. The king of Portugal knew the Jews to be essential for the economic stability of the kingdom (which is why he mass converted the Jews instead of evicting them from Portugal); the Spanish royalty was not as astute. However, in 1579 the Portuguese line disappeared and Philip II of Spain took control of the Portuguese Empire. This change in leadership spurred another mass migration to the New World, and according to the historian Seymour Liebman:

[New Christians] reasoned that there would be a concentration of effort by the Inquisition to apprehend those in Portugal; the hunt within Spain proper would consequently be less arduous and sanctuary could be more readily obtained. Their reasoning was correct. [At the end of sixteenth century] where in earlier years they had come in tens, they now began to come in the hundreds.¹⁶

It may be obvious now that there is a large number of Portuguese conversos in the New Empire, which did not go unnoticed by the Inquisition. Due to the large number, the term Portuguese because synonymous with New Christian or crypto-Jew.

Not only would moving to New Spain save the conversos from persecution, or so they thought, but it would also help them financially. Liebman suggests:

¹³ Ibid, 273.
During the sixteenth and early seventeenth centuries the Jews in New Spain were accepted without animosity by the general populace because they served a function and role which the Spaniard was unable or unwilling to assume. They were merchants, peddlers, itinerant salesmen, and imposters.\textsuperscript{17}

The New Christians held a partial monopoly on the trading industry and profited in their new surroundings. Interestingly, trading probably kept the Jewish traditions alive because New Christians had the opportunity to keep in contact with other Jews. Historian Stanley Hordes states that “in almost every area of trade, crypto-Jews relied on one another as sources of supply and credit, as agents in remote regions, as bondsmen, and as partners in business ventures.”\textsuperscript{18} And in a more specific example, Liebman writes that Mexican Jews traded with those in Hamburg and Aleppo.\textsuperscript{19} San Antonio especially had a unique situation since it was a main trading post on the Camino Real (also known as King’s Highway or Old San Antonio Road). (see figure 1) It was a group of old trails official founded in the 1690’s by Alonso De León and, “in Spanish Texas, the Old San Antonio Road was a major artery for travel into Texas.”\textsuperscript{20} Undoubtedly, crypto-Jewish traders would have constantly used the road to their advantage and settled around it.

Although most New Christians were doing well financially and simply “living their lives” in the New World, the life of the converso was still one defined by constant fear of the Inquisition. As in most cases, wherever the Jews went trouble was not far to follow; after traveling to the New World with the hope they could remain safe from persecution, Philip II ordered the Inquisition to set up holy offices in Mexico.

\textbf{Trouble in the New World Paradise}

After King Philip II ordered the creation of the Inquisition in the New World, the normal life of the New Christian was once again in danger. In the north of the Spanish Empire conversos had to take special precautions so as not to be caught by the eye of the inquisitor. Although many crypto-Jews managed to avoid suspicion (and those of whose descendants still practice Jewish traditions in San Antonio), some were not as lucky. In public demonstrations called autos-de-fe, those conversos who were convicted of reverting back to Judaism were flogged, embarrassed, and exiled, and/or burned at the stake. Although a grotesque part of Spanish history, it is important to mention these public acts in the context that they instilled fear into the remaining crypto-Jewish population which forced them deeper into hiding and, at times, grabbing a tighter hold on their faith.

As mentioned before, King Philip II ordered the creation of the Holy Office of the Inquisition in Mexico City in 1571 to “free the land, which has become contaminated by Jews and heretics.”\textsuperscript{21} Liebman writes “he once said that he would rather lose all his kingdom than permit freedom of religion.”\textsuperscript{22} King Philip II proved to be a stringent religious man when it was in his best interest, but was generally a person lacking

\textsuperscript{17} Ibid, 60.
\textsuperscript{18} Ibid, Hordes, \textit{To the End of the Earth}, 46.
\textsuperscript{19} Ibid, Liebman, \textit{New World Jewry, 1493-1825: Requiem for the Forgotten}, 68.
\textsuperscript{21} Ibid, Roth, \textit{A History of the Marranos}, 275-6.
character. He was responsible for the suffering of many of his citizens and for destroying irreplaceable cultures with the creation of the Holy Office, which was to enforce Catholic morals and prevent Judaizing over the entire Northern part of the New Spanish Empire. It is important to mention that the Holy Office of the Inquisition operated in all of South America; however, for the purpose of this paper it is necessary to look only at the proceedings in Mexico.

A typical auto-de-fe was conducted like a carnival. The day started at sunrise with monks leading a parade of royal officials, nobility in the area, and, last, those to serve penance. The autos-de-fe provided a depraved form of entertainment for Spanish citizens and people would travel large distances to witness one. The victims were dressed in an embarrassing dunce cap and tunic called a sanbenito made of coarse material and, although there were many styles, those for crypto-Jews usually displayed pictures of demons and hell fire. Those who were burned at the stake were made to carry their own torch and were given the option to be garroted to death, a less painful death, if they confessed Jesus as their savior; however, those that refused were burned alive. The punishment of those convicted did not end with the victim, but was inherited by children and grandchildren who were not allowed to wear stylish clothes, ride a horse, or hold a high office in the government. According to Liebman, “The sins of the fathers were visited unto the third and forth generations according to the Inquisition.”

After the Holy Office was created, it succeeded in instilling fear into the converso population, and to avoid persecution the New Christians began to move further from the government center to the outskirts of the New Empire, including San Antonio. The San Antonio area acted as a safe haven for those who feared persecution, and the New Christians could live more normal prosperous lives.

The Carvajals and Their Involvement with Populating the State of Nuevo Leon with Crypto-Jews

The Carvajal family is most famous for their victimization in the 1596 auto-de-fe where five members of the family were burned for reverting back to Judaism. However, it is important to look at their involvement in the creation of the state of Nuevo Leon, a new haven for crypto-Jews in the New World. The head of the Carvajal family, the older Luis Carvajal, helped form the state of Nuevo Leon, became its first governor, and can be credited for bringing over some of the first crypto-Jewish settlers directly to the San Antonio area. It should be emphasized that there are two Luis Carvajals: the governor Luis Carvajal and his nephew, Luis Carvajal the Younger, or also referred to as el Mozo (the servant). For the purpose of this paper, it is first important to look at the actions of Governor Carvajal and his involvement with bringing crypto-Jews to Nuevo Leon.

The life of the older Luis Carvajal is, for the most part, a sad one. Carvajal was born to New Christian parents in 1593 in the Portuguese town of Cueva and left home at the age of ten to continue his education elsewhere. Carvajal made his living as a trader but also took on military jobs for the government, so when he first set sail for Mexico he was given the position of “admiral of the fleet.” Although his career seemed to be

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26 Ibid, 2.
prosperous, the home life of Carvajal was not idyllic. His wife, Guiomar de Rivera, was a secret Jew, and it is rumored that because of religious differences they fought constantly, so they never had children. After serving many years for the crown, Carvajal went back to Spain to ask King Philip II about acquiring land in the New Empire. He arrived in mainland Spain in 1578, and after half a year Carvajal finally gained a charter for the area of Nuevo Leon. Although common for successful people such as Carvajal to ask for a piece of land in exchange for their services, there was something very peculiar about his request. None of Governor Carvajal’s settlers were required to provide proof of Old Catholic blood. Since the discovery of the New World, New Christians along with Muslims and heretics were prohibited from traveling across the ocean “for fear that they would contaminate the Indians with their beliefs.”

The most acceptable theory for this phenomenon is that Governor Carvajal was in desperate need of an heir for his new state so he clung to his sister’s family, who were crypto-Jews. The best way to protect his chances of keeping this relationship with his sister’s family “and at the same time to protect many friends and relatives who practiced Judaism from harassment and persecution- would be to take them to New Spain with an expanded royal license.” This land grant allowed population of the current South Texas with the descendants of the Spanish crypto-Jews. In this author’s opinion, the Governor Luis Carvajal was not a crypto-Jew, unlike the rest of his family, and was strictly Catholic. Carvajal’s motive was that he initially wanted to protect his family and bring those familiar with him to the New World.

Before discussing the Carvajals further, it is important to describe the area of Nuevo Leon. According to author Gerald Ashford, “it was a great square, nearly six hundred miles in diameter, with its southern side cutting clear across Mexico from Tampico on the Atlantic to a point near Chameo on the Pacific, and its northeastern corner embracing a good part of Texas, including the site of San Antonio.” The Spanish government trusted Governor Carvajal with an area of land that was even bigger than Spain on the Iberian Peninsula.

Concerning Carvajal’s family, it is necessary to know that the Governor Carvajal adored his sister’s children and it is rumored that he saw them as his own. He even made his nephew, the younger Luis Carvajal heir to the state of Nuevo Leon. The younger Carvajal is well known for his memoirs where he describes his unwavering devotion to Judaism and is considered the first Jewish writer in the Americas. Once Governor Carvajal realized his family fervently practiced crypto-Judaism he disowned them, but still kept quiet about their traditions.

Unfortunately the Inquisition found out about the Carvajal secret and in 1590 Governor Carvajal and his family were haled before the Inquisition Court. Governor Carvajal was stripped of his title, and sentenced to a year of imprisonment and six years of exile from the Indies. According to the Inquisition records “it was […] charged that he

28 Ibid, 56.
had filled his colony with people who were either “New Christians” or “recalcitrant and obdurate” Jews”.\textsuperscript{33} The rest of the family was stripped of possessions, left destitute, forced to wear Penitential garb, and imprisoned. The now ex-governor of Nuevo Leon died alone in an Inquisition cell in the first year of his imprisonment, unappreciated by his country and unmourned by his family who he testified against. Six years later, the Governor’s sister, nephew Luis Carvajal, and three of his nieces were found guilty of reverting back to Judaism and burned at the stake in an elaborate auto-de-fe on December 8, 1596.\textsuperscript{34}

The Cultural Evidence

This section is a collection of stories from descendants of crypto-Jews in the San Antonio area. Every person has a different background and current religion, but they are united in that their ancestors were persecuted by the Spanish or Portuguese Empires. It must be understood that oral history is not an exact science (especially after over five centuries); facts can become blurred and traditions can mutate. This is true especially of the crypto-Jews in the Spanish Empire, who had to stay hidden so they were not found by the Inquisition. For this reason there are obviously no paper documents from conversos detailing their history and traditions, because it would be a risk to their families’ lives. In must be mentioned that oral history is many times not as accepted in the history community as written primary documentation (particularly when writing a history thesis). However, if history is not written on paper, does it mean it is no longer relevant? Are people just supposed to forget this period of the past because it is necessary to rely on interviews? Of course not! By not acknowledging the past, it does a disservice to those who are presently trying to find their own identity in one of history’s messes, and is disrespectful to their ancestors who suffered under the circumstances. It is also important to document these stories as quickly as possible because traditions and family culture are beginning to disappear in the present day. The following stories are from San Antonio natives: Roi Garcia, Ezra (Eduardo) Villarreal, Mary (San Miguel) and Laura Kraus, Arturo Martinez, and Edward B. Garcia, Sr. Through these interviews it is possible to view the cultural evidence left by the crypto-Jews in San Antonio.

Roi Garcia\textsuperscript{35}

Roi Garcia is the rabbi at the Messianic Jewish Synagogue, Baruch HaShem, in northern San Antonio. His great-grandfather was the first to come to the Americas from the Canary Islands. He arrived in Cuba and stayed there for four to five years, and then moved to Mexico where he stayed until the Mexican Revolution fifteen years later. This would make Garcia’s children fourth generation San Antonians, and they continue to contribute to the influence of the crypto-Jews in the area and pass down the Jewish traditions.

To the general public Garcia’s great-grandfather presented himself as Catholic, but in private he considered himself Jewish. Garcia said, “He was a Catholic during the day and then at night he was Jewish. […] He [great-grandfather] told everybody he was

\begin{footnotes}
\item[33] Ibid, Ashford, \textit{Spanish Texas: Yesterday and Today}, 47.
\item[34] Ibid, Toro, \textit{The Carvajal Family}, 477.
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Catholic, but he didn’t even know anything about the Catholic religion. He didn’t go to Church.” It was while sitting on his great-grandfather’s knee as a young boy that Garcia found out he was Jewish. In Garcia’s own words, “[My grandfather] would say ‘always buy double before the Sabbath and light the candles and do these things […] don’t eat any shellfish and all the Jewish laws, but “shh shh shh” don’t tell anybody you’re Jewish. […] just say you’re anything, but if you say you are Jewish then they will beat you up.’”

Garcia’s great-grandfather and great-grandmother kept many of the mutated Jewish traditions that were passed down through the generations. Garcia said, “[My great-grandfather] would put the mezuzah up at night, put it up take it down, put it up take it down.” In the way of traditions related to Shabbat they would also buy double before Friday night, don their best clothes, and have a Shabbat meal. Garcia also recalled, “My great-grandmother would light the candles and then put them out right away. They were like little sticks that she would roll up […] one time it didn’t go out and my great-grandfather said ‘see you are supposed to not put it out’ […] Once in a while she would be brave and put it next to the window and then quickly bring it back inside to the house.” As for other traditions, the Garcias practiced some funerary traditions such as placing coins on the eyes of the dead. The Garcia family even went as far as to profit on their Sephardic tradition. The Garcia family killed their food in the Kosher way, which supposedly made the meat sweeter. They started the famous Garcia Food Products as a kosher Sephardic food; however it is no longer kosher since they sell pork products.

The crypto-Jewish traditions seemed to have stopped with Garcia’s grandfather. At the present time Garcia and the immediate part of his family are obviously more open with their Jewish identity and do not keep it hidden. He leads services at his Messianic Jewish synagogue and makes a point to encourage other conversos to accept their Jewish roots. Messianic Judaism has become a half way point for those who are descended from conversos; many have grown up with the Christian traditions and still hold their beliefs of Jesus being the Messiah, yet they want to explore their Jewish ancestry. According to Rabbi Garcia, “[Descendants of crypto-Jews] come to Messianic Judaism because they want their Jewish roots, yet they have had a deep spiritual connection with the Messiah […] the converso Jews are very strong with the Messianic Judaism.”

Ezra (Eduardo) Villarreal

Ezra Villarreal is a Messianic Jew at Baruch HaShem Messianic Jewish Synagogue. His family came to the New World shortly after Cortez and first settled in Tampico, Mexico and then moved to Saltillo, Mexico. They lived in an area that was high in the mountains so they could easy hide from the inquisitors.

Villarreal found out he was Jewish in the second grade. He remembered, “I heard my parents speaking in a very hush hush conversation, but you know how little ears are, and I heard them say that we were Jewish.” This was somewhat shocking to Villarreal who always thought of the family as Catholic. While looking back on another incident when he was younger Villarreal recalls, “I was riding my bike and some kids started throwing rocks at me and calling me a dirty Jew, I said ‘wait, why are you calling me a dirty Jew, I’m Catholic.’ That really made an impression on me.” As he grew up, the more he realized his family was different. Villarreal stated, “There were a lot of things

that we did that were not exactly Catholic, but I did not know what they were.” His family acted very peculiarly about the subject of Judaism and there was much denial in the family such as “they would say they’re Jewish, but then ten minutes later they say ‘I never said that’.” Not only did he become suspicious about his Jewish roots through his family’s strange actions, but also from his dreams. At a young age he started having dreams about the Nazis coming to get him and just had an intuitive feeling. So when Villarreal began to research his family ancestry it was not surprising they were of Jewish origin.

The further he researched his family’s past, the more the strange habits his relatives practiced made sense as mutated Jewish traditions and customs. In the home his grandmother followed kosher laws and soaked meat in water to get rid of the blood. Also, she would sweep dirt toward the middle of the room and not toward the door out of respect for mezuzah. Every Friday the family would light two candles to celebrate Shabbat; however Villarreal states, “But it was not called Shabbat, it was just that we were lighting candles.” In celebrating other holidays, when Villarreal was younger his great grandfather would build a little hut outside decorated with grapes and would drink wine in it. At the time Villarreal did not know what it was, but later realized it resembled a sukkah for the Jewish holiday of Sukkot. As for funerary traditions, his grandmother covered mirrors when his grandfather died. As in most Catholic homes saint candles were lit in the Villarreal residence, but unlike other homes, he says, “There was a Saint Moses and a Saint Esther, but Esther is not recognized by the Catholic Church.” A few members of the family were even named Esther or other biblical names, but not New Testament names such as Jesus or Mary. Most amazingly, Villarreal recalls a jar of pickled pigs’ feet that was never eaten. Nobody in the family ever touched the jar and if he made mention of it they changed the subject. Through his research he realized that in the past this was used just for show in case the inquisitors made a visit.

Villarreal learned later in life that these traditions were most likely followed because his ancestors were Jews from Spain so, unlike others in his family, he has chosen to accept his Jewish roots by joining the Messianic Jewish synagogue in San Antonio. Every Friday he leads others in his congregation in Israeli dancing and tries to gain back the Jewish life his ancestors were forced to give up five centuries ago.

Mary (San Miguel) and Laura Kraus

Mary (San Miguel) Kraus and her daughter Laura Kraus are descended from the first Spanish settlers in the Nuevo Leon region. Laura recalls, “Marcos Alonso was known for having many different names, and one theory is that his given name was Jewish and he wanted to avoid suspicion. His wife, Trevino, is a confirmed converso.” Mary grew up in a strictly Catholic home and lived “a very Spanish way of life”; however she remembers, “I always knew that I wasn’t the average Hispanic.” At first Mary thought her family was Spanish Moorish because they were traditionally so

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37 Shabbat is the Jewish Sabbath, or day of rest, which starts on Friday at sundown and lasts till sundown on Saturday.
38 A Sukkah is a four walled structure covered with fruit and has a roof made of palm leaves. It is set up for the holiday of Sukkot.
39 Sukkot is a week long Jewish harvest holiday and is celebrated by creating a sukkah.
40 Mary and Laura Kraus, Interviewed by author, San Antonio, Texas, 26 November 2006.
different from the other Hispanic people she knew, but after researching her ancestors she realized the traditions must be Jewish.

During her childhood Mary realized her family practiced some odd customs, specifically her father would not allow pork in the house. She states, “It never really hit me on the head until I realized he bought kosher meat whenever he could.” When asked about the buying of kosher meat her father would reply, “Because the rabbi said so.” Despite her father’s kosher diet and his relatives’ traditions, he never admitted to the Jewish background and “has really turned on it.” As for other family traditions, Laura states, “My great grandmother always marked the death date of her husband by lighting a candle, and on Friday nights she lit two candles. When asked about the candles, she explained that her mother had done so, as had her grandmother.”

Both Mary and Laura converted to Judaism under the tutelage of the late Rabbi Samuel Lerer in 2004. Rabbi Lerer is well known in the crypto-Jewish circles and was a pioneer in the field. Towards the end of his life, Rabbi Lerer spent his time converting 3,000 crypto-Jews back to Judaism in Mexico and South Texas. The Krauses are currently members of Temple Beth-El Reform synagogue in San Antonio, and Mary says, “I literally could not find peace until I found Judaism.” Laura wrote in the online Jewish magazine, *New Voices*, “my mother and I are just two of the many crypto-Jews who are unearthing and embracing our roots every day. Our identity is no longer hush-hush.”

Arturo Martinez

Arturo Martinez is a native of the San Antonio area and is currently attending St. Mary’s Law school. He practiced Catholicism all his life; however is descended from crypto-Jews on both his mother’s side, who have lived in San Antonio since the late 1770’s, and his father’s side, who have lived in the area since 1912. After the expulsion in 1492, his mother’s side of the family traveled to Portugal, then the Canary Islands, and ultimately the New World in the late 1500’s. Martinez states in response to his mother’s line, the de la Garzas, “According to the Spanish tax rolls, there were six Jewish families in the town of Lepe, Spain in 1450. (in Andalusia on the coast near the Portuguese Border). Of these 6 unnamed families 5 are known to have come to Nuevo Leon and I am descendant from all 5. There are also other Jewish lines, including Trevino, de Faria(s) that come from other towns, but eventually marry into the Jewish circle in and around Monterrey.” Incidentally, Mary and Laura Kraus are also related to the de la Garza line.

His family still practices the Jewish traditions that have been passed down from generation to generation; however Martinez “never thought of them as Jewish traditions, but rather as family traditions.” It was common for his family to practice some kosher laws such as abstaining from eating pork and killing a chicken by decapitation instead of strangulation (this allowed the blood to drain from the body). Around Easter his family would eat a special type of bread pudding containing raisins and nuts called capirotada. Crypto-Jews ate capirotada in replacement as the Passover dish of haroset, but it was made into a bread pudding to trick the inquisitors. As for funerary practices the family would mourn for an entire year and wore black and did not attend parties or other social gatherings.

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41 Arturo Martinez, Interviewed by author, email, 26 October 2006.
42 The Passover dish of haroset is made with nuts, apples, and raisins and represents the mortar used to build the temples in Egypt.
events. After a year the family would observe the yartzite, or anniversary of a loved one’s death and not eat meat or join in festive activities.

He first discovered that the traditions that his family practiced were due to crypto-Jewish ancestry when he began genealogical research. He states, “My mom had started, but mostly focused on her side of the family. I started researching my Dad's side after he passed away and I quickly became aware that something was different about the family, its pattern in intermarrying, its excessive use of the name Joseph rather than Jose, and eventually I came across several sources that explained these patterns as belonging to converso or Nuevo Cristiano families.”

**Physical Evidence**

Another objective of this paper is to determine how Sephardic Jews have influenced San Antonio. Many of the Hispanic customs practiced in San Antonio have actually been adopted from the crypto-Jews. Historian Richard Santos observes:

> It mattered not if the people of Sephardic descent were conversos, anusim, crypto-Jews or openly practicing Jews. They were the ruling class. As such, they unintentionally and unwittingly influenced the people and cultures around them. Be they Old Christians, indigenous, mestizos or castas, the world-view, values, lifestyle and culture of the Sephardi were intentionally imitated and unknowingly adopted.44

It is not the purpose of this section to prove that every person who practices these traditions is Jewish (if so then almost the entire Hispanic population of San Antonio would be descended from crypto-Jews), but to see how Jewish traditions have been adopted into Hispanic culture. Different crypto-Jewish customs have successfully been incorporated into San Antonio society such as symbols, food, and worship traditions, proving the converso existence in the area.

Much of the Jewish influence can be experienced just by visiting the Mercado in downtown San Antonio. It is here that vendors sell decorative wall hangings in the shape of a metal hand, or hamsa, a historic Jewish amulet. (See figures 1 and 2) According to *The Encyclopedia of Jewish Symbols*, the hamsa is derived “from the Semitic root meaning ‘five’” and is normally used as an amulet to ward off evil and protect against the evil eye; “it is speculated that Jews were among the first to use this form as a protective amulet.”45

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43 It should probably also be mentioned that this is also an old Anglo Protestant custom.
Also downtown, one can purchase a toy top similar to a Jewish dreidl, but referred to as a “toma todo.” (See figures 3 and 4) This top used in the gambling game toma todos has written on its sides “toma todo, pon 1, pon 2, toma 1, toma 2, todos ponen” (translating to take all, put in one, put in two, take 1, and take 2) which is similar to the Jewish gambling game of dreidl played during Chanukah. Despite this similarity there is some doubt as to whether this was truly influenced by the descendants of Sephardic Jews. True, the dreidl is not found in Sephardi custom books, but it is so similar that this author thinks it still holds some significance.

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Another area of Jewish influence is the food in San Antonio. In any local Hispanic bakery in San Antonio a customer can walk in and ask for a loaf of “pan de semita” or Semite bread. (See figure 5) This round baked good is sold in South Texas and northern Mexico and has some relation to the Jewish bread matzah. It is commonly eaten at Easter (or Passover) and does not contain any pork lard or yeast, making it kosher, and it is sometimes made unleavened. On another note, out of curiosity, this author asked a young baker of a downtown San Antonio bakery why it is called pan de semita. After giving a surprised look, he said after a few moments, “No se, necesitas hablar con los viejos,” “I don’t know, you need to talk to the old guys.” Although this was not the expected answer, it does prove the meanings and traditions are being lost with the new generation.

Although the most obvious, pan de semita is not the only food in South Texas to have a hidden Jewish meaning, and other foods include empanaditas or turcos, capirtada, cabrito, and buñuelos. Empanaditas or turcos can also be found at the local San Antonio bakeries and are a pastry filled with a type of ground meat. They should not be confused with the larger empanadas which are normally filled with fruit. Richard Santos claims the empanaditas to be “the traditional Jewish knishes, meat filled turnovers”53 Capirtada, like pan de semita, is eaten around the Jewish holiday of Passover. Although a bread pudding, it contains raisins and nuts and resembles the traditional Passover dish of haroset. Capirtada was eaten instead of the haroset to deflect any attention from the Inquisition officials and, as mentioned earlier, Arturo Martinez remembers that his family partakes in this certain tradition. Finally, the common meal of cabrito is a Jewish dish. Many historians, such as Richard Santos, claim cabrito was introduced to South Texas by the coveros. Cabrito contains grilled kid, or baby goat, without any blood, which is according to Jewish kosher law. This is contrary to the unkosher indigenous meal of cabrito en sangre, or baby goat in its own blood.54 Finally, buñuelos are another pastry that can be found at the local bakery and are so tasty that they are becoming very popular. Buñuelos are flat fried dough usually covered with brown sugar and sometimes powdered sugar. These pastries were brought to the New World by the Jewish descendants and are Sephardic Jewish custom to eat them during Chanukah. However, according to Santos,

Figure 5: Pan de Semita bought from Harvest Day Bakery in downtown San Antonio.

“Catholic Mexicans, Mexican Americans, Tejanos and Manitos traditionally eat buñuelos during the Christmas season.”

Besides the food, one of the most interesting aspects of the crypto-Jewish culture in San Antonio is the continuation of the Jewish funerary tradition of placing stones on tombstones. After the Hispanic holiday of Día de los Muertos, intentionally placed stones could be observed on headstones in San Fernando Cemetery I. (see figure 6 and 7) This cemetery is in the middle of downtown San Antonio and surrounded by a predominantly Catholic Hispanic neighborhood. As one example, the tombstone baring the last name Beltrán has a stone placed on the right side. The name Beltran can be found on the ship records of the settlers brought to the area of Nuevo Leon by Governor Luis Carvajal.56 Another example is a grave of a young child named Juanita. Her tombstone, although new, has an intentionally placed stone next to her name. The tradition of placing a stone on a headstone is both an Ashkenazi and Sephardic custom; however, according to Hordes, “the origin of this observance is obscure and is the subject of several interpretations.”

The final possible crypto-Jewish feature of San Antonio is a painting of the Virgin Mary in the Mission Concepción founded in 1716. This painting depicts a standing Virgin Mary with outstretched arms and Hebrew letters above her head spelling out the Jewish name for G-d, and Stars of David around her head. (See figures 8 and 9) Although there is no way to definitively confirm if this is due to crypto-Jewish influence, it is worth mentioning. Laura Kraus must be credited for discovering this painting while she was a docent in the mission and stated that it was in need of restoration.

Save traveling back in time, there is no way to prove this has influence from the descendants of Sephardic Jews in the area. Despite this, the fact there are both the Stars of David and the Hebrew letters seems more than coincidence. That the painting was

55 Ibid., 350.
57 Ibid, Hordes, To the End of the Earth, 259.
58 Laura Kraus, Tombstone in San Fernando Catholic Cemetery I #1, 2006, photograph.
59 Amanda Lipsitt, Tombstone in San Fernando Catholic Cemetery I #2, 2006, photograph.
60 Laura Kraus first wrote about the painting in the article Nothing Secret About Crypto Jews: Coming Out of the Judaic Closet in San Antonio in the online New Voices Magazine
ignored and left to ruin suggests that the former missionaries were attempting to hide this. In Kraus’ words, “The very fact that it was in storage for so long, and that it was in bad need of restoration from water damage, etc, proves to me that the Catholic Church saw this work as a threat.”

Figures 8 and 9: Both pictures are of the painting of the Virgin Mary in the Mission Concepción in San Antonio. The left picture is a close up to better see the Stars of David and Hebrew letters above the head which translate to “G-d.”

Conclusion

The proceeding pages have hopefully proved that there is a significant crypto-Jewish influence in the San Antonio area. The historical evidence proves a motive for crypto-Jews to have come to the New World to escape persecution and, specifically, a motive for why they would have come to the San Antonio area. While the cultural and physical evidence proves the impact crypto-Jews have left on the culture of the San Antonio area, and outlines the traditions still observed within individual families.

It must be kept in mind that this is not an abstract subject since these are real 21st people living in the local community with real lives and real identities. The descendants of crypto-Jews are a very diverse group and not every family has the same history or has the same traditions. During the research process it was not surprising that a few problems arose associated with this type of project. When first researching the existence of crypto-Jews in the San Antonio area it was difficult to locate those who knew they were of converso lineage. It became obvious that some people just did not care about or did not want to accept the possibility of Jewish ancestry. Undoubtedly there are descendants of crypto-Jews in the area, but if they are not aware of their lineage or do not want to be found then there is no way to locate them. Also, it is necessary to place the descendants of crypto-Jews in San Antonio in a bigger picture. For example, many crypto-Jews came to San Antonio during the Mexican Revolution; however this is not original to crypto-Jews since many people were trying to

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62 Laura Kraus, Immaculate Conception, 2006, photograph.
63 Ibid.
escape to the North. Similarly, a more modern problem in dealing with San Antonio is that it is a large metropolitan area that receives many converso migrants from other areas of Southern Texas and Northern Mexico, especially the city of Monterrey and rural areas. Due to the city’s Hispanic culture, San Antonio can be very inviting and attractive to those coming from the border region in this generation. When talking with the people in the community it is obvious that more crypto-Jewish traditions are seen in these recent migrants to San Antonio.

A voice must be given to the descendants of crypto-Jews so they will be able to openly discover their identity. If actions are not taken to document these crypto-Jewish traditions then this past, which has survived for the last five centuries, will be lost in the next generation in the greater San Antonio area. More times than most, Hispanic people in the community remember only a single family tradition that connects them to crypto-Judaism; soon this too will disappear. The middle-aged people who come forward with knowledge of the traditions usually are not practicing them, but remember something strange their grandparents or great grandparents did. As technology is becoming more advanced, and San Antonio being a very modern city, family traditions are being replaced by an American culture that emphasizes unification and uniformity. It is important to document these traditions now, before it is too late.

The Hispanic identity and Jewish identity are very complex and are made from different overlapping layers; this was written in the hopes that one more layer will be accepted in both cultures.

**Works Cited**

Arturo. Interviewed by author. Email, 26 October 2006.
Kraus, Mary and Laura. Interviewed by author. San Antonio, Texas, 26 November 2006.


**Photographs**


Kraus, Laura. Tombstone in San Fernando Catholic Cemetery I #1. 2006, photograph.

Kraus, Laura. *Immaculate Conception*. 2006, photograph.
Putting the “Wild” back in *Wildfell Hall*: Animals and Animalization in the Novels of Anne Bronte
By: Eric Kwartler

The two novels of Anne Bronte aggressively deconstruct the strong female archetype through animalization\(^1\) of primary characters. *Agnes Grey* (1847) portrays a young governess who, despite numerous assurances to the contrary, has no control over her family, her charges, or her life. In *The Tenant of Wildfell Hall* (1848), Anne Bronte deconstructs\(^2\) Helen, the primary mother-figure in the novel, by exposing the unconscionable damage she inflicts on her son as a result of her own insecurity. In each case, primary characters are brutally animalized and then led by animals into situations the status of which even at the end remains dubious. In *Agnes Grey*, Anne animalizes Agnes herself and then mediates her relationship with Edward Weston through animal contact, while *The Tenant of Wildfell Hall* animalizes Arthur, Helen’s son, which leads to the complete reliance of his—and thereby his mother’s—relationship to Gilbert on Gilbert’s dog Sancho.

Agnes Grey’s psychological development connects inextricably to the treatment of animals in the novel. The financial downfall of the Greys forces them to sell the phaeton pony present initially in the Grey household, which greatly disappoints the family. Agnes declares her love for the pony, describing the beast as “the old favourite that we had fully determined should end its days in peace, and never pass from our hands.”\(^3\) In the first chapter, Agnes identifies herself as “the pet of the family,”\(^4\) specifically, with her pet cat. After her sister commands her in response to her offer of assistance to “Go...play with the kitten,”\(^5\) Agnes mutters that around the house, she “was not many degrees more useful than the kitten.”\(^6\) The text further confirms this association through Agnes’ farewell to her kitten, as she laments:

My dear little friend, the kitten, would certainly be changed: she was already growing a fine cat; and when I returned, even for a hasty visit at Christmas, would, most likely, have forgotten both her playmate and her merry pranks. I had romped with her for the last time; and when I stroked her soft bright fur, while she lay purring herself to sleep in my lap, it was with a feeling of sadness I could not easily disguise.\(^7\)

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1. “Animalization” refers to the forced regression of a character to a more primitive physical and emotional state as a result of their environment. More specifically, in this essay it denotes the way characters respond to and emulate animals with which they come into contact.
2. “Deconstruction” often designates a process designed, as the OED puts it, to expose unquestioned metaphysical assumptions and internal contradictions in a given work or system of ideas. In the case of Anne Bronte, deconstruction refers to her attempt to subvert traditional ideas of motherhood and family dynamics by breaking down the humanity of the primary women and children in her novels through the connections they develop, often unwillingly, with animals.
4. Ibid., 4.
5. Ibid., 9.
6. Ibid., 10.
7. Ibid., 14.
Agnes sees herself as the kitten here, and by bemoaning the loss of the kitten’s innocence and youth, admits her own anxieties about growth and departure. The use of the cat to reveal Agnes’ psychological state evidences Anne’s animalization of Agnes, which intensifies significantly once she reaches Wellwood.

At Wellwood, Anne viciously animalizes Agnes through the character of Tom Bloomfield, who destroys Agnes’ ability to control herself and those around her. In her article “‘Hapless Dependents’: Women and Animals in Anne Bronte’s *Agnes Grey,*” Maggie Berg comments on the connection between this episode and Agnes’ affection for her former pony, remarking, “Upon taking up her new post, Agnes finds herself being dragged around by her pupils like a pony, which, she thinks, was ‘reversing the order of things.’”8 Identifying Agnes with the pony leads the reader to the episode with the rocking-horse, in which, after Mary Ann attempts to show Agnes her doll, Tom intervenes and demands Agnes’ attention. As Agnes relates it,

Tom told her to hold her clamour, that Miss Grey might see his rocking-horse, which, with a most important bustle, he dragged forth from its corner into the middle of the room, loudly calling on me to attend to it. Then, ordering his sister to hold the reins, he mounted, and made me stand for ten minutes, watching how manfully he used his whip and spurs. Meantime, however, I admired Mary Ann's pretty doll, and all its possessions; and then told Master Tom he was a capital rider, but I hoped he would not use his whip and spurs so much when he rode a real pony.9

Agnes’ anxiety over his “manful” and copious use of the whip and spurs on the rocking horse marks further verification of Anne’s animalization of Agnes’ psychology. To Agnes’ criticism Tom responds, “Oh, yes, I will!... ’I'll cut into him like smoke! Eeh! my word! but he shall sweat for it.’”,10 an example of the physicality of Tom’s own viciousness that later leads to further debasement of Agnes.

Agnes’ animalization climaxes in an act of extreme violence prompted by an ambience of disregard for the lives and welfare of animals. Upon visiting Tom’s garden just after the rocking-horse incident, Agnes discovers bird traps made of sticks and corn. The dialogue in which she inquires about their purpose proceeds:

I observed, on the grass about his garden, certain apparatus of sticks and corn, and asked what they were.

“Traps for birds.”

“Why do you catch them?”

“Papa says they do harm.”

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8 Maggie Berg, “‘Hapless Dependents’: Women and Animals in Anne Bronte’s *Agnes Grey,*” *Studies in the Novel* 34.2 (Summer 2002): 180.
9 Bronte *Grey*, 20.
10 Ibid.
“And what do you do with them when you catch them?”

“Different things. Sometimes I give them to the cat; sometimes I cut them in pieces with my penknife; but the next, I mean to roast alive.”

“And why do you mean to do such a horrible thing?”

“For two reasons: first, to see how long it will live--and then, to see what it will taste like.”

“But don't you know it is extremely wicked to do such things? Remember, the birds can feel as well as you; and think, how would you like it yourself?”

“Oh, that's nothing! I'm not a bird, and I can't feel what I do to them.”

“But you will have to feel it some time, Tom: you have heard where wicked people go to when they die; and if you don't leave off torturing innocent birds, remember, you will have to go there, and suffer just what you have made them suffer.”

“Oh, pooh! I shan't. Papa knows how I treat them, and he never blames me for it: he says it is just what HE used to do when HE was a boy. Last summer, he gave me a nest full of young sparrows, and he saw me pulling off their legs and wings, and heads, and never said anything; except that they were nasty things, and I must not let them soil my trousers: and Uncle Robson was there too, and he laughed, and said I was a fine boy.”

“But what would your mamma say?”

“Oh, she doesn't care! she says it's a pity to kill the pretty singing birds, but the naughty sparrows, and mice, and rats, I may do what I like with. So now, Miss Grey, you see it is NOT wicked.”

“I still think it is, Tom; and perhaps your papa and mamma would think so too, if they thought much about it. However,' I internally added, 'they may say what they please, but I am determined you shall do nothing of the kind, as long as I have power to prevent it.”

Agnes’ blind determination to defy Tom’s animal abuse at any cost comes to a head upon the arrival of Uncle Robson, who furthers Tom’s bloodlust and provides him with tangible prey. Uncle Robson himself abuses his dogs, to the point that Agnes comments that “he treated them so brutally that, poor as I was, I would have given a sovereign any day to see one of them bite him, provided the animal could have done it with impunity.”

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11 Bronte Grey, 21-22.
12 Ibid., 47.
He also takes the children “a-birds'-nesting,” and one time, they return “with a brood of little callow nestlings.” As Tom stands over his prize, he declares, “But you shall see me fettle 'em off. My word, but I WILL wallop 'em? See if I don't now. By gum! but there's rare sport for me in that nest.” Agnes, defiant, retorts, “But, Tom,'…'I shall not allow you to torture those birds. They must either be killed at once or carried back to the place you took them from, that the old birds may continue to feed them.” First she thinks not to restore the birds to their mother, but to destroy them—and destroy them she does:

So saying--urged by a sense of duty--at the risk of both making myself sick and incurring the wrath of my employers--I got a large flat stone, that had been reared up for a mouse-trap by the gardener; then, having once more vainly endeavoured to persuade the little tyrant to let the birds be carried back, I asked what he intended to do with them. With fiendish glee he commenced a list of torments; and while he was busied in the relation, I dropped the stone upon his intended victims and crushed them flat beneath it.

In his article “Petted Things: Wuthering Heights and the Animal,” Ivan Krielkamp captures the dilemma faced by the reader when he/she encounters this incident. He observes,

The scene of animal cruelty becomes an ethical theater in which at least three roles stand out: the cruel sadist, who enjoys inflicting pain; the cruelly indifferent observer, who can witness the sadistic act and the animal's pain without feeling; and the feeling observer who takes action in response to the abuse, or responds to it with strong compassion and sympathy. Yet the sheer power of the image of the stone crushing the baby birds produces an additional unresolved tension in this passage. If we respond with horror, at least we respond; it is difficult to cordon off a reader's proper dismay at such a scene from an undercurrent of voyeuristic fascination.

The reader, however, inevitably must respond with horror when the text, in “The Cottagers,” confirms that the violent environment of Wellwood contaminated Agnes’ human sense of morality. Agnes herself acquaints the reader with her experience, informing him/her that

Habitual associates are known to exercise a great influence over each other's minds and manners. Those whose actions are for ever before our eyes, whose words are ever in our ears, will naturally lead us, albeit against our will, slowly, gradually, imperceptibly, perhaps, to act and speak as they do. I will not presume

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13 Ibid., 47-48.
14 Ibid., 48
15 Bronte Grey, 48.
16 Ibid., 48-49
to say how far this irresistible power of assimilation extends; but if one civilised man were doomed to pass a dozen years amid a race of intractable savages, unless he had power to improve them, I greatly question whether, at the close of that period, he would not have become, at least, a barbarian himself.  

Agnes’ tenure at Wellwood lasted less than a year; nonetheless, she became as savage as Uncle Robson and Tom. She is completely animalized by the children—they take away her ability to control them, transforming her from the driver of the coach into the pony being whipped, and they take away her ability to control herself. In this proto-human state she moves on to Horton Lodge, where Anne utilizes animals to drive the plot that she can no longer move on her own.

Once at Horton Lodge, Agnes finds herself incapable of realizing her attraction to the curate Edward Weston on her own, which leads Anne to employ animals to keep the plot moving. The first account of Mr. Weston’s character that Agnes hears comes from Nancy Brown, who contrasts Mr. Weston with his superior, Mr. Hatfield, by noting their behavior toward her cat. Mr. Hatfield, she informs Agnes, “kicked [her] poor cat right across th' floor,” while Mr. Weston, “when th' cat, poor thing, jumped on to his knee, he only stroked her, and gave a bit of a smile.” Identifying Mr. Weston positively with a cat helps the reader connect him initially with Agnes, who associated herself with cats from the beginning.

The cat comes into play again in the following chapter, when Agnes encounters Mr. Weston socially for the first time. Mr. Weston rescues the cat from Mr. Murray’s gamekeeper, who attempts to shoot it for discovering the rabbit-warren, then returns it to Nancy Brown, whom Agnes is visiting when he arrives. His rescue of the cat from Mr. Murray again harkens back to Agnes’ identification with her cat, as she wishes him to rescue her from Mr. Murray as well.

The dog Snap also mediates Agnes’ relationship with Mr. Weston. Like Agnes, Snap is a captive of the Murrays, and if it weren’t for Agnes he would have been abused and neglected. Snap often accompanies Agnes on her rambles, and Mr. Weston begins to associate him with her. For that reason he rescues the dog from the rat catcher, and the reconciliation of Agnes and Mr. Weston occurs when Mr. Weston is walking the dog one morning on the beach. When Snap appears in tandem with Mr. Weston, the dog becomes associated with him in her eyes as it is associated with her in his eyes. The dog marks their reunification, which eventually leads to their marriage.

The animalization in The Tenant of Wildfell Hall has an indirect but equally powerful effect on the portrayal of the central female character. In the opening chapters of The Tenant of Wildfell Hall, Helen has recently thrust her son without warning into a foreign situation in which no strong male figure is present. Helen did not consult Arthur on her decision to flee their home, and as a result Arthur feels trapped in his new home by his mother. Although he is but five, he is old enough to feel debased by his mother’s selfishness. Feeling this way and having just come from a home in which dogs were present, the vulnerable young Arthur is immediately drawn to Gilbert’s dog Sancho,

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18 Bronte Grey, 102.
19 Bronte Grey, 95.
20 Ibid., 97.
21 Ibid., 105-109.
although the memory of his father’s abuse makes him hesitant to acknowledge the dog’s owner. Russell Poole notes the parallels between Sancho here and Snap in Agnes Grey, commenting that “As in Agnes Grey, a dog symbolizes a character’s unspoken needs.”\(^22\) Arthur’s inability to express his feelings about his recent liberation from Grassdale pervades the opening description of him in “An Interview,” and that incapacity desperately manifests itself in Arthur’s attempt to reach the dog.

The text animalizes and thereby de-vocabularizes young Arthur from the moment he is introduced, symbolically representing the silencing of Arthur’s opinions by Helen. The garden from which Arthur eventually emerges has grown wild, “having been left so many years, untilled and untrimmed, abandoned to the weeds and the grass, to the frost and the wind, the rain and the drought.”\(^23\) As Gilbert approaches this feral enclosure, he sees hands and then a head surmount the wall as Arthur, like a monkey, clambers to the top. The first appellation given to Arthur as a complete being is “little creature,” and rather than allowing him words, Anne has him simply “call aloud”\(^24\) to the dog, a phrase that could imply any sort of loud vocal utterance. The text finally identifies him as “the child” but continues to deny him verbal abilities, most notably when he falls from the wall and engages in “a silent struggle” followed by “a piercing shriek”\(^25\) rather than yelling for help. His mother’s arrival silences even these modest attempts at communication, cutting off any hope he had of establishing a relationship with the first person he’s seen outside his mother, nursemaid, and possibly uncle.

Arthur’s struggle with communication is juxtaposed in “An Interview” with his struggle with his longing for the home he recently left. Arthur is drawn only to that which brings back happy memories of home, i.e., the dog, and completely ignores Gilbert, a male figure close enough in age and build to Huntingdon to remind Arthur of his abusive father. As Arthur begins to climb the garden wall, Gilbert remarks that Arthur’s “eyes did not notice me, but sparkled with glee on beholding Sancho.”\(^26\) He calls out to the dog, an action symbolic of his wish to be brought back to the only place he has ever called home. When the dog refuses him, he makes “up his mind, like Mahomet, to go to the mountain since the mountain would not come to him” and hops the wall in an attempt to reach the dog. Unable to understand why he had to leave his home, Arthur feels trapped, as his mountain, his former home, will not come to him. In desperation he attempts to go to the dog, who serves as a reminder of Grassdale and the closest he has come to home since arriving at Wildfell Hall. When he is attacked by a tree branch in the course of his attempt, Gilbert runs to keep him from falling, and, unable to comfort Arthur on his own, he calls Sancho to “pacify him.”\(^27\) Here Arthur begins to “smile through his tears” as he finally has reached the perceived emissary of his lost home, but his mother’s interference tears him away from the animal under the assumption that it and its owner are harming him. Once again, Arthur cannot understand being taken away by his mother from a situation he identifies with home.

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\(^{22}\) Russell Poole, “Reformation and Cultural Reproduction in Anne Bronte’s The Tenant of Wildfell Hall,” Studies in English Literature, 1500-1900 33.4 (Fall 1993): 860.


\(^{24}\) Ibid., 24.

\(^{25}\) Ibid.

\(^{26}\) Ibid.

\(^{27}\) Ibid.
In the following chapter, however, Arthur regains his confidence and, momentarily free of his mother’s chains, he approaches Sancho at Linden-Car. Gilbert recalls,

In a little while, however, I was sensible that someone was approaching me, with a light, but slow and hesitating tread. It was at my feet. On looking up, I beheld him standing about two yards off, with his clear blue eyes wistfully gazing on the dog, transfixed to the spot, not by fear of the animal, but by a timid disinclination to approach its master. A little encouragement, however, induced him to come forward. The child, though shy, was not sullen. In a minute he was kneeling on the carpet, with his arms round Sancho’s neck, and in a minute or two more, the little fellow was seated on my knee.28

Here, Arthur bonds with Gilbert through the dog, and their relationship solidifies. The dog serves as a mediator for Gilbert’s connection with Arthur, and Gilbert uses Arthur as an excuse to call on or approach Helen several times before she gives him the diary. Eventually, it is the indelible connection between Sancho, Arthur, and Arthur’s view of Gilbert as a father figure that leads to Gilbert and Helen’s marriage.

Upon Markham’s arrival at Staningley in “Conclusion,” Arthur leaps out of the carriage and immediately requests Mr. Markham’s approval and continued presence. The first voice Gilbert hears from the coach is that of Arthur, who declares “Mamma, mamma, here’s Mr. Markham.”29 When it seems that Gilbert is reluctant to enter, Arthur, sensing the possibility of the disappearance of his long-lost father figure, demands that he enter, “running round from the other door; and seizing [Gilbert’s] hand in both his.”30 He proudly informs Gilbert that he is now seven, then drags him into the coach. Arthur cannot bear life alone with his mother, which leads him to do everything in his power to recover the man from which his mother last stole him away.

Although The Tenant of Wildfell Hall indirectly deconstructs Helen’s character rather than directly, the approach is similar to that of Agnes Grey. Both novels animalize characters to the point that they are capable of neither grasping human morality nor making rational choices. In both cases, the animalization problematizes strong female characters, characters that many critics hail as feminist icons, which causes the reader to question the entire premises of the novels.

28 Bronte Tenant, 29.
29 Ibid., 476.
30 Ibid., 477.
Works Consulted


Poole, Russell. “Reformation and Cultural Reproduction in Anne Brontë’s The Tenant of Wildfell Hall.” Studies in English Literature, 1500-1900 33.4 (Fall 1993): 859-873.
Optimization of the Biotinylation of DPPC Vesicles for Active Targeting in the Treatment of Pulmonary Artery Disease

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Abstract

The site specificity of intravenously injected drug delivery systems is significant in improving the efficacy and efficiency of drug therapeutics. A high level of site specificity is offered by active targeting, which uses the ligand-receptor relationship between an antibody conjugated to the drug delivery system and the cell receptor of interest. We made actively targeting 100 nm lipid vesicles that will be used to treat pulmonary artery disease. The vesicles, or lipid bilayer systems, were made from mixtures of dipalmitoylphosphatidylcholine (DPPC), a natural lipid, and biotin-conjugated dipalmitoylglycerophosphoethanolamine (DPPE), a biotin protein covalently linked to the natural DPPE lipid. The targeting mechanism for our vesicle-based delivery system exploits a biotin-avidin-biotin protein series for the binding of the antibody to the vesicle. However, the tetrameric structure of the avidin protein can lead to the aggregation of vesicles depending upon the surface biotin concentration, resulting in their removal from the blood stream. This study optimizes the surface biotin concentration for the improvement of the active targeting component (biotin-avidin-biotin series) for the site specific delivery of anti-thrombotics to activated platelet cells. Different concentrations of surface biotin were examined to understand the extent of vesicle aggregation. The vesicle sizes were characterized by dynamic light scattering, freeze-fracture transmission electron microscopy and confocal microscopy. The results indicated that the concentration of surface biotin was proportional to the extent of aggregation. The most promising molar ratio was the 0.05% biotin to DPPC lipid, which showed minimal aggregation and maintained a size of 150-225 nm over a period of four days.

Keywords: Biotinylated vesicles, Dipalmitoylphosphatidylcholine, Active Targeting, Dynamic light scattering

1. Introduction

The tremendous growth of intravenously injected drug delivery systems has led to in depth investigations of strategies for site specific targeting. Targeted therapeutic systems increase the efficacy and efficiency while decreasing the potential side effects of the drug [1]. The two approaches of targeting include passive and active targeting. Passive targeting uses the physical nature of the tissue to enhance location specificity, i.e., angiogenesis in tumors. The enhanced permeation and retention (EPR) effect, caused by ‘leaky’ vessels, can trap nanoparticles in the tumor. Active targeting involves the use of antibodies or peptides for the targeting of antigens upon the surfaces of the cells of interest [2].

This paper focuses on actively targeting lipid-based colloidal systems, more specifically natural lipid vesicles. Vesicles of certain lipid compositions are used to encapsulate drugs inside their lipid bilayer system. Through both size control and biomimetic properties, the vesicles can increase the circulation of these drugs in the vasculature [3,4,6,7]. The size and the external
components of the vesicle are also important factors in controlling the removal of the vesicle from the blood stream by the reticuloendothelial system (RES). Vesicles and aggregates with sizes above 300 nm will be removed by the RES. Uptake by the RES limits the delivery of drugs to the liver and spleen, associated with Kupffer cells and spleen macrophages. A size of 100 nm theoretically allows the passage of the vesicles through large vasculature fenestrations, ie., hepatic sinusoidal capillaries [10, 14]. The therapeutic benefits of vesicle systems have influenced cancer chemotherapy, ophthalmology, antimicrobial therapy, vaccines, gene therapy and diagnostic applications [5]. Current pharmaceutical products based upon vesicle drug delivery include DOXIL, Daunosome, Abelcet, Amphotec and Amabisome, uses for chemotherapeutics or anti-fungals [6].

These actively targeting vesicles are being exploited for the delivery of anti-thrombotics to activated platelet cells. The vesicles will treat and eliminate vulnerable plaque, the probable cause of death from sudden cardiac arrest. The active targeting component of this drug delivery system uses the non-covalent, almost irreversible binding of biotin to avidin to create a strong linkage between the vesicle and the antibody. Avidin is a tetrameric protein that has a two-fold symmetry with four binding sites for the protein biotin. The isoelectric points of avidin and biotin occur at pH 10 and 3.5, respectively [3]. This charge difference increases the affinity of the avidin and biotin (avidin is positively charged and biotin is negatively charged between the pH of 3.5 and 10). The valeric chain ring of the biotin and a binding pocket on avidin create a strong bond with a dissociation constant of $10^{-15}$ M. Biotin conjugated to a dipalmitoyl-glycero-phosphoethanolamine (DPPE) lipid is incorporated into the vesicle membrane during vesicle formation, and through the addition of avidin, a biotin-avidin series forms upon the surface. A targeting peptide conjugated to a biotin attaches to the available binding sites upon the avidin forming an actively targeting vesicle [7,8,3,9]. This biotin-avidin-biotin series can be used as an exchangeable system for other targeting purposes.

The four biotin binding sites on avidin allow for the random aggregation of vesicles, which depends on the concentration of the surface biotin on the vesicle. The concentration of the surface biotin (biotinylation) becomes a large concern because the more biotin on the surface, the higher the possibility of aggregation. The aim of this study was to optimize the biotinylation to increase the amount of the targeting component on the surface of the vesicles while limiting aggregation. The ratio of avidin/biotin was maintained at 2, a value shown to decrease aggregation by Kisak [3]. We tested the sizes of vesicles with 2.0%, 0.5% and 0.05% molar ratios of biotin (to the main component of the vesicle, dipalmitoyl-glycero-phosphocholine (DPPC)) after the addition of avidin to measure the extent of aggregation of the vesicles. Vesicle sizes were characterized using dynamic light scattering, freeze-fracture transmission electron microscopy (TEM) and confocal microscopy. The most promising molar ratio was the 0.05% biotin, which showed little to no aggregation.

2. Materials and Methods

2.1 Materials

1,2 – Dipalmitoyl-sn-Glycero-3-Phosphocholine (DPPC), 1,2 – Dipalmitoyl-sn-Glycero-3-Phosphoethanolamine-N-(Lissamine Rhodamine B Sulfonyl) (Ammonium salt) (DPPE-Rhodamine), 1,2 – Dipalmitoyl-sn-Glycero-3-Phosphoethanolamine-N-(Biotinyl) (Sodium salt) (DPPE-biotin) were purchased from Avanti Polar Lipids (Alabaster, AL) and used as received. Phosphate Buffered Saline, pH 7.4 was purchased from Sigma in St. Louis, MO. Avidin-FITC
was purchased from Invitrogen (San Francisco, CA) and avidin from Molecular Probes/Invitrogen (Eugene, Oregon). All solvents used (analytical grade or better) were purchased from Aldrich Chemical Co. (St. Louis, MO). Ultrapure water (resistivity 18 MV cm) was obtained from a Milli-Q UV Plus system (Millipore, Bedford, MA).

2.2 Vesicle Formation

Vesicle preparation follows the same procedure described by Kisak et al [6]. The DPPC, DPPE-Rhodamine and DPPE-biotin (three different concentrations of DPPE-biotin were added separately at 0.05%, 0.5% and 2.0% mole ratio to the DPPC) were dissolved and mixed in glass vials and the solvent chloroform was evaporated under N$_2$ flow, leaving thin lipid films around the vials. The dry films were hydrated overnight with 150 mM PBS buffer solution (typically 0.01 M Na$_2$HPO$_4$ and KH$_2$PO$_4$ phosphate buffered saline, 0.138 M NaCl, 0.0027 M KCl, 0.02 wt% NaN$_3$) to give the final DPPC concentration of 10 mg/ml at 60 °C. The solution was set through a series of 10 freeze-thaw cycles followed by extrusion through 100 nm Nuclepore Track-Etch membranes in an Avanti Polar Lipids Mini-extruder. A 1 ml aliquot of biotinylated vesicles was added dropwise to a solution of avidin (95%)/avidin-FITC (5%) (the avidin solution was set to a ratio of two times the amount of exposed biotin). The reaction was carried out for 24 hours and then diluted to 1 mg/ml. The vesicles were characterized for a period of 1 week by dynamic light scattering, freeze-fracture TEM and fluorescence microscopy.

2.3 Characterization Methods

Dynamic Light Scattering (DLS) studies were performed with a Brookhaven DLS, Avalanche photodiode detector and MG Vertically polarized 35mmV Helium-Neon 633nm laser. 1 ml of the avidinated-biotinylated vesicles (at a concentration of 1 mg/ml) were added to the vial. The aperture was set at 100, and each sample was allowed to reach a count of 1.00 x 10$^8$ with a count rate of 200 – 300 kilo counts per second. In the case that a lower concentration of sample was measured, the aperture was increased to achieve a higher count rate (the opposite situation can be applied similarly).

Freeze-fracture TEM was performed with a RFD-9010 Freeze fracture system. The samples were vitrified in a liquid ethane/propane mixture (~ -170°C) on copper planchettes, fractured under vacuum below 2.5 x 10$^{-7}$ mmHg and platinum and carbon were evaporated onto the sample. The copper planchettes were dissolved and the replicas were placed onto formvar TEM grids, and imaged with a JOEL JSM-6300V TEM instrument.

Fluorescence microscopy was performed with a Nikon F1 Confocal Microscope. The avidinated-biotinylated vesicles were prepared on microscope slides made with 20 µl of the vesicle sample. The samples were viewed using a 10X lens with a 60X objective. The vesicles had rhodamine (Rh) incorporated into the bilayer by way of DPPE-Rh doped at 0.1% mol (excitation at 550 nm and emission at 590 nm), along with an avidin-FITC conjugate for fluorescent viewing (excitation at 490 nm and emission at 525 nm). The intensity values were acquired from a Z-stack of images (from -15.0 to 10.0 nm, zero value at the brightest location).

3. Results and Discussion

The relatively fluid nature of the vesicle resulted in batch to batch variability in vesicle size and amount of surface biotin. As calculated using the differences in the surface area of the outer and inner layers of the vesicle bilayer, approximately 48% of the biotin-lipids moved to the inner layer of the bilayer and 52% moved to the outer layer during vesicle formation [3]. The biotin-
DPPE can diffuse laterally across the fluid membrane layers and (although it is less likely) flip between the two layers of the bilayer and reorient itself on the membrane. This allows for a variation of amounts of surface, or outer layer, biotin on each vesicle (see Table 1).

<table>
<thead>
<tr>
<th>Molar ratio of Biotin-DPPE (%)</th>
<th>Calculated amount of surface biotin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00</td>
<td>1234</td>
</tr>
<tr>
<td>0.50</td>
<td>308</td>
</tr>
<tr>
<td>0.05</td>
<td>31</td>
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</tbody>
</table>

After the addition of the avidin to the vesicle suspension, the avidin binds to the surface biotin. Avidin is a tetrameric protein with two binding sites on two sides. There are three possible outcomes for the avidin that are dependent upon the surface biotin concentration of the vesicles: avidin can remain unbound in suspension; avidin can bind to a biotin on the surface of one vesicle and remain unbound on the opposite side, or avidin can bind to a biotin on the surface of one vesicle and bind to a biotin on the surface of another vesicle. The optimal concentration of surface biotin will allow for the availability of a binding site facing away from the vesicle, so that the targeting peptide – biotin conjugate can attach. The avidin bound to the surface biotin can be seen in the fluorescent images of Figure 1.

Avidin-FITC and DPPE-Rhodamine allowed for the fluorescent viewing of the binding of avidin to the surface of the biotinylated vesicles. Avidin-FITC was mixed with the avidin (avidin-FITC was only 5% of the avidin added), which was added dropwise to the suspension. DPPE-Rhodamine conjugates were incorporated into the vesicle membrane during vesicle formation. Avidin-FITC fluoresces yellow/green and the Rhodamine fluoresces red. In the images, there are juxtapositions of green and red that show the proximity of the avidin-FITC to the biotinylated vesicles.

![Figure 1: Fluorescence images for 100 nm biotinylated vesicles 48 hours after the addition of avidin. (a) Undialyzed unilamellar vesicles and (b) Dialyzed unilamellar vesicles.](a) (b)

Samples were dialyzed in dialysis tubes with 100 kDa pores (100 kDa MWCO) to remove unbound avidin (MW 68 kDa). The fluorescence intensity of the vesicle solutions (dialyzed and undialyzed) was measured using a z-stack of the fluorescence images, allowing for the
approximation of the amount of avidin bound to the surface of the vesicles (note that the fluorescence intensity was measured at 548 nm, the wavelength for the color green). The difference in green fluorescence between the dialyzed and undialyzed samples provides a clear indication that avidin-FITC bound to the vesicle and remained bound to the vesicles after dialysis. The intensity measurements showed a 4-fold decrease after dialysis (Table 2). The samples that were tested by other characterization methods, however, were left undialyzed to provide the possibility of more binding of unbound avidin to the unbound surface biotin.

Table 2: Fluorescence intensities 48 hours after the addition of avidin, dialyzed and undialyzed

<table>
<thead>
<tr>
<th>Mole ratio of Biotin (%)</th>
<th>Average Intensity (au)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00</td>
<td>1925</td>
</tr>
<tr>
<td>0.50</td>
<td>933</td>
</tr>
<tr>
<td>0.05</td>
<td>81</td>
</tr>
<tr>
<td>2.00</td>
<td>346</td>
</tr>
<tr>
<td>0.50</td>
<td>136</td>
</tr>
<tr>
<td>0.05</td>
<td>21</td>
</tr>
</tbody>
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The main concern regarding the viability of this avidin-biotin system was the aggregation of the vesicles to a size that would be removed by the body. The aggregation of the vesicles were measured using dynamic light scattering (DLS) and freeze-fracture transmission electron microscopy (TEM). The trends for the aggregate formation and morphology of the vesicles provide insight into the optimal surface biotin concentration.

Dynamic light scattering provides an effective diameter of the vesicles and aggregates, which skews to the higher values. The accuracy of DLS is highly concentration dependent, large concentrations will cause multiple scattering events which will skew the diameter value. Prior to the testing of the samples, the scattering events of the DLS were tested for the concentration of sample suspensions. Single scattering events were confirmed by the linear change in scattering intensity (count rate) with sample concentration as seen in Figure 2. At concentrations of 4 mg/mL we observed a deviation from the linear trend. At high concentrations, deviations are a result of multiple scattering events.

Figure 2: The linear change in scattering intensity (count rate) versus sample concentration proves a single scattering event for vesicles with 0.5% molar ratio of biotin. The vesicles with 2.0% and 0.05% molar ratios of biotin showed similar linear correlations between scattering intensity and sample concentration.
The DLS measurements of the biotinylated vesicle suspensions with avidin showed a trend of increasing aggregate size for increasing molar ratios of biotin (Figure 3). The 2.0% biotinylated vesicles had a relative size of 600 nm, 0.5% biotinylated vesicles a relative size of 300 nm and 0.05% biotinylated vesicles a relative size of 220 nm, 96 hours after the addition of avidin. Furthermore, within the first 24 hours after the addition of avidin, there was a noticeable difference between the sizes. The extent of aggregation was time dependent, the aggregates grew larger as time elapsed.

Figure 3: Dynamic light scattering results for biotinylated vesicles after the addition of avidin in PBS solution, pH 7.4.

The freeze-fracture TEM images supported the DLS measurements. Freeze-fracture TEM provides a replica of the morphology of the vesicles and aggregates. As seen in Figure 4 (a), the relative size of the aggregates for the vesicles of 0.05% molar ratio biotin was ~100 nm, and (b) the aggregate size for the vesicles of 2.0% molar ratio biotin was >1000 nm. As a result of the low concentration of the vesicle solution (1 mg/ml), the vesicle aggregates and unbound vesicles were found to be sparse on the replica’s surface. Additionally, the replicas for all three samples showed a large variation of vesicle and aggregate sizes.
Figure 4: Freeze-fracture TEM images of the biotinylated vesicles 72 hours after the addition of avidin (notice the scales are different). (a) 0.05% molar ratio of biotin showing no aggregation, the entire replica contained unbound vesicles. (b) 2.0% molar ratio of biotin showing a 1.3 µm aggregate.

The dropwise addition of the biotinylated vesicles to an avidin solution was an important factor in ensuring proper exposure of the avidin to the biotin on the vesicles. Trials were performed where the avidin was not added dropwise to the biotinylated vesicles, and the results were skewed with more aggregation occurring in the lowest molar ratio of surface biotin. This may also be influenced by the salt concentration in the PBS buffer solution. Overall, there is a positive correlation between the concentration of surface biotin and extent of aggregation as shown by the characterization methods.

5. Conclusion

The optimization of the active targeting component of this drug delivery system relies on the concentration of surface biotin, salt concentration of the PBS solution and methodology of the addition of avidin. The biotin-avidin-biotin series can be used as an exchangeable system for targeting other tissues or cells, i.e., tumor cells. The further development of such a system will provide a useful tool for drug delivery.

There are other techniques that can be explored to further optimize the biotin-avidin-biotin system. These techniques include using free floating biotin for the random binding of sites on avidin to decrease aggregation and a monomeric avidin column for the removal of biotinylated vesicles that have available binding sites for avidin. As a result of the tetrameric structure of avidin and steric hindrance, if one biotin molecule binds to the trans side (trans to the vesicle), there is one location available for the biotin-peptide to bind on the same side. By adding free floating biotin, this can decrease the extent of aggregation by limiting the number of available binding sites. The monomeric avidin column will bind (reversibly) biotinylated vesicles that have open sites for avidin binding. This will allow the biotinylated vesicles with avidin to elute through, decreasing the aggregation caused by biotin and avidin.

6. Acknowledgements

We would like to thank Dr. Brian Prevo and Ben Wong for their input, and Dr. Christine Schmidt for critically reviewing this paper. This work is supported by NSF – DMR-05-20415 and the NIH-PEN grant.
7. References
The Veil of Belonging: Rushdie as Spokesperson for Islam

Silence the subaltern by talking too much. Describe, account, print.

Gayatri Chakravorty Spivak, “Acting Bits/Identity Talk”

Though Salman Rushdie has twice won the Booker Prize for his *Midnight’s Children* (1980), the majority of the world knows him for the infamous fatwa he incurred over his novel, *The Satanic Verses* (1988). The latter novel’s title refers to an unauthenticated legend that the Prophet Muhammad recited false verses legitimating the Meccans’ polytheistic worship of idols, which he later recanted as the work of Satan. *The Satanic Verses* as a whole treats Islam irreverently and, in certain key chapters, not only satirizes the Muslim belief in Muhammad’s divine inspiration, but also openly insults the Prophet, referring to him as “Mahound” (an epithet many of the Meccans used to slur the Prophet during his time). On February 14, 1989, just a few months after *The Satanic Verses* was published, Iran’s Ayatollah Khomeini called on Muslims worldwide to execute, not only Rushdie, but all those involved in the publication of the novel. In the years that followed, Muslim extremists wounded or killed several of the novel’s translators, and a number of people died in anti-Rushdie riots. The violence and uproar over the novel as a result of the Muslim world’s response to its publication led to Rushdie’s public image as the martyr of secularism.

Rushdie reinforces this image of himself in the media, playing on the public’s recognition of his name in connection with Islam and Postcolonialism, so that he represents the spokesperson on the “Third-World” to a Western audience that eagerly accepts the Orientalist sentiments promoted by what they consider a “legitimate” source. The elitist manner in which Salman Rushdie constructs his public identity only further marginalizes the Third-World “other,” thereby undermining the author’s professedly cosmopolitan principles.
His sweepingly critical accusations of the Muslim community, in particular, reinforce the cultural, political, and religious misunderstandings already in place between the East and the West, and dangerously privilege Rushdie’s secularism to an international audience. For example, during the controversy over *The Satanic Verses*, Rushdie issued an apology and formally converted to Islam. However, given that in a 1995 interview with *The Times*, Rushdie proclaimed his conversion to Islam “the biggest mistake of my life,” his apology takes on the color of insincere political expediency. Despite this statement, however, one would be hard pressed to find an interview in which Rushdie does not offer his views on Islam and Islamic ideals. Rushdie actively and consciously plays the role of “rational” Muslim for the Western media who seek him out as spokesperson for the Muslim community. Ironically, however, Rushdie himself disavows his membership to the Muslim faith or community, so that his role as spokesperson rings of charlatanism.

As a representative example of the contradictory literary and political roles the author plays, I will close-read *Midnight’s Children*’s representations of veiling, primarily with regard to the character Jamila Singer, as legitimate criticisms of absolutism, but not of Muslim religious and cultural practice. I will then focus on the role that Rushdie has recently played in the media with regard to the veil controversy going on in England, and I will demonstrate how his public statements reveal the religious intolerance behind his secularist ideals. Finally, I will discuss the significance of genre—the novel versus the print media—in determining the repercussions of Rushdie’s loudly professed views.
Representations of Veiling in *Midnight's Children*

In the novel, Saleem Sinai’s sister, Jamila Singer, represents Purity above all. The Sinai family refers to Jamila as the “Brass Monkey” both because of the color of her hair and because of the mischief she creates in order to siphon attention away from Saleem, the favorite child. Upon reaching adolescence and moving to Pakistan, however, Jamila discovers both her amazing vocal talents and her penchant for obedience and piety. Jamila gains national fame and fortune through her behaviors as the “ideal” daughter, Muslim, and Pakistani citizen: As “The Voice of the Nation,” Jamila’s “character [begins] to owe more to the most strident aspects of the national persona than to the child-world of her Monkey years.”

Thus, unlike her brother, Jamila successfully sheds her colorful Indian past in favor of Pakistani Purity. The two siblings are divided by their opposing ideals: “the sacred, or good, [holds] little interest for [Saleem], even when such aromas [surround his] sister as she [sings]” (Rushdie, 364). However, Jamila’s intense, obsessive love of country seems like the only viable option for assimilation into the all-encompassing homogeneity that Pakistan’s Purity demands. Because of the fundamental unreality of the entire idea of Purity, those who subscribe to it must do so entirely, for even the slightest glimpse of Reality would topple this ideology. Jamila, firmly esconced in her gold-and-white veil, that symbol of Purity, is thereby shielded not only from impurity, but also, consequentially, from Reality.

The appeal of the veil repeatedly attracts the female characters of *Midnight’s Children* because it seemingly provides a way for them to assert their identities within cultural limitations; in reality, however, the veil becomes the woman’s identity, concealing both body and soul. For example, Saleem’s highly traditional maternal grandmother,
Naseem Aziz, protests against her husband’s desire that she give up purdah because she insists, “‘They will see more than [my body]! They will see my deep-deep shame!’” Naseem’s culturally-imposed equation of her body with shame exposes the external/social and internal/personal disparagement of female identity caused by cultural expectations of female Purity. Throughout the novel, then, Reverend Mother (a nickname given to Saleem’s grandmother, indicating her role as matriarch) seeks out various alternate forms of purdah and attempts to co-opt them as avenues of power in order to conceal the helplessness imparted by her woman’s body in a culture of shame. Indeed, “she [lives] in an invisible fortress of her own making, an ironclad citadel of traditions and certainties” (Rushdie, 40), so that the culture itself becomes a form of purdah. In one episode, she responds to Aadam’s command of “‘Be silent, woman!’” by remaining permanently silent (Rushdie, 55), thereby making her obedience to her husband a form of power. This purdah of silence, however, also conceals her identity, for “her sentences […] offer up glimpses of her self” (Rushdie, 56) in the same way that coming out of traditional purdah would offer glimpses of her body.

Finally, she retreats into the purdah of the glass booth at her gasoline pump in Pakistan; “transformed […] into a woman more interested in other people’s lives than her own,” she “[develops] the absorbent properties of a sponge” (Rushdie, 375), and thus succumbs willingly to yet another form of identity concealment as a result of purdah. However, in this state of purdah-ensconced non-identity, in which her personal identity loses importance to her, “she [becomes] the first victim of that spirit of detached fatigue which made the end the only possible solution” (Rushdie, 376)—death becomes the only resolution to the paradox of identity-less existence which society imposes upon women.
The veil similarly acts as both a shield and a trap for Jamila. She becomes “the victim of her own public image” (Rushdie, 359) because she is unable to move outside of her veil-encircled sphere of existence. Though Jamila’s entire life is characterized by an intense desire for the attention and preference that her gender denies her within her cultural paradigm, as an adolescent she diverges from her childhood belief that “if she was going to get any attention in her life, she would have to make plenty of noise” (Rushdie, 169). Ironically, while her early efforts at gaining attention by “making noise” fail miserably, she finally succeeds in receiving attention in her later years by “[sitting] demurely” behind a “white silk chadar” (Rushdie, 358). This strange success reveals cultural standards of acceptability in female behavior; paradoxically, cultural ideals of femininity establish that women can only gain attention by deliberately diverting attention away from their existence. When “Pakistan [falls] in love with a fifteen-year-old girl whom it only ever glimpsed through a gold-and-white perforated sheet” (Rushdie, 359), it idolizes, not Jamila herself, but her image of Purity. Though Saleem melodramatically asserts that he “must take second place to her talent forever” (Rushdie, 336), the attention Jamila receives has more to do with her extreme assimilation into a culture of Purity than her personal identity or talent. When Rushdie points to “the blind and blinding devoutness and the right-or-wrong nationalism which […] began to dominate [Jamila’s] personality, to the exclusion of almost everything else” (Rushdie, 359), he demonstrates that the true worth of her talent is doubly marginalized by pre-existing cultural and religious ideals of female behavior (“devoutness”) and post-Partition ideals of national Purity (“right-or-wrong nationalism”). Unfortunately, Jamila internalizes this marginalization, so that she becomes subject to “the exaggerations and simplifications of self which are the unavoidable side-effects of stardom” (Rushdie, 359).
Her talent and desire for attention lead to a fame that in turn necessitates her descent into nothingness as a result of culturally-based female marginalization.

**Rushdie in the Media**

In October 2006, British Member of Parliament Jack Straw raised controversy over the issue of veiling in Islam by stating that he would require Muslim women to remove the veil covering their faces before admitting them to his office.¹¹ In the midst of the debate, newspaper headlines, including ABC News, glaringly carried Rushdie’s statement that “veils suck.”¹² Rushdie, who twice won the Booker Prize for his creative talent and flowing prose in *Midnight’s Children*, who repeatedly demonstrates in his novels his full command of the English language, chose to publicly declare his political, cultural, and religious views in the media using vulgar language lacking either nuance or depth. However, this choice, too, reveals his command of the language; *Midnight’s Children* contains numerous examples of Rushdie’s intense awareness of the power of media over a public that generally equates news with Truth. And while newspapers printed Rushdie’s statement within quotation marks—indicating that “Veils suck” merely represents one man’s opinion—their visibly attaching Rushdie’s name to the quote only reinforces the audience’s perception that his represents the “authentic” view. The media further authorizes his views by elevating them to bold headlines, playing upon the scandalous nature of his remarks.¹³ Rushdie ventriloquizes for the media and its own anxieties and prejudices toward Islam, so that in the Western world, “Rushdie” has become a household name equated with intense suffering inflicted by the violent censorship of oppressive Muslim regimes.

In his *Salman Rushdie and the Third World*, Marxist critic Timothy Brennan addresses the problematics of celebrity Postcolonial writers. Brennan argues that
Postcolonial writers who gain popularity in the West, especially Rushdie, present a skewed image of the Third World they mean to represent. Brennan further argues that those Postcolonial writers who attain Western celebrity do so by privileging the Western aesthetics of irony and ambiguity over the alternative aesthetic sensibilities found in anti-imperialist and social realist works. Thus, Rushdie gains Western media attention by propounding Western aesthetic and political ideals from an ostensibly Eastern viewpoint. Furthermore, Rushdie’s highly public “victimhood”—in addition to the fact that he belongs to that group of Postcolonial exiles “who present their own ‘Third-World’ identities as a mark of distinction in a world supposedly exempt from national belonging”—somehow authenticates his point of view in the eyes of the Western public.

Rushdie’s other remarks only further demonstrate the absolutist manner in which he holds himself up as the paragon of cultural and religious understanding. He states, “Speaking as somebody with three sisters and a very largely female Muslim family, there’s not a single woman I know in my family or in their friends who would have accepted wearing the veil.” Rushdie presents the members of his family as ideal, “enlightened” representatives of Islam, even though he openly avows a decidedly secular upbringing and his current apostasy in an interview with The Independent published around the same time period. Even the phrase “accepted wearing the veil” wrongly suggests that veiling is necessarily an externally imposed, oppressive practice. If Midnight’s Children satirizes family as a coherent unit of celebrated ideals that closely mirrors the oppression of a superimposed national identity, Rushdie undermines this parody in his media presence by seriously attempting to promote his family as a kind of cosmopolitan, diasporic-secular ideal.

Questions of Form
“I do not propose to offer, prescriptively, any answers to these questions [of existence]; only to state that these are the issues with which each of us will have to come to terms,” Rushdie writes in his essay “Imaginary Homelands.” However, Rushdie doesn’t prescriptively offer answers in his fiction because the nature of the novel as a genre precludes prescriptivity. Czech writer Milan Kundera, whose status as an exile who writes almost entirely about his country of origin closely mirrors Rushdie’s, provides an extensive treatise on the nature of the novel as a genre which will be useful in determining the political ramifications of Rushdie’s genre choices. In The Art of the Novel, Kundera conceives of the novel as a genre of possibility: “both the character and his world must be understood as possibilities.” According the Kundera, the mode of prescriptivity constitutes propaganda more so than novelistic fiction. Indeed, the novel is a genre, not of answers, but of questions that embody what Kundera calls “the wisdom of uncertainty” (Kundera, 7): “The world of one single Truth and the relative, ambiguous world of the novel are molded of entirely different substances. Totalitarian Truth excludes relatively, doubt, questioning; it can never accommodate what I would call the spirit of the novel” (Kundera, 14).

Kundera criticizes the Orwellian novel as contrary to this same “spirit of the novel” because “[what] Orwell tells us could have been said just as well (or even much better) in an essay or pamphlet” (Kundera, 12). In Rushdie’s case, however, what he tells us of the veil, and the resultant questions that arise about the nature of religion, culture, gender—indeed, of existence—is far better stated in his novel than in his press statements. While in both genres he ultimately poses the same underlying criticisms about the veil, and in a larger sense, about the position of women in Islam [in that “the veil is a way of taking power away from women”], only Midnight’s Children adequately realizes the issue of veiling in its full
complexity. What Rushdie says of the veil in *Midnight’s Children*, with its nuance and subtlety, its recognition and realization of the possible connotations and consequences of veiling, far outshines the flat, hollow resonances of a statement like “veils suck.” Through his various portraits of purdah and his emphasis on the role of culture in religion, as well as the manner in which his female characters adopt purdah as a form of power (however perverse), Rushdie explores veiling through fundamental questions of existence. In Kundera’s terms, he “examines not reality but existence. And existence is not what has occurred, existence is the realm of human possibilities, everything that man can become, everything he’s capable of” (Kundera, 43). Rushdie’s press statements, on the other hand, mean to prescriptively and absolutely represent the secular, Western reality to which he himself subscribes.

However, although Kundera notes that “the novel is more and more in the hands of the mass media” (Kundera, 18), Rushdie’s novels stand out distinctly from his mass media presence. The lofty, academic register of English in which Rushdie writes his novels necessarily narrows his literary audience as compared to the vast audience of those who might read his press statements in the mass media. Especially with the increasing popularity of online news, those reading newspapers with headlines claiming that “Veils suck” would substantially outnumber those who might read *Midnight’s Children*. In *Salman Rushdie and the Third World*, Timothy Brennan criticizes Rushdie for appealing to “the parochial tastes of the Western public” while at the same time censuring his elitism due to his novels’ postmodern aesthetics. Even if Rushdie draws criticism for the supposedly elitist audience of his novels, that audience includes the educated people of the world, not just those of the West. Brennan himself points out that “under conditions of illiteracy and shortages, and
given simply the leisure-time necessary for reading one, the novel has been an elitist and minority form in developing countries when compared to poem, song, television and film” (Brennan, 17-8). In that sense, Rushdie’s audience of elites can process the message of his novel with more grains of salt, so to speak, than can the average person who follows his press statements in the Western news media. Furthermore, given the strongly secular slant of Rushdie’s statements, Rushdie appeals more strongly to a Western, cosmopolitan audience that views itself as “secular”—and therefore “rational” and “modern”—than to Eastern audiences in whose cultures veiling remains prevalent and not necessarily inconsistent with progress or rationality. The novel has become a more truly cosmopolitan form than the sometimes reactionary and sensationalist print media.

**Conclusion**

I believe Brennan correctly discerns that “[the] disparity between Rushdie’s journalism and his fiction rests in the molding of his politics to the demands of form” (Brennan, 99). Because the novel, unlike other forms of print media, does not and cannot seek to establish its sole authority at the expense of other points of view, the religious and cultural politics of *Midnight’s Children* do not take on the quality of secular absolutism that tinges Rushdie’s press statements and his larger role as Third-World spokesperson. Again, in his representations of Islam, Rushdie resembles no other character so much as Cyrus-Dubash-turned-Lord-Khusro-Khusrovand. Lord Khusro’s manipulation of media, although preposterous to Rushdie’s reading audience, mirrors Rushdie’s representations of Islam in the Western media: exaggerated, sensationalist, and fraudulent. The extension of Rushdie’s role as author into that of media celebrity, however, suggests the willingness of the Western media to appoint as spokespersons those whose views justify the political status quo.
Moreover, Rushdie’s celebrity represents the susceptibility of the Western public to images of “authenticity,” such that Rushdie’s claims to nativity (his Muslim heritage) bear greater importance than his apostasy in the public’s perception of what qualifies him to speak about Islam.

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1 Rushdie won the Booker Prize for *Midnight’s Children* in 1981. In 1993, he subsequently won the ‘Booker of the Bookers’, which designated *Midnight’s Children* as the best of the Booker Prize winners of the past 25 years.


7 As “Pakistan” literally means “Land of the Pure”, Rushdie plays on the idea of religious and cultural “Purity”, or homogeneity, as a requirement for Pakistani citizenship.

8 “Purdah” refers to the seclusion of women from the sight of men. The term may also refer to the physical screen, curtain, or veil used for the purpose of seclusion. [purdah. *Oxford English Dictionary Online* (2nd ed.). (accessed: May 26, 2007.)]


10 “Chadar” is an Urdu word for “shawl.” In the context of the Subcontinent, the word refers to the large sheet of material that women wear over their clothes to cover their heads and upper bodies. [chadar. *Oxford English Dictionary Online* (2nd ed.). (accessed: May 26, 2007.)]


Kundera quite vocally defends Rushdie’s *Satanic Verses* in several of his *Testaments Betrayed* (1995). *The Art of the Novel* posits theoretical principles about the genre of the novel that Kundera elaborates upon as particularly relating to Rushdie in *Testaments Betrayed*. I attempt to do the same here, except as applies to *Midnight’s Children* instead of to *The Satanic Verses*.

19 Wagner, “Rushdie: Veils Take Power From Women”.

20 The parallel between the novel’s Ahmed Sinai and Rushdie’s own father represents another instance of the disparity between Rushdie’s fiction and his practice in the media of elevating himself and his family to the status of ideal, enlightened Muslims. In *Midnight’s Children*, Ahmed Sinai desires during his depressive, drunken tirades to rearrange the Qur’an into a linear narrative, rather than the non-linear form of narrative in the standard version of the text (Rushdie, 339). Rushdie parodies this desire in the novel, tingeing it with the lunacy of Ahmed’s alcoholic depression and the ridiculousness of his other far-fetched schemes. However, in the same interview with *The Independent* cited above, Rushdie mentions that his own father had similar intentions with regard to ‘rationalizing’ the Qur’anic narrative. In the interview, then, this scheme takes on the characteristics of ‘rationalism’ and ‘enlightenment’ (Rushdie compares his father to Thomas Jefferson), rather than the ludicrousness associated with Ahmed Sinai. In this manner, the richness of Rushdie’s characterization of Ahmed Sinai transforms outside the novel to mere endorsement of Rushdie’s own personal and political realities. Furthermore, that in the interview Rushdie prescriptively privileges linear narrative over non-linear narrative reinforces Brennan’s criticism of Rushdie’s elitist aesthetics.

21 See Chapter 2.
Disordered Eating, Anxiety, and Written Emotional Disclosure: 
A Prevention.

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Abstract

This study sought to use the written emotional disclosure paradigm to lower anxiety, body dissatisfaction, and negative affect, and ultimately, to lower disordered eating symptomology. Participants were 56 college women prescreened for concerns about their body image or eating habits and randomly assigned to either a written emotional disclosure treatment or to a neutral writing control. Their disordered eating symptomology was measured at a pre-test, at a post-test one week later, and at a one-month follow-up. As predicted, a non-significant trend was found toward lower disordered eating symptomology at the post-test and follow-up for those who participated in the written emotional disclosure treatment than for those who participated in the neutral writing control. Furthermore, the preoccupation measure of disordered eating was significantly correlated with anxiety, body dissatisfaction, and negative affect, revealing that these mediators do play a role in disordered eating. These findings strengthen the link between disordered eating and anxiety and suggest that future preventions for eating disorders may eliminate this anxiety through writing.

Disordered Eating, Anxiety, and Written Emotional Disclosure: A Prevention.

The prevalence of eating disorders, which frequently plague college women, is on the rise. Anorexia nervosa, characterized by a dangerously low body weight and extreme dieting, affects approximately 0.5-1% of women overall in the United States; bulimia nervosa, characterized by over-eating and compensatory behavior such as purging, affects approximately 1-3% of women (Franko & Orosan-Weine, 1998). However, prevalence rates are even higher among college women than in the normal population—in one study, while only 4% of first-year college women had diagnosable eating disorders, 19% exhibited sub-clinical risk factors for disordered eating (Mintz, O’Halloran, Mulholland, & Schneider, 1997). These risk factors, including body-dissatisfaction and negative affect, can lead to emotional eating—an example of a poor coping strategy. Emotional eating occurs when a person uses food to cope with emotions, usually negative emotions. Furthermore, these risk factors often coexist with anxiety, and when this anxiety is left unchecked eating disorders may develop (Keel et al., 2005). Written emotional disclosure may help to eliminate this underlying anxiety and to serve as a positive coping mechanism, thus ameliorating potential risk factors for disordered eating. The current study uses written emotional disclosure as a prevention for eating disorders in a sub-clinical population of college women.

Disordered Eating

The criteria for a diagnosable eating disorder are narrow, and many women fall outside of this standard while still exhibiting disordered eating behavior (Mintz, O’Halloran, Mulholland, & Schneider, 1997). Disordered eating is manifested in different ways. Disordered eating could refer to dieting (Polivy & Herman, 1985), both purging and non-purging compensatory behaviors (such as throwing up food or over-exercising), and overeating (consuming more food than is comfortable or healthy; Stice, 2002). Disordered eating could also refer to emotional eating which is highly correlated with eating disorder pathology, especially among women (Tanofsky et al., 1997).
Disordered eating also accompanies risk factors—such as body dissatisfaction and negative affect—that could later develop into a diagnosable and dangerous eating disorder. For this reason, risk factors for eating disorders need to be identified and managed in prevention programs in order to successfully prevent future eating pathology.

Risk Factors for Disordered Eating

Two predictive risk factors for the development of eating disorders are body dissatisfaction and negative affect (Stice, 2002). Body dissatisfaction often results in dieting in an attempt to control weight and also predicts the onset of bulimic symptoms (Cooley & Toray, 2001). Similarly, negative affect causes people to ignore their feelings of anxiety and to turn to other sources of comfort, such as food. Wertheim et al. (2001) conducted a longitudinal study that revealed that negative affect led to increases in later eating disorder behaviors.

Risk factors, such as body dissatisfaction and negative affect, often accompany poor coping strategies to manage stress and anxiety. Avoidance coping often results in emotional eating and emotional purging, and may be escalated by body dissatisfaction and negative affect, which then creates a vicious cycle of low self-esteem. For example, past research suggests that avoidance coping is positively correlated with disordered eating behavior. In a study of 286 teenage girls, Fryer, Waller, and Kroese (1997) observed that avoidance coping mechanisms led to low self-esteem which in turn led to disturbed eating. More recently, Hasking (2006) observed a positive correlation between non-productive coping strategies and disordered eating behavior, suggesting that non-productive coping strategies should be targeted in prevention programs as well.

Anxiety: An Overlooked Component of Bulimia

One explanation for why these risk factors—body dissatisfaction and negative affect—have such a strong predictive power for future disordered eating is because of the comorbidity between anxiety and eating disorders. The comorbidity of Axis I and Axis II disorders with eating disorders is high, with anxiety and depressive disorders being most prevalent (Milos, Spindler, & Schnyder, 2003). More specifically, Godart et al. (2003) found that 71% of people with bulimia suffered from at least one anxiety disorder, a significant difference from the controls. Furthermore, the two most common anxiety disorders comorbid with bulimia are social phobia (BN-P: 36.8%; BN-NP: 36%) and generalized anxiety disorder (BN-P: 32.6%; BN-NP: 26.3%).

The direction of this relationship between eating disorders and anxiety remains unclear, although there is evidence that a shared underlying diathesis exists. Keel et al. (2005) looked at anxiety rates between mono-zygotic twins discordant for an eating disorder. The twin without the eating disorder was still twice as likely to suffer from an anxiety disorder than other non-eating disorder controls. This suggests that there is a shared genetic transmission between eating disorders and anxiety disorders. Interestingly, women recovered from bulimia were slightly more likely to have an anxiety disorder than those women still suffering from an eating disorder, which further supports the theory of a shared diathesis (Keel, Mitchell, Miller, Davis, & Crow, 2000). Even if a diagnosable anxiety disorder is not found, women who were in recovery for an eating disorder still reported higher levels of anxiety than women in the normal population (Kaye, Bulik, Thornton, Barbarich, & Masters, 2004).
This unchecked anxiety may account for the escalation of risk factors such as body dissatisfaction and negative affect into disordered eating, and later into full-blown eating disorders. This unchecked anxiety is also positively correlated with avoidant coping strategies whereas approach coping strategies are negatively correlated with anxiety (Whatley, Foreman, & Richards, 1998), suggesting that ways to manage anxiety outside of food-related coping mechanisms need to be addressed. Anxiety is a clear component of eating disorder pathology and should not be overlooked as prevention programs are being developed.

**Short-Comings of Eating Disorder Preventions**

Unfortunately, recent efforts to find a reliable prevention for eating disorders have failed to address anxiety—instead, most prevention research focuses on increasing the information about the risks of eating disorders rather than providing high-risk populations with an interactive approach that changes behavior (Franko and Orosan-Weine, 1998). To date, many eating disorder preventions have successfully increased the participants’ knowledge of the eating disorder pathology. However, this strategy has failed to produce long-term resilience to disordered eating behavior (Stice and Shaw, 2004). Carter et al. (1997) integrated information sessions concerning the effects of dieting, the development of eating disorders, society’s pressures to be thin, and the benefits of healthy eating into school curriculum; unfortunately, at the 6-month follow-up, scores on the Eating Disorder Exam (EDE-Q) increased, showing that disordered eating increased. This suggests that behavioral risk factors, such as those defined by Patton et al. (1990) including “attenuated eating symptoms” (such as emotional eating) and general psychological symptoms (such as anxiety), show more promise as a target for future eating disorder prevention (Franko and Orosan-Weine, 1998).

It is time that a prevention is developed that addresses the comorbidity of anxiety and eating disorders in order to give high-risk populations new ways to manage their anxiety without resorting to disordered eating.

**Written Emotional Disclosure as a Positive Coping Mechanism**

Written emotional disclosure has emerged in the last decade as a new therapy that encourages its participants to release negative emotions, events, and concerns through writing. This new therapy has been shown to have positive health benefits, both physically and psychologically. Pennebaker and Susman (1988) found an increase in autonomic nervous system activity when participants inhibited their thoughts or feelings, resulting in a culmination of stress. Written emotional disclosure showed a significant alleviation of this stress. Pennebaker (1997) also used written emotional disclosure as a therapeutic practice and again found promising results in the participants’ mental and physical health. Because of this past research, written emotional disclosure is gaining credibility as a new and robust therapy.

More specifically, because written emotional disclosure focuses on anxiety-producing events, it is a positive coping mechanism. Frisina, Borod, and Lepore (2004) conducted a meta-analysis on the effects of written emotional disclosure on clinical populations. They found that, among the many psychological benefits associated with written emotional disclosure, a reduction in anxiety occurred. Because anxiety goes hand
in hand with disordered eating and leads to poor coping behaviors, written emotional disclosure may serve as a positive coping mechanism to relieve this underlying anxiety.

The risk factors for eating disorders—such as body dissatisfaction and negative affect—would be especially targeted by a program such as written emotional disclosure. Body dissatisfaction creates unnecessary anxiety that leads to poor eating habits as a way to both adjust body weight and to escape the anxiety. Sloan and Marx (2004) found not only a decrease in anxiety throughout the written emotional disclosure program, but robust physical and psychological benefits as well. Negative affect is another risk factor for eating disorders that would be targeted by this program. When anxiety concerning a traumatic event—or simply a stressful lifestyle—is left unaddressed, an individual may develop negative affect and refuse to address their emotions. These emotions could manifest themselves in unhealthy relationships to food. Written emotional disclosure would provide an outlet for these emotions, a decrease in negative affect, and a reduction in eating disorder risk (Smyth, 1998).

Present Study

The purpose of this study is to provide a behavior-oriented prevention for eating disorders. Anxiety is highly comorbid with eating disorders (Keel et al., 2005) and was targeted in this study. Risk factors for eating disorders, such as body dissatisfaction and negative affect, often lead to poor coping mechanisms to manage the anxiety that is often shared with eating disorders (Stice, 2002). Written emotional disclosure will target these risk factors (Norman et al., 2004) by providing a positive behavior to substitute for the negative coping strategy of disordered eating that results from unchecked body dissatisfaction and negative affect.

This study is innovative in that it explores a latent mediator, anxiety. First, anxiety may play the role of mediator between written emotional disclosure and a decrease in disordered eating behaviors. Second, this may occur because of a reduction in other indicators of anxiety, such as negative affect and body dissatisfaction, because these may also contribute to a decrease in eating pathology due to written emotional disclosure. It is predicted that written emotional disclosure will lower anxiety, as measured by anxiety, body dissatisfaction and negative affect, resulting in an overall decrease of disordered eating.

Participants at risk for an eating disorder who were assigned to the written emotional disclosure prevention were predicted to show a reduction in disordered eating when compared to controls. It was also hypothesized that this reduction in disordered eating will accompany a reduction in the latent mediator of anxiety, as indicated by a reduction in anxiety, body dissatisfaction and/or negative affect (see Figure 1).
Methods

Participants

Participants were 56 undergraduate psychology majors at the University of Texas at Austin between the ages of 18 and 21 who were recruited to participate in this study in order to earn partial credit for their PSY 301 introductory course. The ethnicities included 69% Caucasian, 7.5% African American, 7.5% Asian American, 15% Hispanic, and 2% Middle Eastern, and the mean age was 18. These participants completed a brief pre-screening questionnaire to determine that concerns with dieting, body image, or preoccupation with food were present. Two participants’ data were excluded due to changes in medication (N=54). Six participants did not return for follow-up (n=48).

Design

A 2 X 3 mixed factor design was used: 2 (between-subjects treatment) X 3 (within-subjects time). The treatment type had two factors, an experimental written emotional disclosure group and a neutral writing group to serve as the control. The time period had 3 factors, the pre-test, the post-test a week later, and the one-month follow-up. The participants were randomly assigned into one of the two treatment types and remained blind to the type of treatment they received. In light of time constraints, a target of 50 participants was established.

The independent variable was the type of treatment received. The dependent variable was the scores on the Eating Disorder Evaluation (EDE) and the Three-Factor Eating Questionnaire (TFEQ). In order to determine which level of mediation produced the biggest effect, anxiety, body dissatisfaction, and negative affect were measured at the pre-test, post-test, and follow-up as well. Data were analyzed in a 2 (treatment type) X 3 (time) mixed-design analysis of variance measures.

Disordered Eating

The Eating Disorder Evaluation (EDE), a semi-structured psychiatric interview, was used to assess risk factors for eating disorders (Fairburn & Cooper, 1993). To reduce
the length of the interview and to decrease participant burden, only items needed to assess for anorexia nervosa, bulimia nervosa, binge eating, and preoccupation with body shape were included. Items assessing frequency and type of exercise, as well as height and weight, were left off. Strong internal validity ($\alpha=.96$) has been found in other studies that used a streamlined version of this interview (Stice, Fisher, & Martinez, 2004).

The Three-Factor Eating Questionnaire (TFEQ) was also used to measure the risk factors of perceived hunger, disinhibition, and dietary restraint (Stunkard & Messick, 1985). In order to reduce participant burden, a 36-question abbreviated version that only included the true-false items was used. The internal validity on these three scales was also high ($\alpha=.85$, $\alpha=.91$, $\alpha=.92$, respectively).

**Body Dissatisfaction.**

Body dissatisfaction was measured using a shortened version of the Satisfaction and Dissatisfaction with Body Parts Scale (Berscheid, Walster, & Bohrnstedt, 1973). The scale asked participants to rank their level of satisfaction with eight relevant body parts on a five-point scale ranging from 1 = *extremely dissatisfied* to 5 = *extremely satisfied*. This adapted form showed strong internal validity ($\alpha=.94$) and a predictive validity for future bulimic symptoms onset (Stice et al., 2002).

**Negative Affect.**

The Positive and Negative Affects Scale (PANAS) was used to measure negative affect (Watson et al., 1988). The scale asked participants to rank the extent that 24 descriptive items matched their feelings on a five-point scale ranging from 1 = *not at all true* to 5 = *very true*. The internal validity for the positive affect scales and negative affect scales were $\alpha=.91$ and $\alpha=.87$, respectively (Wills et al., 1999).

**Anxiety.**

The State-Trait Anxiety Inventory (STAI) was used to measure general anxiety (Spielberger et al., 1995). In order to emphasize the trait anxiety scales, only the last 20 items were used; they were adapted to request participants to consider their feelings over the past three months (for the pre-test), over the past week (for the post-test), and over the past month (for the follow-up). The scale asked participants to rank the frequency that they felt 20 descriptive items using a four-point scale with 1 = *not at all* to 4 = *very much so*. The internal validity for the trait anxiety ranged was moderate ($\alpha=.65 – \alpha=.86$; Spielberger et al., 1995).

**Procedure**

Participants were recruited from students taking Psy 301 at the University of Texas at Austin; for compensation, they received their required experimental credit hours. Students who responded to questions about dieting, preoccupation with food, and body dissatisfaction on a pre-screening survey were recruited through a follow-up email. Participants must have answered “Yes” to all three questions. All other participants who selected this study as a way to obtain credit hours also completed a similar pre-screening survey to determine the validity of self-reported eating abnormalities. They needed to score a 4 or higher on 2 of the 3 questions in order to participate in the study.
Each participant was given the Body Dissatisfaction, PANAS, STAI, and TFEQ surveys to fill out, followed by the EDE interview. Afterward, the participant was given one of two packets that contained instructions for either the written emotional disclosure group or the neutral writing group along with three writing journals. These packets were assembled in advance, labeled with a numerical identifier, and randomized in blocks of two; these packets were then given to the participants in the order that they there were seen. Both sets of instructions requested that the participant write for 20 minutes a day three times during the week in a quiet, private environment. The interviewer remained blind to group assignment (Norman et al., 2004).

After a week elapsed participants returned their writing packets and completed the Body Dissatisfaction, PANAS, STAI, and TFEQ, as well as the EDE interview. After one month, the participants returned for a final assessment and completed the above series of measures once more.

Results

Written Emotional Disclosure and Disordered Eating—Behavioral Outcome

The overarching hypothesis stated that those who were assigned to the written emotional disclosure group would have less disordered eating symptomology than those assigned to the neutral writing group. The first outcome variable used to measure disordered eating was the behavioral outcome, which indexed the average number of times a participant binged or purged in one week. To examine the relationship between written emotional disclosure and the behavioral outcome, the two writing groups were compared at three time points. A 2 (treatment) X 3 (time) analysis of variance (repeated-measures ANOVA) was conducted. Although no significant interaction was found using a quadratic fit, there was a weak marginal trend ($F = 2.179, p = .147$) revealing that those in the written emotional disclosure group experienced less disordered eating symptomology then the control group as measured by the behavioral outcome (see Figure 2).

![Figure 2](image-url)
This analysis was conducted on the data from the 48 participants who completed all three sessions, with 24 participants in the written emotional disclosure group and 24 participants in the neutral writing group. At the pre-test, post-test, and follow-up, the written emotional disclosure group had means and standard deviations of 1.76 (3.51), .88 (1.80), and .71 (1.21), respectively, and the neutral writing group had means and standard deviations of 1.38 (2.47), 1.54 (2.67), and .71 (1.21), respectively.

However, this ANOVA did not include the data for the six participants who completed both the pre-test and the post-test but not the follow-up. Therefore, a 2 (time) X 2 (treatment) ANOVA was conducted using the 54 participants who completed the pre- and post-test time intervals. Again, no significant interaction was found ($F = 1.251, p = .269$), but a pattern emerged showing that the written emotional disclosure group ($M = 1.07, SD = 1.98$) experienced less disordered symptomology on the behavioral outcome than what the neutral writing group ($M = 1.52, SD = 2.52$) experienced (see Figure 3).

![Figure 3](image.jpg)

Although the interaction was not significant, both the written emotional disclosure group and the neutral writing group were examined separately. A repeated measures ANOVA was conducted on only the written emotional disclosure group ($n = 27$) to explore the effect of time on the behavioral outcome. There was a weak marginal trend in both treatment conditions toward lower instances of binging and purging across time, with the written emotional disclosure group showing a stronger trend toward lower symptomology than the neutral writing control ($F = 2.4, p = .133$).

Using the data from the 54 participants who completed both the pre- and post-tests and the data from the 48 participants who completed the follow-up, a new figure was constructed that shows the change in means on the behavioral outcome at the three time
points: pre-test, post-test, and follow-up. This suggests that while the experimental writing group benefited initially, both groups experienced a non-significant decrease in the behavioral outcome over the following month (see Figure 4).

**Figure 4**

*Changes in Behavior: Pre-Test, Post-Test, and Follow-Up (Revised Version)*

![Graph showing changes in behavior over time.](image)

**Written Emotional Disclosure and Disordered Eating—Preoccupation Outcome**

The second outcome variable measuring disordered eating was the preoccupation outcome, which measured the frequency of negative, intrusive thoughts related to body image and food consumption. Because of the difference in scales between the hunger subscale of the TFEQ and the perception subscales of the EDE, these variables were first converted to z-scores and then collapsed to form the preoccupation outcome. To examine the relationship between written emotional disclosure and the preoccupation outcome, the two writing groups were compared at three time points. A 2 (treatment) X 3 (time) repeated-measures ANOVA was conducted. No significant interaction was found between the two treatment groups at the different time levels ($F = .552, p = .461$).

**Correlations of the Mediators—Post-Test**

Because no significant interaction was found between the treatment groups and the two behavioral outcomes, measuring the strength of mediation was not appropriate. Instead, the correlations between the three mediators (anxiety, negative affect, and body dissatisfaction) and the two outcome variables (behavior and preoccupation) were explored at the post-test and follow-up in order to see if these could potentially function as mediators in future studies.

The correlations reveal that, at the post-test, anxiety, negative affect, and body dissatisfaction were not related to the behavioral outcome. The correlations of these three mediators were related to the preoccupation outcome, although the only significant correlation was between body dissatisfaction and the preoccupation outcome ($r = .487, p < .01$). This suggests that anxiety, negative affect, and body dissatisfaction may function as mediators in the context of a more successful intervention.

However, it is important to note that the groups were non-equivalent at the pre-test. Therefore, the change in anxiety, negative affect, and body dissatisfaction were compared to the change in both the behavioral outcome and the preoccupation outcome.
Again, there was no relationship between change in the mediators and change in the behavioral outcome, but there was a stronger relationship between change in the mediators and change in the preoccupation outcome. The correlation for anxiety showed a positive trend ($r = .217, p = .116$), and both negative affect ($r = .312, p < .05$) and body dissatisfaction ($r = .372, p < .01$) were significantly correlated in the positive direction. The more symptomatic a participant was on the preoccupation outcome, the higher the scores were for the three mediators, anxiety, negative affect, and body dissatisfaction.

**Correlations of the Mediators—Follow-up**

The lack of significant relationships between anxiety, negative affect, body dissatisfaction, and the preoccupation outcome at the post-test supports past research on the written emotional disclosure paradigm: immediately after writing about anxiety and stress, moods do not change and the variables do not shift. However, the effects of written emotional disclosure—including its ability to reduce anxiety—typically appear a few weeks to a month later.

Based on this past research, the correlations between the three mediators—anxiety, negative affect, and body dissatisfaction—were compared to the behavioral and preoccupation outcomes at follow-up. There were no significant relationships between the mediators and the behavioral outcome. However, as predicted there were strong correlations between the three mediators and the preoccupation outcome: for anxiety and the preoccupation outcome $r = .464 (p < .01)$, for the negative affect and preoccupation outcome $r = .464 (p < .01)$, and for the body dissatisfaction and preoccupation outcome $r = .572 (p < .01)$. This suggests that reductions in anxiety correlate with reductions in negative thinking associated with disordered eating.

**Discussion**

Current preventions for eating disorders fail to target the comorbidity between anxiety and eating disorders. This anxiety is important to examine in relation to eating disorders because it may underlie known risk factors, such as body dissatisfaction and negative affect. The present study sought to ameliorate this anxiety through the use of the written emotional disclosure paradigm. Although both conditions experienced a reduction in behavioral disordered eating symptomology, the participants who received the written emotional disclosure treatment experienced a non-significant greater decrease in the number of binges and purges in one week compared to the neutral writing control. However, neither group experienced a decrease in the frequency of weight-gain and body-image concerns. Despite the non-significant results, there is evidence that written emotional disclosure may be influential in the reduction of disordered eating symptomology, and these implications should not be overlooked.

**Success of the Hypotheses**

It was predicted that anxiety would function as a mediator between written emotional disclosure and a reduction in disordered eating symptomology. Previous research has linked written emotional disclosure with reductions in illness, stress, and anxiety (Frisina, Borod, and Lepore, 2004). Furthermore, it was predicted that a reduction in anxiety would accompany a reduction in the risk factors for disordered eating.
eating, such as negative affect and body dissatisfaction (Stice, 2002). However, because no significant results were found between the two writing conditions and the reduction in disordered eating symptomology, tests of mediation were not appropriate and confirmation of these previous studies was not assessed.

It is important, however, to note the success of the correlations. Pennebaker (1997) found that, immediately after participation in a written emotional disclosure treatment, participants actually experienced an increase in anxiety. The reduction in anxiety typically occurred a month later. The current study found support for this past research—at the one-month follow-up, the strength of correlation between the frequency of body and weight concerns with anxiety, body dissatisfaction, and negative affect shows that powerful mediators are being tapped. Anxiety, body dissatisfaction, and negative affect are linked to the preoccupation aspect of disordered eating symptomology (Stice, 2002). Ways to both link and reduce these three components should continue to be explored.

It was also predicted that those who participated in the written emotional disclosure group would experience a reduction in disordered eating symptomology. Although the frequency of body and weight concerns did not change for either group, the average number of binges and purges in one week did. In fact, both the written emotional disclosure group and the neutral writing group experienced an overall trend toward lower instances of binging and purging. This finding is important because it suggests that any writing—not simply writing about stress or anxiety—contributes to a reduction in the behavioral symptoms of disordered eating. Because the mediation of anxiety, body dissatisfaction, and negative affect could not be measured, the reason why writing produced these results remains unclear. A more controlled study that includes a third, non-writing control is needed to measure the strength of this result. Furthermore, a study that includes 3, or even 4, writing sessions would help to flesh out the effect of writing.

Theoretical Implications

The present study found further support for the link between body dissatisfaction, negative affect, and the frequency of body and weight concerns associated with disordered eating. It also revealed that anxiety plays a role in these body and weight concerns as well. Anxiety has been successfully linked with bulimia (Godart et al., 2003), and now it must be explored in other disordered eating behaviors as well. Anxiety may play a predictive role in the frequency of negative and intrusive thoughts that accompany disordered eating behavior, and its importance should not be overlooked.

Furthermore, the fact that both conditions benefited behaviorally from writing supports the written emotional disclosure paradigm. From an observational perspective, the writing of both groups was identical—the journals about the events of a day contained as much anxiety-related material as the journals about stressful concerns. This accounts for why both groups experienced less binging and purging at the one-month follow-up; although without finding any clear mediation, the reason why written emotional disclosure produced this result remains unclear. This finding argues for the application of the written emotional disclosure paradigm to a wide-range of psychological disorders, and possibly those linked with anxiety.
Practical Uses

To date, most preventions for eating disorders have focused on increasing awareness of eating disorders rather than providing high-risk populations with alternative behaviors (Franko and Orosan-Weine, 1998). Written emotional disclosure is a prevention that focuses on behavior—the act of writing may be used as a substitute for unhealthy food behaviors, such as frequent dieting, binging, fasting, or purging. Furthermore, written emotional disclosure is an easy program to implement—high schools and college campuses can initiate programs that promote the benefits of writing, thereby providing an outlet for the anxiety associated with the life changes that accompany the completion of high school. Written emotional disclosure is also cost-effective and time-effective. New staff does not need to be hired or trained, and high-risk populations do not have to spend time listening to lectures. Furthermore, written emotional disclosure is location-independent, meaning that, no matter what situation women may find themselves in, a pen and paper is almost always handy. And lastly, written emotional disclosure could be considered a life-style change—young women will learn to turn to writing instead of food when experiencing anxiety, and this behavior may be sustainable well into their future.

Limitations

Several factors contributed to the non-significance of the results. Due to time and personnel constraints, a small sample of only 56 participants was used. Perhaps, if more participants could be run, sufficient power would be achieved to turn the trend toward lower disordered eating symptomology into statistically significant results.

A floor-effect also obscured the effects of written emotional disclosure on the behavioral outcome. Although the participants were prescreened for concerns about body image and preoccupation with food, they did not represent a clinical population. Many of the participants experienced no behavioral symptoms of disordered eating (no binging or purging), which forced the behavioral outcome to hover close to zero and any movement in this variable hard to detect. If a more clinical population participated in a prevention that included written emotional disclosure, the behavioral outcome may move more drastically.

There was also the confounding variable of the freshman fifteen. The freshman fifteen refers to the fact that many college freshmen gain weight as a result of hormonal and life-style changes. While weight-fluctuation is considered normal, many young women allow this fear to take a disproportionate place of importance in their thoughts, thus contributing to disordered eating. However, after a few months of college life, this concern may fade in importance as other natural stressors, such as school, takes its place. The diminishing fear of the freshman fifteen could account for the reduction in the behavioral measure of disordered eating symptomology as the semester progressed. The present study should be conducted in the spring semester to avoid this confounding variable, or it should incorporate freshman, sophomores, juniors, and seniors.

Lastly, the lack of a distinction between the written emotional disclosure condition and the neutral writing condition eliminated a true control group. A third, non-writing control group needs to be added that would separate the effect of writing in general from the effect of writing about anxiety in particular.
Conclusion

This study found that anxiety and disordered eating symptomology are linked and that written emotional disclosure does seem to have the ability to reduce disordered eating symptomology. New preventions need to be piloted that will continue to take this anxiety into consideration, and written emotional disclosure needs to be applied to other disorders that involve anxiety. Eating disorders are on the rise throughout modern society, and advances in the understanding of this debilitating disorder should continue. If preventions can be found that reduce disordered eating before it reaches clinical levels and written emotional disclosure can become a life-style change, healthier young women will result.

References


Is There Life After Texas Prison?
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What happens when someone is released from a Texas Prison or a Texas State Jail? An inmate released from the Texas Department of Criminal Justice’s (TDCJ) Huntsville Unit is provided a set of clothing, a bus ticket, and a report time for a parole officer. The situation is even worse for those pardoned after a lengthy prison stay. Not only do they have nothing, they have to deal with no assistance from any source (Asquith, 2007). If they have any money it is from their commissary fund in the form of a check, usually less than fifty dollars. This person will have no place to live, no employment, and no transportation beyond a one-way bus ticket to their selected home. If they are fortunate enough to have a commissary fund check it might cost them half its value to cash it. While incarcerated few have the opportunity to learn a marketable skill allowing them to find employment of any kind after release. What vocational training is offered is provided on obsolete equipment and isn’t transferable into the community. TDCJ is one of the largest employers in the State of Texas. A significant percentage of the prison population is employed by Texas Correctional Industries (TCI). Prisoners grow the food, raise the cattle, operate butcher shops, build and maintain most of the equipment used by TDCJ, operate one of the largest canning facilities in the United States, operate significant garment manufacturing facilities, and produce a variety of footwear (Texas Correctional Industries, 2007). Prisoners are also used to train and care for all the horses used throughout the TDCJ system. Inmates are not paid for their labor. Not being paid for their work and inadequate training are major reasons two out of three people released return to prison is less than two years for parole violations (CENTER ON JUVENILE AND CRIMINAL JUSTICE. Texas Tough?, 2007). This paper addresses explanations for the high rate of recidivism in the State of Texas and provides suggestions from academicians, legislators, and former prisoners for reducing the high recidivism rate.

A survey form with 93 questions was prepared for gathering data. Interviews with individuals were conducted using the survey form as a model for questioning respondents. 22 former prisoners were interviewed by the author for this paper. The interviews were conducted from February 16, 2007 to March 10, 2007. A few of the interviews were conducted over the telephone and the rest were conducted in person by the author. The interviews conducted in person were at 5 homeless camps around Austin, Texas. A single interview was conducted in Ojinaga, Chihuahua, Mexico. Telephone interviews were prearranged collect calls to me from payphones around Texas. In-person interviews were conducted at random with ex-prisoners found in homeless camps. In all cases great care was taken to protect the identity and locations of the respondents.

The respondents identified these key issues to reduce recidivism: Usable education and vocational training provided in prison and state jail; Pay inmates for work performed while incarcerated; Provide pre-release employment interviews and provide employment applications; Provide free access to public transportation after release from prison; Provide temporary housing immediately after release from prison or state jail.
The following demographic information for the respondents is derived from the survey forms.

Respondent Level of Education:
- Elementary or no public school education: 1
- High School: 13
- Some College: 7
- College Graduates: 1

Respondents Vocational Training: 9

Texas Workforce Commission Contact (TWC): Of the 22 respondents 6 contacted TWC for assistance finding employment. TWC found employment for 1 of the 6 contacting TWC.

Non-Criminal Employment: 11 of the 22 respondents were employed in the private sector and not engaging in any illegal or criminal activity.

Criminal Employment: 11 of the 22 respondents derived all their income from illegal or criminal activity.

Parole Revocation: 7 of the 22 respondents had at least one parole revocation. 3 of the 22 respondents were in violation of their parole conditions at the time of the interview.

Homeless: 7 of the 22 respondents defined themselves as homeless at the time of the interview. 6 of the 22 respondents defined themselves as temporarily homeless. 9 of the 22 respondents defined themselves as not homeless.

Race:
- Black: 9
- White: 9
- Hispanic: 4

Since August of 2000 Texas has the nation’s largest incarcerated population (CENTER ON JUVENILE AND CRIMINAL JUSTICE. Texas Tough?, 2007). About 3% of the population of Texas is incarcerated or controlled for criminal offenses and about 2% of the population of Texas is involved with law enforcement and corrections. In the fiscal year 2005 TDCJ incarcerated 153,000 offenders in 106 prisons, had 430,000 offenders on probation in 121 Community Supervision and Corrections Departments (CSCD), and 76,000 offenders on parole and mandatory supervision (Sunset Commission, 2007). Texas currently has 659,000 people under the control of TDCJ. There are 229,356 licensed law enforcement personnel in Texas (Texas Commission on Law Enforcement Standards and Education, 2007). TDCJ employs about 38,000 people, of which 23,500 are correctional officers (Sunset Commission. 2007). There are approximately 267,000 people involved in law enforcement and correction. These numbers exclude the employees of the 121 probation and parole offices throughout Texas. The estimated population of Texas in 2005 was 22,859,968 (U.S. Census Bureau, 2007).
Since recidivism is the primary cause of the exploding prison population in Texas it is helpful to understand what recidivism is. Texas defines recidivism as “the number of offenders who are revoked from parole or probation to probation due to violations of law or the terms of supervision” (Sunset Commission, 2007). This expanded supervision results in an increase in recidivism. It is estimated “nearly two-thirds of all reincarcerations in 2000 were for technical violations rather than new convictions” (Maxwell, 2005). It is estimated approximately 30% of those released from prison will return to prison in less than three years. Adding to this is the number of first-time offenders sent to prison for probation violations. The combination of parole and probation revocation accounts for 55% to 60% of annual prison admissions (Sunset Commission, 2007). According to the Sunset Commission (2007) of the Texas Legislature the primary risk factors for recidivism are: Anti-social peer associations, substance abuse, lack of problem solving and self control skills, lack of education and vocational skills, and negative behavior regarding employment.

What does recidivism cost? The daily cost per inmate in prison is $40.00. A court ordered residential treatment center is $68.00 a day (Sunset Commission, 2007). In 2005 Texas had 153,000 inmates with an annual cost of $2.2 Billion. 59,000 prisoners were released from TDCJ in 2002 (Watson, 2004). Of the 59,000 prisoners released in 2002, 40,000 were returned to prison for parole violations at a cost of $600 Million a year (Sunset Commission, 2007). The following chart provides costs based on information found in Texas Legislature Sunset Commission Report (2007):

The Windham School District (2007) is responsible for educating inmates and providing vocational training. “Windham School District provides appropriate educational programs to meet the needs of the eligible offender population, thus reducing recidivism by assisting offenders in becoming productive members of society. Studies show that education and employment reduce recidivism and save tax dollars. According to a study conducted by the Texas Criminal Justice Policy Council (CJPC) in 2000, offenders with higher levels of education have lower recidivism rates, and releasees who are employed have a lower recidivism rate than those not employed.

Many of the offenders in the TDCJ lack the educational background and basic skills necessary for attaining employment upon release. The typical Windham student functions below the sixth grade level” (Windham School District, 2007).

Interviews with respondents reveal the education provided for a High School GED is certainly available and, for those who did not graduate from High School, mandatory. The reality is whether or not an inmate completes the required GED, they will still be released. Windham has a series of courses on social skills, parenting, and reintegration into society. There are courses on how to interview for a job and how to fill out a job application. The value of these various courses is determined by the individual inmate’s use of them. A High School GED issued by the Windham School District is recognized by most potential employers as questionable at best. Usable vocational training providing marketable skills is a primary need identified by the respondents.

Vocational training is provided in office support using computers and software no longer in use by most companies. Computer Aided Design and Computer Aided Manufacturing (CAD/CAM) courses use obsolete equipment and software. The respondents suggest inmates need vocational courses approved by various unions in order for them to become licensed in an appropriate apprentice program. Many of these programs are offered by the Windham School District. The problem identified by most of the respondents is the courses are not offered at all
units in TDCJ. The vocational programs differ from unit to unit and Institutional Division (ID) inmates transfer frequently for several years before reaching a unit they will be for the balance of their sentence. According to the respondents for these programs to be effective there must be consistency, unity, and transferability between TDCJ units.

Inmates provide free labor for working in the fields growing vegetables, preparing meals in the kitchens, general maintenance and cleaning at every unit, and every form of manual labor. Inmates are not paid for these services. In addition Texas Correctional Industries (TCI) is one of the largest users of prison labor in Texas. If TCI were a private corporation it would be one of the top ten employers in the State of Texas. TCI is divided into six divisions: Graphics, Janitorial supplies, Garments/Textiles, Modular office systems, Furniture, and Metal products.

TCI is a component of the TDCJ Manufacturing and Logistics Division. According to the Manufacturing and Logistics Division 2005 Annual Report (Texas Department of Criminal Justice, 2005) had sales of over $78 million.

Within the Manufacturing and Logistics Division is a program called Prison Industry Enhancement Certification Program (PIE). “The PIE Certification program was created by the U.S. Congress in 1979 to encourage states and units of local government to establish employment opportunities for offenders in realistic working environments, pay them wages, and enable them to acquire marketable skills to increase their potential for successful rehabilitation and meaningful employment upon release.” (Texas Department of Criminal Justice, 2005). In 1993 TDCJ implemented the PIE program with 11 inmates and now has expanded the program to about 500 inmates. The average income per inmate in the PIE certification program is $10,500 per year. After all costs and restitution are subtracted the average inmate has earned $3,600 for each year worked for personal use when he/she is released.

Thirty-six states have full-time programs for employing and paying inmates. Some of these programs involve prison manufacturing similar to TCI and inmates are paid from $20.00 a month (Oklahoma Department of Corrections, 2007) to $1.15 an hour (Federal Bureau of Prisons, 1999). Private industry is using prison labor for call centers, assembly, and other low-wage jobs to prevent those jobs from going to other countries (Swartz, 2007). Automobile manufacturers pay inmates about $2.00 an hour for assembly work and some piece work pays as little as $0.21 an hour (Wojdacz, 2007).

Does providing usable vocational training and paying inmates reduce recidivism? According to statistics found in the Manufacturing and Logistics Division 2005 Annual Report (Texas Department of Criminal Justice, 2005) the answer is yes. The PIE program had a successful reentry rate of 81.7%, an employment rate of 90.6%, and the average hourly wage was $10.57. By expanding the PIE system of training and paying inmates, the recidivism rate should be significantly reduced. This conclusion is supported by the results over the last fourteen years. TDCJ needs to implement a program to pay all inmates working throughout TDCJ. TCI is an efficient and profitable organization which can be expanded to include private industries successfully as other states have already done. The Federal Prison Industries, Inc. provides a working model for a successful and profitable system of paying inmates for their labor (Federal Bureau of Prisons, 1999).

A significant issue identified by the respondents is finding a job and how the employment process is handled while still incarcerated and after being released. Project RIO is the primary method used by TDCJ to help offenders find employment. Project RIO (Re-integration of Offenders) is a project of the Texas Workforce Commission (Texas Workforce, 2007). For some respondents the experience with TWC was excellent and helped them find employment and housing in a reasonably short period of time. For others it was a useless exercise and most didn’t
bother using the services. The majority of respondents made the following suggestions for improving employment opportunities after being released from prison or jail.

The first suggestion was providing interviews with potential employers while still incarcerated. This could begin with an employment application provided to a specific employer or group of employers. The potential employers could visit and interview the inmates before they were released. A similar suggestion was having job fairs in the prison or state jail facility. Both prisons and state jails occasionally host religious groups making presentations to the general population. The same security could be applied to a job fair held inside the prison or state jail facility.

For Institutional Division (prison) inmates release takes place from the Huntsville Unit. Inmates released from Huntsville go to all parts of the State of Texas. Respondents suggested having a localized employment resource coordinated by the Texas Workforce Commission. Once and Institutional Division (ID) inmate is notified of an impending parole date a package of information about potential employers with employment applications and specific contact information could be prepared just for that inmate. The inmate could initiate correspondence with potential employers before being transferred to the Huntsville Unit for release. It may also be possible to arrange a pre-release interview. Respondents from both State Jail (SJD) and Institutional Division (ID) thought periodic job fairs would provide a major improvement in finding employment. Some respondents felt there should be a cooperative unit between the parole office and the Texas Workforce Commission. Between the inmate, the parole officer, and the TWC representative the employment effort could be focused and confusion avoided over what the inmate is trying to accomplish. It was also suggested a specific unit or section be created within TWC specifically for those released from TDCJ. TWC already has personnel assigned to assist parolees and the suggestions made by the respondents will improve the interaction between TWC and the parolees. Again the thought of an ex-offender specific job fair held by TWC after release would be an improvement.

Employment is a condition of parole. The parolee has many fees to pay and program fees to pay. In addition there may be restitution and other costs associated with being on parole. The average cost to the respondents interviewed was $120.00 a month. Inability to pay the costs associated with parole is the major cause of parole revocation. Some respondents told me this was low and the actual cost was around $300.00 month. A local Community Supervision and Corrections Department employee said parole and probation costs vary but would not provide a cost range. Without employment it makes no difference how much the parole or probation fee is. If the parolee can’t pay the fee, then they are going back to prison.

Transportation provides a unique problem for respondents. After release they are provided a bus ticket to their choice of any city within the State of Texas, a pair of pants, shirt, and shoes and that’s it. The average parolee usually has between twelve and twenty-four hours to report for the first meeting with a parole officer. The parolee is supposed to be provided the name, address, and telephone number of the assigned parole officer. To provide a sense of this exercise imagine getting off a bus in an unfamiliar town with no money, no map, no cell phone, and find an address in that town in 12 hours or less and get there on-time. This exercise is repeated daily by hundreds of parolees all over Texas and most are successful. Being late for a meeting or missing a meeting with a parole officer is the second major cause for parole revocation.

Respondents suggested either TWC or TDCJ provide a bus pass for towns and cities having public transportation. A thirty day bus pass is less expensive than the estimated $200.00 cost to transport the parolee back to a parole unit (Linthicum & Kelley, 2004). For those towns to small
for public transportation it was suggested the local police department or county Sheriff could provide transportation to meetings with parole officers.

Temporary housing after release is an important issue to the respondents. Several of the respondents live in homeless areas on city streets. Some find shelter through the Salvation Army or through organizations such as the Austin Resource Center for the Homeless (ARCH) and Goodwill. Many parolees end up looking for day labor, panhandling on the streets or petty theft when they must. Associated with temporary housing the respondents thought an inexpensive cell phone would be invaluable for finding employment. Most potential employers require a telephone number for contacting potential employees for interview times. Not having a mailing address or telephone number makes finding employment nearly impossible. In 2002 it was estimated 75% of released offenders would have been revoked back to prison if temporary residential facilities were not available (Sunset Commission, 2007). Currently what few residential facilities remain are for drug and substance abuse parolees. Prior to the reduction of available temporary residential facilities recidivism was about 13% (Sunset Commission, 2007). In 2005 over $100 Million was proposed for a variety of residential facilities, including temporary residential facilities. The funds were not approved. TDCJ’s 2008-2009 Legislative Appropriations Request (LAR) includes $440.6 Million to build three new prisons.

Providing temporary housing for those released from TDCJ for thirty days could reduce recidivism to as little as 8% (Landreville, 1995). Although thirty days may not seem like very much time it is enough time to find some kind of employment and locate minimal housing according to some respondents. The respondents did bring up the additional point of finding an apartment complex or subsidized housing that accepts ex-offenders is difficult. It was suggested that TWC extend its offender fidelity bonding program (Texas Workforce. Project RIO, 2007) to include housing.

The cost of implementing the suggestions made by the respondents and the recommendations of the Legislative Sunset Commission is estimated at about $300 Million a year. Funding the improved educational programs, expanding the PIE program to include paying all inmates for their work, improving employment methodology and implementation, providing temporary public transportation, and temporary housing will potentially reduce the recidivism rate to between 8% and 13%. Using the proven and successful methods of reducing recidivism suggested is well worth the investment. Comparing an annual savings of over $500 Million annually generated by reducing recidivism to the cost of three new prisons at $440.6 Million plus increasing annual incarceration costs provides more than enough fiscal incentive for implementing a proven plan for reducing recidivism. An additional benefit is the addition of over 50,000 productive and tax paying Texas citizens every year. Enhancing the probability of a successful parole program and possibly reducing recidivism even further is a well designed, mission-oriented parole public relations plan. The purpose, function, and utility of a successful parole program must have high community visibility and community participation (Evans, 2006). Implementing such a public relations program will improve the public image of the Texas prison system and improve community acceptance of parolees.

The Texas Legislature recognizes the benefit and need for improvements in a variety of TDCJ programs. The suggestions made by those interviewed are realistic, easily implemented, low-cost, and provide significant savings by reducing the current recidivism rate. Implementing a consistent and transferable trades oriented vocational training program will provide qualified and employable people contributing to the Texas economy. Expanding the already proven Prison Industry Enhancement Certification Program will provide expanded professional training and a
proven work force both as inmates and as tax-paying Texas citizens. Coordinating the existing Project RIO with employer interviews and job fairs conducted inside prisons will increase the number of inmates being employed before being released. Better communications between the parole officers, the Texas Workforce Commission, and the parolee will improve employment opportunities and reduce parole revocations. A low-cost cell phone provides contact with potential employers, TWC, and their parole officer. Providing bus passes to parolees allows them to get to parole officer appointments reliably, expedite employment interviews, and provide transportation to and from their work site. Reinstating the temporary housing program to parolees reduces the possibility of returning to criminal activity while providing a safe place to live while seeking employment. Implementing respondent suggestions should reduce recidivism resulting in saving over $500 Million a year and provides over 50,000 productive Texas citizens every year.
References


Office of Justice Programs. Retrieved February 16, 2007 from the world wide web: http://www.ojp.usdoj.gov/

Oklahoma Department of Corrections. Retrieved March 14, 2007 from the world wide web: http://doc.state.ok.us/newsroom/faq.htm


Texas Commission on Law Enforcement Standards and Education. Retrieved February 17, 2007
from the world wide:
http://www.tcleose.state.tx.us/Public%20Notice/CommissionOverview-Web_9-25-06.doc

Texas Correctional Industries. Retrieved February 17, 2007 from the world wide web: http://www.tci.tdcj.state.tx.us/

Texas Department of Criminal Justice (2005). Manufacturing and Logistics Division, Annual Report

Texas Department of Criminal Justice. Retrieved February 17, 2007 from the world wide web: http://www.tdcj.state.tx.us/

Texas Workforce. Project RIO. Retrieved February 16, 2007 from the world wide web: http://www.twc.state.tx.us/svcs/rio.html


