AUSPEX

Interdisciplinary Journal of Undergraduate Research

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Volume One

Gordon Jones | *Sustainable Agriculture*

Elena J. Wertenbaker | *Sustainable Agriculture*

Abra Johgart | *Archaeology*

Devon Malick | *Anthropology / Gender Studies*

Drew Thilmany | *Sociology*

Lillyanne Tyler Daigle | *Latin American Studies*

Hannah Jacobs | *English*

Editors
Mary Hricik
Janai Kinnebrew
Charlotte Mitchell
Derek Roy

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Cover Image
Madalyn Baldwin

Table of Contents

Editorial

Articles

Features

Editorial
Mary Hricik

Auspex (latin for augur): a diviner and priest of ancient
Rome who interprets the flight patterns of birds

      The diviners of ancient Rome were highly honored, supernatural messengers of the gods. Augurs, in particular, were consulted on all political and public decisions. Augurs read the flight patterns of the birds in an occult practice called "taking the auspices." The will of the gods was divined through this medium, which could influence war, public policy, or the selection of a new king. Favorable or unfavorable auspices could invoke either *pax deorum* (divine peace) or *ira deorum* (divine wrath) on the Roman people. During the creation of Warren Wilson's first interdisciplinary journal of undergraduate research, we have spent months observing and interpreting the work of seven undergraduate researchers, Warren Wilson owls, and have only found favorable auspices.

      For the first volume of the journal, we have made a few choices that reflect our commitment to interdisciplinary studies. Each piece remains in its original style to highlight the subtleties of each academic discipline. In addition, we have arranged the pieces by geographical distance in order to emphasize the range of experiences among Warren Wilson students. We begin with Gordon Jones and Elena Wertenbaker, who study pasture quality and soil carbon content, respectively, on the Warren Wilson College farm. We next move to Morganton, North Carolina, where Abra Joghart examines the remains of Native American structures. In Nashville, Tennessee, Devon Malick spends a semester with the Music City Rollergirls studying gender performativity. Drew Thilmany considers representations of masculinity in comic books, and here geography is a bit harder to determine; we have settled on New York as home to the largest comic publishing houses. Two essays take us outside of the United

States. In Guatemala, Lillyanne Daigle analyzes the failure of the 1996 Peace Accords . Finally, reaching back to England a century ago, Hannah Jacobs looks at gender in the work of Beatrix Potter.

We have found that the journal not only exemplifies undergraduate research in a professional format, but also highlights interests and issues unique to the Warren Wilson community – sustainable living, gender analysis, and cross-cultural understanding. For faculty, *Auspex* provides useful examples of professional, well-written theses. For students, *Auspex* serves as an outlet for personal academic exploration. To the general reader, *Auspex* displays an impressive example of Warren Wilson's academic excellence.

We see *Auspex* as a much-needed opportunity for interdisciplinary discourse on our campus. *Auspex* gives students the chance to explore and engage in campus research outside of their majors. When Natural Science Seminar and Gender Studies theses appear side-by-side, academic magic happens; we begin to probe the interconnections between academic disciplines that ultimately lead to the whole, the liberal arts education. We invite the Warren Wilson community to read *Auspex* with interdisciplinary discourse in mind and to consider the influence of undergraduate research on the important local and global issues the authors present.

The Effects of Winter Grazing Management on Spring Pasture Quality and Composition

Abstract: Tall fescue (*Festuca arundincaea*) is a widely grown forage species in the southeastern United States. With a high autumn growth rate and a waxy cuticle preserving the leaf structure, tall fescue is well suited to be stockpiled for winter grazing. While much is understood about winter grazing of tall fescue pastures, there has been little research looking at the effects of winter grazing on spring regrowth. The objective of this study was to examine the effects of winter grazing on botanical composition of spring pasture on Warren Wilson College Farm. Quadrats of stockpiled pasture at Warren Wilson College containing tall fescue and white clover (*Trifolium repens*) were selected and divided into grazed (n=41) and ungrazed (n=37) treatments. Pastures were rotationally stocked with yearling beef cattle (*Bos taurus*) in January and February 2011. The cattle were exclosed from the ungrazed treatments. The quadrats were harvested in late March 2011 and hand separated into categories: green grass, legumes, and dead material. Mean percent composition of both treatments was determined. Green grass comprised 60.1% and 48.3% of the forage dry matter in the grazed and ungrazed treatments, respectively ($p<0.05$). Legume comprised 21.0% and 4.2% ($p<0.001$) and dead material comprised the 18.9% and 47.5% ($p<0.001$) of the forage dry matter in the grazed and ungrazed treatments, respectively. Because green grass and legumes have higher livestock feeding value than dead material, results of this study suggest that winter grazing can increase the quality of spring pasture.

Gordon Jones*****
Sustainable Agriculture

At Warren Wilson, Gordon majored in Environmental Studies with a concentration in Sustainable Agriculture and worked on the Farm Crew. His work on this research project and experiences during a semester abroad in New Zealand inspired him to continue to study agriculture. He is currently working on a master's degree in grasslands ecology at Virginia Tech. His thesis focuses on soil fertility in cow/calf grazing systems.

Introduction

Tall fescue is a commonly grown, cool-season pasture grass in the southeastern United States. Tall fescue has several characteristics that make it particularly suitable for stockpiling and winter grazing. Grazing stockpiled forage is a cost effective way of feeding beef cattle during the winter (Poore 2000b).

Tall fescue has a waxy cuticle on the leaf surface that protects the tissues from the damage of winter freeze and thaw cycles (Roberts et al. 2009). Because the integrity of its cell walls is preserved through the winter, fewer nutrients are lost. One study showed that, though Kentucky bluegrass (*Poa pratense*) and tall fescue enter winter with similar levels of soluble carbohydrates, tall fescue maintained 14% more soluble carbohydrates than did Kentucky bluegrass (Taylor and Templeton 1976). Higher levels of soluble carbohydrates in forage are valuable in terms of palatability to livestock.

High autumn growth rate and the quality of forage produced also position tall fescue as a species well adapted to winter grazing. During autumn, tall fescue has been shown to yield more dry matter than other cool-season grasses including Kentucky bluegrass, orchardgrass (*Dactyalis glomerata*), and reed canarygrass (*Phalaris arundinacea*) (Archer and Decker 1977; Mays and Wasko 1960; Taylor and Templeton 1976). The forage produced by tall fescue during the winter is of a higher quality than during the summer; it contains lower levels of indigestible fiber (Fales 1986). Tall fescue is typically infected with an endophyte, *Neotyphodium coenophialum*, which produces toxic alkaloids. These alkaloids are deleterious to animal performance. Concentrations of the endophyte are significantly lower during the winter versus summer (Ju et al. 2006).

As forages mature and senesce, their digestibility decreases (Collins and Fritz 2003). Thus, the lignified stems of grasses and dead leaves are considered anti-quality factors in a pasture system. Legumes contribute high levels of

protein to the ruminant diet, tend to be highly digestible, and also fix nitrogen (Belesky et al. 2007). Swards of tall fescue are frequently planted with white clover (*Trifolium repens*). White clover can be added to existing swards through winter frost seeding. Management of grass/clover pastures is known to influence the proportions of grass and clover in a stand (McKenzie et al. 2008).

Research based in the maritime climates of Northern Ireland and New Zealand has investigated the population dynamics of perennial ryegrass (*Lolium perrene*) and white clover pastures. Under high grazing intensity, it has been shown that there is a decrease in the mass of ryegrass tillers and increase in the mass of white clover stolons (Yu et al. 2007). Increasing incident solar radiation on white clover stolons increases branching, node frequency, and dry matter production (Brink 1995). It has been shown that increased grazing intensity of perennial ryegrass and white clover swards during the winter increases the dry matter mass of clover leaf and stem and decreases the mass of grass stem and senescent material in the pasture regrowth the following spring (Holmes et al. 1992).

Little is known of the effects of winter grazing of tall fescue and white clover pastures in terms of spring regrowth. The objective of this study is to examine the effect of winter grazing on the botanical composition of spring pasture on Warren Wilson College Farm.

Methods and Materials

The experiment was conducted on two pastures at Warren Wilson College Farm in western North Carolina (35° 36' 10.88" N, 82° 26' 27.83" W). The soils across the two pastures consist of loamy alluvium and residuum (*Typic Hapuldults, Humic Hapuldults, Aquic Hapuldults*). The average elevation of the site is 650 m above sea level. Precipitation from September 2010 through March 2011 totaled 537 mm, while the 50-year average for that period is 539 mm (Chart 1). The mean temperature for the period

from September 2010 through March 2011 was 8.5°C and the 50-year average for the study period is 8.9°C (Chart 2). The two pastures total 8 ha and had been established in "Kentucky 31" tall fescue and white clover. In September 2010, intensive rotational grazing was halted, and fertilizer, at the rate of 45 kg N ha^{-1}, was applied in the form of $(NH_4)_2SO_4$. The tall fescue and white clover was allowed to accumulate dry matter until late December 2010 when high-density grazing began.

The herd of beef animals (*Bos taurus*) consisted of 25 heifers and 35 steers at approximately 10 months of age and a mean body weight (BW) of 275 kg. The unshrunk liveweights of the cattle used in the study were recorded approximately every 30 days (Chart 6). These 60 animals were allotted two paddocks of approximately 400 m^2 per day. They were moved to new paddocks of stockpiled forage at approximately 8:30 am and 4:30 pm each day. The animals were provided potable water and a beef cattle mineral mix, *ad libitum*.

The experimental period of grazing was from January 19, 2011 to February 7, 2011. On January 22, the forage dry matter mass for the two pastures ranged from 2700 to 3500 kg DM ha^{-1}. Twelve quadrats were selected in every fourth paddock. Selection was based on visually assessed botanical composition; each 0.25 m^2 quadrat contained 90% tall fescue and 10% white clover. Quadrats were randomly assigned a treatment, either grazed or ungrazed. The grazed quadrats were marked with a stake 1 m to the east of the southeastern corner of the quadrat. The ungrazed quadrats were exclosed during the grazing period using reinforcing bar and woven-wire fencing cages secured to the ground with stakes. The exact size of each paddock and duration of each stay was determined by farm management. Quadrats were placed in seven total paddocks, but there was a critical level of damage to four of the ungrazed quadrats and one graze quadrat such that the total number of plots was 79 (grazed: n=41; ungrazed: n=38).

A sample of ungrazed pasture was clipped on March 16, 2011 at ground-level and was sorted into three classes: green grass, legume, and senescent material. These three samples were sent to the North Carolina Department of Agriculture and Consumer Services (Raleigh, NC) for proximate analysis including crude protein (CP), acid detergent fiber (ADF), neutral detergent fiber (NDF), and total digestible nutrients (TDN).

On March 20 and 21, a 0.09 m² plot from all of the quadrats was harvested to ground level. The forage was separated by hand into the same 3 classes: green grass, legume, and senescent material. The samples were dried at 80°C for 18 hours and weighed. The percent composition was determined for each quadrat.

An unpaired t-test and/or a Wilcoxon Mann-Whitney test was used to compare the mean percentage of each forage component per quadrat between the two treatments. The dataset was blocked to explore confounding variables. Means were assessed using ANOVA comparing the two pastures used in the experiment, comparing across the three soil series, comparing across the dates of grazing, and comparing plots in terms of their proximity to the livestock-watering site.

Results

Winter grazing affected the mean composition of spring pasture regrowth. The mean percent green grass was 60.1% for the grazed treatment and 48.3% for the ungrazed treatment ($p < 0.05$) (Chart 3). The mean percent legume was 21.0% for the grazed treatment and 4.2% for the ungrazed treatment ($p < 0.001$) (Chart 4). The mean percent dead material was 18.9% for the grazed treatment and 47.5% for the ungrazed treatment ($p<0.001$) (Chart 5).

No significant differences were found using ANOVA to compare the mean percent of each sward component across several potentially confounding variables ($p < 0.05$). The pasture, soil series, date of grazing, and distance to watering site did not affect the mean pasture composition between

the two treatments.

The results of the proximate analysis of the green grass, legume, and dead material showed increased levels of total digestible nutrients and protein in the green grass and legume as compared with the dead material (Table 1). The percentages of neutral detergent fiber and acid detergent fiber were highest for the dead material, then green grass, and the legume had the lowest levels (Table 1).

The liveweights of the yearlings used in the study increased through the duration. The mean average daily gain (ADG) for the cattle from December 14, 2010 through March 31, 2011 was 0.73 kg (Chart 6).

Discussion

The defoliation of a tall fescue and white clover sward through grazing during the winter improves the quality of the pasture re-growth the following spring. As tall fescue is affected by the freeze and thaw cycles of winter, the proportion of brown to green material increases (Archer and Decker 1977; Burns and Chamblee 2000). Grazing in the late winter removes the brown fraction, thus decreasing the presence of brown material in the spring regrowth. Defoliation also increases red:far red ratio of incident light striking the white clover stolon. The increased proportion of red light stimulates growth of new clover stems and leaves and thus increases the yield of white clover in the sward (Lötscher and Nösberger 1997; Thompson and Harper 1988).

An increased proportion of legume and green grass and decreased proportion of dead material in a pasture sward will increase the feeding quality of the pasture because of the relative levels of protein, digestible fiber, and total digestible nutrients in each sward fraction (Table 1). If consumption is equal, increased levels of total digestible nutrients and protein can increase livestock weight gains. Achieving high rate of gain is important for the profitability of beef production systems.

Winter grazing is a tool that farmers can use to achieve a variety of benefits. Tall fescue systems tend to provide high quality forage throughout the winter. Winter grazing is a lower cost winter feeding method as compared to feeding dry hay (Poore 2000b). Because feed is not located in a single feeding area, manure is distributed across pastures; evenly spread manure provides more consistent benefits to the soil and pasture systems and prevents point-source pollution (Roberts et al. 2009). This study shows that winter grazing can improve the quality of spring pasture regrowth.

	Green Grass (% of DM)	Legume (% of DM)	Dead Material (% of DM)
Total Digestible Nutrients (TDN)	73.87	72.98	57.91
Crude Protein	30.59	31.89	8.80
Neutral Detergent Fiber (NDF)	42.21	17.51	62.97
Acid Detergent Fiber (ADF)	23.40	18.77	43.44

Table 1: Results of proximate analysis of green grass, legume, and dead material sward fractions.

Asheville, NC Precipitation
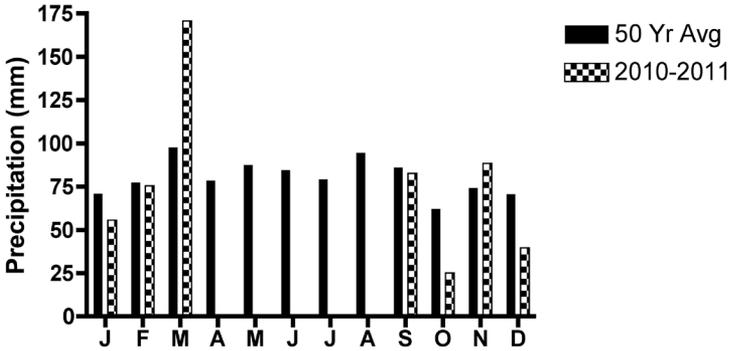
Chart 1: Asheville, North Carolina monthly precipitation

Asheville, NC Temperature
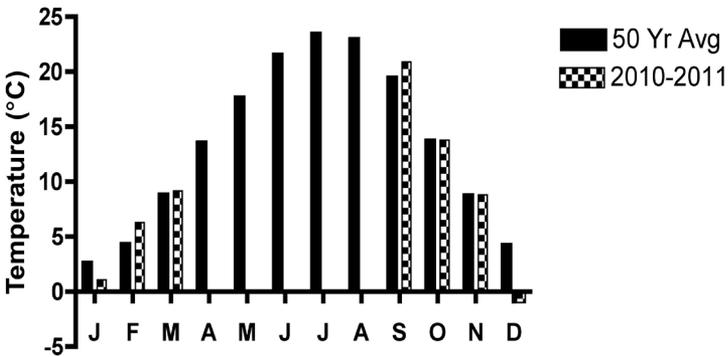
Chart 2: Asheville, North Carolina mean monthly temperature

Calf Weights at WWC Farm
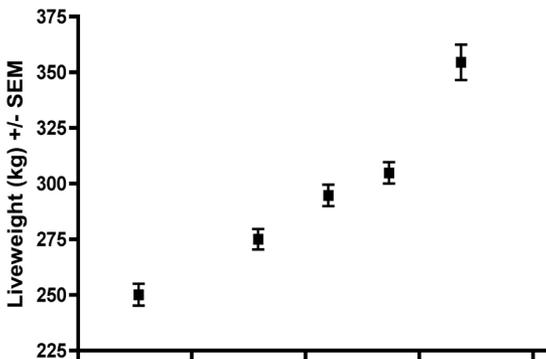


Chart 6: Mean yearling weight

Percent Green Grass
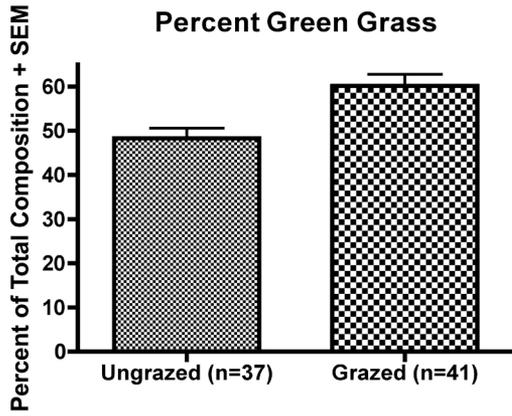
Chart 3: Mean percent green grass composition
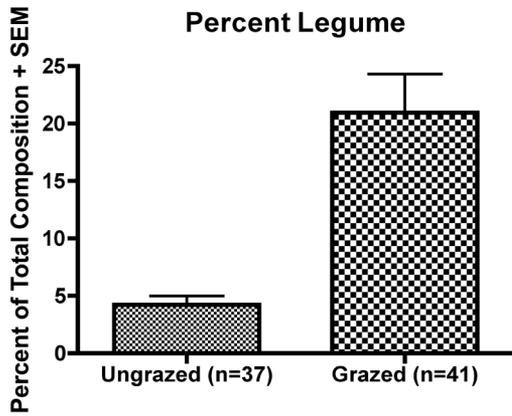
Percent Legume

Chart 4: Mean percent legume composition
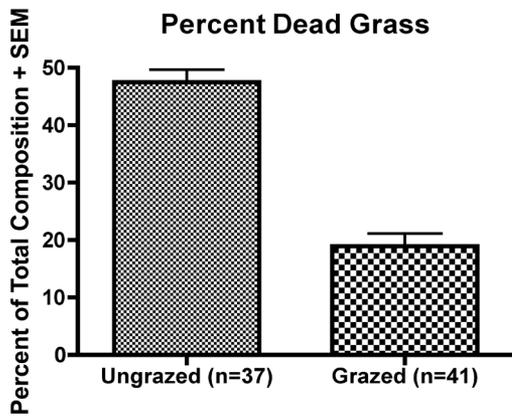
Percent Dead Grass

Chart 5: Mean percent composition dead material

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Appendix 1:
Using a rising plate meter to determine pasture dry matter mass

Knowing the quantity of forage in a pasture is important for managing livestock and ensuring that sufficient quantities of feed are available throughout the year. A rising plate meter is one non-destructive method of assessing pasture mass. There is a linear relationship between the compressed pasture height reading from a plate meter and the dry matter mass of a pasture sward (Hodgson et al. 2008). In some regions of the world with consistent climates, pasture species, and management practices, relationships between compressed height and pasture mass have been established. In the eastern United States, these same factors are sufficiently variable that creating universal equations with reasonable levels of error has not been successful (Sanderson et al. 2001). Site specific equations must be determined to correlate the relationship between compressed pasture height and dry matter pasture mass.

The process of creating an equation to calibrate a rising plate meter is not particularly complicated. An area of pasture of a consistent height is measured with the rising plate meter. Note: the Warren Wilson College plate meter presents results in "clicks," each of which is 0.5 cm. Thirty plonks, depressions of the meter into the stand of forage, should sufficiently reduce the standard deviation of the sample mean. With a plate meter reading established for the area, several (3-5) plots of a known area should be harvested to ground level. These should then be individually oven-dried at 105°C until the sample reaches a constant weight, about 12 hours (Allen et al. 2011). The mean mass of these samples should be converted to the conventional units of pasture mass, either kilograms of dry matter per hectare (kg DM/ha) or pounds of dry matter per acre (lb DM/ac). This process of measuring using the plate meter, harvesting, and drying plots should be repeated on several areas of pasture containing the same species but at differing heights.

With known pasture mass and plate meter readings for several heights of pasture, a linear regression can be formed. This regression will allow one to determine the pasture mass value for any plate meter value along that line.

    An example of a chart used to determine the relationship between compressed height and pasture mass for tall fescue (*Festuca arundincaea*) pastures that had been stockpiled for winter feeding on the Warren Wilson College Farm is shown below (Chart 1):
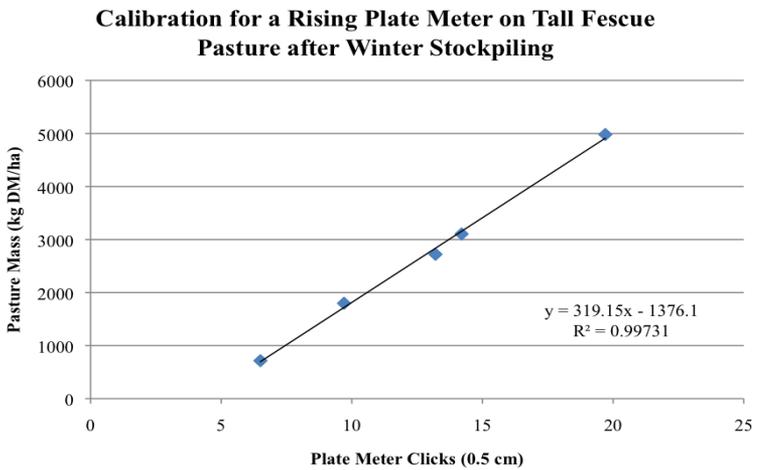
Chart 1: The relationship between the compressed height of tall fescue pastures and their dry matter mass.

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Soil Conditioning Index Predictions of Soil Organic Carbon in the Warren Wilson Rotation

Abstract: Consistent, reliable assessment and prediction of carbon sequestration in different agricultural systems are needed to better understand and manage the potential for these systems to mitigate greenhouse gas emissions. The Soil Conditioning Index (SCI) is a simulation model used by the Natural Resources Conservation Service to predict changes in soil organic carbon storage in response to different soil and crop management practices. The objective was to assess the ability of the SCI to predict soil carbon sequestration in the Warren Wilson College field crop rotation. I measured stored organic carbon at a depth of 15 cm in 8 cultivated fields and compared my results to the predictions of the SCI. Regression analysis found no significant correlation (r^2=0.078, $p>0.05$) between soil organic carbon levels estimated by loss on ignition and SCI scores for all sample locations. Correlations improved when soil samples were grouped by soil texture (r^2=0.522, $p>0.05$). Regression analysis found no significant correlation (r^2=0.075, $p>0.05$) between SCI predicted and observed change in soil organic carbon from 2002 to 2009. My results were consistent with the literature, which suggests that the SCI is less precise as soil carbon content and the complexity of the crop rotation increases and that the SCI does not adequately account for biomass accumulation in the Southeast. The SCI did not predict soil organic carbon sequestration in the Warren Wilson College farm rotation.

Elena J. Wertenbaker*
Sustainable Agriculture

Elena came to Warren Wilson in the fall of 2008 to study Environmental Studies and Sustainable Agriculture. While a student at Warren Wilson, she pursued her interest in agriculture and food systems in several different ways, including working in the campus vegetable operation and completing a soil science research internship at North Carolina State University. She also worked on a project to create the North Carolina Youth Food Council, which was one of five finalists for the Institute for Emerging Issues Prize for Innovation. This past fall she returned to Warren Wilson as a graduate intern in the college garden, where she has specifically focused on educational development for garden crew members. Following this internship she plans to attend a yoga teacher training in San Francisco and continue her education in sustainable food production.

Introduction

The increase in atmospheric carbon storage is one of the major contributors to human caused climate change (IPCC 2007). Carbon is stored in the atmosphere primarily as the greenhouse gases carbon dioxide and methane, which increase the surface temperature of the earth by trapping and re-radiating heat that enters the planet's system from the sun (EPA 2011). Carbon dioxide is the dominant greenhouse gas by concentration and is produced primarily by fossil fuel combustion and other industrial processes (Harding 1998). The atmospheric carbon dioxide concentration mirrors the prevalence of human activities that require fossil fuel combustion, increasing from 280 ppm in 1800 to 379 ppm in 2005 (IPCC 2007). Soils are a large capacity carbon storage reservoir that may make critical contributions to offsetting anthropogenic carbon dioxide emissions.

Carbon storage pools include the atmosphere, surface and deep oceans, the geosphere, the biosphere, and soils (NOAA 2011). Carbon moves between these storage reservoirs through different processes. Carbon moves from the atmosphere to the biosphere by photosynthesis, the process by which plants fix carbon dioxide into their tissues. Carbon also moves from plant and animal bodies into the soil carbon pool and can remain sequestered in that pool for centuries. Soils are the largest terrestrial sink for carbon and collectively contain over 1550 pentagrams of organic carbon (Follett 2001), which is more carbon than is stored in the atmosphere and biosphere combined. Well-managed soils can sequester carbon that would otherwise reside in the atmosphere. Current methods to estimate soil carbon sequestration are limited and inconsistent. There is need for a consistent and reliable assessment of the effect of different management strategies on the soil carbon pool so that we can manage soils to maximize their potential to mitigate climate change (Franzluebbers et al. 2009).

Soil organic carbon (SOC) is a part of the soil organic matter, which includes living organisms and organic

residues in various stages of decomposition (Magdoff and Van Es 2000). Carbon storage is determined by the balance between carbon additions in the form of organic residues and carbon losses in the form of carbon dioxide that is released as residues are broken down (Follett 2001). Generally, 60-80% of added carbon is lost as carbon dioxide, while 15-35% ends up in the long-term storage pool called humus. Humus is biologically stable carbon that cannot be broken down any further and may remain in the soil for centuries (Brady and Weil 2010). Management can affect soil storage by maximizing the amount of added carbon that ends up in long term storage and minimizing the rate at which carbon is lost to the atmosphere as CO_2. Soil disturbances, such as tillage, increase soil aeration and thereby increase the rates of organic matter decomposition and carbon dioxide release. Management systems that minimize soil disturbance typically decrease the rate of carbon loss as carbon dioxide. Practices that add organic matter to the soil, such as cover cropping or adding manure and compost, are likely to increase the quantity of stored carbon because they increase the overall pool of soil organic carbon (Lal 2004).

In order to mitigate climate change using carbon sequestration, we need to predict the consequences of different agricultural management scenarios on carbon storage (Franzluebbers et al. 2009). Such predictions can be made using the Soil Conditioning Index (SCI), a simulation model developed by the Natural Resource Conservation Service (NRCS), which is embedded in the Revised Universal Soil Loss Equation 2 (RUSLE2). The SCI produces a qualitative score between -1 and +1 to represent the expected change over time in soil carbon storage as a result of management. The SCI is calculated based on information about field operations such as tillage, organic matter inputs, and loss of soil through erosion (Franzluebbers et al. 2010). It also considers environmental information such as climate and the physical and chemical characteristics of soils (SQI 2003). Currently, the SCI determines eligibility for NRCS

agriculture conservation programs and is likely to be used in the future to determine carbon credits for carbon trading schemes.

There are a number of pressing issues with the SCI's ability to predict carbon sequestration, especially in sustainably managed systems. Franzluebbers et al. (2009) showed that as the amount of carbon in the soil increases, the sensitivity of the model decreases. In other words, large increases in SOC are represented by small increases in the SCI score. This study concluded that additional research is needed in systems with high SOC. Numerous studies have demonstrated that the SCI is highly sensitive to tillage and perhaps over-represents the effect of tillage on carbon storage (Hubbs et al. 2002; Franzluebbers et al. 2010; Abrahamson et al. 2009). The study by Abrahamson et al. (2009) also concluded that the SCI does not adequately represent the contribution that organic matter inputs make to increase soil organic carbon. Other studies have shown that cover crop growth dynamics in the model do not closely simulate those found in the southeast (Franzluebbers et al. 2009). Sustainable agricultural management is characterized by the same practices that the SCI is less able to simulate, such as the use of cover crops and maximizing organic matter additions to the soil. Prior investigations of the SCI's predictive capacity therefore indicate that the SCI is less able to predict soil carbon dynamics in sustainable systems. Numerous studies have reached the conclusion that additional research is needed in such systems.

The Warren Wilson College farm offers an ideal location to explore the limitations of the SCI. The farm is managed with sustainable practices such as a complex 5-year rotation that includes perennial mixed grass/legume forage and is rotationally grazed by a livestock herd. Following the years in pasture, corn and small grain crops are grown. This system maximizes organic matter additions to the soil in the form of manure, sod root exudates, and winter cover crops. Tillage is also used in the corn and small grain phases of the rotation.

In 2009, Chelsea Gay established that the Warren Wilson farm fields have high levels of organic matter for our region, a characteristic that the literature cites as problematic for determining SCI. Her research created a baseline soil organic matter dataset for the most dominant soil series represented in the farm fields. She found that soil organic matter ranged from 2.5% to 3.8%, corresponding to soil organic carbon levels between 14.4 to 22.0 g SOC/kg soil (Gay 2009). Gay also created a dataset that tracked the change in soil organic matter from 2002 to 2009 in six of the farm fields. She found that the change in soil organic matter ranged from -0.27% to 0.62%, corresponding to a change in soil organic carbon between -1.58 to 3.60 g SOC/kg soil (Gay 2009).

My objectives were therefore to complete the baseline soil organic matter/carbon dataset for the cultivated farm fields by filling in the soil series that were not sampled in 2009 and use the completed dataset to determine if the SCI is able to predict soil organic carbon sequestration in the Warren Wilson rotation.

Methods
Objective 1: Complete the Warren Wilson Farm baseline soil organic carbon dataset

In order to complete the baseline dataset, I first determined which dominant soil series were missing from the existing dataset. I obtained samples from every soil series that occupies more than 10% of one of the cultivated fields on the Warren Wilson College Farm. I determined the extent of the soil series using the NRCS soil web survey and conducted a random walk through the series extent, taking 15-20 six-inch cores from each series that I sampled. I bulked the cores to create a representative sample. Samples were then air dried, ground, and passed through a 2 mm sieve. I analyzed my samples for carbon content using the loss on ignition procedure recommended by Storer et al. (1984) to determine the mass of material that was lost in a 360˚C burn. I compared the loss on ignition data to known soil organic

matter concentrations from Gay (2009) to create a regression curve and calculate organic matter from loss on ignition. The regression equation used was %SOM = (%LOI)0.157 + 0.915 with $r^2 = 0.916$. Between the data collected by Gay and myself, we have observations of soil organic carbon levels in every dominant series represented in the cultivated fields of the Warren Wilson Farm.

Objective 2: Determine if the SCI is able to predict soil organic carbon sequestration in the Warren Wilson rotation
          To compare observed soil carbon with the SCI predictions, I created profiles within the RUSLE2 model to simulate the field histories of each cultivated field from 1996 to 2009. I used records of the crop rotations in each field and interviews with the farm manager (Chase Hubbard, personal communication, 2010) to approximate the associated field operations for each crop in the rotations. I generated an SCI score for each soil series that had been sampled within each cultivated field and performed a linear regression analysis in Microsoft Excel to determine the relationship between the soil conditioning index value and a static observation of SOC that had been made either in 2009 or 2010.   To test the ability of the SCI to simulate change in SOC over time, I generated SCI scores over the 2003 to 2009 period and compared these scores to full field SOC data developed by Gay (2009) using linear regression analysis.
          To more closely investigate the relationship between SCI score, management practices, and soil carbon sequestration, I grouped the data by soil textural class, soil series, field, and number of years with and without tillage. To consider the effect of soil textural class on SCI scores, observations were grouped according to textural class, the mean soil organic carbon level was determined for each group, and the mean SOC was compared to the mean SCI score for that group. I examined the relationship between SOC and SCI score for each soil series in the same way. I considered the effect of field operations on SCI scores in

two ways: by grouping SOC observations within each individual field and by grouping observations by the number of years that fields spent in pasture, corn, or slump grass within the thirteen year rotation.

Results

Regression analysis was conducted on different soil datasets to explore the relationship between observed soil organic carbon and soil conditioning index scores. The r^2 value from the regression between the SCI score and a single observation of SOC was 0.078, indicating that there was no significant relationship present (see Table 2 and Figure 1). Franzluebbers et al. (2010) created a calibration equation for the southeastern U.S. that predicts the rate of carbon sequestration from the SCI score. Because this relationship converts SCI score into a rate of carbon sequestration, the prediction can only be compared to change in observed soil organic carbon over time. I therefore compared the observed change in SOC from 2003-2009 to the predicted change based on the SCI score (see Table 2 and Figure 2). A linear regression generated an r^2 value of 0.075, again indicating that the relationship was not significant.The relationships between observed soil organic carbon and SCI scores when grouped according to soil textural class or soil series were also insignificant (see Table 2).

To examine the relationships between different management scenarios and the SCI score, I grouped SOC data according to the field in which observations were made and the number of years that a field had spent in corn, slump grass, or pasture over the course of the thirteen-year simulation. The relationship between mean SOC in each field and corresponding mean SCI scores was not significant. The relationship between the number of years of corn or slump within the field history and SCI score was also not significant (see Table 2 and Figure 4). Finally, I analyzed the relationship between the number of years a field had been in perennial pasture and the average SCI score for each group

and found an r^2 value of 0.960, which was significant at the 99% confidence interval (see Table 2 and Figure 5).

Discussion

The soil conditioning index is unable to simulate observed soil carbon in the Warren Wilson rotation, either as static measurements or observations changed over time. These results are consistent with the literature and suggest that the SCI would be challenged by several of the factors present in the Warren Wilson rotation (Franzluebbers et al. 2009; Franzluebbers et al. 2010; Hubbs et al. 2002; Abrahamson et al. 2009). My results support Franzluebbers' et al. (2009) conclusion that the SCI is less sensitive in systems with high soil carbon and that further research is needed to investigate the model's deficiencies as soil organic carbon increases. My study, which was conducted in a system with soil organic carbon ranging from 11.16 to 37.0 g SOC/kg soil, provides further support for this conclusion. Additionally, Franzluebbers et al. found that the cover crop growth dynamics in the model are not representative of the growth patterns found in the southeastern U.S. This further complicates the SCI's ability to predict carbon sequestration on the Warren Wilson farm.

The Warren Wilson fields are managed with a complex rotation. The rotation begins with three years of perennial pasture and then proceeds to annual corn and small grain production for two years. The first phase of the rotation builds soil organic matter and sequesters carbon because of the contributions that sod crops make to the soil organic matter pool and the lack of soil disturbance during this phase (Lal 2004; Hutchinson et al. 2007). During the second phase, soil disturbance is frequent, and soil carbon is lost as a result. The use of tillage within the rotation represents another challenge for the SCI simulation. It has been found that the model over-estimates the effect that tillage operations have on the flux of carbon out of the soil storage pool (Hubbs et al. 2002; Franzluebbers et al. 2010;

Abrahamson et al. 2009). Furthermore, Abrahamson et al. (2009) found that the model did not adequately represent the contribution that added carbon residue makes to the total carbon sequestered by the soil. This influences the model's ability to simulate carbon sequestration in the soil building phase of the Warren Wilson rotation.

My results may have been affected by data gaps in the field profile data used to create the simulations. Because of limited records, I was only able to conduct a thirteen-year long simulation, which is shorter than the simulations reported in the literature and may have affected the accuracy of the SCI scores that were generated. Furthermore, certain management practices that are used on the Warren Wilson farm were not available as input options in the model. I estimated the slope input based on the characteristic slope of the series that I was modeling rather than directly measuring it. I also estimated soil organic carbon values from soil organic matter estimates determined by loss on ignition (Storer 1984), which introduced some error into SOC estimates (Goldin 1987).

The results of the studies cited in the literature collectively indicate that the SCI is not able to adequately represent the management scenarios that are commonly used in sustainable agriculture. My experience working with the SCI to simulate the operations used on the Warren Wilson College farm provides further support for this conclusion. The SCI is the most comprehensive soil carbon sequestration model that is currently available and may be used in the future to determine eligibility for carbon trading schemes. Given its importance, it is critical that the model is able to account for the effect of sustainable soil management on soil carbon sequestration and the global carbon cycle as a whole. It is clear that additional research in sustainable agriculture systems with high observed rates of carbon sequestration is needed to modify the SCI so that it is reliable in such systems.

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Appendix A:

Soil Series	Fields observed	Researcher and Date	No. Observations (Series total)
Dillard	Ballfield, Hattie's	Wertenbaker, Fall 2010	7
	Ballfield, Hattie's, Testfield, Dairy Barn	Gay, Fall 2009	
Iotla	Big Bottom, S-field, Testfield, Hattie's	Wertenbaker, Fall 2010	8
	Hattie's, Sawmill, Back Bottom, Ballfield	Gay, Fall 2009	
Statler	Hattie's, Dairy Barn, Ballfield	Wertenbaker, Fall 2010	6
	Hattie's, Dairy Barn, Big Bottom	Gay, Fall 2009	
Rosman	Sawmill, Back Bottom	Wertenbaker, Fall 2010	3
	Big Bottom	Gay, Fall 2009	
Hemphill	Testfield, Dairy Barn, Hattie's	Wertenbaker, Fall 2010	3
Biltmore	Big Bottom, Back Bottom	Wertenbaker, Fall 2010	3
Unison	Ballfield	Wertenbaker, Fall 2010	2

Table 1. Observed series and fields sampled.

Comparison	R^2 value	P value
Single observation of SOC vs. SCI score	0.078	>0.05
Full field change in SOC vs. predicted change in SOC (based on SCI score)	0.075	>0.05
Mean textural class SOC vs. mean textural class SCI	0.522	>0.05
Mean series SOC vs. mean series SCI	0.291	>0.05
Mean field SOC vs. mean field SCI	0.245	>0.05
Mean yrs in pasture SOC vs. mean yrs in pasture SCI	0.960	<0.001
Mean yrs in corn/slump SOC vs. mean yrs in corn/slump SCI	0.505	>0.05

Table 2. R^2 and P values for each comparison investigated.

Appendix B:

SCI vs. Measured SOC

$y = -8.737x + 20.57$
$R^2 = 0.078$

SOC (g / kg soil)

SCI
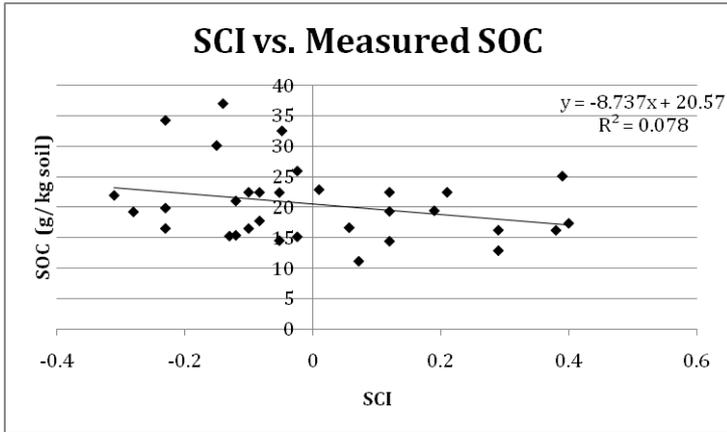
Figure 1. Static observations of soil organic carbon compared to Soil Conditioning Index score. Each point represents one soil series/ field combination.

Predicted vs. Measured Change in SOC over 6 years

$y = 0.773x - 0.609$
$R^2 = 0.075$

Predicted Change (g SOC/kg soil)

Measured Change (g SOC/kg soil)
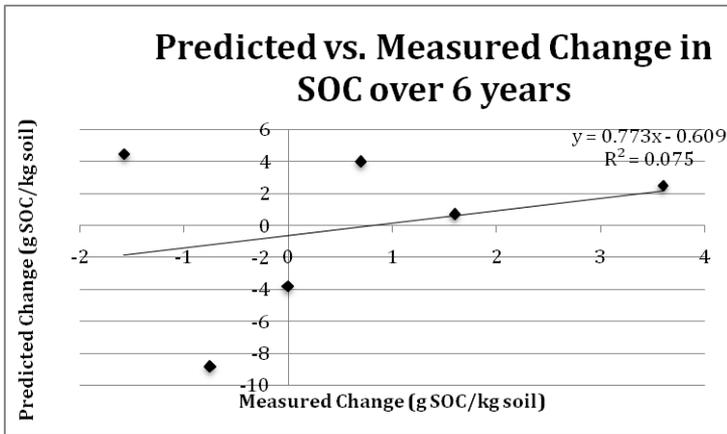
Figure 2. Change in soil organic carbon observed in six full field datasets between 2003 and 2009 compared to predicted change based on SCI score. Each point represents one field.

SCI vs. SOC Sorted by Textural Class

$y = -40.74x + 23.91$
$R^2 = 0.522$
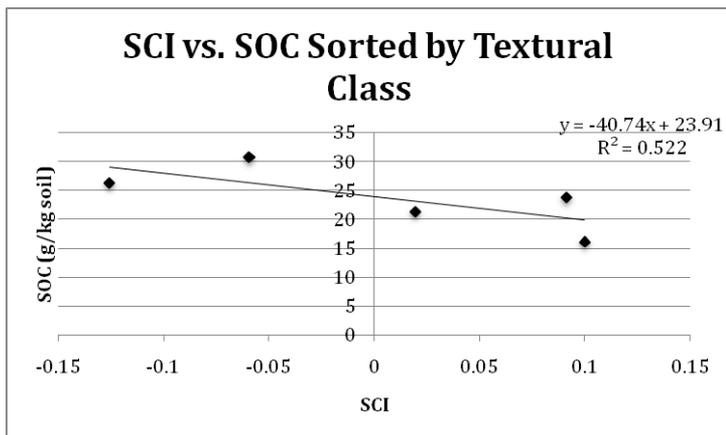
Figure 3. Observed soil organic carbon means of textural class groupings compared to mean SCI scores for each group. Each point represents a textural class, which includes 3-11 observations of SOC.

SCI vs. Years in Corn/Slump

$y = -3.393x + 4.692$
$R^2 = 0.505$
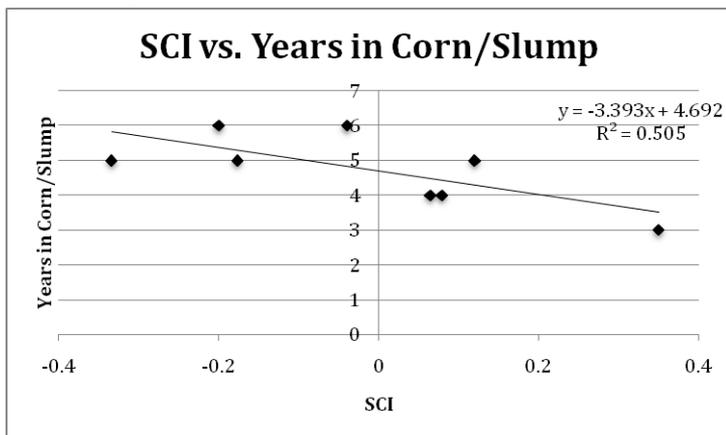
Figure 4. Observed soil organic carbon means of groups based on number of years that a field spent in corn or slump through the rotation compared to mean SCI score for each group. Each point represents 4-12 observations.
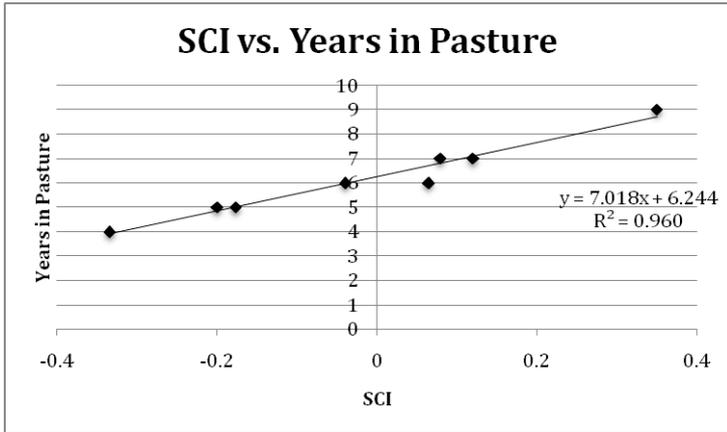
Figure 5. Observed soil organic carbon means of groups based on number of years that a field spent in pasture through the rotation compared to mean SCI score for each group. Each point represents 4-6 observations.
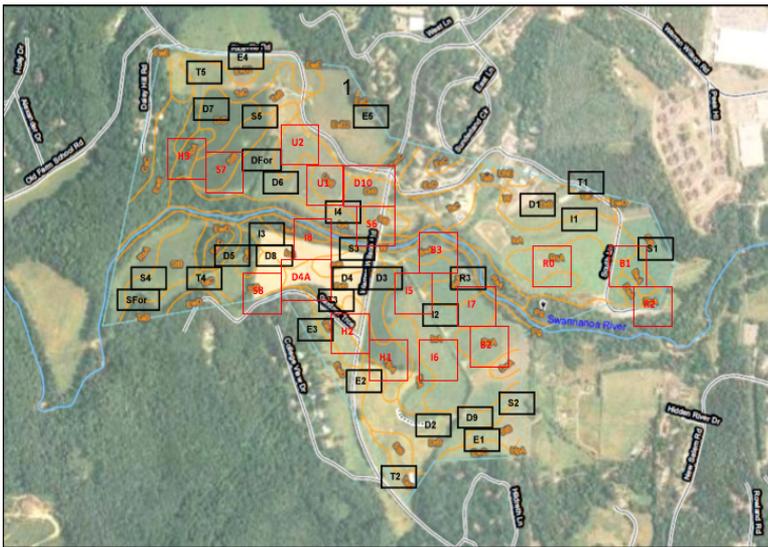
Figure 6. Combined sampling sites map from Gay 2009 (outlined in black) and Wertenbaker 2010 (outlined in red).

Native American and Spanish Ancillary Structures:
An Analysis of Postholes at the Berry Site

Abstract: Postholes are places where wooden architectural posts once stood. They provide primary, secondary, and ancillary structural evidence at archaeology sites, all of which aid archaeologists in reconstructing spatial uses of the past. This study uses posthole analysis to discover structure patterns at the Berry site, a late Mississippian site near Morganton, NC. By sorting postholes based on size and shape and analyzing their distribution on the site map, this study discovers possible Spanish and Native American ancillary structure patterns. The study of square postholes at the site reveals a concentration in the northwest corner of excavations, indicating a possible small Spanish structure between two Spanish domestic structures. Visual evidence shows several privacy fences surrounding the buildings and one possible Native American circular structure around the large pit feature 23.

Abra Johgart*****
Archaeology
Abra was an Anthropology/Sociology major at Warren Wilson, with a concentration in Archaeology. Under the guidance of her advisor, she focused on archaeology in the southeastern U.S. and spent most of her time studying the Berry site. To further her focus, she was also on the archaeology crew for three years and worked at Warren Wilson's archaeology field school at the Berry site and other sites in the area for three summers. Now, she is a graduate intern with the Warren Wilson archaeology crew, working in the archaeology lab full time. Some of her responsibilities include teaching new crew members lab responsibilities, performing duties as a research assistant, supervising fieldwork, and educating the public about archaeology.

Introduction

One thing that all cultures have in common is that they require the utilization of space. The choices that cultures make about how to use that space reflect social organization and systems of meaning for particular cultures. One choice societies have is where and where not to build. On a large scale, this means deciding where to establish a village within a region. On a smaller scale, villagers must decide where to build a house within the village or where to build a fence in relation to the house.

Space in a village is divided into three groups: domestic space, ceremonial space, and public space. Archaeological excavations of public and ceremonial space contain information about the leaders of society: they tell the stories of the great men and women of the time. Excavations of domestic space tell a different story: they contain information about how people lived their everyday lives. They tell not only the stories of the great leaders but also of the common people who made village life possible.

Domestic space includes both the household and the area surrounding the household (Gougeon 2007:140). Throughout North American prehistory, before written records, most domestic activity took place outside of the house, including cooking and craft making. Studies of the architecture of this outdoor domestic space inform us about how people interacted with each other and what activities took place. We can learn about the materials they used, what they used those materials for, and the significance of this human-made domestic environment.

The Berry site in Morganton, North Carolina, is one site where studying outdoor domestic space could aid our understanding of past everyday life, specifically life during the contact period in the interior of the eastern United States. Architecture at the Berry site can provide information about such aspects of life as political organization, economic organization, subsistence, and aesthetic tastes. Previous research has been done on the burnt structures associated

with the Spanish Fort San Juan in order to examine the relationship between Spanish soldiers and native villagers, but research has not yet explored outdoor domestic space between the structures (Beck, Moore, and Rodning 2006; Best and Rodning 2003). Research on these outdoor activity areas is important because the fort is thought to be located on an old section of the village, so there is the possibility of evidence of both native and Spanish activity, much of which took place outside.

This study examines the use of outdoor domestic space at the Berry Site by studying posthole distribution outside of the known structures. This research analyzes the dimensions and characteristics of the postholes and their spatial relationships, and compares these characteristics to postholes in known structures at the Berry site and at other Mississippian and colonial Spanish sites. I explore evidence of Mississippian and Spanish architectural structures via the postholes they left behind. Data from this study contribute to our understanding of interactions between villagers and Spanish soldiers by illuminating characteristics of the built environment and activity areas in the outdoor domestic space of Fort San Juan and Joara during and preceding the time of Spanish contact in 1567.

Research Framework

The Mississippian Period denotes societies in the southeastern United States from around A.D. 1000 to A.D. 1500 and includes societies with similar styles of artifacts, architecture, and settlement patterns (Boudreaux 2007). Important and relevant themes in the literature are Mississippian town designs, architectural designs, and how posthole patterns inform the research of both. Previous research on these topics aided my own research on posthole patterns at the Berry site and helped me understand the meaning of its built environment.

Ethnohistoric and Archaeological Background of the Berry Site

The ethnohistoric and archaeological records provide evidence of both Native American and Spanish occupation at the Berry site. Ethnohistoric documents show that Spanish soldiers traveled through the southeastern United States, including the area where the Berry site is located. During these travels, Spanish soldiers interacted with Native Americans and established permanent and temporary settlements.

One group of Spanish soldiers came from Santa Elena, the capital of sixteenth-century Spanish Florida, established in 1566, located on the southern tip of modern-day Parris Island, South Carolina. Later that year, 250 soldiers arrived in Santa Elena to reinforce the colony. Because Santa Elena was not prepared to feed all of the soldiers, Captain Juan Pardo took half of his men on an exploring expedition of the interior lands. During Pardo's expeditions, he built a total of six forts, with the first and most important being Fort San Juan, located at the native town of Joara (Beck, Moore, and Rodning 2006:5).

The Berry site in the western Piedmont of North Carolina represents the sixteenth-century native Mississippian town of Joara, one of the largest native towns in western North Carolina at that time (Best and Rodning 2003). In 1567, Pardo directed the construction of Spanish Fort San Juan at this location. With the aid of the native villagers, Pardo's soldiers built a five-structure fort immediately north of the town's mound. The five structures were in a circular arrangement around what was possibly a plaza. The plaza area contains both postholes and features, but no identifiable structures. Relations between the villagers and the Spanish soldiers were cooperative in the beginning, as evidenced by native architectural design elements in the Spanish structures, but the fort was short-lived; the native villagers burnt the fort down in 1568 after the Spanish wore out their welcome (Best and Rodning 2003).

The belief that the Berry site is the location of Fort San Juan comes from the architectural style of the five structures and the presence of certain Spanish artifacts that were not typically used as trade items, like lead shot, nails, and Spanish ceramics (Beck, Moore, and Rodning 2006:9). Ethnohistoric documents suggest that domestic structures at Pardo's forts were larger than native domestic structures, but built in a similar style, which fits the description of the structures at the Berry site (Beck, Moore, and Rodning 2006).
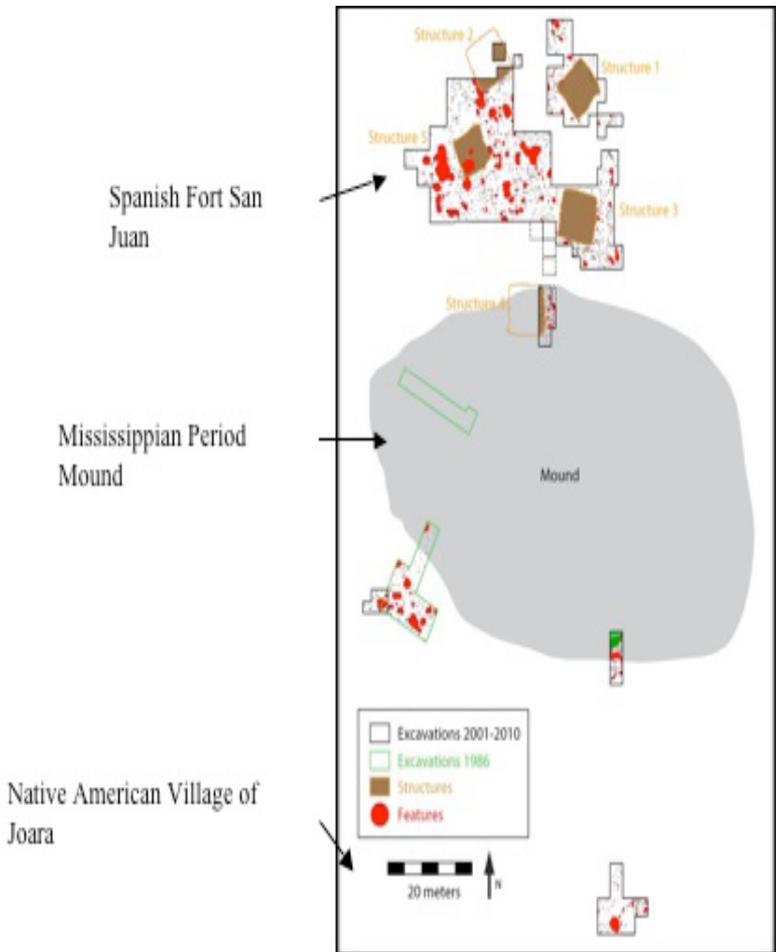
Figure 1: Berry Site Map

The Berry site includes three different occupational areas: the Native American village, located in the south area of the site; the mound, located in the center; and Fort San Juan, in the northernmost area (Figure 1). Upper Creek, a tributary of the upper Catawba River, runs along the east side of the site. Most of the excavations have taken place north of the mound, in the fort area of the site. Distributions of artifacts indicate that the site extends farther south and west than excavations have explored, so the whole extent of Joara has not been discovered. The village may be located both north and south of the mound, with Fort San Juan being built in part of the village, as opposed to outside of the village.

Mississippian Town Design

Mississippian towns usually include five different spatial elements: plazas, mounds, boundaries, gates, and domestic units (Lewis et al. 1998:11, Gougeon 2007:150). Plazas, distinguished by their lack of any built environment, are no less important than the structures that surround them (Gougeon 2007:146, Lewis et al. 1998:11). The term plaza indicates "positive outdoor space," meaning that this space has a definite shape and is partially enclosed by surrounding structures (Gougeon 2007:147). Plazas are areas that have been purposefully left empty, as opposed to "left over space," which is empty space between structures in which it is impractical to build another structure (Gougeon 2007:147). Archaeologically, plazas may be the least interesting part of a town to study because of the lack of artifacts and features, but they represent one of the most important parts of the town. According to Lewis et al., "the majority of social life is acted out on . . . the plaza, not in the structures" (1998:12).

Mounds are ritual structures included in larger Mississippian towns. They are large earthen structures made from dirt taken from borrow pits and are usually built near the plaza. There are two different types of mounds: platform and burial. Platform mounds are more common during the Mississippian period, but they may contain some burials as well as being used as platforms for building (Boudreaux 2007).

Houses of important leaders, religious structures, charnel houses, and public meeting buildings are located on top of platform mounds (Lewis et al. 1998:17).

Towns are divided into different spatial levels by boundaries and gates, which are each different types of locks. A lock is something that restricts public access to private space. A boundary is a lock that covers a large unit of space (i.e., a palisade); a gate is a lock that controls a point of space (i.e., a door) (Lewis et al. 1998:18). Palisades and protective ditches, which were often present in Mississippian towns, separate domestic areas from the outer areas of towns. Gates in the palisades controlled access to towns (Gougeon 2007:146-147, Lewis et al. 1998). Some Mississippian towns have evidence of multiple stages of palisade building; as the towns grew larger, palisades had to expand (Boudreaux 2007:42, Dickens 1978). Boundaries also separate neighborhoods within a town (Lewis et al. 1998:19). The stairs leading up from plaza areas to the top of a mound represent a gate, which restricts access to private space.

Household clusters are the neighborhoods that make up the domestic area of a town. A house cluster is a group of primary and secondary structures around a common patio (Gougeon 2007:148, Steere 2009). Other terms for patio are outdoor activity area and miniplaza (Gougeon 2007), which can be used interchangeably. Household units can include a primary structure, secondary structure, and outdoor activity area (Gougeon 2007:139-140). In the Mississippian town of Joara, this research focuses on the household cluster that forms the Spanish fort, which may include a miniplaza or even a small plaza in the center of the fort. It is unclear whether the fort was included as a neighborhood in the village or separated from the village.

Types of Mississippian Architecture

Mississippian towns include many different types of architecture within their boundaries. Any type of built environment can generally be called a structure, but there

are several different types of structures. Public structures are one type. The other main type of structure is a domestic structure, which includes primary, secondary, and ancillary structures (Gougeon 2007).

Primary structures, also known as winter structures, are domestic structures containing both walls and a roof. They include both circular and rectilinear forms (Boudreaux 2007). Secondary and ancillary structures are often located near primary structures. Secondary structures, sometimes called summer shelters, are open-sided covered structures. They have roofs, but no walls. These buildings may have been originally designed as storage facilities but were later used as a type of domestic structure (Gougeon 2007:140). Ancillary constructions (i.e., privacy fences, outdoor hearths, storage pits, burials, borrow pits, and hide processing racks) were built in the miniplaza, partially enclosed by the primary and secondary structures (Gougeon 2007:147, Dickens 1978). The outdoor domestic space of Fort San Juan probably includes both secondary and ancillary structures but may also include primary and public structures.

Posthole Research

Postholes provide evidence for architecture in archaeology sites. They represent places where wooden posts once stood (i.e., domestic structure, public building, or palisade). They may be a variety of different sizes but are identifiable by darker soil color and different soil type and density than the surrounding soil matrix (Gougeon 2007:141). Postholes represent any kind of human-built environment and can be found in any area of a village. Patterns of postholes show where structures were and their relationships. Post molds (the stain of the post inside the posthole) display even more information: they present evidence for construction techniques such as the size and shape of posts used (Gougeon 2007:141, Lacquement 2007). Postholes can either represent an area where a post was placed and deteriorated in that same area or an area where a

post was placed and later removed (Figure 2). The post mold is created when the post is placed in the posthole, and soil is filled in around the post. If the post deteriorates in the posthole, the post mold, sometimes referred to as the postpipe, may contain wood remains and have a darker, more organic fill than the surrounding posthole. If the post is removed from the posthole before deteriorating, the post mold will be less noticeable and may be completely gone due to the slumping of posthole fill into the post void. If the post was burned in place, sometimes the charred remains of the post will remain in-situ.
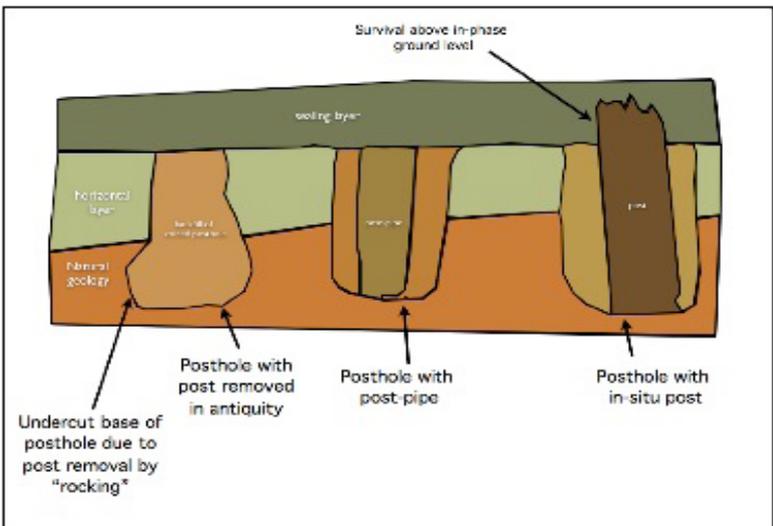
Figure 2: Posthole Diagram
Source: http://en.wikipedia.org/wiki/File:Postholegraphic2.png

Historical accounts provide insight into different ways posts were used and viewed by native people. Native Americans viewed posts as functional (e.g., roof support post) or symbolic (e.g., monumental post). Monumental posts, which are a type of symbolic post, are large posts erected in plazas, similar to flag poles we have today (Boudreaux 2007).

One method of analyzing functional postholes is delineating them in the field (Benyshek et al. 2010). The

47

first step in determining structure patterns is to identify postholes, which requires keeping detailed field records on all cultural, non-cultural, and possibly cultural postholes. South and DePratter (1996:77) distinguish posthole-sized pits at Santa Elena from definite postholes. They do not identify a posthole-sized pit as a posthole unless it is part of an identifiable structural outline or contains a post mold. Once the postholes are recorded on a computerized map, Benyshek et al. (2010) search for symmetry, alignment, and regular post spacing. Schroedl's (1986) team at Chota-Tanasee depends on the presence of hearths and regular post mold spacing of post molds with uniform depth, diameter, and fill that form a closed geometric pattern around the hearth to define structures. In 1974, Schroedl's (1986:82) Chota-Tanasee team stopped excavating post molds, instead using a soil probe to discover post mold depth. Using these simple methods, the researchers are able to locate structure patterns.

Methods

In order to understand the use of space in the miniplazas at the Berry site, I studied the postholes in these areas. I analyzed three dimensions of excavated postholes—size, shape, and color—using a quantitative coding instrument that characterizes postholes. I used my observations to classify postholes based on these dimensions (see below). I obtained data on the postholes from posthole excavation forms, unit excavation forms, feature forms, and maps, which the excavators completed at the time of excavation. Postholes with similar characteristics were analyzed by their location on the site map.

The first of the three dimensions of postholes I examined was size. Posthole size includes measures of diameter and depth. All of these data were recorded on the posthole excavation form, unit form, feature form, or map, depending on the year of excavation. I divided the postholes into the categories of smallest, small, medium, and large based on their diameters. The smallest postholes were less

than 10 centimeters across, small postholes were between 10 and 19 centimeters across, medium postholes were between 20 and 30 centimeters, and large postholes were more than 30 centimeters. Posthole depth was divided into shallowest (less than 10 centimeters deep), shallow (between 10 and 19 centimeters deep), average (between 20 and 40 centimeters deep), and deep (more than 40 centimeters deep).

Identifying the shape of postholes is very important in determining the origin of the postholes. The two shapes it is important to distinguish are circular and square, but in my analysis I divided them into circular, oval, square, rectangular, or irregular because those were the most common descriptors on the excavation forms. Any postholes that did not fit into these categories (e.g., triangular) were treated individually.

In addition to analyzing the shape of excavated postholes, I also analyzed the shape of some unexcavated postholes. Most unexcavated postholes do not include records of any of the information I need for my instrument, which is why I left most of them out of this part of my analysis, but these unexcavated postholes appeared square at the surface and were labeled "possible STP" (possible shovel test pit) on the unit maps. Although these postholes were included on the unit maps as possible STPs, they were excluded from the main site map because excavators assumed these were modern disturbances. I added these unexcavated square disturbances to the map and analyzed them alongside the excavated square postholes.

The third dimension I analyzed was soil color which is recorded on the posthole excavation form or the posthole map. It is based on the excavators' observations, so is not completely reliable. I did not get the exact color of the soil, but I did have the color of the soil relative to the surrounding soil matrix. The soil can be a single color, like dark brown or dark grayish brown, or it can be mottled, containing multiple colors of soil.

Some postholes that have multiple colors of soil contain post molds. Some researchers use the terms "posthole" and "post mold" interchangeably, but there is a subtle difference. A posthole is the hole that was dug to house a post; a post mold is a stain where the post actually stood. This can include burned posts that leave charcoal in the ground where the post once stood. Post molds are identifiable because they have a different color soil stain located inside the posthole stain. Most postholes do not contain post molds, so unless the posthole excavation form or map indicates that a post mold was present, I assumed there was no post mold present.

Using these categories I observed spatial relationships between the postholes on the Berry site map, created in Adobe Illustrator. I separated the postholes into excavated, unexcavated, and possibly cultural (STP) layers and separated the excavated postholes into layers based on depth, diameter, and shape. I was able to view each map layer separately from the other layers, so by creating these different layers, I can view, for example, all of the large excavated postholes without the interference of unexcavated postholes or postholes of different sizes. Postholes with similar depths may have been part of a single structure, so the locations of postholes with similar depths were compared and analyzed for structure patterns. Diameter also contributes to identifying posthole patterns, but is not a good indicator on its own. Although postholes may have been larger than the posts that were placed in them posts of similar sizes probably had postholes of similar sizes, so postholes with similar diameters may indicate structure patterns.

Besides using the information I was able to obtain from my instrument for excavated postholes, I also examined the Berry site map for posthole patterns including all postholes and features. Later, I examined the map including all postholes, but excluding features. The number of postholes at the Berry site has never been recorded, so I do not know how many postholes were included in this part of my research.

All of the data I used came from the north end of the mound, outside of the five burnt structures. The principle investigator (Dr. David Moore) used a purposive sampling method in order to excavate three by three meter units in and around the structures. From these excavated units postholes were also purposively selected to be excavated as teaching tools during the field school. Out of the 173 excavated postholes, I was able to use data from 154 of the postholes. Postholes 4, 35, 1037, 1054, 1055, 1098, 1102, and 1123 were determined to not be postholes after excavation, and I removed them from my analysis and the site map.

Findings and Discussion

I used several different methods of data analysis to determine the significance of the characteristics of the non-structural postholes at the Berry site. First, I compiled all of the data from the posthole excavation forms and determined the maximum depth, maximum diameter, minimum depth, minimum diameter, mean depth, mean diameter, standard deviation of depth, and standard deviation of diameter for all of the non-structural postholes and postholes divided by shape. I gathered comparative data from the postholes in Structures 1 and 5 at the Berry Site as well as from the Spanish site, Santa Elena, and the Cherokee site, Chota-Tanasee. Second, I observed the spatial relationships between the postholes on the Berry site map.

Berry Site Non-Structural Postholes

Of the Berry site's numerous postholes not associated with the five known structures, I found the average depth and diameter of 167 excavated postholes (Table 1). The average depth is 13.176 cm, and the average diameter is 16.733 cm. Depths range from 1.1 cm to 72 cm, and the diameters range from 1.5 cm to 53 cm. After finding the averages of all of the postholes, I divided the postholes based on shape. The average depth of the 39 circular postholes is 14.937 cm, and the average diameter is 20.041 cm. The 16 oval postholes

have an average depth of 17.644 cm and an average diameter of 18.881 cm. The square postholes, of which only 5 have been excavated, have an average depth of 23.6 cm and an average diameter of 31.4 cm.

Table 1

Berry Site Non-Structural Excavated Postholes						
PH ID	# of PHs	Mean Depth (cm)	Standard Deviation of Depth (cm)	Max Depth (cm)	Min Depth (cm)	Mean Diameter (cm)
All	167	13.2	11.0	72	1.1	16.7
Circular	39	14.9	14.4	72	1.5	20.0
Oval	16	17.6	14.2	40	3	18.9
Square	5	23.6	9.4	38	15	31.4

PH ID	Standard Deviation of Diameter (cm)	Max Diameter (cm)	Min Diameter (cm)
All	9.9	53	1.5
Circular	11.5	50	5
Oval	9.9	33	1.5
Square	6.3	40	23

From these averages, square postholes appear to have the greatest depth and diameter of any shape and are 10.424 cm deeper and 14.667 cm wider than the average depth and diameter of all 167 Berry site postholes together. Because the depths of the 167 postholes have such a wide range, the standard deviation for the depths of the postholes is large. The depth of square postholes falls within one standard deviation of the average depth of all postholes, which is an acceptable range, and means that the average depth of square postholes is not significantly different than the average depth of all 167 postholes. The diameter of square postholes falls outside of one standard deviation of the average diameter of all postholes, meaning that the diameter of square

postholes is significantly different than the diameter of all 167 postholes.

Chota-Tanasee Site

The sites of Chota and Tanasee are Overhill Cherokee villages located on the east side of the Little Tennessee River seven miles east-southeast of Vonore, Tennessee. The Overhill settlements are one of three clusters of Cherokee settlements with distinct political, social, economic, and linguistic traits (Schroedl 1986:5). The Overhill Cherokee lived in northern Cherokee country along the Little Tennessee and Tellico Rivers. Chota and Tanasee were two of over sixty Cherokee settlements occupied during the eighteenth century. The Overhill Cherokee may have had contact with Spanish explorers DeSoto and Pardo in the sixteenth century, but there was no sustained contact with Europeans until the Cherokee established trade relationships with the British in the eighteenth century (Schroedl 1986:7).

The Chota-Tanasee site has many different examples of postholes. Schroedl (1986) divides postholes—based on assumed purpose—into post molds in oval pits with posts, post molds in rectangular pits with posts, major roof support postholes and post molds in the townhouses, post molds associated with the townhouses, and post molds associated with the summer pavilion. Because of the limited scope of my study, I only use the data from the summer pavilion and pits with posts (Table 2).

Table 2

Chota-Tanasee Postholes						
PH ID	# of PHs	Mean Depth (cm)	Standard Deviation of Depth (cm)	Max Depth (cm)	Min Depth (cm)	Mean Diameter (cm)
oval pits with posts	19	24.4	12.8	45.7	7.6	17.4
rectangular pits with posts	43	28.7	10.1	45.7	4.6	16.2
summer pavilion	222	14.3	6.7	39.6	3.0	15.9

PH ID	Standard Deviation of Diameter (cm)	Max Diameter (cm)	Min Diameter (cm)
oval pits with posts	5.8	30.5	9
rectangular pits with posts	3.7	30.5	9.1
summer pavilion	5.5	29.0	4.6

At Chota-Tanasee there are 222 post molds associated with the summer pavilion. The average depth is 14.326 cm, and the average diameter is 15.85 cm. The depths of the post molds ranged from 3.048 cm to 39.624 cm, and the diameters ranged from 4.572 to 28.956 cm. The average depth of Chota-Tanasee summer pavilion postholes is only 1.15 cm deeper than the average depth of Berry site postholes, and the average diameter is only 0.883 cm smaller than Berry site postholes, which easily falls within one standard deviation of the average, meaning that Berry site non-structural postholes are similar to eighteenth-century Cherokee summer pavilion postholes.

Santa Elena Site

Santa Elena is a sixteenth-century Spanish site with a variety of different postholes and features. The site has evidence of pre-Spanish Native American occupation, a French fort abandoned two years before the Spanish arrived, Spanish occupation between 1566 and 1587, and twentieth-century Marine Corps occupation. Each period of occupation has distinct features and artifacts associated with it.

There are postholes or posthole-sized pits associated with the pre-Spanish occupation, Spanish occupation, and Marine Corps occupation. The information I use comes from the 1993 excavation of the 38BU162N Block at Santa Elena.

There are ten possible Spanish postholes—Features 32, 33, 48, 49, 52, 68B, 68C, 105, 105A, and 107 (Table 3)—not associated with structures in Block 38BU162N. South and DePratter (1996) call these posthole-size pits because they do not have post molds and have no identifiable structural pattern. Some of these posthole-size pits contain Spanish artifacts (See Table 3); postholes 68B and 68C contain unfired daub that indicates their Spanish origin. The Spanish postholes have blended edges between the posthole fill and surrounding soil matrix. These edges are more distinct than tree holes but less distinct than Marine Corps postholes.

There are three postholes with diameters around three meters, while seven postholes have diameters of less than 60 cm. One posthole does not have diameter or depth data recorded. The three postholes with the largest diameters are outliers and are excluded from the average diameter for Spanish postholes at Santa Elena. The average diameter of the other six postholes is 41.33 cm. The average depth of those same six postholes is 25.5 cm.

Santa Elena postholes have diameters that are 24.597 cm larger than average Berry site postholes and are 12.324 cm deeper. Both of these differences fall outside one standard deviation of the mean, signifying that Santa Elena

postholes are not similar to Berry site postholes. The square, possibly Spanish, postholes at the Berry site are more comparable to Santa Elena postholes. Square Berry site postholes are only 9.93 cm smaller in diameter than Santa Elena postholes, and only 1.9 cm shallower. The diameter still falls outside one standard deviation of the mean, but the depth is within one standard deviation of the mean. This demonstrates that although possible Spanish Berry site postholes are not similar to Santa Elena non-structural postholes, they are more similar in size than general Berry site postholes.

Table 3

Santa Elena Spanish Postholes				
Feature #	Shape	Diameter (cm)	Depth (cm)	Contents
32				Majolica
33		55	44	Earthenware, olive jar
48	Oval	296	12	
49	Circular	27	6	Majolica
52		58	35	
68B		26	7	
68C	Oval	293	26	Olive jar
105	Oval	316	13	Majolica
105A		55	35	Majolica, olive jar
107		27	26	

The Marine Corps postholes—features 53, 92, 93, and 97 (Table 4)—were all square shaped and had a lighter posthole fill color and sharp outlines. The sharp outline between posthole fill and the surrounding soil matrix indicates that these postholes were dug recently, because there has not been much soil leeching. These postholes date to the World War I era when the site was used as a training facility, bombing range, and golf course.

The average diameter of Marine Corps postholes is 36.5 cm, and the depths of the two excavated postholes are 24 and 55 cm. Feature 53 contained wooden post fragments and wire nails, which provide further evidence for its twentieth-century origin.

Table 4

Santa Elena Marine Corps Postholes				
Feature #	Shape	Diameter (cm)	Depth (cm)	Contents
53	Square	43	55	Wire nails
92	Square	18	24	
93	Square	21	Not Excavated	
97	Square	64	Not Excavated	

Berry Site Structures 1 and 5

At the Berry site, archaeologists find similarities as well as differences in posthole styles between the two excavated structures. The two posthole styles are Native American and Spanish postholes. Structure 1 was built of more durable materials and of a more stable architectural design. One of the postholes in this structure contained an upright post, which was the same size as the hole it was in (Figure 3). This is evidence of the native technique of ramming posts into the ground (Beck et al. 2010).

Structure 5, although a similar size to structure 1, was built of less durable materials and in a shallower basin indicating that it may have been built at a later time, and with less Native American help. One of the postholes in this structure had a post mold much smaller than the posthole and had an iron shim wedged in between the post mold and the edge of the posthole (Figure 3). The larger posthole is evidence that the hole was dug with shovels before the post was placed in. Historical documents show that Pardo's soldiers had shovels with them at Fort San Juan, whereas Native Americans would not have used shovels, so this

posthole was probably dug by the Spanish soldiers or by Native Americans with Spanish tools (Beck et al. 2010).
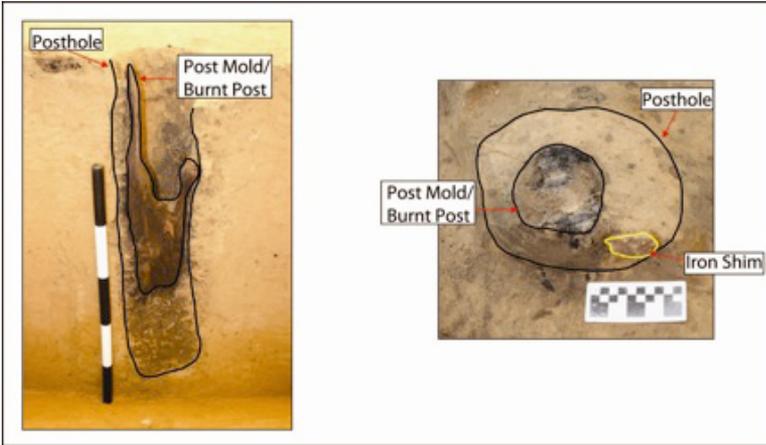
Figure 3: Native Posthole Style (Left) and Spanish Posthole Style (Right)

The structures have exterior wall posts and interior roof support posts. The interior posts have larger diameters and depths than the exterior posts. The average depth of Structure 5 postholes is 27.577 cm, and the average diameter is 20.885 cm. The average depth of Structure 1 postholes is 24.636 cm, and the average diameter is 18.909 cm. The depths of the postholes of both of the structures lie outside one standard deviation of the mean of general Berry site postholes and are significantly larger than the non-structural postholes.

Table 5

			Berry Site Structure Postholes			
PH ID	# of PHs	Mean Depth (cm)	Standard Deviation of Depth (cm)	Max Depth (cm)	Min Depth (cm)	Mean Diameter (cm)
Structure 5	13	27.6	12.9	48	7	20.9
Structure 1	22	24.6	18.8	59	1	18.9

Table 5 Continued

PH ID	Standard Deviation of Diameter (cm)	Max Diameter (cm)	Min Diameter (cm)
Structure 5	7.5	37	10
Structure 1	7.1	34	10

Square Posthole Distribution

I analyzed postholes for differences between Native and Spanish postholes. The shapes of postholes are a good indicator of who created them. Square postholes were most likely not dug by native people because of their lack of square digging implements. Historical records provide evidence that Pardo's soldiers carried shovels with them, so they possessed a greater capability to dig square postholes than did natives (Beck, Moore, Rodning 2010). Not only does the square shape indicate a Spanish posthole, but the depth and size of existing post molds provide evidence as to how the posthole was created. Post molds in Native postholes would have been closer to the size of the postholes because native people used a ramming technique to insert posts rather than digging a posthole to insert a post into (Beck, Moore, Rodning 2010). Square-shaped postholes could also indicate historic postholes of other origins, but since the Berry site already has evidence of Spanish occupation, it is likely that these postholes are Spanish.

There are five excavated square postholes at the Berry site (Table 6) as well as twelve unexcavated square-shaped posthole-sized stains labeled "possible STPs" on the unit maps that were not originally included on the site map.

Table 6

Excavated Square Postholes					
Posthole #	Post Mold	Shape	Diameter (cm)	Depth (cm)	Contents
1109	y	square	34	18.5	potsherds, charcoal
1112	n	square	29	38	charcoal
1156	p	square	23	28	small sherds, pebbles
1176	y	square	31	18.5	biface, postsherds
Fea. 41	n	square	40	15	

After excavating posthole 1109, one of these "possible STPs," during the 2010 field season, we discovered that our initial assumptions—that the mottled square stains were modern archaeological shovel test pits—were wrong: Posthole 1109 had a post mold, which an STP would not have. Unexcavated possible STPs were added to the map and analyzed next to excavated possible STPs and other square postholes.

Posthole 1109 (Figure 4), which was originally thought to be a possible STP because of its square shape and mottled soil color, was excavated, and found to have a solid-colored, circular post mold inside the mottled, square posthole. The circular post mold is 13 cm across and 23 cm deep, while the posthole is 34 cm across and 15.5 cm deep. The post mold is less compact than the surrounding posthole and continues deeper than the posthole. Square posthole 1176 (Figure 4) also contains a circular, less compact post mold, but this post mold does not extend deeper than the posthole. Square posthole 1156 contains a possible square post mold.

There is a concentration of seven possible STPs in the northwest corner of the Berry site between Structures 2 and 5 (Figure 5). Four of these possible STPs, along with two other similarly-sized unexcavated postholes, appear to form the outline of a small structure. A fifth possible STP is located directly in the center of this posthole pattern. There are several other postholes around the border

of the possible structure. Due to the square shape of these postholes it is likely that this is a Spanish structure associated with one or both of the nearby Spanish domestic structures.
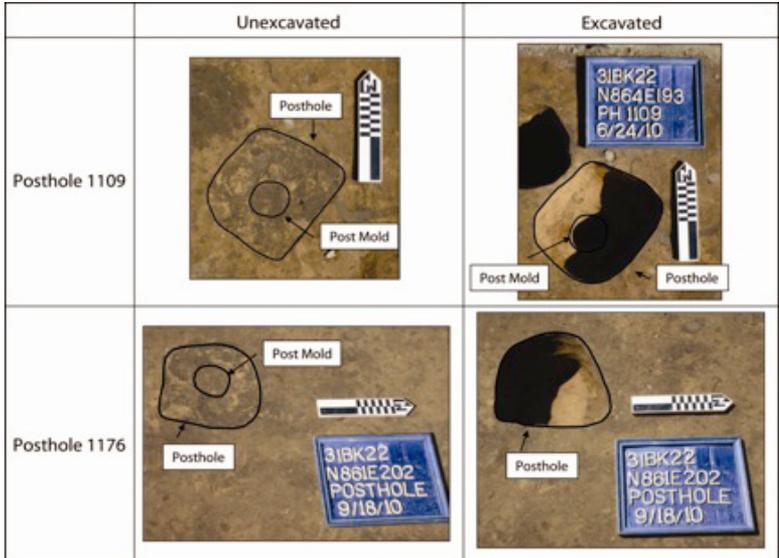
Figure 4: Postholes 1109 and 1176 Before and After Excavation
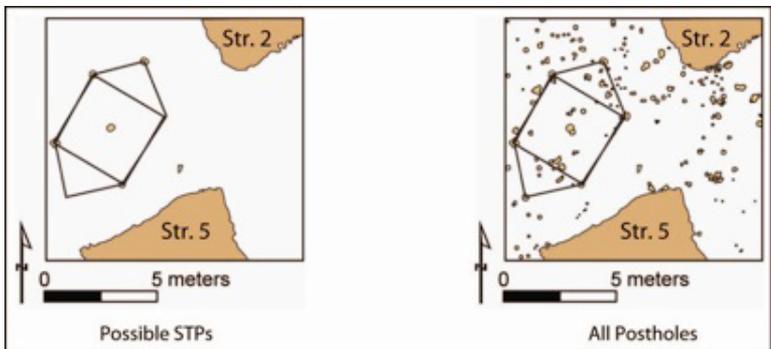
Figure 5: Possible Spanish Structure in NW Corner

A second concentration of six possible STPs and square postholes (Figure 6) is located in the southern area north of the mound, between Structures 3 and 5. This pattern is slightly larger than the pattern found in the northwest corner of the site and is not in as close proximity to a domestic structure. Three of the square postholes in this pattern have been excavated.

This possible Spanish structure intrudes into the possible Native structure around feature 23, indicating that these two structures were not in use at the same time (Figure 6). Neither the Native structure, nor feature 23, was in use during the time of Spanish occupation. Further evidence that the Spanish structure was built after the feature 23 structure is that one of the postholes in the Spanish structure intrudes into feature 23. This posthole is visible at the top of feature 23, indicating that the pit had been filled in prior to the time the posthole was dug.
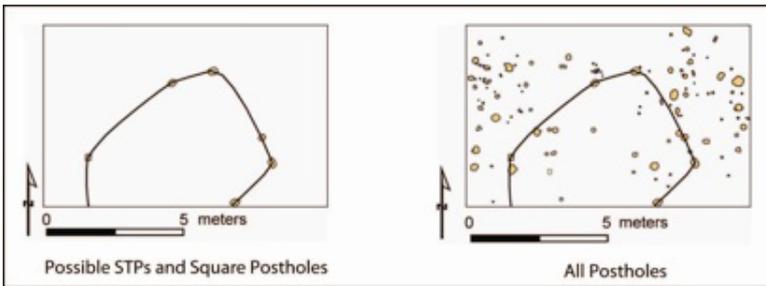
Figure 6: Possible Spanish Structure in South Area
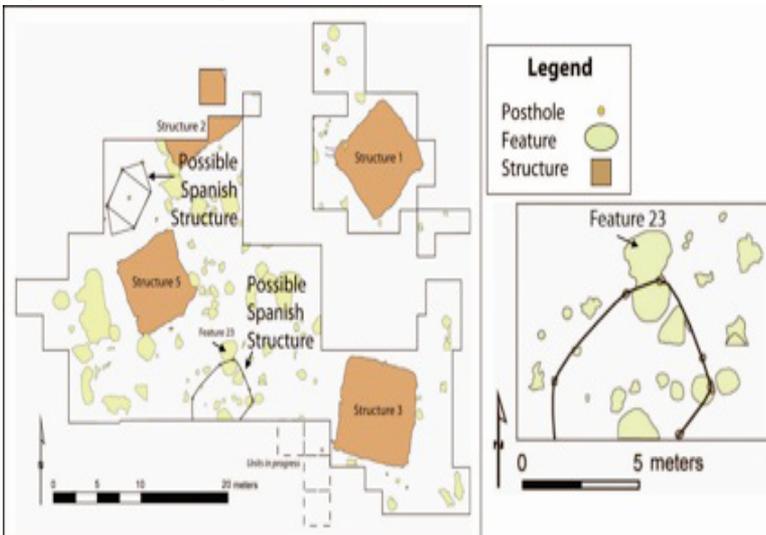
Figure 7: South Spanish Structure Intrudes into Feature 23

Another example of sixteenth-century Spanish architecture is found at San Luis in northern Florida (Scarry and McEwan 1995). Excavations at this Apalachee site

found evidence of several Spanish structures, including small structures associated with larger domestic structures. The earliest Spanish domestic structure found at the site had an associated detached building that could have been a storage room or hen house. There were also activity areas around these Spanish buildings that included animal pens. Evidence shows that Spanish houses, like Native American houses, were organized around a patio and had associated corrals, yards, or other activity areas (Scarry and McEwan 1995). Based on this evidence, I suggest that these small possible Spanish structures at the Berry site are storage structures for the domestic Spanish structures.

Privacy Fences

By studying patterns of all the postholes, both excavated and unexcavated, I connected many lines of small postholes. There are five straight lines of postholes that do not appear to be part of larger structures (Figure 8). Two of the lines appear to curve at a right angle but do not continue into a complete roofed structure. Four of these appear to be privacy fences running parallel to the walls of the structures of the Spanish fort. The privacy fences around three sides of Structure 5 are about two meters from the structure walls. The fence by Structure 3 is only about one meter from the eastern wall. The other three posthole lines not associated with structures could be part of unidentified ancillary structures in the miniplaza.

Because these privacy fences are associated with the Spanish structures, I assume these were built during the time of Spanish occupation. Although none of the postholes surrounding the structures have been excavated, the shapes of the postholes are still illustrated on the site map, even though I do not have data for their depths or diameters. None of these postholes appear to have a square shape, which indicates that these fences were probably built by Native Americans when they built Structure 5.
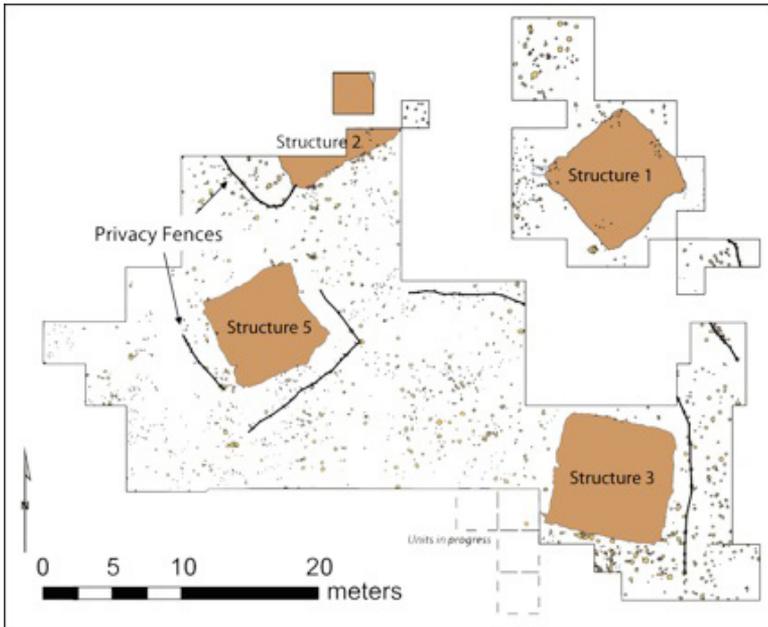
Figure 8: Berry Site Privacy Fences

Conclusions

After examining the postholes at the Berry site, there is clear evidence that there are more structures at the site than there first appear to be. These structures are not as apparent as the Spanish domestic structures because they were not burned or semisubterranean, so there is no evidence of soil discoloration from burning or burnt posts, and they are much smaller. There is evidence of both Native American and Spanish postholes styles and evidence of both pre-Spanish Native American architecture and Spanish architecture in the fort area of the Berry site. I found evidence of two possible Spanish structures and several privacy fences around the Spanish domestic structures. The postholes at the Berry site most closely resemble the postholes at the Cherokee site Chota-Tanasee, but the possible Spanish postholes at the Berry site resemble the postholes at Santa Elena.

From these findings I can infer a little about Fort San Juan and about the area before the fort was built. The Native American style postholes in this area, along with the

possible pit with posts, show either Cherokee influence or similar architectural development between the Cherokee and Native Americans at the Berry site. The privacy fences and possible Spanish storage structures further emphasize the domestic nature of the structures at Fort San Juan.

Limitations and Delimitations

The results from my data apply to the area of the Berry Site thought to be the Spanish Fort San Juan, which is also the native Mississippian village of Joara. The posthole patterns and styles I find at Joara can be compared to other Mississippian sites, and any postholes I identify as Spanish can be compared to other contact period Spanish sites on the east coast of the United States.

The main limitation of my research was the small number of excavated postholes. Most of the excavated postholes are in the north area of the site, which is the fort area. Because only a portion of the postholes in this area have been uncovered, and even fewer have been excavated, identifying structure patterns is difficult. When attempting to discover patterns throughout an area, it is impossible to use a sample. In order to complete my research, it is necessary for all, or most, of the postholes in the fort area to be excavated. Another limitation of this sample is that I cannot compare the postholes in this area with postholes in other areas of the site, so it is impossible to determine if the patterns I find are representative of the whole site.

Because of my small sample of excavated postholes, I was not able to utilize my posthole instrument to the extent that I wanted. I used the data I collected with this instrument to compare Berry site postholes with postholes at only two other sites, but I was not able to use much of this data to analyze the distribution of different types of postholes throughout the Berry site map because the sample had such a small distribution.

Instead, I studied the map with all of the excavated and unexcavated postholes on it. Although I did get results

from this method, the only way to check the accuracy of these results is to do a more in-depth analysis. Finding posthole patterns on a map full of postholes is similar to finding constellations in the stars: Using one's imagination, it is possible to find any number of patterns that do not actually represent structures.

In addition, field school students excavated the postholes, which could create a possible nonsampling error. The field school setting also leads to inconsistent data because a different person excavated each posthole.

Questions For Future Research

Future researchers need to finish excavating the postholes at the Berry site in order to identify posthole patterns based on the depth of the postholes. Although I attempted this in my research, the postholes in only a small area of the site had been excavated, so I was not able to identify any patterns using this method. After all of the postholes at the Berry site are excavated, including postholes in all areas of the site, postholes in different areas should be compared to discover if different areas were used for different purposes or during different times. Postholes in the north area of the site might have more Spanish or Cherokee influence than postholes in other areas of the site.

Further research can also be done in the areas around the possible Spanish structures to determine the purpose of these structures. More in-depth research needs to be done on the square postholes at the Berry site. Although I have been calling these Spanish postholes, it is possible that they represent other types of historical structures. From my research of Santa Elena, I discovered that the Spanish postholes at that site do not have a square shape, but the postholes from the Marine Corps period do. More research needs to be done to determine if the square postholes at the Berry site are actually Spanish or are more modern historic postholes.

Significance of Study

This study provides information regarding the usage of space at the Berry site, specifically in and around Fort San Juan. Posthole patterns at the Berry site indicate various types of structures and provide understanding of the built environment. Understanding the built environment at the Berry site is important because it provides insights into the interactions that took place among the people living there, including interactions between Native Americans and Spanish soldiers. My research provides evidence of architectural structures of Fort San Juan and pre-Spanish Native American architecture, and contributes to a large body of research on site structure and contact situations. It adds to the broad research about both Mississippian settlements and Spanish contact sites, as well as providing specific data about the structure of the Berry site.

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"This Isn't Your Parents' Derby":
How Women's Flat Track Derby Is Challenging Hegemonic Sport

Abstract: Although roller derby in the United States operates under the patriarchal institution of sports, woman-only teams manage their own leagues with very limited male involvement, except for the occasional male coach, sponsor, or referee. In this woman-dominated space, women are free to create identities unconstrained by the dichotomies of gender performativity that are so often seen in athletics (Eng 2006; Finley 2010; Griffin 1992; Hall 1998). Using three months of field research among the Music City Rollergirls of Nashville, Tennessee, I deconstruct the image of the rollergirl and reveal how emerging standardizations of the sport affect identity expression among these athletes.

Devon Malick*
Anthropology / Gender Studies

Devon Malick is currently a Warren Wilson College student pursuing a degree in Sociology. Originally hailing from Nashville, Tennessee, she returned in January to research third wave feminist reactionaries, the Nashville Rollergirls, and to chase her interests in women's sports and skating puns. After graduating in May, Devon plans to pursue a graduate degree in Social Work. She hopes to continue to work with TRUEPUNKROCKSOULCRUSADERS, like the Nashville Rollergirls, throughout her professional and personal life, never forgetting the importance of community fellowship in enacting social change. She would also like to dedicate her past and future research to her cat and friend, Sacco Potatoes, who has since passed away.

Introduction

Women's flat track derby, or roller derby, is not a typical sport. In the United States, the word athlete generates images of the male in uniform, arming himself as if for battle with helmets, protective pads, and cleats. He annihilates his opponents and basks in the glory and adoration of his feminine fans. The image of a female athlete is the woman on the sidelines in sexualized costumes or shrunken uniforms participating in an alternative, often socially inferior, form of male sports (women's basketball, soccer, softball, etc.). This illustration of the American athlete is a direct reflection of the hypermasculinity that exists within athletics and is often inflated to appeal to the general public. Yet, in roller derby, women express both hypermasculinity and overt femininity, which directly challenges the hegemonic masculinity that exists within sports culture.

For many women athletes, this hegemonic masculinity poses a daunting problem. Hegemonic expectations of femininity direct women's gender roles to a subaltern position; women are expected to exhibit complacency, quietude, and physical inferiority to men. The realm of sports has little room for these subordinate social positions (Markula 2003; Purdom 2009; Thorpe 2009). Athletes are expected to be high-energy, communicative, loud, strong, muscular, and take on positions of leadership. Because these aspects of sports are contrary to a woman's expected gender performance, women lose power within the sphere of athletics if they enact their feminine gender (Thorpe 2009). Women's flat track derby athletes increase their social power within the realm of athletics by portraying both hypermasculinity and hyperfemininity in exaggerated forms of spectacle.

Through the use of what social theorist Mikhail Bakhtin refers to as the carnivalesque, along with Judith Butler's foundational work on gender performativity, I demonstrate how these women in roller derby create spaces where they can subliminally and overtly rebel against gendered sport expectations that confine their expressions

of personal identity and true athleticism. Rollergirls wear sexualized costumes, create humorous monikers, and enact gendered sports taboos in order to challenge social norms and reveal the androcentrism that exists in sports culture. However, the parodic and carnivalesque spaces created in the name of rebellion have proven to be ineffective in revolutionizing women's ability to be seen as serious athletes by larger society. As derby reaches its ten-year anniversary, many teams, including the Nashville Rollergirls, are decreasing their use of spectacle and focusing on the professionalism of the sport. With the waning of this underlying rebellion comes a transformation in the way women's roles in derby are defined and how sexuality is accepted in institutionalized sports. The shift in roller derby raises broader theoretical questions concerning a woman's ability to simultaneously play with her identity and be taken seriously by society. The women of the Nashville Rollergirls draw in spectators with their carnivalesque images of the exaggerated, sexualized, and masculinized woman, but also demand public recognition as a serious sport with their athletic ability.

Method

The Nashville Music City Rollergirls is a Women's Flat Track Derby Association (WFTDA)-certified roller derby team that has two sub-teams: the Music City All-Stars (the A-team) and the Music City Brawl-Stars (the B-team). There are twenty women on the All-Stars and twenty-six women on the Brawl-Stars. The rollergirls vary in age, from the youngest at twenty years old to the oldest guessed by a team member as "in her late forties." The majority of the women are over thirty. All but three women identify as white, and, of the women interviewed, all identified their gender as woman.

I was able to send out an initial interest letter explaining my research to the entire Nashville Rollergirls team for 2011 via email. Of the forty-six members, thirteen volunteered to participate. One volunteer was a female

referee and another was the male coach, Master Bates. I conducted formal interviews with seven players, each lasting forty-five to seventy-five minutes. These interviews were collected before and during practices held every Monday, Wednesday, and Thursday. The rest of the participants chose to contribute to my research by responding to two open-ended questions I posted on the team's online message board. They emailed their answers to me, and I emailed them any follow-up questions that I had.

I also conducted informal interviews with spectators at a pre-season bout, content analysis of posters and the team website, and team observations from over a dozen practices. At the pre-season bout, I had conversations with seven attendees—four adults (three female, one male) in their early-to-mid fifties, two young adults (female and male) in their early twenties, and one mother of a player who had traveled more than two hours to see her daughter play. During these conversations, I asked what brought them to the bout and where their interest in derby stems from. For three of the four middle-aged adults, the pre-season bout was their first derby bout, and they allowed me to record their conversations outside during halftime.

I analyzed flyers, posters, Facebook profile pictures, team pictures, and individual players' headshots and biographies to more adequately understand the culture of roller derby as well as the performative aspects of the sport. I also observed the team throughout the months of February and March at their practices and the "newbies" at Derby 101 one Saturday in February. These observations consisted of diligent examination of the team and team dynamics through watching and note-taking; no recording devices were used.

Deliminations and Limitations

I have chosen to particularly focus on issues of the carnivalesque and performativity in relation to the standardization of women's flat track derby because it is often not discussed in scholarly circles that surround the sport.

Little research has been conducted on roller derby as a professional sport. I wish to adequately portray the women of the Nashville Music City Rollergirls as athletes by focusing on their efforts to straddle the line of athleticism and spectacle. Due to time constraints and resources available, I was able to focus on only one team in-depth: the Nashville Music City Rollergirls. As a case study, my findings cannot be analyzed in generalities but only speculated in such. Additionally, by focusing on gender and sexuality performativity, my scope fails to develop theories based on age, class, and race within the greater derby subculture. Although a proper discussion of gender is one that does not overlook these identities, the main focus of my research is more oriented towards gender and sexuality as a conscious performance.

Background and Context

American culture is formed and reformed through social symbols, rituals, practices, and beliefs organized around the two-gender model: man and woman. The culture of American sports is no different; in fact, it operates as a microcosm of larger patriarchal, androcentric structures, where maleness serves as the norm and anything non-male is abnormal. While sex functions as the key tool in the arrangement of sports, the gender binary is used as a power mechanism to maintain the separation between men's teams and women's teams. Because of this structure, any athletic display determined as socially feminine or "female" is rejected as an unsuccessful aspiration (Eng 2006; Hall 1998; Pirkko 2003). The power dynamic that ultimately arises from the male-centeredness of sports creates what Krane et al. (2004) calls "living the paradox."

Living the paradox refers to the two cultural expectations that fall on women athletes. In the sports culture, women are expected to throw femininity to the wayside to be taken seriously as athletes. They are expected to exaggerate their masculinity in order to be socially accepted in athletics. In the larger culture, gender is polarized. Women are assumed to

take on displays of femininity, and all masculine traits are dismissed as deviant. According to Bourdieu, this paradox is very common for most women athletes, if not all of them. He writes, "if they behave like men, they risk losing the obligatory attributes of 'femininity' and call into question the natural right of men to the positions of power; if they behave like women, they appear incapable and unfit for the job" (2001:67). On the same note, "Such paradoxical sporting practices continue to ensure that gender remains the primary categorization of women athletes, re/producing female athletes as women who play sports rather than as athletes first and foremost" (Mean and Kassing 2008:127). These conflicting expectations for women can oftentimes be challenging and intimidating for female athletes. Participation in sport, which is associated with maleness, strengthens the ideal that an athlete's identity should be masculine. Female athletes just play a part, checking their masculinity at the locker room door. As women participate in sports and bring elements of both femininity and masculinity with them, athletic power relations become obscured, stretched, and threatened, which ultimately leads to women losing power within the sports culture (Eng 2006; Wright and Clarke 1999).

Using Bakhtin's theory of carnivalesque and Butler's arguments concerning gender performativity, I explore how women of the Nashville Rollergirls use gender expectations within sports not to reinforce expectations, but to dismantle gendered differences through performances of gender and sexuality. In carnival, social hierarchies of everyday life become skewed, distorted, and sometimes even eradicated by participants who are normally outside of the dominant culture (Hirschkop and Shepherd 1989; Hoy 1992; Santino 2011). Although the action of carnival is not designed to produce lasting social change within a community, it is a tactic used to project an alternative perception of society so that others may be aware of the hegemonic conditions that normally exist (Armstrong 2010).

Even so, carnivalesque is not just about humorous spectacle where the socially stigmatized can briefly dress and act as society's most prominent. It is also about using the humor and satire from the carnivalesque presentation to rebel against social expectations of a person's natural performance. For the women of roller derby, the carnivalesque is used to undermine gendered expectations of female athletes. The athletes of roller derby represent all types of body size and image; they portray both overt feminine sexuality and masculine aggression while playing their sport. They often don humorous monikers to add to the spectacle of the event, and many identify within the deemed deviant tattooed punk subculture, giving spectators a reason to ogle. The carnivalesque allows for normally unrecognized aspects of culture to be mocked and satirized. Unusual ideas like masculinized female athletes, sexualized athletes, or women in positions of physical power are brought to light and their stigma diminished with humor.

Butler discusses this very issue of social reflection and contestation in her theory on gender performativity. In her description, she writes, "Gender is the repeated stylization of the body, a set of repeated acts within a highly rigid regulatory frame that congeal over time to produce the appearance of substance, of a natural sort of being" (Butler 1990:45). Gender can be done and undone using different scripts found within a "highly regulatory frame," the frame being how one is expected to present gender according to his or her sex and social location, with some frames being more fluid than others (Salih 2002). Within the domain of sports, the frame of social configurations of gender for women, or, "the 'costumes' from which to make a constrained choice of gender style" (Salih 2002:63), is narrowly defined as feminine, but not too feminine to be sexualized, and masculine, but not too masculine to be taboo. Because gender expectations are framed more narrowly in the arena of sports than in other social institutions, women are forced to compromise what might be their "natural," everyday

gender performance and alter it to fit into the frame of sports.

Butler also argues that expectations of gender are not engrained and that it is possible to deviate from them. In her example of drag, she uses gender performance in theater as a means to explain that individuals can in fact escape the socially configured regulatory frame, if even for a brief period of time (Butler 1990:187). Gender performativity is not just successful for the participants; observers of gender spectacles like drag see that gender can be played with and that it is only a construction, not a strict boundary that should be constantly adhered to. These subversive acts of gender performativity can often lead to expansions in the boundaries set by certain social institutions, even if not immediately. My research serves as another example of the way individuals use gender performance to resist the narrow hegemonic boundaries established in certain social institutions. Like Bakhtin, Butler does not allude to the performance of gender as a means to an end. Gender acting, similarly to carnival, can remind society that these categories can be played with and stretched.

From Sport To Spectacle:
The History of Roller Derby

When the modern-day roller skate was invented in 1876, it took only two decades for roller-skating to become a sport symbolizing athleticism, endurance, and hypermasculinity. On March 10, 1885, Madison Square Garden hosted its first roller derby, catering to a sold-out crowd. Men were expected to skate for 142 hours, or six whole days, and on average skated 800-1,100 miles during the competition (Six Day Race 1885). However, when two vital young men died from exhaustion just days after the competition, the attraction to derby and roller-skating quickly dwindled (Victim of Roller Skates 1885). It wasn't until fifty years later that someone attempted to revive the sport, this time adding a sense of spectacle and show.

Before the 1920s, women competing in athletic events were practically unheard of in the United States, especially women competing among men with the same rules and for the same prizes. When Leo Seltzer, famed athletic promoter accredited with inventing the modern derby, introduced women to the roster in 1935, it was certainly not a move towards the athletic liberation of women (A&E 2006; Bay City Bombers 2010). With the admittance of women in roller derby came a focus on style and flair, not physical capability. Players were recruited as much for their looks and ability to entertain as for their athletic prowess. Although roller derby women found this to be an exciting opportunity to prove their strength and ability next to men, their participation was quickly dismissed as a "sideshow novelty" (Cohen and Barbee 2010:14) and remained with that label for nearly seventy years.

The first roller skating competition hosted by Seltzer was held in the Chicago Coliseum on August 13, 1935, boasting one man against one woman in an endurance competition (A&E 2006). The Transcontinental Roller Derby, as it soon became known, developed into a traveling event and an instant success, riding on the coattails of first-wave feminism. The Transcontinental Roller Derby became one of the first events in the country where spectators could observe women exercising their newfound shared equalities and openly interacting with men on the same social plane (Cohen and Barbee 2010). However, with the emphasis of derby placed on the carnivalesque, the man versus woman competition that was revolutionary at the time was seen as non-threatening to the hypermasculinity that permeated the larger institution of athletics. Men and women alike flocked to stadiums to see the athletes perform.

Two years later, with the suggestion of sportswriter Damon Runyon, Leo Seltzer changed the rules of roller derby to include two teams of five, a rule that is still very much in effect today (Roller Derby Foundation 1998). Television broadcasting and films like *Fireball* with Mickey Rooney

and *Kansas City Bomber* with Raquel Welch assisted roller derby in becoming a staple of American entertainment. By the 1960s, it became one of the most popular events to watch in America. However, roller derby suddenly ended in1973 (Bay City Bombers 2010). Television programs were losing viewers, and fewer and fewer fans flocked to arenas to watch teams of men and women compete against each other in their brightly colored uniforms. There were attempts to revive it, but none ever succeeded. Just as quickly as it died out in the 1880s, roller derby of the 1970s was over.

In 2001, a group of third-wave feminists in Austin, Texas decided to revive the sport, this time allowing only women to compete. What was first a sport designed to compare the athletic ability of men and women soon became the only sport in the country that was decentralized and entirely women-dominated. The roller derby revival of the early 2000s became a grassroots, do-it-yourself triumph and combined aspects of punk subculture, athleticism, and the riot grrrl-inspired ideals of female solidarity, ultimately leading to the creation of the contemporary rollergirl.

Fishnets and Fauxhawks:
The Modern Roller Girl

Currently, roller derby is operated almost solely by the women who play, with the occasional fan, friend, or partner volunteering their time to help as coaches, referees, or other non-skating officials (NSOs). The Nashville Rollergirls have over a dozen separate committees made up of team members that use their special skills and resources to run the team successfully. No one from the team receives monetary compensation for their work; in fact, each player has to pay dues every year for practice spaces, insurance, traveling expenses, and any other financial needs that might arise. The entire team is responsible for setting up the Municipal Auditorium, the amphitheatre that hosts the Nashville Rollergirls' bouts. Their jobs include setting up ticket tables and taping off the track, as well as organizing volunteer committees that can help while they are skating.

At most sporting events, the athletes would be on the sidelines warming up to play; at a roller derby bout, the women are fastening wristbands to spectators and taking pictures with fans.

Roller derby has fewer restrictions on physical frame. Unlike basketball, where women are expected to be tall; rugby, where women are expected to be muscular; or cheerleading, where women are expected to be small and flexible, roller derby is open to all body types, with skates as the physical equalizer. As Bertrand Hustle, mother of three, educational researcher, and team blocker for the Music City Brawl-Stars said, "In derby, you can be different physical types, and it's okay. I don't want restrictions on how I present myself or how my physical body is supposed to look. I can be overweight, scrawny, tall, short, have tattoos, whatever." Body sizes, shapes, and athleticism vary greatly on the Nashville Rollergirls. Height ranges from five feet, three inches to over six feet tall. Some women have played sports their entire lives, and some define themselves as "lazy, besides doing derby."

The ability to create their own sport identities and not be defined by a hegemonic image of a female athlete is something that all women interviewed mentioned as a positive feature of the sport. Rollergirls have a stereotyped reputation of having tattoos, wearing sexy costumes to bouts, and instigating after-bout bar fights after chugging a few drinks. Although many athletes of the Nashville Rollergirls do have tattoos, some have dyed hair, and a few are known to engage in the occasional scuffle, all the women interviewed from the Nashville Rollergirls did not feel like they match the stereotyped image that many Americans visualize when discussing roller derby. The women I spoke to are mothers, researchers, waitresses, managers of healthcare companies, and self-identified "homebodies."

The Nashville Rollergirls use the exaggerated image of the roller derby woman as a form of identity play, creating derby personas that can sometimes be a far stretch from

their off-track personality. The team's website offers viewers the chance to read biographies with players and see professional portraits of each skater. There, the women of the Nashville Rollergirls are posing in their new, standardized jerseys, some posing with flexed muscles and scowls, but most are posing naturally with no visible tattoos. As for the biographies themselves, the questions surround the derby stereotypes, questions like "Favorite Beer-Guzzling Spot," "Favorite Injury," and "Favorite Tantrum." Some answers are equally stereotypical. Nix and Bruises, a Nashville Rollergirl, responds to "Favorite Derby Injury" with "It hurt so bad, yet felt so good." For the question "Favorite Tantrum," both Britches n' Hose and Dawn n' Dirty said, "Tantrums are for babies" (Music City Rollergirls 2010). The images that exist to define roller derby are those generated by the riot grrrl ideals. Riot grrrl intends to reclaim the images that were once used to demarginalize women in the subculture, just as roller derby intends to reclaim the images of women's sport to exaggerate and highlight their absurdity. Although many players do not adhere to these basic principles of the feminist punk movement, it serves as a strong model that is used to subvert gendered principles of the sport world and is currently being used by all women athletes in derby, not just the "punk" ones.

The Bout as Revolution:
The Use of Carnival and Performance as Defiance

Women's flat track derby uses both carnivalesque displays and theatrical gender exhibitions as intentional modes of subversion to make spectators aware of the gender disparities that lie in institutionalized sports. Derby attempts to answer the question posed by Butler in the preface of *Gender Trouble*, which is, "Does being female constitute a 'natural fact' or a cultural performance, or is 'naturalness' constituted through discursively constrained performative acts that produce the body through within the categories of sex?" (Butler 1999:xxviii). Within derby, the female

identity no longer expresses an "authentic inner 'core' self" but becomes "the dramatic *effect* (rather than the cause) of our performances" (Gauntlett 1998). To the women of roller derby, acting feminine is a performance that can be stretched and satirized through the theatrical display of the derby bout, particularly using what Mikhail Bakhtin refers to as "carnival."

Roller derby is a carnivalesque performance where players on the outskirts of women's institutionalized sports can flip expectations of what the female athlete should look like, how she should act, and how she can define her sexuality. Bertrand Hustle refers to this ability to perform carnivalesque displays as a "highlight in weirdness." She says, "Here, weirdness is okay, but when you're trying to play along with traditional sports, being kind of weird and eccentric is not a feature; here, it is a feature rather than something that makes people look at you funny." Carnival becomes a means for which women of roller derby can challenge dominant notions of what is proper and what is mere social construction in a non-combative, entertaining fashion. They have the ability to "act weird" because the very action of performing strangeness is used as symbolic resistance.

The Nashville Rollergirls symbolically resist androcentrism in sport by pushing the limits of expected self-presentation, dramatizing the overtly sexual, and drawing attention to the spectacularly masculine, both exaggerated spectrums of the assumed female athletic identity. They calculatedly enact two overstated gender expressions that are found to be taboo within the culture of sports: the "masculinized woman" and the "sexualized woman." The masculinized roller derby woman takes pictures with fans before bouts with teeth clenched and muscles flexed. She scowls and growls at the opposing team as she skates by them during team introductions. She shakes her fists into the air as she is called into the penalty box for being overly aggressive towards players. She parades her injuries around

the stadium, letting blood leave permanent stains on her uniform as a reminder of her toughness. She catcalls the derby cheerleaders when they perform at halftime. They have names like "Hildabeast," "Nix and Bruises," and "Killah B. Killed." The feminine, sexualized roller derby athlete wears glittered face paint, fake eyelashes, hot pants revealing half of her buttocks, and fishnets. She blows kisses at the crowd and pushes her breasts against spectators and pouts her lips when they wish to take pictures with her. They have names like "Suzy Ho'maker," "She-Devil," and "Babe E. Dahl." Roller derby pushes the boundaries of femininity, dramatizing it through sexuality performances and denying it through conscious displays of what one could consider masculine. Within a frame of play, these gender inversions and sexuality performances can be presented as paradoxical without being threatening. The fact that the once forbidden topic of gender bending can be treated with such hilarity during a derby bout signifies not only the reduction of social limitations, but also the desecration of the fundamental backbone of the culture of sports.

Besides breaking down gender differences within the culture of sports, carnival in roller derby also serves to dismantle social stratifications on a much larger scale. Armstrong writes, "Carnival is a stage for the affirmative representation of traditionally diverse socio-ethnic identities; it alludes to their conflicts, collaborations and collusions in everyday life" (2010:451). When asked about the types of spectators that come to derby bouts, Bertrand Hustle responded,

It's the weirdest conglomeration of people ever put together in different ways. You'll see eight-year-old girls and you'll see 50-year-old lesbians. You'll see rednecks drinking beer. There's just a lot of types of people that enjoy it for various reasons and somehow they all get in the same place at the same time and I don't think anything besides roller derby would do that (2011).

Another player, Mackin, a blocker for the Music City Brawl-Stars, describes derby bouts as having the ability to "attract an audience comprised of people who wouldn't identify themselves as sport fans." These accounts of spectators from the players themselves prove that carnival not only has the ability to shed light on oppressive social institutions that create problems for the athletes in roller derby, but also creates a space for the spectators themselves to openly defy social norms. Derby then becomes a venue where spectators are comfortable experimenting with their own identities, having witnessed roller derby athletes doing so. In derby, boundaries of society are broken down, and bouts become open environments where everyone is involved in the carnival, not just the performers.

But with all this work in producing carnivalesque displays, are the roller derby women's gender performances upholding or subverting understood sport regimes? The sport itself, as argued, is designed around punk ideals and constructed as a purposeful challenge to traditional notions of gender and therefore can be see as an attempt to subvert. However, these exaggerated displays of carnival that we see in roller derby are not proving to be subversive. Santino (2011) writes, "Often, the carnivalesque quality of public performative events are recognized, but their seriousness of purpose, the intention to raise awareness, change opinion, and open the minds of spectators, has remained unremarked upon and has not been analyzed as a constitutive dimension of the event." Bakhtin and Butler both argue that spectacular performance, although a strong method of raising awareness of disparities among social realms, is not in fact a subversive act that is used to spark change (Butler 1999; Santino 2011; Sahil 2010). Even if the performers create carnivalesque displays with subversive intention, they quite often feel the spectacles to be ineffective. A close friend of mine said to me after attending his first bout: "So what? These big men-women just skate around in their underwear and you call it a sport?" This comment served as the inspiration to my

research into this very subject and led to the more important question about the intention of derby performances: If the message of carnival becomes so completely lost to some spectators, then how can exaggerated spectacle be an effective mode of raising awareness to the general public about social inequalities?

In the current display of exaggerated gender attributes of the overtly sexual and hypermasculine, many teams and players feel that their performances are getting in the way of how they truly wish to be perceived: as athletes. Teams are beginning to notice a trend of not being taken seriously by spectators and other athletes, and many feel that this is leading to a misinterpretation of why the carnival exists. Therefore, teams such as the Nashville Rollergirls are currently making conscious efforts to conform to professional sport expectations. Many teams hope to be taken more seriously within athletics and gain power in sports that will allow their voices to be heard in other spheres they occupy. Though they still wish to challenge the gender binary that is so oppressive to women in sports, many teams across the league are hoping that professionalization is their answer.

1. It needs to be noted that roller derby is not considered a professional sport in the sense that football or basketball are; women who play roller derby do not receive payment for their athletic performance. When I use the word "profes-sional" or phrase "profes-sional sport," I am referring to the social implications of the word, meaning skilled or trained.

"We All Say We're Athletes":
The Professionalization of Derby

As the ten-year anniversary of the revival of roller derby approaches, women are reinventing it once again. This time, instead of emphasizing the carnivalesque, rollergirls are highlighting their sport as professional[1] and socially legitimate, downplaying features of spectacle during the bout. This includes a change in uniform, derby players' names, halftime performances, and team relationships among players. 5 Scar, blocker for the All-Stars said, while reflecting on the changes within roller derby:

The sport evolved and became more competitive almost overnight. Leagues started to notice that people

weren't taking derby seriously because of how we dressed. They still thought we were a "wrestling type sport" where everything is choreographed. It seemed if we dressed more athletic, people would notice the sport aspect instead of the hot ass part (2011).

As women in roller derby focus on professionalizing the sport, the current structure is moving away from the radical differences that it once had from other women's institutionalized sports and moving more towards following sport hegemony. Yet, as parody is being replaced with traditional sports structure, many are wondering if roller derby can still remain active in challenging oppressive gender dynamics within sport if the frame in which they function is becoming more limited.

Although several high-ranked teams in the WFTDA still wear exaggerated, sexualized costumes, women of the Nashville Rollergirls and many other teams across the league have changed their uniform standards to correspond with the general uniform requirements of mainstream sports. Over the last year, the seriousness of a team's self-presentation has come to represent their seriousness about the athleticism found in the sport. Jessticular Fortitude, referee and WFTDA league representative for the Nashville Rollergirls, said about the way teams dress: "I'll admit when I see a new team that is all 'done up' with tutus and their butts showing, I immediately think to myself that they should have spent their time practicing instead of doing their makeup" (2011). A new sentiment is spreading through the Nashville Rollergirls: by deemphasizing spectacle, roller derby women can be sincerely defined as athletes.

The Nashville Rollergirls have standardized their uniforms to include a blue jersey with the Nashville Rollergirls emblem on the front (white jerseys for away games) and black shorts, typically worn at the mid-thigh. Players still have the ability to pick whatever patterned sock they wish to wear, but many stick to white sport socks. Many players feel

that the movement away from individualized costume is a huge stepping-stone for teams and the sport as a whole. Ramb0 Samb0, the jammer and star player of the Music City All-Stars, states, "As a skater I felt even more empowered, even more ready to defeat the other team, because we all look so professional. We're all on one page outwardly and it reflects how we are mentally" (2011). Getting the team to agree on standardized uniforms was a challenge, and the debate still sizzles occasionally between players as the rules on uniform become more finalized. Some women feel that it has compromised their ability to express their individualism, which was something always allowed and supported in derby before. Some women even try to maneuver around the new uniform changes by wearing fishnets and booty-shorts to practices and scrimmages, but retiring them for the standardized uniforms during bouts. Rocko Sock'Em, a blocker for the Brawl-Stars and new team member, shares her mixed feelings concerning uniform and respect within the athletic community:

> I think the crazy clothes would have been a lot of fun and it bums me out that in order to be taken seriously, we have to conform to other sports' ways of doing things. On the other hand, I can't change the fact that people simply will take it more seriously as a sport with a professional appearance and that is more important to me than crazy clothes (2011).

As professional uniforms become more popular among teams, they have become a symbol of a new model of roller derby—one that focuses chiefly on athleticism, strategy, and sportsmanship. With the new model of roller derby also comes players' wishing to change their derby names to match their given name. On the Nashville Rollergirls, Smith, pivot for the All-Stars, changed her derby name from Smith n' Wesson to strictly her last name. Mackin, a blocker for the Brawl-Stars, did the same. Mackin's reasoning is as follows:

"As much effort and hard work that I put into it, I should have my real name on my back" (2011).

Rocko Sock'em, among other players, has also witnessed internal team changes that have followed the professionalization of the Nashville Music City Rollergirls. Sock'Em acknowledges that professionalism is not just about being taken seriously, but also about creating a community of women where the stress of outperforming one another does not exist. In professionalized derby, the gendered costumes that players are allowed have become much more regulated, with only one presentation being wholeheartedly accepted by teammates: the athletic woman. Rocko Sock'Em writes in an email, "However, maybe ultimately women who join roller derby expecting to get their power from that individualism find a much more healthy way to get it in a sport that is for and about women and lifts them up in the same way men's sports lift men up" (2011). By limiting gender frames in self-presentation, women are able to form a bond of solidarity and ultimately find a stronger source of team empowerment: its original riot grrrl ideals of eliminating girl-hate and creating a safe environment. As the women of the Nashville Rollergirls begin taking themselves more seriously, they have noticed spectators taking them seriously too. This signifies that the professionalization of the sport has caused a strong and positive internal shift for the Nashville Rollergirls.

However, the Nashville Rollergirls still have great hurdles to overcome if they wish to restructure the image of the rollergirl into that of an athlete. Even though roller derby is moving away from the carnivalesque displays it once glorified, teams still use relics of the stereotyped rollergirl to attract fans. In their marketing strategy, the women know that spectators want to see what is portrayed in films and have heard from others. Fans want to see attractive women with tattoos elbowing one another and pulling hair. Therefore, they use the same images of the hackneyed rollergirl used before, but the structure of the bout itself is different.

As one anonymous player stated, "It's like we put a circus tent over a football game" (2011). Because many spectators are attracted to the sport for the spectacle, the Nashville team cannot eradicate it completely. They currently use it as an enhancer to the game while the main focus is placed on the sport.

There are no longer kitschy antics before the bout or during halftime, stunts that included bike jousting, arm wrestling, dance parties, unicycle races, and penalty wheel games. Instead, women spend the moments before the bout taking photographs with fans and mingling among the crowd, enacting their celebrity status among spectators. During halftime, the jeerleaders (roller derby cheerleaders) perform dance routines much like cheerleading routines at other sporting events. The jeerleaders are an example of the new combination of both "carnival" and "professionalism" at a derby bout, symbolizing the sexualized relics that existed in roller derby before the shift in professionalization while still appealing to the hegemonic ideas of halftime. The jeerleaders wear short skirts, fishnets, and infantile pigtails, and some wear wigs and costumes similar to the roller derby uniforms worn during the time of the derby revival in 2001. Just as cheerleaders are the sexualized, supportive counterparts in other sports, the jeerleaders hold the role of the "crowd pleasers." The role of these women is to create a family-friendly environment while still appealing to the spectators who have come to see the outrageous carnival that exists in roller derby.

As the sport begins to change its framework to fit the larger hegemonic framework of the sports sphere, it is not losing aspects of spectacle completely. Women's flat track derby is instead combining aspects of both the carnival and the professional to better fit the functions of the sport: creating safe spaces for women to participate in athletics. The change to a more professional sport makes sense; if women are investing time and money into athletic events, they should be recognized as athletes and be taken seriously

within their field. Yet the switch to a more hegemonic sport construct seems to imply that there is no room for gender play or sexuality expression in institutionalized sports at all. The current way that roller derby represents itself appears to be unfolding as a more subversive means to challenge the demands of gendered assumptions in sport. The carnival that empowered women is now used as an enlightening part of the game without overshadowing why derby exists: as an athletic event.

From Parody to Professional:
The Future of Women's Flat Track Derby

Nevertheless, the shift towards professionalizing women's flat track derby leaves more questions than answers about the effects this will have on derby athletes and women athletes as a whole. What does eradicating exaggerated gender and sexuality displays in derby for the sake of professionalism mean for gender displays in women's athletics? Can sexuality be expressed and also be considered professional? Many players argue that sexuality as performance has not been eliminated completely from derby. Instead, it is used with a more narrow intention: to attract spectators. Bertrand Hustle comments on spectators and bouts: "I think there is that image there. They want to see women in tight shorts fighting other women because it would be hot. We don't try to deny that this image exists. We wait for people to come and then we show them that, yeah, we know we're hot, but this is actually really hard and fighting is against the rules" (2011). In this manner, sexuality becomes a marketing strategy for women and less of a means of self-expression. The Nashville Rollergirls have learned how to balance the symbols of the carnival—the sexy, small woman in hot pants and fishnets—with the actuality of the game. Therefore, roller derby is not compromising its aspects of gender and sexuality play to conform to the demands of professional sports. The Nashville Rollergirls are instead using parody and inflated symbols to gain acknowledgment as professional

athletes while still challenging the systems they find oppressive.

The professionalization of roller derby also begs the question of the future of women athletes who participate in traditionally structured athletics. Roller derby has always served as a space for women athletes to share their personal gender expressions without the restricting framework laid out by the male-dominated world of sports, something that has set it apart from all other sports. But as women's flat track derby grows to reflect the androcentric ideologies of institutionalized sport, it appears to be acknowledging that women cannot have complete agency within this cultural domain. Women cannot play with gender and still be seen as serious athletes. However, as roller derby has progressed into a hybrid of both traditional and non-traditional athletic presentations within the last year, it has broken many of the sports barriers for other women athletes, not just rollergirls. Roller derby has now created a framework and a solution to combating male hegemony. Women athletes can construct gender and sexual identities for themselves as long as they begin to operate within a frame of play and enact the carnivalesque to lighten the concerns of the spectators.

Conclusion and Significance of Study

Because the league is currently in a transitional stage between the performance that existed and the professionalism that is arising, there is little information available about the effects that professionalism will have on roller derby and other women's sports teams. However, the research I have done does open doors to the possibility of answering this important question for women: Can women draw attention to their sexuality or perceived masculinity and still be taken seriously? Although women still continue to be restricted in how they present themselves, with almost every other gender expression besides regulated femininity being taboo, women can eradicate some of these restrictions by using spectacle, humor, and satire mixed with a stern sense of professionalism

in their own gender performances. As women continue to use a combination of spectacle and professionalism in roller derby, gender restrictions will be brought to light and change in gender frames will eventually occur. Although it is unfortunate to learn that women continue to skate fine lines in regards to gender presentation, it is inspiring to see that women have found a means to maneuver around sport androcentrism, have fun with their identities, and still be taken seriously as athletes.

My research is not just a case study on the anomaly that is roller derby. The institution of sport is widely acknowledged as a microcosm of larger patriarchal social systems and serves as a key for examining the production, reproduction, and sometimes opposition of gendered norms. Sport, like many other American systems, is dominated by androcentrism, where maleness and masculinity are considered to be the main vessel in which social systems operate. In the culture of sports, any expression of masculinity by males is seen as correct and normative, while any non-masculine gendered expressions performed by men and masculine traits performed by women are considered to be social deviations. Women's athleticism is often discredited and mocked as physical appearance overshadows actual ability.

When women athletes, such as those who play women's hockey or rugby or participate in bodybuilding, contest these gendered assumptions and show physical aggression and other masculine traits, they are pummeled for being "butch" and unattractive, and the sport loses validation from spectators. On the other spectrum, when women athletes such as female tennis players and cheerleaders contest gendered norms by exuding their sexuality and feminine characteristics, they are ridiculed, and their athletic talent is dismissed.

Understanding the gender disparities in roller derby not only illuminates the inequalities within other sports but also the inequalities that exist within our own, everyday

society. The issues in roller derby address larger feminist concerns about gender expressions and professionalism. Can women perform outside of their expected gender roles and still be considered professional? Can being sexy be empowering? Can exaggerated femininity be taken seriously? The answers to these questions are still debated in feminist circles, but I hope that my research offers possible means that women can use to maneuver among the fine lines of gender performance and hopefully begin to spur a slow changing of social systems.

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Tights in Flight:
A Quantitative Deconstruction of Super-Masculinity in American Comic Books

Abstract: Drawing on theories of social constructionism and research by Carrigan et al. (1985), Hildebrandt (2004), Morrison and Halton (2009), and others, this research uses manifest and latent content analysis to examine demographical and behavioral attributes of characters in superhero comic books. Research hypotheses predict whiteness, heterosexuality, and extreme musculature as normative masculine traits among characters, with alternate traits being minimized, excluded, or sanctioned. Analysis of 138 characters in 14 comic books identifies patterns of aggression, humiliation, sexuality, and race. Preliminary data analysis indicates whiteness as a dominant character trait (65.2% of characters) and heterosexuality as the exclusive form of sexuality expressed. Extreme musculature among men is more prevalent than any other body type (48.6%) and roughly one fifth of all men represented (21.4%) could only achieve their body type with the use of ergogenic aids (such as steroids). Extensive examination of the data and suggestions for further research are included.

Drew Thilmany*
Sociology

A lifelong interest in human behavior and social interaction culminated in a BA in Sociology and Anthropology from Warren Wilson College; Drew has no idea whether these interests will propel him to graduate school or leave him working in a recording studio and obsessively analyzing the relationships between social constructs for the rest of his life. Drew desperately wishes graduating with Academic Honors increased the amount of money he received in exchange for labor. At least he found a use for his extensive collection of wooden shoes.

Introduction and Problem Statement

Classical comic book depictions of masculinity are perhaps the quintessential expression of our cultural beliefs about what it means to be a man.

Brown 1999:26

It's a bird, it's a plane, it's—a white man! In tights! With x-ray vision! And rock-hard abs! While adolescent boys have been flocking to Superman's—and other superheroes'—representations of masculinity in comic books for decades, academia has just arrived at the party (Lavin 1998:93). Comic book analysis has become more popular in recent years, yet the number of extant sociological analyses can be counted on two hands—and all are qualitative. For a medium almost 80 years old and staggeringly popular, this seems more than a minor oversight.

What can be gleaned from the seeming contradiction embodied by muscular men in tights who hide behind bumbling alter egos and suave playboy personas? More importantly, what forms of masculinity are encoded in the pages of superhero comics and how are they being interpreted by ever expanding audiences (MacDonald 2008 as cited in Gavigan 2010)?

Representations of masculinity have been dissected across a range of media, yet limited analysis of comic books in general—and superhero comics in particular—persists (Palmer-Mehta and Hay 2005:391). Comics today gross hundreds of millions of dollars a year, while films like the superhero comic-inspired *Dark Knight* gross over a billion dollars worldwide (Lavin 1998:94; MacDonald 2008 as cited in Gavigan 2010). A dearth of research in an area influential in the formation of masculinity among many adolescent and young adult males indicates a need for further analysis (Gavigan 2010; Lavin 1998). Specifically, quantitative data are needed to triangulate qualitative analyses in existing literature and identify areas for further research.

Literature Review

This research employs the theory of social constructionism and the history of gender studies to locate masculinity as a concept. Carrigan, Connell, and Lee (1985) discuss the development of masculinity within sociology, culminating in the theory of hegemonic masculinity and the importance of media studies in interpreting social constructions. Their analysis identifies a number of masculine traits, most notably heterosexuality, associated with hegemony. A review of numerous studies indicates race, muscularity, sexuality, and aggression as areas of interest in modern analyses of masculinity, especially in regard to media representations of society. Existing literature on superhero comics, including representations of masculinity and femininity, as well as readership and sales, contextualize contemporary analysis of the medium.

Although Erving Goffman (1963:128) identified the relationship between normative masculine traits and social power much earlier, the interaction was not systematized until 1985 (Connell and Messerschmidt 2005). Carrigan et al. (1985:592) use the term *hegemonic masculinity* to articulate a masculinity that has the "ability to impose a particular definition on other kinds of masculinity." The concept explains "how particular groups of men inhabit positions of power and wealth, and how they legitimate and reproduce the social relationships that generate their dominance" (Carrigan et al. 1985:592). The hegemonic form of masculinity, or the form that is "culturally exalted," may only represent the actual characteristics of a small number of men. For most men there is "a distance, and a tension, between [the] collective ideal and [their] actual lives" (Carrigan et al. 1985:592).

However, the hegemonic form of masculinity is maintained through the complicity of a majority of men, primarily because all men benefit from aspects of it, such as the subordination of women, the most prominent characteristic of the current form (Carrigan et al. 1985:592).

The second most prominent characteristic is heterosexuality, to which all other forms of sexuality are socially, politically, and institutionally subordinated (Carrigan et al. 1985:593).

"Hegemony," as articulated by the authors in relation to masculinity, refers to historically situated circumstances in which power is gained and maintained through the definition of relationships and social categories. It is an ongoing and adaptive process that is constantly contested. Carrigan et al. (1985:594) identify three primary processes through which hegemonic masculinity is constituted: media portrayals of masculinity, which reinforce certain aspects of masculinity while creating anxiety over others; the division and definition of labor as masculine and feminine; and negotiation and enforcement of masculinity through the state, such as the criminalization of homosexuality.

Media significantly impact the formation and maintenance of hierarchical gender relationships (Carrigan et al. 1985; Connell and Messerschmidt 2005; Evans and Davies 2000; Greenberg, Eastin, Hofschire, Lachlan, and Brownell 2003; Lorenzen, Grieve, and Thomas 2004; Morrison et al. 2003; Morrison and Halton 2009; Ricciardelli et al. 2010; Soulliere 2006). While this is a process negotiated by both producer and consumer, it remains a field ripe with sociological data regarding the production of gender in society (Connell and Messerschmidt 2005; Morrison and Halton 2009; Soulliere 2006). Content analysis of masculinity in media can provide valuable insight into social reproduction of normative traits and power dynamics (Carrigan et al. 1985).

Caucasian characters are widely overrepresented in television and film, implying a white racial landscape that minimizes the social importance and impact of non-whites, both on and off screen (Greenberg et al. 2003; Morrison and Halton 2009; Soulliere 2006). Existing qualitative analyses of superhero comics indicate a continuation of this trend, with alien races more commonly representing ethnic diversity than actual minorities (Singer 2002:107, 110).

Muscularity is widely associated with masculine power (Brown 1999; Lorenzen et al. 2004; Morrison and Halton 2009; Morrison, Morrison, and Hopkins 2003; Ricciardelli et al. 2010; Soulliere 2006; Walser 1993). Research finds both sexes associate increased musculature with confidence, popularity, and increased sexual activity (Thompson and Tantleff 1992 as cited in Morrison and Halton 2009). Masculine body types in the media have increased in musculature to the point where the media ideal is almost impossible for men to attain (Morrison and Halton 2009; Ricciardelli et al. 2010). Men are increasingly likely to evaluate their bodies by media standards, causing decreases in body satisfaction that mirror female reactions to ideal feminine bodies in the media (Lorenzen et al. 2004; Morrison and Halton 2009). Research developing diagnostic instruments assessing male desire to improve muscle mass and its connection to mental and physical health problems has become increasingly prominent (Hildebrandt, Langenbucher, and Schlundt 2004; Lorenzen et al. 2004; Morrison et al. 2003).

Heterosexuality is one of the keystones of hegemonic masculinity (Carrigan et al. 1985; Donaldson 1993; Goffman 1963; Kimmel 2007). Men who are perceived as effeminate may engage in homophobic activities to demonstrate heterosexuality (Walser 1993). Other forms of sexuality in media may be sanctioned through exclusion, which can increase homophobia among viewers (Soulliere 2006).

In 1953 Frederick Wertham's assertion that Batman and Robin are homosexual lovers sent shockwaves through the comic industry, and—along with Wertham's overall analysis of comics as destroying the morality of children—led directly to self-regulation in the form of the Comic Book Code (Best 2005; Tipton 2008; Ziolkowska and Howard 2010). As a result, heteronormative signifiers, such as scantily clad women swooning over heroes and mixed-sex superhero families, were increased to dispel the specter of homosexuality in otherwise all-male environments

Best 2005).

Superhero comics have taken occasional stands in support of gay rights, such as the Green Lantern *Hate Crime* story arc (#154 and 155) from 2002 (Palmer-Mehta and Hay 2005). In the story, Green Lantern's assistant, Terry Berg, is beaten into a coma by three muscular white men for being openly gay. Green Lantern uses his powers to hunt down the assailants, whom he tortures and beats almost to death. An analysis of fan mail regarding the story indicated a 52 percent positive response (n=16), supporting the Green Lantern's actions and the choices of the writers (Palmer-Mehta and Hay 2005). Superhero comics addressing gay issues or with openly gay characters are, however, exceedingly rare.

In many ways musculature is a masculine signifier because it represents the aggressive potential of a character. Research shows that aggression is one of the primary measurements of masculinity (Donaldson 1993; Evans and Davies 2000; Pecora 1992; Soulliere 2006). Soulliere (2006:5) found that aggression was the most important method of performing masculinity among television wrestlers, characters existing in a hyper-masculine fictional environment not unlike the world of comic book superheroes. Aggression serves as a medium through which men assert manhood by contesting the masculinity of other men, primarily through physical altercations, but also verbally (Soulliere 2006:5). Masculinity is, in many ways, defined by expressions of dominance in a social order that defines emasculation of other men as the ultimate symbol of success and social power. Only through the removal of another man's masculinity can true masculinity be demonstrated (Soulliere 2006).

In understanding how masculinity is constructed, it is essential to examine the mutual reinforcement and contestation between masculine and feminine categories (Connell and Messerschmidt 2005:848). Longitudinal analysis of women in comics identifies two primary contradictions inherent in female characters: the contradiction

between strength and dependence, exemplified by characters like Lois Lane—hardened career woman in constant need of rescue; and the contradiction between role model and sex object, exemplified by Wonder Woman and other female heroes (Lavin 1998:94).

During the 1940s and 1950s female characters became hyper-sexualized, constantly bound and in need of male assistance with inexplicable rips in their clothing, making comics popular with servicemen before the advent of *Playboy* and *Penthouse* (Lavin 1998:95). The influence of the second-wave Women's Movement brought changes to female characters during the late 1960s, inspiring representation of more realistic body types (Lavin 1998:97). However, these changes did not last and arguably, "comics of today are more blatantly sexist and provocative than ever" (Lavin 1998:97).

A longitudinal analysis of Wonder Woman comics supports this, asserting that although Wonder Woman sometimes provides a realistic female character, she remains hyper-sexualized and largely devoid of sexual politics (Emad 2006). Notable exceptions are Wonder Woman comics between 1942-1947 and 1987-1992, during which times the character became highly politicized, initially as a national icon similar to Rosie the Riveter, and later as a feminist fighter vanquishing villains representing social problems like urban decay. During the latter part of the '87 to '92 run, Wonder Woman became a diplomat, pushing social reform at the state level as an emissary from a superior culture of Amazonian women (Emad 2006:971-973).

Although Wonder Woman has frequently rescued men in distress—a stark reversal of prevalent superhero gender dynamics—she has also been consistently associated with bondage, either as the standard female prisoner of the genre or as a nationalist dominatrix wielding her golden whip, which forces anyone tied with it to tell the truth (Emad 2006). Ultimately, representations of Wonder Woman have returned to the hyper-sexualized wide-eyed ingénue (Emad 2006:976-977).

Statistical information about current comic readership is almost non-existent, with the exception of Simba Information's recent comic and graphic novel readership reports, which retail for $995 (2008-2009) and $1,295 (2009-2010). These resources are outside the economic scope of this research. A press release from Simba Information regarding the 2009-2010 report claims 1 in 4 comic readers is over the age of 65 (Pawlowski 2010). Another analysis indicates adolescents and young adults dominate the market (12-25 year olds, Lavin 1998:93). Gender analysis of readership indicates a male majority (86.59 to 90% in Emad 2006:969; consistent with Lavin 1993, and Pecora 1996). However, comics are increasing in popularity. Reported sales growth among major publishers is dominated by Marvel Comics, which experienced a 400 percent increase between 1999 and 2002 alone (Macdonald 2008 as cited in Gavigan 2010:146). Graphic novel sales (trade paperback comic collections) for the U.S. and Canada in 2007 were $375 million, a 500 percent increase from 2001 (Macdonald 2008 as cited in Gavigan 2010). Individual issue sales for the 300 highest-grossing series of 2007 are estimated at $270 million (comichron.com 2010).

Rapid growth may indicate expansion into new reader demographics, arguably instigated by the recent popularity of comic book film adaptations such as *The Dark Knight,* the third highest-grossing domestic picture of all time ($533,345,358 in the U.S., $1,001,921,825 worldwide; boxofficemojo.com 2010). Comic book superheroes are rapidly becoming one of the United States' most lucrative cultural exports.

Although media analysis provides valuable data regarding the construction of social categories, patterns of behavior, and beliefs, any assumption that content alone can accurately describe the way media is interpreted would be erroneous. In his landmark work on encoding and decoding, Stuart Hall argues that consumers interact with media messages in a variety of ways and not always in accordance

with the intentions of media producers (Hall 2007). Hall identifies three positions from which media are decoded by consumers: the *dominant-hegemonic position*, in which a media message is interpreted as it was intended by encoders without questioning content, motive, method, or global and ideological implications; *negotiated-corporate position*, in which global and ideological implications are accepted but personalized, and local interests dominate interpretation, often creating internal contradictions that are rarely, if ever, consciously explored or reconciled in the decoder; and *oppositional position*, in which the literal and implied relationships in the message are understood and intentionally analyzed through an alternate frame of reference, effectively subverting the encoding. Hall describes the oppositional position in terms of an individual "who listens to a debate on the need to limit wages but 'reads' every mention of the 'national interest' as 'class interest'" (Hall 2007:572). While media analysis is vital to understanding how gender categories are constructed and maintained, it is one part of a process that must ultimately include the voices within the audience.

Research Hypotheses and Questions

This research explores the construction of masculinity in superhero comic books through analysis of race, sexuality, muscularity, and aggression. Demographical characteristics are examined against normative masculine traits identified in existing literature (i.e., whiteness, heterosexuality, increased musculature, and aggressive behavior). Variation between male and female characters is examined, and gender interactions are analyzed to determine whether current representations support existing literature identifying female characters as unequal (Best 2005; Emad 2006; Lavin 1998; Pecora 1992). Specifically, the following research hypotheses are tested:

(1) Muscularity, whiteness, and heterosexuality will, through exclusion or negative sanctioning of alternatives, be presented as normative masculine traits among major characters.

(2) Normative masculine traits will be positively associated with attainment of favorable outcomes, reception of sexual interest, and romantic relationships.

(3) Male characters will be more likely to possess physical superpowers than female characters.

(4) Female characters will be more likely to possess nonphysical superpowers than male characters.

The following research question will also be explored: what is the relationship between masculinity and aggression?

Research Methodology

This research employs mixed methods to examine the construction of masculinity in superhero comics, relying primarily on quantitative analysis with limited qualitative observations. An eighty-six-item instrument was constructed and used to analyze 138 characters from fourteen comic books. Coding was done at a small comic book store in western North Carolina with the verbal consent of the owner.

Instrument Design

All variables were conceptualized for the purpose of the study. Each variable was operationalized to measure dimensions relevant to the research questions. Instrument items were closed-ended, exclusive, and exhaustive. A number of categories included the dimension *other* to identify dimensions for future drafts. An *additional comments* section was provided after each table to note potential revisions to the instrument and information not recorded elsewhere.

Seven variables measured demographical characteristics: sex, race, age, muscularity, sexual orientation, prominence, and superpower. Each dimension of a variable was assigned a numerical score, which was converted to a Likert-type measurement and analyzed using SPSS. Five variables measured character behavior: attainment of a favorable outcome, romantic partnership, sexual interest, aggression, and humiliation. Occurrence of each behavior was tallied, summed, and converted to a Likert-type measurement for analysis using SPSS. The instrument underwent three revisions based on feedback received during pretests.

Data Collection

The sample was selected from the thirty best-selling series between September 2010 and February 2011. The thirty best-selling issues from each month were organized according to series. The seven series with the highest cumulative number of units sold were included in the sampling frame. Series selected for the sampling frame and the cumulative units sold were: *Amazing Spiderman*, 929,326 units; *Brightest Day*, 864,265 units; *Batman and Robin*, 505,251 units; *Green Lantern*, 463,058 units; *Avengers*, 441,274 units; *Wolverine*, 409,220 units; and *New Avengers*, 407,535 units. These totals were determined using figures from the Comic Chronicle website, which compiles monthly and annual sales statistics for comic books distributed by Diamond, the sole distributor of Marvel and DC Comics, the two highest-grossing comic book companies in the world.

A stratified random sample without replacement was used to select individual issues from each series. The sampling frame included all issues published between September 2010 and March 2011. Two issues were randomly selected from each series using the random integer function on a TI-84 graphing calculator.

At the comic book store in which I coded the selected issues, two were unavailable (*Brightest Day* #18 and *New Avengers* #7). Alternate issues in the series were randomly

selected as replacements.

Data Analysis and Discussion
Characteristics of the Sample

Random stratified sampling resulted in selection of 14 comic books from 7 series and 2 publishers: *Brightest Day* (DC), issues 13 and 21; *Avengers* (Marvel), issues 7 and 8; *New Avengers* (Marvel), issues 5 and 10; *Batman and Robin* (DC), issues 15 and 20; *Green Lantern* (DC), issues 56 and 63; *Amazing Spiderman* (Marvel), issues 643 and 649; and *Wolverine* (Marvel), issues 2 and 6. Statistical analysis of 138 characters was completed with additional analysis of character centrality and motion applied to 14 randomly-selected pages. Due to small sample sizes all results should be interpreted as indicators of potential significance, rather than inherently significant. All p values are calculated using Pearson Chi-Square.

Characters' frequencies per title are as follows: 5.1 percent *Brightest Day* (n=7), 15.2 percent *Avengers* (n=21), 21 percent *New Avengers* (n=29), 14.5 percent *Batman and Robin* (n=20), 18.8 percent *Green Lantern* (n=26), 12.3 percent *Amazing Spiderman* (n=17), and 13 percent Wolverine (n=18). Frequency by publisher is 38.4 percent DC (n=53) and 61.8 percent Marvel (n=85). This variation is explained by the inclusion of four Marvel titles (eight comics) and three DC titles (six comics) in the sample. Also, *Brightest Day* #21 contained only two characters, significantly altering the percentage of characters per publisher in a way that could be balanced by a larger sample.

Demographical Information

Approximately one-fifth of the characters sampled are major (19.6%, n=27). This number is deceptive due to lower representation of individual characters in comics featuring superhero teams, such as *Avengers* and *New Avengers*. While eight or more characters may be prominent members of a team, only a fraction of them may be present in more

than fifty percent of the pages in an individual comic book. If the team separates, which is common, one group may participate in a story line that takes precedence over another group, reducing representation of characters participating in the secondary story line.

More than seventy percent (72.5%) of characters possess superpowers (n=100), indicating superpowers are normative rather than exceptional. Characters with nonphysical superpowers are most common (25.4%, n=35), followed by physical superpowers (19.6%, n=27). The combination of both physical and nonphysical superpowers is comparatively rare (8%, n=11), while characters with unidentified powers make up approximately one-fifth of the sample (19.6%, n=27). High representation of nonphysical powers fails to support existing literature and research expectations associating masculinity and aggression (see below; Donaldson 1993; Evans and Davies 2000; Pecora 1992; Soulliere 2006). Unexpectedly high representation of characters with unknown powers indicates that although superheroes are often costumed, they do not always utilize their powers and may spend entire issues talking or attempting to unravel a mystery (for example, *Avengers* #8).

Male characters represent the majority of the sample (74.6%, n=103), indicating that superhero comics continue to represent a masculine environment in which female characters are marginalized—even aliens, mutants, and demons are easily identified by sex. Best's analysis of homosociality in 1950s superhero comics seems uncannily representative of the modern milieu (see below; 2005:88).

Because the majority of characters' racial identities are unstated (86.2%, n=119) apparent racial identities are used for analysis and cross-tabulations. In keeping with research hypotheses and existing literature, white characters are most common (65.2%, n=90; Brown 1999; Greenberg et al. 2003; Morrison and Halton 2009; Singer 2002; Soulliere 2006). Even two characters whose stated racial identities are Egyptian present as white (Shiera/Hawkgirl and Carter/

Hawkman in *Brightest Day* #13). Mutants are more common than black or Asian characters (mutant, n=8; black, n=7; Asian, n=3), and aliens outnumber all minorities and mutants combined (16.7%, n=23), supporting Singer's observation that imaginary races outnumber racial minorities and create a false sense of racial diversity in superhero comics (Singer 2002:112).

Similar to racial dimensions, age is primarily unstated (97.8%, n=135). The majority of characters' apparent age is adult (69.6%, n=96) followed by young adult (n=13), middle age (n=12), and old age (n=8). While adult characters represent an overwhelming portion of the sample, each age range is represented (n≥1).

The only form of sexuality represented is heterosexuality (39.1%, n=54). While this supports existing literature and research hypotheses (Carrigan et al. 1985; Donaldson 1993; Goffman 1963; Kimmel 2007; Palmer-Mehta and Hay 2005), the complete absence of other sexualities indicates more extreme social sanctioning through exclusion, a phenomenon Soulliere argues can lead to increased homophobia in audiences (2006:9). The majority of characters express no sexuality (60.9%, n=84), indicating a predominantly asexual environment.

Almost half of the characters engage in physical aggression (45.7%, n=63), though the majority of them fall into the low category (n=42). Fewer characters participate in verbal aggression (36.2%, n=50). Data indicate that physical aggression is more prevalent and more concentrated among individual characters, as reflected by wider class widths. Frequencies of physical and verbal humiliation among characters are slightly higher than those of aggression (55.1%, n=76; and 41.3%, n=57, respectively). Overall, physical altercations represent the majority of character conflicts, with superpowers being the most common weapon (n=31).

Normative Masculinity

*There is only one complete unblushing male in America:
a young, married, white, urban, northern, heterosexual
Protestant father of college education, fully employed,
of good complexion, weight, and height, and a recent
record in sports.*

<div align="right">

Goffman 1963:128

</div>

One of the primary mediums of cultural transmission is the story, in which beliefs, customs, and values are embedded and shared. In stories, heroes are symbolic representations of social ideals, expressions of desirable and exemplary traits, though they are often flawed or conflicted in some way. Modern stories take many forms: radio, television, film, novel, comic book, and so on. The superheroes of modern comic books, however, are arguably the quintessential symbols of masculinity for adolescent and young adult males in America (Brown 1999; Pecora 1992). Statistical analysis of traits of male characters indicates a number of significant relationships, providing a quantitative sketch of the exemplary masculinity that superheroes symbolically embody.

As indicated by demographical frequencies, normative character traits within the sample are whiteness and heterosexuality, a finding consistent with relevant media analyses and research expectations (Best 2005; Brown 1999; Greenberg et al. 2003; Morrison and Halton 2009; Palmer-Mehta and Hay 2005; Singer 2002; Soulliere 2006). In regard to a hierarchy of masculinities, this aligns normative superhero masculinity with these two primary elements of hegemonic masculinity, indicating that not only superhuman abilities, but also racial and sexual privilege are important elements of the idealized masculinity of superheroes (Carrigan et al. 1985; Chesebro and Fuse 2001; Connell and Messerschmidt 2005; Donaldson 1993).

Further exploration of the relationship between race and sexuality among male characters indicates the majority of identifiable heterosexuals are white (85.3%, n=29), while non-whites make up almost half the characters with unknown sexualities (47.1%, n=33), showing a statistically significant disparity in sexual representation by race (p=.018). This seems to indicate that the sexuality of non-white characters is of lesser importance, reinforcing observations of the social privilege afforded white male characters. Apparently, representations of white sexuality are more noteworthy and acceptable, especially for the emulation of adolescent boys.

Although not statistically significant, the relationship between race and character prominence among men also supports observations of the increased social value of white characters (p=.145). One mutant, one alien, and one unidentifiable character are major. All other major characters are white (n=22). Although black and mutant characters are equally represented (n=6), no black or other minority male characters are major. Even when minority masculinities are present, they are relegated to supporting roles in the whitewashed drama of super-heroism.

Racial minorities are also less likely to talk back. Black, Asian, and mutant characters do not engage in verbal aggression. White characters, however, dominate every level (none, low, moderate, high, and extreme), indicating a statistically significant relationship between race and verbal aggression (p=.000). However, no relationship between race and physical aggression exists (p=.307), indicating all men are equally ready to put up their fists, claws, and tentacles. This indicates that minorities may be silent muscle, token representations that join the physical fray but are otherwise on the sidelines.

While data show a masculine environment dominated by white characters interacting with one another, a number of variables are randomly distributed among races, demonstrating relative equality in specific areas. Contrary to research hypotheses, male characters of every

race are equally likely to succeed (p=.99), receive sexual interest (p=.982), and have romantic partners (p=.961). This indicates that although non-whites are underrepresented and their sexual preferences are marginalized, their secondary status does not preclude them from equal opportunities for romance and success. Minorities are also not singled out for physical or verbal abuse, (physical humiliation, p=.343; verbal humiliation, p=.976) indicating that the primary sanction against non-whites is underrepresentation. However, underrepresentation alone presents a skewed version of idealistic masculinity unattainable to minority male readers.

Analysis of Muscularity Among Male Characters

As an external signifier of masculinity, the body has come to represent all the conventions traditionally linked to assumptions of male superiority.
Brown 1999:27

The musculature of the male body symbolizes strength, power, desirability, and success (Brown 1999; Morrison et al. 2003). Musculature is, in essence, the physical manifestation of a man's masculinity. As such, masculinity among superheroes is expected to correspond with excessive and idealized musculature, indicating male characters are superior not only to normal men, but even to men who are muscular by modern social conventions.

Analysis of body types among male characters indicates a bimodal distribution clustered around hyper-muscular (extreme musculature, 26.9%, n=28; steroid use, 21.2%, n=22) and thin (34.6 %, n=36). Hyper-muscularity is most common (48.1%, n=50), supporting research hypotheses concerning normative musculature among male superheroes. High representation of thin male characters supports Brown's analysis of modern masculinity:

The male identity in the twentieth century is perceived in extremes: man or mouse, He-man or 98-pound weakling. At one end is the hyper-masculine ideal with muscles, sex appeal, and social competence; at the other is the skinny, socially inept failure. But these two male extremes are not so far removed as they might seem. Warrior and wimp exist side by side, each defining the other in mutual opposition. (1999:25)

Hyper-muscularity must be offset by less muscular representations of masculinity in order to provide context and articulate dominance among men. If only hyper-muscularity is represented, it becomes unexceptional and no longer serves as a status indicator of power and success.

Examination of the relationships between body type and other normative traits among male characters shows a positive association between identifiable heterosexuals and hyper-muscularity (73.6% of all heterosexual male characters are hyper-muscular, n=25, p=.006). This finding supports existing literature associating muscularity and sexuality (Brown 1999; Morrison et al. 2003). The sexual orientation of hyper-muscular men is presented as more apparent and more important (hyper-muscular men represent only 35.7% of characters with unknown sexual identities, n=25).

An analysis of the relationship between male body type and physical aggression supports existing literature identifying muscularity as a signifier of physical power and dominance (Brown 1999; Morrison et al. 2003). Data indicate physical aggression is least common among male characters with unidentifiable and moderate body types, followed by overweight characters, with significantly higher frequencies among thin characters and highest representation among hyper-muscular body types (68%, n=34). Overall, increased physical aggression is associated with hyper-muscularity at a level approaching statistical significance (p=.06).

Interestingly, data contradict research hypotheses associating muscularity with prominence (p=.674),

success (p=.618), romance (p=.703), and desirability (reception of sexual interest, p=.582), indicating muscles primarily signify heterosexuality and physical power among male characters. Also, male characters without hyper-muscular body types are not victims of increased physical (p=.67) or verbal humiliation (p=.43), indicating a lack of verbal or physical sanctions against non-normative male body types. Similar to race and sexual orientation, hyper-muscularity is established as a normative trait through overrepresentation, and, much like other normative superhero traits, hyper-muscularity articulates an idealized masculinity unattainable for most readers and often impossible without the use of steroids (21.2% of male characters, n=21).

Qualitative observation of male superheroes identifies hyper-muscularity as a possible form of compensation for traditionally emasculating apparel (i.e., tights and colorful latex body suits), reinforcing masculine identities called into question by the transcendence of apparel-related gender signifiers. This finding aligns with Walser's identification of bodybuilding and homophobia as forms of apologetic behavior among men who adopt stage personas that transcend traditional gender boundaries regarding make-up and feminine clothing (1993:129-130).

Masculinity and Favorable Outcomes

The majority of male characters experience favorable outcomes (59.6%, n=62), indicating success is a normative feature of superhero masculinity. However, while 92 percent of major characters succeed (n=23), only 49.4 percent of minor characters achieve favorable outcomes (n=39), indicating a statistically significant relationship between success and prominence (p=.000). In fact, data indicate that major characters are almost inevitably successful, which appears to be the most common difference between major and minor characters.

In contrast to all relevant literature and research hypotheses associating aggression and masculinity,

as levels of physical aggression increase, attainment of favorable outcomes decreases, indicating a statistically significant negative correlation between variables (p=.014; Brown 1999; Evans and Davies 2000; Morrison and Halton 2009; Pecora 1992; Soulliere 2006). Also, a statistically significant negative correlation exists between physical humiliation and attainment of favorable outcomes (p=.01), indicating that avoidance of physical conflict is beneficial for male characters. This is in contradiction to other media representations of masculinity (Brown 1999; Evans and Davies 2000; Morrison and Halton 2009; Pecora 1992; Soulliere 2006). From children's books to action films, theorists suggest that aggression is associated with normative masculine behavior (Evans and Davies 2000; Morrison and Halton 2009), yet quantitative analysis of modern superhero comic books suggests that the more physically violent a hero is, the less successful he is. This indicates a change in idealized representations of masculinity. Because this is a behavioral trait, it is also one of the few masculine qualities that readers can emulate—and arguably one of the more positive social contributions offered by the medium.

Gender Dynamics

Our understanding of hegemonic masculinity needs to incorporate a more holistic understanding of gender hierarchy, recognizing the agency of subordinated groups as much as the power of dominant groups and the mutual conditioning of gender dynamics and other social dynamics.

Connell and Messerschmidt 2005:848

In order to map the construction of masculinities in superhero comics, the reciprocal relationship with femininities must be examined and the interaction between male and female characters analyzed. Beginning with examination of data relevant to research hypotheses regarding sex and superpowers, this section explores theoretical questions

regarding the agency and importance of female characters in a mostly male environment.

Based on existing literature identifying physical strength and aggression as masculine traits, research hypotheses anticipate a negative association between female characters and physical superpowers (Donaldson 1993; Evans and Davies 2000; Pecora 1992; Soulliere 2006). Although data indicate a statistically significant relationship between sex and superpowers (p=.017), analysis shows it to be more complex than the anticipated association between feminine and nonphysical powers and masculine and physical powers.

Female characters are most likely to possess both physical and nonphysical powers (17.6% of females, n=6), while male characters dominate the separate categories of nonphysical and physical. Data indicate male characters are most closely associated with nonphysical powers (30.1% of males, n=31), while physical powers are secondary (23.3% of males, n=24)—a finding contradictory to previously identified associations between physicality and masculinity. Female characters are less likely than males to possess physical powers (8.8% of females, n=3), yet male characters are even more likely to possess nonphysical powers. At the same time, it is extremely rare for men to possess both physical and nonphysical powers (4.9% of males, n=5), indicating that while women are underrepresented in either extreme, they dominate the middle ground, functioning as intermediaries between the binary opposition of physical and nonphysical and occupying, at least in regard to superpowers, a liminal position in the world of heroes.

The odds of not having superpowers are also higher among female characters (35.3% of females, n=12; 25.2% of males, n=26), and women are more likely to put on a costume without ever using their abilities (unknown superpowers: 29.4% of females, n=10; 16.5% of males, n=17). Both findings support Best's assessment of 1950s superhero comics, in which female characters exist as heterosexual

signifiers, occupying less important roles than their male counterparts (2005:94). Best argues that women became more prevalent within superhero comics to dispel the specter of homosexuality conjured up by the 1954 publication of Frederick Wertham's *Seduction of the Innocent*. However, rather than being active participants, the primary role of female characters was to disarm an otherwise male environment by providing socially acceptable love interests for the heroes.

In keeping with Connell and Messerschmidt's argument that gender dynamics must be explored more thoroughly in order to comprehend the construction of masculinities, a number of other variables were analyzed to better understand the relationship between male and female characters. Best's identification of women as heterosexual signifiers in superhero comics is supported by several of these findings: female characters are less likely to be major characters (5.9% of females, n=2; 24.3% of males, n=25; p=.057); they are more likely to be identifiably heterosexual (58.8% of females, n=20; 33% of males, n=34; p=.02); they are more likely to have romantic partners (32.4% of females, n=11; 6.7% of males, n=7; p=.005); and, although not statistically significant (p=.337), women are more likely to express sexual interest than men (23.5% of females, n=8; 8.7% of males, n=9).

An analysis of the relationship between sex and aggression failed to find a positive association between male characters and physical or verbal aggression—in direct contradiction to research hypotheses and existing literature (Brown 1999; Carrigan et al. 1985; Donaldson 1993; Evans and Davies 2000; Morrison and Halton 2009; Pecora 1992; Soulliere 2006). In fact, data show no statistically significant relationship between sex and aggression whatsoever (physical aggression, p=.835; verbal aggression, p=.781), indicating that female characters are just as ready to shit-talk, threaten, and physically attack as their male counterparts. Even analysis of specific forms of physical aggression found

no association with sex (body, p=.906; object: p=.655; superpowers, p=.663). Although this contradicts existing analyses of gender and aggression, Evans and Davies' study of children's books found that female characters are more likely to transcend gendered expectations than male characters, indicating greater flexibility in emerging representations of femininity (2000:257).

Also contradictory to expectations, including Best's argument that female characters play a supporting role in a masculine superhero environment, is the lack of relationship between sex and attainment of favorable outcomes (p=.936). Modern female characters in superhero comics, although underrepresented, are equally likely to vanquish enemies, rescue characters, and obtain valuable information. Women in comics may still signify heterosexuality in a predominantly male world, but they are now as aggressive and successful as the men they share the page with.

Although no statistically significant relationship exists between sex and humiliation (physical humiliation, p=.787; verbal humiliation, p=.78)—indicating male and female characters are equally victimized—qualitative observations identify female characters as uniquely prone to total incapacitation, in which they are either restrained or unconscious for entire issues, situations that facilitate protection or attempted rescue by male characters (for example, Shiera/Hawkgirl in *Brightest Day* #13 and Bobbi/Mockingbird in *New Avengers* #10). This finding is in keeping with Lavin's analysis of female characters in pre-1950s comics, which identifies bondage and distress as two major themes associated with women (1998:94-95).

Also supportive of Lavin's argument, the only act of sexual aggression within the sample is unwanted physical contact from a male character (Hath-Set) toward a restrained female character (Shiera/Hawkgirl) in *Brightest Day* #13. However, as data indicate, female characters are not as helpless as they once were. After extensive physical and emotional abuse, Shiera strangles her abuser to death

with her legs while Carter/Hawkman, her would-be rescuer and declared soul mate, is incapacitated by Queen Khea, her mother, in dual demonstrations of aggressive feminine strength (Figure 1).

Figure 1: Demonstrations of Feminine Aggression

Brightest Day #13 (Johns 2011:18-19)

Limitations and Delimitations

Social constructionism argues that identities are manufactured through a web of social interactions founded in historical milieus. Traits are neither masculine nor feminine but articulated as such in ways that tend to associate power and agency with maleness in western societies. Connell and Messerschmidt argue that trait-based analyses of gender are increasingly inadequate, yet a systematized alternative has yet to be proposed (2005:847).

In an attempt to understand relationships of gendered social attributes represented in superhero comics, a matrix of variables and associations were identified and analyzed. The selection of variables, while informed by existing literature, does not include analyses of a wide range of social behaviors that could be examined, due primarily to time constraints and the complexity of the instrument construction involved (for example: emotional expression among characters, risk-taking behaviors, and competitive behaviors).

The decision to examine highest-grossing superhero comics, while providing valuable information about normative masculinity among characters, inevitably reduces overall variation in the sample by excluding titles that may appeal to less prominent social groups and possess a smaller market share. Sampling only the highest-grossing comics within a short time period (Sept. 2010 to Mar. 2011) may also reduce generalizability of results due to periodic changes in the writers and artists on each series and overall shifts in popularity. Masculinities represented in superhero comics are also unlikely to be generalizable to other comic book genres.

Small sample size, while potentially adequate in a normally distributed population, provides n values that are almost non-existent for female and non-white characters. This also reduces the generalizability of the data. To make definitive statements about the population, a larger sample is necessary, but due to time constraints (design, collection, and analysis occurred within a three-month period), the analysis of 138 characters and more than 70 items proved highly challenging in itself. Above all, further research—both qualitative and quantitative—is required to accurately map the gendered landscape of comics and the relationships between superhero masculinities.

As identified by Hall (2007), content analysis provides only one aspect of a social process mediated by individual interpretations. Without analysis of comic book readers and ways in which they interpret and negotiate

meaning, statistics describe encoded messages without contextualization of the nuanced relationship between cultural artifact and consumer.

Significance of Study

Media significantly impact the formation and reproduction of gendered hierarchies in society. As a result, studies of media representations of masculinity provide insight into the structure of gendered hierarchies and the processes through which they are constructed and maintained. Comic books are an area of increasing social significance that has been relatively unexamined by scholars. Existing studies are qualitative, employing historical and literary forms of analyses. This research uses a quantitative instrument designed by the author to collect numerical data for statistical analysis. While results are illuminating, small sample size reduces the generalizability of the data. Future research should repeat the study with a larger sample.

Results identify heterosexuality, whiteness, hyper-muscularity, attainment of favorable outcomes, increased prominence, and the possession of superpowers as normative masculine characteristics in superhero comic books--findings consistent with qualitative observations in existing studies. However, in contradiction to existing literature, analysis indicates a negative correlation between male physical aggression and attainment of favorable outcomes. Further analysis of the relationship between gender and aggression shows female characters to be equally aggressive—also in contradiction to existing literature. Additional examination of the relationship between gender and aggression is recommended.

The majority of quantitative data support the argument that female characters are heterosexual signifiers, finding them to be more identifiably heterosexual, less prominent, less likely to have or use superpowers, less represented, and more likely to engage in romantic or sexual behaviors. However, contrary to existing arguments,

they are also equally violent and successful, indicating that underrepresentation and increased sexual activity are the primary characteristics distinguishing them from their male counterparts. Future research should include an equivalent study of representations of femininity in superhero comics, as well as a quantitative longitudinal study of gender representations to identify possible historical shifts indicated by qualitative observations in existing literature.

Humiliation is randomly distributed by race, muscularity, gender, and sexual orientation, indicating that the primary form of sanctioning against non-normative masculine traits and female characters is underrepresentation. This underrepresentation has been theoretically identified as harmful to consumers for whom specific characteristics may be unattainable (for example, whiteness, body types dependent on steroid use, maleness, and heterosexuality). However, an audience study should be done to analyze the ways superhero comic books are decoded by readers and to determine the interaction between representations of masculinity and the formation and maintenance of reader identities.

Last, the instrument designed for this study provides an example and resource for future researchers interested in measuring quantitative data in comic books of any genre.

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A Clash of Ideologies:
The Failure of the Guatemalan Peace Accords

Abstract: On December 29, 1996, the Guatemalan government and the Guatemalan National Revolutionary Unity signed the Guatemalan Peace Accords, ending a thirty-six year civil war that killed upwards of 200,000 people. The Peace Accords consisted of plans to end the prolonged conflict by redressing structural issues within Guatemalan society and promoting economic development. The neoliberal concept of development embodied in the Peace Accords reflects the dominant ideological paradigm that emerged at the end of the Cold War, which was endorsed by the international actors involved in the Guatemalan peace process. However, the sociopolitical issues addressed in the Peace Accords were clearly shaped by the competing, oftentimes conflicting, interests of the Guatemalan oligarchy and civil society. This paper examines the negotiations and subsequent implementation of the Peace Accords as an interface between these three competing ideologies and shows that the lack of ideological coherence polarized negotiating parties and ultimately resulted in the failure of the Guatemalan Peace Accords to create positive, meaningful change in post-settlement Guatemala.

Lillyanne Tyler Daigle*
Latin American Studies

Lillyanne majored in Global Studies with a concentration in Peace and Social Justice and minored in Peace and Conflict Studies during her time at Warren Wilson College. Through her academic escapades she came to the realization that her sincere academic interests lie in exploring the intersection between international development and conflict in the post-Cold War era. At some point in the next few years she would like to attend graduate school to continue her investigation into the relationship between international conflicts and contemporary world systems. But, for now, she is more than content waitressing at a beer bar, collecting tattoos, creating zines, and travelling Central America.

A Clash of Ideologies

On December 29, 1996, the Guatemalan government and the Guatemalan National Revolutionary Unity signed the Guatemalan Peace Accords to end a thirty-six year civil war. The Peace Accords consisted of plans to not only end a long-term conflict by addressing the root causes from which the conflict stemmed, but to promote economic development as well. The neoliberal concept of development embodied in the Peace Accords reflected the ideology of the international actors that were involved in the negotiation process, while several other accords were clearly shaped by the interests of both Guatemalan civil society and the oligarchy. The negotiations and subsequent implementation of the Peace Accords can be examined as an interface between the competing ideologies of the domestic elite, international actors, and Guatemalan civil society. The lack of ideological coherence polarized negotiating parties during both the negotiation and implementation processes and resulted in the failure of the Peace Accords to create a positive, meaningful change in post-settlement Guatemala.

In order to present a comprehensive analysis of the issues surrounding the Guatemalan Peace Accords, it is necessary to understand the context in which the Peace Accords took place. Therefore, this paper begins by exploring the history of the Guatemalan sociopolitical structure in the years prior to and during the civil war. This history is essential to understanding the deeply entrenched culture of plutocratic power within Guatemalan society. The domestic background is then analyzed within a global context to view the negotiation and implementation of the Guatemalan Peace Accords in terms of larger influencing factors. Specific examples relating to the negotiation and implementation processes are dissected and discussed to facilitate an understanding of the three forces at play.

At this point, the arguments in this paper will diverge from the prominent discourse relating to the Guatemalan peace process. Much of the literature interprets the failure

1. William Robinson, "Neoliberalism, the Global Elite, and the Guatemalan Transition: A Critical Macrosocial Analysis," *Journal of Interamerican Studies and World Affairs* 42, no. 4 (2000): 89.

2. See also: Christopher Chase-Dunn, "Guatemala in the Global System,"

3. Susanne Jonas, "Democratization Through Peace: The Difficult Case of Guatemala," *Journal of Interamerican Studies and World Affairs* 42, no. 4 (2000): 10. Other pertinent work by Jonas includes *Of Centaurs and Doves, The Battle for Guatemala: Rebels, Death Squads, and US Power*, "The Mined Road to Peace in Guatemala," and "Guatemala's Peace Accords: An End and a Beginning."

of the Guatemalan Peace Accords as either a direct result of inherent internal issues or as a symptom of the larger sickness present within the contemporary world system. In "Neoliberalism, the Global Elite, and the Guatemalan Transition: A Critical Macrosocial Analysis," William Robinson argues that the Guatemalan transition toward democracy illustrates "contradictions internal to global capitalism."[1] Though he makes valid arguments with the world-systems approach, Robinson fails to take the full significance of Guatemala's sociopolitical history into account. Christopher Chase-Dunn and several other world-systems theorists take positions similar to Robinson.[2]

Unlike Chase-Dunn or Robinson, Susanne Jonas utilizes Guatemalan sociopolitical history as means to analyze the failure of the Guatemalan Peace Accords. Jonas's work is amongst the most prominent of literature regarding the Guatemalan Peace Accords and has influenced the historical argument of this paper. Jonas sets out to understand the transition of Guatemala's political system and suggests that Guatemala can be used as an example of sweeping transitional trends within Latin America.[3] Other literature focuses solely on the implementation processes within Guatemala and analyzes the success and failure of specific aspects of the Peace Accords. This paper incorporates ideas from different theoretical approaches in the literature regarding the Guatemalan Peace Accords and places them within the context of international conflict resolution practices that developed within the post-Cold War geopolitical paradigm.

Primary sources are utilized alongside prominent secondary literature regarding the Guatemalan peace process. The Peace Accords themselves were explored to examine the outcome of interactions between the three forces present during the negotiation process. Reports from the United Nations Verification Mission in Guatemala (MINUGUA) were also utilized to interpret the implementation procedures and their success. These documents were then synthesized with historical records and theoretical concepts such as

world systems theory to create an original argument pertaining to the failure of the Guatemalan Peace Accords.

By the time peace negotiations began in Guatemala, the interests of the landed elite were deeply embedded within military philosophy, an institution that has historically played a significant role in Guatemalan governmental structures. As the Commission for Historical Clarification notes, "The proclamation of independence in 1821, an event prompted by the country's elite, saw the creation of an authoritarian State which excluded the majority of the population, was racist in its precepts and practices, and served to protect the economic interests of the privileged minority."[4] Prior to 1944, Guatemala had been ruled by a series of dictatorships, which survived through continual exploitation of Guatemala's majority Maya population.[5] As the Guatemalan economy developed, it became increasingly reliant on export-based profits, enabling large businesses to flourish and gain significant control over both the government and the larger Guatemalan social structure.

In 1944, the dictatorship was overthrown by a democratic revolution, and Guatemala's first democratic government was established under the elected leader Juan Jose Arevalo Bermejo.[6] While in office, Arevalo instituted a wide array of reforms centered around four themes: improving the education system, agrarian reform, refining labor rights, and strengthening democratic values.[7] These reforms threatened both the power and possessions of the big businesses that had flourished during the previous dictatorships. In 1951, under the presidency of Jacabo Arbenz, Arevalo's reforms were transformed into concrete action, which resulted in palpable changes within Guatemalan society; for the first time in Guatemalan history, the interests of the people were held higher than those of the oligarchs, which meant losses for big business. United Fruit Company, for example, lost approximately one-third of its land holdings and its monopoly over public services in Guatemala due to the 1952 Agrarian Reform Law.[8]

4. Commission for Historical Clarification, *Guatemala, Memory of Silence* (Guatemala: Guatemala, 1998), 1.

5. Laura Moye, "The United States Intervention in Guatemala," *International Social Science Review* 73, no. 1 (1998): 44.

6. Ibid.

7. Stephen Schlesinger and Stephen Kinzer, *Bitter Fruit: The Untold Story of the American Coup in Guatemala* (Garden City, NY: Anchor Press, 1983), 37.

8. Moye, "United States Intervention," 45.

9.
Schlesinger, *Bitter Fruits,* 12.

10.
Moye, "United States Intervention," 49.

11.
Jennifer Schirmer, *The Guatemalan Military Project: A Violence Called Democracy* (Philadelphia, University of Pennsylvania Press, 1998), 2.

12.
Odd Arne Westad, *The Global Cold War: Third World Interventions and the Making of Our Times* (Cambridge: Cambridge University Press, 2007).

13.
Jonas, "Democratization," 10.

14.
Schirmer, *The Guatemalan Military Project,* 13.

These changes wrought huge implications for the Arbenz government. The United Fruit Company had exercised an immense amount of economic power in Guatemala for a long period of time, which had enabled the company to develop a strong relationship with the Guatemalan plutocracy as well as the United States government. According to historians Schlesinger and Kinzer, "It functioned as a state within a state, owning Guatemala's telephone and telegraphy facilities, administering its only important Atlantic harbor and monopolizing its banana export."[9] In response, United Fruit Company appealed to the United States, who, in 1954, funded a coup d'état to install a government more friendly to business interests. Castillo Armas, the new leader backed by the U.S., established a military dictatorship and effectively ended the climate of social change.

Under Armas, the Guatemalan government was once again geared toward propagating the interests of the landed elite. Reforms made by the two previous democratic governments were reversed, and policies of state repression and structural violence were reinstated.[10] The military fused with the Guatemalan government, creating a state identity that was inseparable from military philosophy.[11] The installment of Armas illustrates not only the power of the Guatemalan oligarchy, but also the attitude of the United States at that time, which held interventionism and authoritarian rule to be the most effective way of securing interests abroad. This intervention-based philosophy of the United States was widely representative of the bipolar power struggle that took place during the Cold War; both the U.S. and U.S.S.R. secured and financed authoritarian governments throughout the world to ensure that strategic areas upheld either democracy or communism.[12]

In 1960, civil war broke out in a country divided by vast socio-economic inequalities, languages, and culture.[13] Factions of guerillas waged war against the state as a response to the continuation of pervasive, systematized violence built into the Guatemalan Constitution.[14] The state military was

trained and funded by the U.S. and supported the creation of independent paramilitaries that consisted of large landowners who joined on a voluntary basis. The state also created special paramilitaries, known as civilian defense patrols, comprised of civilians who were given the choice of cooperation or death.[15] The guerillas were funded and trained by Cuba, a relationship that provided the U.S. continuous justification to fund the Guatemalan military despite its grave record of human rights abuses; within this context, the civil war had taken on the undertones of a Cold War proxy war.

    The serious human rights violations that marked the civil war evolved as a result of the state's fierce reaction to the guerillas; at this point in the war, the state perpetrated violence against pockets of the population not deemed "loyal" to the state. As Ivan Eckhardt, a Cold War scholar, writes, "While the victims were of all ethnic and social types, the vast majority were Mayans, corresponding with the traditional authoritarianism and racism of the state."[16] In the early 1980s, this backlash against the Maya population culminated in the "scorched-earth" campaign under the orders of General Effrain Rios Montt, which left at least 150,000 Maya dead or disappeared.

    In 1984, Montt was overthrown in a coup partially due to the widespread dislike and disapproval of his regime, with the most outspoken criticism originating from within Montt's own cabinet. In 1985, for the first time since the outbreak of civil war, the government transitioned to a civilian government, as provided for in the new Guatemalan Constitution. The 1985 Constitution did not, however, win the faith of the majority of the Guatemalan population since most civilians did not see any change in their daily lives. There was still a strong paramilitary presence while repression and human rights abuses continued, and, as Jonas writes, "for the most part, civilian presidents allowed the army to rule from behind the scenes."[17]

    While the state's capacity to function was no longer directly threatened by the guerillas, the civil war made

15. Ivan Eckhardt, "The Guatemalan Civil War: The Bipolarisation of an Internal Conflict," *Perspectives: Central European Review of International Affairs* 25, (2005): 33.

16. Ibid.

17. Jonas, "Democratization Through Peace," 20.

18.
Eckhardt, "The Guatemalan Civil War," 34.

19.
Jonas, "Democratization Through Peace," 2.

20.
Chase-Dunn, "Global System," 100.

21.
Robinson, "Macrosocial Analysis," 91.

22.
Teresa Whitfield, *Friends Indeed? The United Nations, Groups of Friends, and the Resolution of Conflict* (Washington, DC: United States Institute of Peace, 2007), 30.

internal stability impossible to achieve and effectively isolated Guatemala from the global economy.[18] So, the civil war raged on in a desperate attempt by the government to quell the rebel forces, which by this time had united under a single umbrella organization known as the Guatemalan National Revolutionary Unity (URNG). According to Susanne Jonas, by the late 1980s the URNG "recognized that a strategy based on military victory or 'taking state power' was unworkable; its costs made it totally unacceptable to the noncombatant population."[19] Initially, both the Guatemalan government and military were strictly opposed to peace negotiations, but by 1989 it became clear to the government that while the civil war was continuing, no one was going to "win."

The willingness of the government to begin negotiations demonstrates the influence of the dominant ideology held by international actors, which had shifted with the end of the Cold War. Christopher Chase-Dunn, a world-systems theorist, writes, "The demise of the Soviet Union and the emergence of global patterns of economic restructuring have produced a hegemonic consensus," a transition which had been embraced by international bodies such as the United Nations and World Bank.[20] As the core powers saw it, authoritarian dictatorships isolate states from the global market, while stable democracies provide a more favorable environment for the full integration of a state into the global economy.[21] In order to promote the newfound international policy of democracy, the United Nations, which was no longer rendered ineffective by the ideological gridlock that characterized Cold War politics, became extremely involved in international peacekeeping activities.[22]

Alongside the exponential increase of U.N. peacekeeping activities grew the existence of groups of Friends. According to Teresa Whitfield, a Friends scholar, "Friends' groups can be described as ad hoc, informal, issue-specific mini-coalitions of states or intergovernmental organizations that become involved in and provide support

for resolving conflicts and implementing peace agreements."[23] The first group of Friends came to fruition during the United Nations' involvement in the Salvadorian peace process, which was the first example of successful international conflict mediation in the post-Cold War era. The inclusion of a group of Friends in this initial peace process evolved to include the resolution of many major conflicts in the post-Cold War era, including that of Guatemala. As Whitfield writes, "They [groups of Friends] have developed as a critical element of an incipient system of post-Cold War global security governance."[24] The increasing involvement of Friends in the post-Cold War era exemplifies the global shift toward peacemaking as a means to meet desired ends.

Despite the global transition toward international peacekeeping methods, there was not a historic legacy of such attitudes toward peace in Guatemala. The prior Guatemalan governments did not subscribe to the new ideological model that utilized neoliberal development as means to resolve social inequalities and other structural causes of conflict. The Guatemalan government had historically placed priority on the continuation of a plutocratic legacy rather than on the integration of the state into the global economy, since that could potentially threaten the interests of the oligarchy. The fact that the Guatemalan state was receptive to a peace process that countered the interests of the oligarchy highlights the larger paradigm shift toward neoliberal peacekeeping practices within the world system.

From 1989 to 1990, the National Reconciliation Commission facilitated dialogue between the Guatemalan government, its military, and parts of civil society. The initial talks did not involve the URNG, an action that demonstrates an incomplete transformation of state ideology; at this point, neither the government nor military had entirely embraced the principles of democracy endorsed by the dominant global powers. Direct negotiations did not take place until 1991, but the state was more concerned about establishing a cease-fire to appease the international audience than creating

23. Whitfield, *Friends Indeed*: 9.

24. Whitfield, *Friends Indeed*, 2.

25.
Jonas, "Democratization Through Peace," 11-12.

26.
Ibid.

27.
Whitfield, *Friends Indeed*, 87.

28.
Jonas, "Democratization Through Peace," 12.

29.
United Nations General Assembly, A/49/61, "Framework Agreement for the Resumption of the Negotiating Process between the Government of Guatemala and the UNIDAD Revolucionaria Nacional Guatemalteca," Jan. 10, 1994, 3.

agreements to redress the root causes of the conflict. The URNG interpreted these actions as an unwillingness to participate in meaningful negotiations. Consequently, negotiations stagnated by the middle of 1992.[25]

In 1993, Jorge Serrano, the president of Guatemala at the time, made a failed attempt to take control of the government through an autogolpe, or self-coup.[26] This unexpected effort to seize complete power elucidates that, while Serrano identified with the dominant global ideology more so than any previous president, he continued to hold the interests of the oligarchy as his highest priority. When analyzed in conjunction with the continued failure to initiate meaningful peace negotiations, the failed autogolpe is yet another example of the incomplete ideological transition that took place in Guatemala. Ramiro de Leon Carpio, a former human rights ombudsman who had strong ties with the military, became president after Serrano was deposed. Once in power, Carpio reinitiated the peace process, though his early attempts were insincere. Carpio initially required the URNG to disarm before continuing negotiations without first providing sufficient settlements, a prerequisite that was rejected by both the URNG and the international community. After the failed coup and Carpio's weak attempt to initiate a ceasefire, it became clear to the international community that more international involvement, especially by the U.N., would be necessary in order to ensure a meaningful peace process occurred.[27]

In January 1994, the desire of the international community to become more involved in the Peace Accords was satiated when the Guatemalan state and URNG signed the Framework Accord.[28] This groundbreaking agreement formalized a structure for the peace process to follow, paved the way for the creation of more agreements, and requested that a representative from the United Nations serve as a moderator for the negotiations.[29] The accord also provided for the formation of two organizations: the Assembly of Civil Society and the Group of Friends of the Guatemalan

Peace Process. The establishment of these organizations, as well as the direct involvement of the U.N., lent the peace negotiations the international and domestic credibility that was desperately needed for it to continue as a legitimate peace process. According to Whitfield, "The direct engagement of these two composite actors in support of the United Nations reinforced the pressure for change."[30] The formal inclusion of a group of Friends and civil society signified that the Guatemalan state accepted the global ideological paradigm that it had previously seen as counter to the interests of the oligarchy.

The Assembly of Civil Society, or ASC, encompassed a vast majority of non-governmental organizations within Guatemala. The ASC was created to write documents on the five major themes of the negotiations, present non-binding recommendations, and endorse the final accords. The Coordinating Committee of Agricultural, Commercial, Industrial, and Financial Associations (CACIF) was initially part of the ASC but withdrew soon after its formation, claiming the ASC consisted of illegal organizations. The CACIF, one of the most powerful non-governmental forces in Guatemala, is an organization that consists of big industrial and agricultural businesses that represent the interests of the oligarchy. After withdrawing from the ASC, the CACIF acted on its own volition by forming the Business Peace Commission (CEPAZ), which lobbied domestic and international actors during the peace process. While the inclusion of civil society in negotiations was unprecedented, Roman Kznaric argues that the state used the ASC to increase the legitimacy of the Peace Accords in the eyes of the public while intentionally giving it minimal influence over the negotiations themselves.[31]

The Framework Accord also requested that Columbia, Mexico, Norway, Spain, the United States, and Venezuela form a group of Friends, which was to be present and active during the negotiation process. The Framework Accords gave the Group of Friends of the Guatemalan Peace Process

30. Whitfield, *Friends Indeed*, 82.

31. Roman Kznaric, "Civil and Uncivil Actors in the Guatemalan Peace Process," *Bulletin of Latin American Research* 19, no. 1 (1999): 5.

32.
United Nations, "Framework Agreement," 5.

33.
Whitfield, *Friends Indeed*, 82.

34.
Whitfield, *Friends Indeed*, 79.

35.
Jonas, "Democratization Through Peace," 13.

36.
Robinson, "Critical Macrosocial Analysis," 100.

the following two purposes:

(i) To support, through their actions, the representative of the Secretary General of the United Nations in order to facilitate the negotiation process;
(ii) To give greater certainty and firmness to the commitments entered into by the parties in their capacity as solemn witnesses to the agreements arrived at in the course of the negotiating process, when the parties so request.[32]

The involvement of a group of Friends was widely received as a beneficial addition to the peace process for several reasons. First, the involvement of international actors acting separately from the U.N. gave greater legitimacy to the peace process. The U.N. benefitted from leverage provided by the group of Friends, whose involvement helped to legitimize decisions made by the U.N. in the eyes of the negotiating parties.[33] In addition, the group of Friends was able to help equalize the power dynamics between the two negotiating parties. The URNG was extremely weak when compared with the power of the state, which gave the organization a natural disadvantage at the negotiating table; the group of Friends was seen as a remedy to this imbalance.[34]

The presidential elections in November of 1995 led to a 1996 run-off between Alvaro Arzu of the National Advancement Party (PAN) and Alfonso Portillo of the Guatemalan Republican Front (FRG).[35] The two political parties of the presidential candidates embodied the ideological division in Guatemala at the time. The FRG, founded by former dictator General Rios Montt, stood for the preservation of plutocracy, while PAN embodied the dominant global ideology that was centered upon neoliberal development.[36] Alvaro Arzu won the run-off elections with a scant two-percent majority and, in 1996, became president. Unlike his predecessors, Arzu was a strong proponent of the peace process, and the accords soon blossomed under his

leadership.

At this stage of negotiations, each party had different priorities. The government, though still linked with the military, was interested in creating a stable democracy to foster an effective integration of Guatemala into the global economy. As written by Robinson, the Arzu government was geared toward "a program of neoliberal restructuring and to a new 'competitive' insertion into the emerging global economy," which would theoretically address the endemic poverty and social inequalities that plagued Guatemala.[37] The oligarchy wanted to preserve the pre-existing status quo while, conversely, the URNG aimed to be a voice of the people by addressing the underlying structural causes of the conflict.

Some factions within the negotiating parties doubted the validity of the peace process, yet the international community embraced it wholeheartedly. The direct involvement of both the U.N. and a group of Friends illustrates this newfound international support. At times, the influence exercised by these two actors in the peace negotiations outweighed that of the negotiating parties, both in terms of domestic negotiations and international support. International pressure oftentimes overrode domestic strife to the point where there appeared to be cohesion amongst the Guatemalan negotiating parties. In reality, however, the deep-seated sociopolitical belief systems of the parties had not changed.

In October of 1996, just months away from the projected end to the peace process, a kidnapping scandal involving the URNG made it clear that negotiations had created only a superficial cohesion and deep discord still haunted Guatemala. On October 16, 1996, the story broke in the Guatemalan press that the Organization of People in Arms (OPRA) had kidnapped Olga de Novella, an eighty-six year-old member of a prominent family within the Guatemalan oligarchy. OPRA was one of the guerilla groups that identified under URNG and had previously been one of

38.
Susanne Jonas,
*Of Centaurs
and Doves:
Guatemala's
Peace Process*
(Boulder, CO:
Westview
Press, 2000),
53.

39.
Jonas, *Of Centaurs*, 52.

40.
Jonas, *Of Centaurs*, 53.

41.
Ibid.

the most vocal proponents of peace negotiations within the URNG umbrella. Following the kidnapping, the Guatemalan government apprehended two OPRA leaders involved and brokered a swap with OPRA: Novella in return for one of its leaders, who was code named Isaías.[38]

The kidnapping occurred at a crucial time during the peace negotiations; the peace process was nearing its end and several landmark accords had been recently signed. The Accord on the Strengthening of Civilian Power and the Role of the Armed Forces in a Democratic Society, for example, had been signed only a month earlier and had marked a turning point in the attitude of the military. Prior to the signing of this accord, the military had continuously expounded the fact that it would not negotiate on issues regarding its size. By the time the Novella kidnapping had taken place, the military had reversed its previous stance and begun to demobilize civilian defense patrols, actions that, only months before, the military would have never considered.[39] More importantly, the end of the long negotiation process was in sight, signifying that both the government and URNG had successfully reached common ground. This high profile kidnapping, however, showed otherwise.

The implications of the kidnapping were felt from all sides of the negotiating table and put the very continuation of the peace negotiations at risk. While the Guatemalan government suspended negotiations and halted the demobilization of civilian defense patrols, many members of the government and civil society that had initially been skeptical of peace publicly called for the peace process to end.[40] As Jonas writes, "Only international pressure and the efforts by U.N. negotiator Arnault – and the fortunate fact that all of the substantive agreements had been signed, above all the demilitarization accord – eventually (in November) got the process back on track."[41] The Friends played a supplemental role in this whole fiasco, assisting the U.N. in the shuttle diplomacy between the government and the URNG that eventually resulted in the resignation of

Rodrigo Asturias, the OPRA representative in the URNG negotiating party.[42]

On November 9, 1996, after Asturias' resignation, the negotiations resumed. The government and the URNG entered the final phase of peace negotiations substantially weaker, in terms of both political will and support.[43] In an Interim Report concerning violence during the peace negotiation, Kristine Höglund commented, "Besides from considerably weakening the URNG's negotiation position, the incident dealt a serious blow to their moral credibility and cast doubts on their true willingness to pursue peace."[44] Nowhere did this mistrust manifest itself more clearly than in the oligarchy, the portion of society that had been against negotiations from the very start. The CACIF, for instance, offered to support the government if it chose to permanently withdraw from the negotiating table, while other critics publically scorned the government for its decision to continue direct negotiations with the URNG.[45]

On December 29, 1996, despite the Novella kidnapping scandal and continuing hypercritical critiques from the oligarchy, the Agreement on a Firm and Lasting Peace was signed, ending not only the negotiation process but Guatemala's thirty-six year civil war as well. The Agreement declares that, "The country now faces the task, in which all Guatemalans must share, of preserving and consolidating peace. To this end, the Peace Agreements provide the country with a comprehensive agenda for overcoming the root causes of the conflict and laying the foundation for a new kind of development."[46] The final Agreement also states that successful implementation of the accords is not just a commitment of the state, but requires active participation of all Guatemalans, expounding upon the importance of continued support of civil society.[47] The signing of the final agreement was endorsed by the international community and celebrated as a successful ending to one of the longest conflicts in Latin America.

42. Whitfield, *Friends Indeed*, 94.

43. Jonas, *Of Centaurs*, 60.

44. Kristine Höglund, "Negotiations Amidst Violence: Explaining Violence Induced Crisis in Peace Negotiation Processes" (Interim Report, International Institute for Applied Systems Anylsis, Laxenburg, Austria, Jan. 16, 2004), 19.

45. Jonas, *Of Centaurs*, 53.

46. United Nations General Assembly, A/51/796, "Agreement on a Firm and Lasting Peace," Dec. 29, 1996, 37.

47. United Nations General Assembly, "Firm and Lasting Peace," 38.

48.
Jonas, *Of Centaurs*, 141.

49.
Edward
Hegstrom,
"U.N. Envoy
is Accused of
Covering Up
Killing; Silence
May Have Been
the Price of
Peace," *Houston Chronicle*,
sec. A.

50.
Jonas, *Of Centaurs*, 142.

51.
Jack Spence,
David Dye,
Paula Worby,
Carmen Rosa
de Leon-Escribano, George
Vckers, and
Mike Lanchin,
"Promise and
reality: Implementation of
the Guatemalan
Peace Accords,"
Hemisphere Initiatives, August
1998, 24.

52.
Clark Taylor,
*Return of
Guatemala's
Refugees:
Reweaving the
Torn* (Philadelphia: Temple
University
Press, 1998),
58.

Celebrations were cut short only months after the Final Agreement was signed when reports surfaced that a second OPRA operative, Mincho, was captured during the Novella kidnapping affair. Mincho's arrest had not been mentioned publically during the Novella kidnapping incident; in fact, his arrest was kept secret until April 15, 1997, when it became public that Mincho had not only been arrested, but tortured, murdered, and had subsequently 'disappeared.'[48] As *The Houston Chronicle* reported, "Both the government and leftist rebels denied that the rebel [Mincho] existed when first confronted with the allegations. But under increasing scrutiny from the Guatemalan media, the government and rebels now concede that Mincho did exist and may have died as a part of an army hostage-rescue mission."[49]

Stories circulated alleging involvement of not only the government and the URNG, but MINUGUA as well. *Prensa Libre*, Guatemala's major newspaper, released a story charging that Arnault, the former U.N. moderator and new head of MINUGUA, had known about the disappearance of Mincho and had ordered a cover-up by MINUGUA.[50] These accusations only grew stronger as the days passed. In May 1997, as a response to widespread allegations, MINUGUA issued a report that stated that the Presidential Military Guard (EMP) was responsible for Mincho's disappearance and that the Guatemalan government and the URNG had not been cooperative during MINUGUA's investigations.[51]

Unlike the Novella kidnapping, the Mincho Affair implicated MINUGUA alongside the URNG and the Guatemalan government, and each institution felt repercussions. While the political power of the URNG had been crippled by the Novella kidnapping, the Mincho Affair destroyed any remaining political power. URNG's initial attempt to cover up Mincho's disappearance betrayed the public and managed to simultaneously alienate its support base and decimate its last remaining bit of meaningful political power.[52]

MINUGUA's entanglement not only strained relations with the URNG and the Guatemalan state, but damaged ties with human rights organizations as well. The initial allegations regarding MINUGUA's involvement in covering up Mincho's disappearance solidified lurking suspicions within the human rights community that Arnault, who was the moderator of the peace negotiations, should not be in charge of monitoring implementation compliance. As investigative reporter Jack Spence and his colleagues found, "They [human rights organizations] believed that he would give undo weight to the URNG and the government, potentially marginalizing civil society groups not linked to either."[53] *The Houston Chronicle* reported that many within the human rights community were calling for Arnault to step down.[54] Though claims regarding MINUGUA's involvement in the Mincho Affair were eventually shown to be unsubstantiated, estrangement from the human rights community temporarily made MINUGUA a less legitimate verification institution.

MINUGUA's allegations that the EMP had been involved in the murder of Mincho damaged relations with the Guatemalan state, inciting an anti-MINUGUA campaign.[55] The crusade against MINUGUA only acted to exacerbate divisions within the Arzu government and made a successful implementation more difficult. The Mincho Affair was the first case of a human rights violation that was committed by the Arzu government, which discouraged public buy-in during the early days of implementation, a fragile time that needed the full investment and support of civil society.[56] The disappointment felt by the public foreshadowed the impending disempowerment of civil society as a whole.

While the credibility of all three parties was damaged by the Novella kidnapping and ensuing Mincho Affair, the very existence of such problems was more dangerous to the peace process and spoke widely of the underlying dynamics amongst the three forces. Had the URNG and Guatemalan government successfully redressed conflicting ideological inconsistencies during the peace negotiations, such a high

53. Spence, "Promise and Reality," 60.

54. Hegstrom, "UN Envoy," sec. A.

55. Jonas, *Of Centaurs*, 143.

56. Spence, "Promise and Reality," 60.

57.
Kznaric, "Civil and Uncivil Actors," 12.

58.
Robinson, "Macrosocial Analysis," 89.

profile kidnapping and subsequent scandal may not have occurred. Instead, peace negotiations addressed issues and problems superficially and failed to create a fundamental shift in belief systems; the reversion of the URNG and the Guatemalan government back to civil war tactics illustrates that this necessary change did not take place.

Despite the negative impact the Mincho Affair had on all parties involved, the implementation process continued. While the accords were fairly progressive in their attempt to redress latent structural causes of the civil war, the goals of many accords conflicted with one another and blatantly reflected the influence of outside parties.[57] These incongruities can be seen in the content of the accords themselves; agreements dealing with social issues attempted to address the underlying structural causes of the conflict, while the accords concerning economics and development strove to preserve those very structures. Land reform, labor laws, and several other measures that were essential to successfully confront structural violence were skirted to protect oligarchic interests.

These contradictions were overshadowed by the progressive theme of the Peace Accords, in which several major advances in addressing structural violence were made.[58] For example, Guatemala was redefined as a multi ethnic, multi lingual, multi cultural state, and plans were included in the accords to institutionalize this definition through amendments to the Constitution. An international verification mission, overseen by the UN, was also created to monitor both human rights and the implementation process. Demilitarization, an area that was vital to a legitimate transition to democracy, was to be addressed through constitutional reform.

The Peace Accords divided the implementation into three phases to be completed by December, 30, 2000. Unfortunately, the government failed to implement many accords within the first year of the implementation process and ultimately gained no forward momentum. By 1999,

only a portion of commitments had been implemented. This forced the Follow Up Commission, created to monitor government bills and ensure compliance with the accords, to change the implementation deadline to December 2004.[59] The deficiency in initial governmental ambition indicates a lack of political will, as well as a developing dependency on neoliberal economic development as means to address structural problems.

The United Nations Verification Mission (MINUGUA) held a strong presence in Guatemala during the implementation process and issued annual reports from the secretary-general that commented on the progress made. Two major observations were made in the reports from the years 1996 to 1999. First, the state created the organizations called for in the Peace Accords. Second, the state underfunded these organizations through delayed decision making, denying them meaningful state support and essentially rendering the newly created organizations ineffective. However, it was through these purely superficial acts of implementation that the state simultaneously garnered international support and prevented the organizations created by the Peace Accords from making a meaningful impact on Guatemalan society.

The situation of the education system also illuminated the deficiencies of state support and funding for programs fundamental to the creation of a truly democratic state.[60] According to pedagogical scholar Margiret Poppema, throughout the civil war the military dictatorships "saw education for the indigenous population mainly as a threat and the school as a place where 'wrong' ideas could be transmitted."[61] Throughout the civil war, indigenous Maya were purposefully disenfranchised within the Guatemalan educational system, leaving vast portions of the indigenous population illiterate. The Peace Accords redefined educational goals and declared that education was to be utilized, "to affirm and disseminate the moral and cultural values and the concepts and behavior patterns which are the foundations of democratic coexistence."[62]

59. Hilde Salvensen, "Guatemala: Five Years After the Peace Accords: The Challenges of Implementing Peace," *PRIO Report* 1 (2002): 9.

60. United Nations Verification Mission in Guatemala, A/54/526, "Report of the Secretary General," November 11, 1999, 10.

61. Margriet Poppema, "Guatemala, the Peace Accords, and Education: A Post Conflict Struggle for Equal Opportunities, Cultural Recognition and Participation in Education," *Globalisation, Societies, and Education* 7, no. 4 (2009): 386.

62. United Nations General Assembly, A/50/956, "Agreement on Social and Economic Aspects and Agrarian Situation," May 6, 1996, 11.

63.
Ibid.

64.
United Nations General Assembly, "Social and Economic Aspects," 11.

65.
United Nations Verification Mission in Guatemala, A/55/175, "Report of the Secretary General," July 26, 2000, 10.

66.
United Nations Verification Mission in Guatemala, A/54/526, 10.

Education was to be employed as a means to prevent the perpetuation of injustices, in terms of endemic poverty or discrimination.[63] Both civil society and the international community welcomed this significant departure from Guatemala's historically racist and classist educational policies since reforms to the education system were vital to ensure a successful transition toward democracy.

In post-settlement Guatemala, the government's goal of increased educational spending was reached, though certain critical educational programs remained underfunded. Bilingual education was nearly nonexistent while civic education, which is of huge importance in post-conflict societies, suffered from an extreme lack of funding and support. According to commitments made in the Agreement on Social and Economic Aspects and Agrarian Situation (Socioeconomic Accord), a main objective was to "design and implement a national civic education programme for democracy and peace, promoting the protection of human rights, the renewal of political culture and the peaceful resolution of conflict."[64] These principles have been historically absent from Guatemalan sociopolitical culture, where the oligarchy has a long legacy of ruling in their own interest at the expense of the masses. A civic education program was crucial for the firm establishment of democratic values that needed to develop within all sectors of Guatemalan society; successful democracy not only requires civic participation, but it necessitates the prioritization of the common good over personal gains as well. As stated in the accords themselves, civic education programs were necessary to guarantee the development of these values.

In its 1998 implementation assessment, however, MINUGUA reported that "the civic education programme is still receiving no State funding, despite its crucial importance for shaping a new civic and democratic culture."[65] In fact, a budget for civic education was not even present in the government's draft budget for 2000.[66] Such deficient funding undermined the democratic principles embodied by the

Peace Accords and ensured that the necessary nationwide shift in values would not occur. The lack of funding and support from the government is a clear example of the battle of ideologies that took place during the implementation process. The absence of a thriving civic education program fostered the development of a shallow democracy that did not embody the principles upon which a meaningful democracy is founded; it was democratic by name only.

     The MINUGUA reports also underlined repeated instances of both the government and military intentionally delaying the implementation process by being difficult during negotiations and obstructing the passage of bills related to the Peace Accords. These actions stalled the progress of the peace process and jeopardized the potential benefits of programs. Specific instances regarding tax reform and the constitutional referendum elucidate this tactic of intentional postponement.

     Tax reform called for in the Socioeconomic Accords not only illuminates the government's practice of bureaucratic obstruction, but the fallacies of overwhelming international influence as well. Prior to peace negotiations, Guatemala had the lowest tax rates in the Western hemisphere; only eight-percent of its gross domestic product was taxed.[67] Conflict resolution scholar Stephen Stedman comments, "As a consequence, the [Guatemalan] state is chronically underfunded, and has little capacity to carry out programs that could alleviate poverty or improve social conditions for the majority of the population."[68] The preexisting tax system benefitted the Guatemalan oligarchy and business community, and any previous attempts to revise the tax structure were met with such intense protest from the oligarchy that reforms were impossible. The lack of a fiscally sensible tax structure caused the Guatemalan state to be extremely weak and would have left the state with little economic capacity to finance commitments made in the accords or match international donations with internal funds.[69]

67. Jonas, "Democratization Through Peace," 17.

68. Stephen John Stedman, Donald Rothchild, Elizabeth M. Cousens, ed., *Ending Civil Wars: The Implementation of Peace Agreements* (Boulder: Lynne Rienner, 2002), 452.

69. Salvensen, "Five Years After," 24.

70.
Whitfield,
Friends Indeed,
92.

71.
Jonas, *Of Cen-*
taurs, 168.

72.
United Nations
General As-
sembly, "Social
and Economic
Aspects," 11.

73.
Jonas, *Of Cen-*
taurs, 168.

74.
Jonas, *Of Cen-*
taurs, 80.

75.
Ibid.

As international actors saw it, tax reforms were necessary to ensure a sustainable and meaningful implementation of the Peace Accords.[70] The U.N., international donors, and international financial institutions such as the International Monetary Fund (IMF) and World Bank worked together to create a comprehensive tax reform policy that would be included in the Socioeconomic Accords. This unprecedented collaboration between international actors was meant to avoid competition between the neoliberal policies of international financial institutions and the democratization plans of the U.N.[71]

In May 1996, after thirteen months of negotiations, the Socioeconomic Accord was signed. In regards to the tax reform policy designed by international actors, the Socioeconomic Accord states, "Bearing in mind the need to increase State revenues in order to cope with the urgent tasks of economic growth, social development and building peace, the Government undertakes to ensure that by the year 2000, the tax burden, measured as a ratio of gross domestic product, increases by at least 50 per cent as compared with the 1995 tax burden."[72] This commitment can be interpreted as an institutionalization of the neoliberal agenda and a significant departure from the state's legacy of plutocratic fiscal policies. International donors pledged $1.9 billion in aide for the successful implementation of the tax reform as stated in the Accord.[73] This potential donation, which would cover seventy-percent of the total estimated cost of implementation, acted as an incentive for widespread agreement and support of the tax reforms within Guatemalan society. Even the CACIF, an organization that historically championed the interests of the business elite, initially supported the reforms.[74]

The international community celebrated the Socioeconomic Accord and its inclusion of significant tax reforms as a wild success, especially since it garnered support from international financial institutions and conservative organizations like the CACIF.[75] However, this "success"

did not translate into concrete action. Instead, the implementation of the tax reforms was defined by a battle between the interests of the oligarchy and the globalized elite, a theme that began characterizing the implementation of the Peace Accords as a whole. The international community had made the assumption that the negotiations themselves resolved the deep-seated discrepancies between the three competing ideologies held by the URNG, the Guatemalan oligarchy, and international actors. Consequently, they believed that the implementation process would go smoothly and swiftly.

The failed passage of integral constitutional reforms called for in the Peace Accords illustrates an ineffectiveness caused by this ideological battle. In the Peace Accords, the government committed to pass specific amendments to the Constitution within the first ninety days of signing the Peace Accords, but instead took over two years.[76] The original twelve amendments created by the Peace Accords were grouped together along with additional, extraneous amendments, bringing the total number of amendments to fifty. Congress arbitrarily grouped these reforms into four major blocks, many of which contained contradictory amendments. These four groups were put to a nationwide referendum that MINUGUA reported to be extremely complicated and confusing.[77] With a nineteen-percent voter turn-out rate, each block of referendums was voted down.[78] As MINUGUA commented, "The referendum results revealed a serious division in the country: in municipalities where indigenous people were in the majority, people voted 'yes' to the reform, whereas in other municipalities the majority voted 'no'."[79]

The failed implementation of the Peace Accords disempowered Guatemalan civil society and disintegrated the feelings of ownership over the accords, an unprecedented popular sentiment that was cultivated through painstaking work by the ASC. As MINUGUA Reported in 2000, "Guatemalans still do not see the peace process as having

76. Salvesen, "Five Years After," 23.

77. United Nations Verification Mission in Guatemala, A/54/526, 16.

78. Salvesen, "Five Years After," 21.

79. United Nations Verification Mission in Guatemala, A/54/526, 2.

80. United Nations Verification Mission in Guatemala, A/55/175, 9-10.

81. United Nations Verification Mission in Guatemala, A/54/526, 4.

82. Alessandro Pretti, "Guatemala: Violence in Peacetime: A Critical Analysis of the Armed Conflict and Peace Process," *Disasters* 26, no. 2 (2002): 109.

83. United Nations Verification Mission in Guatemala, A/55/175, 2.

brought about any major, tangible improvements in their lives."[80] Human rights abuses increased, and the police forces still employed mostly ladinos, a Guatemalan ethnic group that does not identify with the strong culture of indigenous communities.[81] Literacy rates stagnated while crime rates rose, making Guatemala the most violent country in Central America and noticeably more dangerous than it was during the final years of the civil war.[82] By 1999, just three years after the Final Peace Accords were signed, civil society had become both disinterested and deflated, and public participation in the political process plummeted, as reflected in the elections that took place later in that same year.

In 1999, Alfonso Portillo, a FRG candidate, won the presidential elections and FRG won the majority of seats in Congress. FRG, founded by General Rios Montt, aims to uphold the former plutocratic structure of the state by supporting big businesses and has a long history of making decisions detrimental to the interests of Guatemala's civil society. The results of the 1999 election reveal not only the power of the oligarchy, but the widespread feelings of disempowerment amongst civil society as well. Portillo came into office in a time when there was no forward momentum on the implementation processes, which left his government with little accountability toward the Peace Accords. The absence of sentiments regarding responsibility on behalf of the state is reflected in the MINUGUA report from 2000, which expounded upon a lack of progress in all areas of the Peace Accords and mentions the legalization of policies which are not conducive toward peace. This phenomenon can be specifically applied to the demilitarization process, in which, MINUGUA states, "Measures are being adopted which are not conducive to the demilitarization of public security or to the strengthening of civilian authority, as called for in the peace agreements."[83]

This paper does not claim that nothing has been accomplished through the Peace Accords. Indeed, improvements were and continue to be made; the size of

the military has decreased, the economy is growing, and Guatemala has been redefined as a multicultural state. This paper does argue, however, that despite the high human and economic developmental goals of the Peace Accords, stagnation and decline have overcome these advancements. Social indicators within Guatemala elucidate this sad reality and give proof that few Guatemalans have been positively affected by the Peace Accords. Violence rates, for example, are higher now than they were in pre-settlement Guatemala, making it the third most dangerous country in the world only fifteen years after the monumental Peace Accords were signed. Clearly, meaningful change has yet to come.

The Peace Accords aimed to shift the sociopolitical structure of Guatemala by changing the underlying ideologies involved. However, the deep-seated beliefs of the negotiating parties remained unchanged, and the very foundations of each negotiating party continued to conflict at an innate level. The dominant global ideology present at the negotiating table pushed for a stable democracy to promote neoliberal economic development. The oligarchy strove to prioritize their own interests and to uphold the existing status quo. While the URNG was initially formed to represent the interests of the masses, its involvement in the Novella kidnapping robbed it of any real power to affect implementation.

With decreased pressure from the URNG, the implementation process became a battleground between the interests of the Guatemalan oligarchy and the dominant global ideology. The Guatemalan oligarchy has a deeply entrenched legacy of power. The presence of global interests is comparatively new in Guatemalan society and subsequently fairly weak because it lacks a strong domestic support base. Continued implementation of the Peace Accords became, and still is, a battle of ideologies. This has caused a failure to implement the true extent of the Peace Accords, as well as a failure to create meaningful change in Guatemala.

This paper argues that an effective implementation of a democratic process has proven almost impossible because there was no common ideological ground established from which parties could draw upon. In fact, ideological discrepancies between negotiating parties were never reconciled. The ideological disconnects that exist within all engaged tenets must be successfully addressed before a sustainable, long term societal impact can be made. If belief systems are not synthesized, these inherent ideological separations act as destabilizing forces, which influence the political environment in such a way that discourages the evolution of cohesive sociocultural values like democracy. The failure of the Guatemalan Peace Accords is but one example of the tactical shortcomings of post-Cold War international conflict resolution practices, which generally result in the creation of shallow democratic transitions within post-conflict states that have little positive long-term impact.

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Beatrix Potter's Sister Anne: Gender Stereotypes in a Subversive Retelling of the Bluebeard Folktale

Abstract: Beatrix Potter's 1932 recasting of "Bluebeard," *Sister Anne*, challenges simultaneously certain aspects of the Bluebeard narrative and particular gender stereotypes of late Victorian and Edwardian societies. Potter advances this distinctive perspective through her use of Sister Anne as primary subject of the narrative and through her characterization of the women of the tale in terms of traditional or subversive gender stereotypes. In so doing, Potter follows in a long tradition of folktale adaptations employed by authors as vehicles for discussion of particular themes in their current society. Unlike previous redactions of "Bluebeard," however, Potter focuses the narrative consciousness upon a minor character, Anne, and juxtaposes Anne and the bride, Fatima, to highlight the contrasts between certain Victorian stereotypes and certain ideals of the New Woman. Although written thirty years after the Victorian *fin de siècle*, *Sister Anne* centers around issues present in Potter's early life and common of that earlier era: women's struggle for authorial credibility and financial independence in a male-dominated society. The cool reception of the book and its subsequent fall into obscurity should in no way hinder Sister Anne from taking its place within the Bluebeard canon as a vital work examining a crucial ideological turning point in modern Western society.

Hannah Jacobs*
English
Hannah graduated from Warren Wilson College in 2011 with a major in Theatre/English. While at Warren Wilson, she dedicated much of her time to the Theatre Department and completed both a Theatre Senior Project titled "Theatre Education in Theory and Practice" and an English Honors Thesis titled "Beatrix Potter's *Sister Anne*: A Subversive Retelling of the Bluebeard Folktale". In August 2011, she accepted a position as the Program Associate at the John Hope Franklin Humanities Institute at Duke University, where she provides technical and logistical support to a variety of academic projects and events. In the coming years, she hopes to continue her studies in gender and literature.

Almost anyone in the world who has read children's literature knows at least the image of Peter Rabbit, that mischievous little bunny who nearly meets a violent end when he dares to trespass into and steal from Mr. McGregor's garden. Readers most often associate Beatrix Potter, the creator of this classic, with her miniature books of anthropomorphized animals. However, Potter was more than an author and illustrator of children's books. Although early biographers attempted to portray her as a shy, submissive woman,[1] Potter was actually very outspoken in her opinions. Since the discovery and decoding of her journal, critics have consistently proclaimed Potter to be a subversive author who used her writing as a medium through which to criticize Victorian and *fin de siècle* culture[2].

Late in her life, Potter produced *Sister Anne*, a book in which she offered such criticism through the specifically gender-based aspects of the story line. This work offers a retelling of the Bluebeard folktale, a reworking adverse to many previously published adaptations. Perhaps because of its Gothic style and dissimilarity to Potter's other works, *Sister Anne* received an unenthusiastic response from critics and remains virtually unexplored territory in the realm of literary scholarship. Despite its neglect, Potter's recasting of the tale presents a more provocative cultural commentary than at first it might appear to offer. Potter uses *Sister Anne* to challenge simultaneously certain aspects of the Bluebeard narrative and particular gender stereotypes of late Victorian and Edwardian societies. She advances this distinctive perspective through her use of *Sister Anne* as primary subject of the narrative and through her characterization of the women of the tale in terms of traditional or subversive gender stereotypes.

Of course, Potter is not alone in manipulating this folktale to convey a specific message. The traditional tale of Bluebeard, a corrupt nobleman who marries young women and violently kills them, is a story whose origins are disputed and whose variations are many. Literary scholars

1.
Margaret Lane was the first to document Potter's life, and, in so doing, she unknowingly provided an inapt representation of Potter. Lane's book *The Tale of Beatrix Potter* was published after Potter's death but before the discovery of a journal that Potter had kept during the last two decades of the nineteenth century. Potter's journal later gave scholars a surprising window into the mind of a woman they thought they already knew.

2.
Potter kept her journal, which she wrote using a Caesar Cipher of her own creation, between the years 1881 and 1897. Potter's relatives did not discover the journal among her papers until 1952 (nine years after Potter's death), and Leslie Linder did not successfully decipher it until 1958, nor did he publish

it until 1966 (Linder, "The Code-Writing" xxiii-xxv). Some scholars treat her books in the same way that they do her journal, as works written in code: writers such as M. Daphne Kutzer and Lise Hermine Makman argue, among other things, that *The Tale of Squirrel Nutkin* is really a commentary on bourgeois society.

3.
Charles Dickens and his audience knew the Bluebeard story so well that Dickens used the tale as an example in an essay titled "Frauds on the Fairies" (*Household Words*, 1853). Dickens, who was widely known as one of the great moralistic writers of the Victorian era, utilizes this article to denounce the effort of other writers to moralize such fairy tales, writing, "With seven Blue Beards in the field, each coming at a gallop from his

recognize Charles Perrault as the first author to publish the story, and, since his doing so in 1697, the story has been retold or referred to by many writers the world over. During the nineteenth and early twentieth centuries, "Bluebeard" enjoyed widespread popularity in England, particularly. The characters and symbols of the narrative are profuse throughout the literature of these periods. During the nineteenth century, authors such as Dickens and Thackeray integrated the Bluebeard tale into their works.[3] In the early twentieth century, "pantomimes, nursery and parlor plays, and juvenile renditions in the Victorian tradition…continued to be published and produced" (Hermansson 130). Likewise, "Bluebeard" also influenced movie directors and screen writers, carrying the Bluebeard theme far beyond the turn of the twentieth century. Because of the narrative's broad cultural influence, many writers, from Anatole France to Margaret Atwood,[4] have joined Potter, modifying the story to fit their own opinions and motivations. The pervasiveness of the legend over the centuries has meant that it is "constantly reconfigured to reflect issues of the contemporary world" (Davies 31). Like so many other artists of words and images who have left their mark on the Bluebeard tradition, Potter offers, with *Sister Anne*, a somewhat politicized refashioning of the Bluebeard tale.

Potter flipped the classic Bluebeard tale on its head. Unlike most other adaptors of the story, instead of choosing the young bride as her primary concern, Potter focuses the narrative consciousness upon a minor character who does not always appear in Bluebeard variations: the bride's sister, Anne. Potter's heroine is a headstrong, rebellious young woman whom Bluebeard passes over so that he may marry the more favored of the two sisters. When the bride, Fatima, cannot save herself from the verbal and physical abuses of her tyrannical husband, Anne swoops in to save the day. Although, in the end, their brothers physically defeat Bluebeard, Anne is the mastermind behind the plan to escape from Bluebeard's castle. It is this foregrounding

of the title character's determinedly sensible nature as well as the traditional heroine's crippling naïveté that sets Sister Anne apart from its fellow redactions.

However, Potter's road to the exploration, juxtaposition, and criticism of these conventions of gender through the lens of the Bluebeard tradition was a long one. Until she published *The Tale of Peter Rabbit* in 1901, Potter, who was born in 1866, had led a relatively secluded life distinguished by her appreciation for art, literature, and nature. She used book sales from her first publication to buy a farm in the Lake District, an area of northern England, and she finally married when she was forty-seven years old. Although she no longer turned out several books a year after her marriage in 1913, she did continue to write sporadically until her death in 1943. As Potter's productivity slowed and her fame grew, American publisher Alexander McKay urged her to write more. So, in 1929, Potter published *The Fairy Caravan*, a chapter book much longer than her earlier *Peter Rabbit* books. This book combines adventure and storytelling as it follows the lives of a group of misfit mammalian circus performers. In one draft of a frame narrative in *The Fairy Caravan*, one character recounts an adaptation of the Bluebeard folktale, but Potter and her editors decided to cut this section of *The Fairy Caravan*. It was this excised portion that later became *Sister Anne*.

Potter published her variation of the Bluebeard tale in 1932. She states that *Sister Anne*, unlike her other work, is "certainly not food for babes," but, instead, "absurd and grisly," and, at the time of publication, she found herself of two minds, "uncertain whether it is a romance or a joke" (*Letters* 346). Meanwhile, Potter's various biographers have offered rather negative opinions on this narrative. Margaret Lane goes so far as to call *Sister Anne* "a good artist's failure[ ]" (Lane 129). Judy Taylor and fellow authors of a 1987 biography of Potter, call *Sister Anne* an "artificial tale, full of tushery and 'nameless horror'" (Taylor et al. 167).[5] In addition, Ruth MacDonald lists the book in her chronology

own platform mounted on a foaming hobby, a generation or two hence would not know which was which, and the great original Blue Beard would be confounded with the counterfeits" (Dickens 567-568). Dickens then published "The Career of Captain Murderer" (1860), a short and particularly grotesque retelling of "Bluebeard," as a part of his essay series "The Uncommercial Traveler" (*All The Year Round*). Not long after Dickens's publications, William Makepeace Thackeray produced a very different adaptation of the tale titled "Bluebeard's Ghost" (1867) (Early and Late Papers Hitherto Uncollected).

4.
Several notable twentieth-century works whose authors have used "Bluebeard" for inspiration include Anatole France's

The Seven Wives of Bluebeard (1920), John Fowles's *The Collector* (1963), Angela Carter's The *Bloody Chamber* (1979), and Margaret Atwood's *Bluebeard's Egg* (1998). Additionally, several scholars have recently published analytical works on the Bluebeard theme as found in both obvious and obscure elements of nineteenth- and twentieth-century Western culture. Two recent studies published on this topic are Griselda Pollock and Victoria Anderson's *Bluebeard's Legacy: Death and Secrets from Bartók to Hitchcock* (2009) and Heta Pyrhönen's *Bluebeard Gothic: Jane Eyre and Its Progeny* (2010). Such literature and scholarship are also informed by an abundance of performance and visual art based on the Bluebeard tradition.

but fails to mention even a single word specifically about *Sister Anne*. Lisa Makman explains these occurrences, pointing out in her essay on Potter that this fiction has "virtually been ignored…perhaps because it differs substantially from her other work" (Makman 305). Nonetheless, the contrasts between *Sister Anne* and Potter's other works make the book compelling to study within the context of late nineteenth- and early twentieth-century British culture. The admitted lack of editorial polish in *Sister Anne* simply reminds readers that Potter was no longer entirely focused on writing: her personal life now had a more complete hold on her attention. Had she written Sister Anne twenty-five years earlier, the novel might have been more thoroughly crafted and, perhaps, its audience might have reacted to it differently.

Furthermore, no one can be certain of the specific reasons behind Potter's initial choice to include "Bluebeard" in *The Fairy Caravan* or her later acquiescence to the publication of *Sister Anne*. Potter admits in a letter to a friend that, "I wrote *The Fairy Caravan* and *Sister Anne* with pleasure to amuse myself; but they were different and they had not the same appeal" (*Potter's Americans* 67-68). Although it seems that she enjoyed writing her Bluebeard narrative, it also appears as though she at first thought the story unfit for publication (*Potter's Americans* 40-41). There is clear evidence that Potter held a fondness for *Sister Anne* that, at least at the end of her life, she did not hold for *Peter Rabbit*: "I reread [*Sister Anne*] with enjoyment and detached interest, whereas I am sick of *Peter Rabbit*!!" (*Potter's Americans* 161-162). Potter's personal opinions of her early and late works highlight the contrast between *Sister Anne* and *The Tale of Peter Rabbit* and the almost certain change in character that occurred in Potter herself between 1901 and 1932.

These gradual alterations in narrative theme and personality must have strengthened Potter's desire to be taken seriously by her critics. For, through her choice of intended audience, Potter explains the extreme difference of *Sister Anne* from her other works: "I have always felt that

the New Englanders understood and liked an aspect of my writing which is not appreciated by the British shopkeeper… though very possibly children the world over appreciate it, without consciously understanding that there is more in the books than mere funniness" (Lear 409). Potter's reference to that something more profound could be the voicing of her own intention to upset traditional norms. Perhaps through *Sister Anne*, with its bone-chilling Gothic[6] composition, Potter hoped to become acknowledged as something more than a children's author. Because she published it for an American audience, she may have hoped that Americans would appreciate her politicized presentation in a way that British readers would not. Possibly, had *Sister Anne* been published during a more prosperous era of American history, it would have sold well.[7]

      The cool reception of the book and its arrival on an already strained market certainly combined to ensure its quick fading into obscurity, but whether one factor influenced the outspoken public response more than another can never be known. Still, her biographers' general reactions to the book indicate that probably—a lamentable hypothesis—the literate public was not open to anything more than "mere funniness" from Potter. Consequently, it appears that those concerned with Potter have overlooked *Sister Anne*, as well as her other late works, so that titles like *Wag-By-Wall* or *The Faithful Dove* have remained virtually unknown to the literary world today.

      Why, then, is *Sister Anne* worth more thought? Being one of many retellings of "Bluebeard," it has its own stake to claim within the Bluebeard canon. In the work, Potter amalgamates traditional and contemporary "Bluebeard" tales and societal ideals with narrative elements of her own invention. The novella's striking commentary on gender roles within British society during the late nineteenth and early twentieth centuries creates a window for further analysis of the period.

5. According to the Oxford English Dictionary, Robert Louis Stevenson first employed the term "tushery" in 1883 to refer to "a conventional style of romance characterized by excessive use of affected archaisms such as 'tush!'"—a kind of writing that Stevenson apparently found to be "great sport" ("Tushery").

6. According to Fred Botting in his book *Gothic*, "Gothic excesses[,]… the fascination with transgression[,] and the anxiety over cultural limits and boundaries, continue to produce ambivalent emotions and meanings in their tales of darkness, desire and power" (Botting 2). This understanding of the Gothic can be readily applied to Potter's narrative choices in *Sister Anne*.

7.

The publication of *Sister Anne* came just three years after the stock market crash that sent the United States hurtling into the Great Depression.

8.

On Tuesday, May 13, 1884, for example, Potter refers to the Vote of Censure, Prime Minister William Gladstone, several British victories in the Mahdist War, and the Divorced Woman's Bill before she goes on to discuss the auctioning of *Monarch of the Glen* and her father's photography.

While Potter published Sister Anne several decades after the *fin de siècle*, particular themes within the narrative evoke gender concerns of that earlier age that were crucial in Potter's own personal development. This congruence should not prove surprising. After all, it was in the 1880s and 1890s that Potter effectively became the woman who would publish more than twenty-three books, found and manage her own farms, and advocate for nature conservation. During the last two decades of the nineteenth century and in the years leading up to the First World War, considerable social upheaval wracked Britain, as suffragists and campaigners for trade unionism such as Olive Schreiner and Edith Lees fought for their civil rights. Meanwhile, proponents of a variety of political movements sought social changes: among them, anarchist organizations followed the theories of the Russian Prince Kropotkin who aimed to establish "a new rational order without the intrusion of state control" (Beckson 19). Potter certainly knew of this turmoil, for it was at this time that her father began escorting her to a variety of public intellectual functions, events that she often recorded in her journal, adding, as she saw fit, opinions on social or political arguments to which she was privy.[8]

Amid the bustle of the 1890s, Potter also attempted to gain acceptance from the Linnean Society of a scientific study that she had authored; the paper, "On the Germination of the Species of Agaricineae," contradicted past studies concerning that species of mushroom. The society rejected her, however, on the grounds that she was a young woman, so her experiments clearly could not be trusted to yield authoritative results (Golden 17). Yet Potter had spent much of her adolescent life studying the natural world both in Scotland and in the nursery at Bolton Gardens, her family's London home. Her parents' enforcing of strict rules upon her only encouraged these studies: "she was seldom invited downstairs to join her parents for meals and was not permitted beyond the front door without her governess" (McDonald 1). This harshly strict parental authority ensured

that Potter had ample time to examine thoroughly a variety of scientific inquiries. But, apparently, "as they grew older, the Potter parents came to demand more and more of their daughter's time and interest," and this treatment of Potter began to wear on her patience and obedience (McDonald 6). Her parents' increasing needs, coupled with the Linnean Society's rejection, may have been the main instigator of Potter's restiveness.

As the turn of the century neared, Potter ended her studies in mycology; having had enough of societal and domestic repression, she began looking for publishers for her first book, *The Tale of Peter Rabbit*. Ultimately, she gained her financial independence, as well as freedom from societal and familial expectations, through the production of this book and the others that followed. Like so many other young women of her generation, Potter worked against the constraints then commonly imposed upon her sex. Because of the coinciding of the *fin de siècle* and these pivotal occurrences in Potter's life, readers can reasonably speculate that Potter's version of "Bluebeard," although written near the end of her life, addresses some aspects of late Victorian and Edwardian gender norms.

Most prominently in the book, Anne and Fatima present opposing examples of contemporary femininity. Although they share certain attributes—both are first described as "buxom" (*Sister Anne* 12)[9] —the sisters convey different attitudes toward life. Fatima is her mother's favorite daughter, a "high-spirited girl, fat and merry, and fond of a frolic" (12-13). Fatima seems to embody specific characteristics (frivolity, giddiness, foolishness) traditionally desired in women—characteristics that Anne does not possess. Anne is a "big dark browed capable woman, with strong arms, and a quick wit" (50-51).[10] This description hardly brings to mind the image of the delicate, fair, naïve heroine that exists within so many other redactions of traditional folktales. The narrative subject of the novel, Anne fits a definition of what writer Sarah Grand first called "the new woman"

9.
The word "buxom" carries several definitions. Probably the most likely definition brought to mind in the twenty-first century is "full of health, vigour and good temper; well-favoured, plump and comely, 'jolly,' comfortable-looking," which can be seen in an example from *S. Sea Bubbles* (1873): "A slight gathering in of her dress... to exhibit her buxom figure to full perfection" ("Buxom"). However, another (earlier) definition of the word is "flexible, pliant"; the Renaissance figure John Milton used this definition in *Paradise Lost* (1667), writing "Wing silently the buxom Air" ("Buxom").

10.
As in so many other aspects of her life, with respect to punctuation, Potter was not known to follow accepted practices.

in her 1894 essay *The New Aspect of the Woman Question* (Grand 270). Anne acts bravely when faced with adversity and proves quite capable of rational thought when in a dangerous situation (27). Anne also stands independent of men, asking for their support only for necessary physical conflict. Such a quality of resourceful self-reliance in a woman was traditionally considered unfeminine or even potentially threatening to the standards of an androcentric culture.

Juxtaposed with Anne as New Woman, Fatima closely resembles one Victorian ideal of what a woman should be, and she acts out certain stereotypes commonly associated with nineteenth-century femininity. She is curious, easily frightened, childish, and irrational. While exploring a particularly dismal part of the castle, Fatima becomes frightened, telling Anne, "'I crave fresh air, or I shall faint'" (46). Distinctive of certain Victorian fictional female characters, this weakness of constitution suggests frailty of mind because Fatima cannot process anxiety. Her inability to cope with her emotions also points to another stereotype of female innocence, one that many thought appropriate for Victorian wives. In his lecture "Lilies: Of Queens' Gardens," John Ruskin explains this ideal:

> This is wonderful—oh, wonderful!—to see [woman], with every innocent feeling fresh within her…and no cloud upon her brow, because there is a little wall around her place of peace: and yet she knows, in her heart, if she would only look for its knowledge, that, outside of that little rose-covered wall, the wild grass, to the horizon, is torn up by the agony of men, and beat level by the drift of their life-blood. (Ruskin 84)

According to Ruskin, women should stay, should desire to stay, walled in by their blissful ignorance. They should remain separated from the degenerate world outside of their homes, the purity of their minds protected by their male counterparts.

Potter's Fatima replicates Ruskin's sentiments to such a degree and the narrative voice frames her replication in such a way that, when her character is collocated with Anne's, the opposition of gender norms and taboos in *Sister Anne* are revealed in stark relief.

Potter's construction of these contrasting characters in her Bluebeard tale is the most apparent element of the book that distinguishes it from other adaptations of the story. In comparison with previous redactions, Potter's version of "Bluebeard" offers a different, even dissident, perspective on the traditional thematic elements of the Völksmarchen. This variance becomes most evident through the study of Potter's characterizations within the narrative. Without distorting the broad outlines of the folk story, Potter presents certain figures in *Sister Anne* so that each one easily fits within traditional or subversive gender stereotypes. Potter's use of Anne and Fatima as primary and secondary subjects of the narrative emphasizes these portrayals. Simply by approaching *Sister Anne* from a cultural or historical standpoint, readers encounter in Anne and Fatima some specific stereotypes of the New Woman and the Victorian woman. Because of these symbolic castings, Potter's Bluebeard adaptation becomes more than a remote fairytale: it transforms into a critical commentary on late nineteenth- and early twentieth-century British culture. *Sister Anne* and its very creation require further gender-based analysis for clear delineation of Potter's social criticism, however.

There are correlations to be found between the characterizations of Anne and Fatima, between the relationships of their sexual and intellectual natures, and among the many other issues of gender noted within Sister Anne. Whether Potter intended for these connections to be noticed can be surmised only in conjunction with analysis of Potter's work and life. Daphne Kutzer, referring to Potter's entire body of work, writes of Potter: "What we see…is an Edwardian woman writer with deep anxieties about both gender and class, a writer with rebellious if not subversive

11. Still, Potter was not altogether a feminist. In a letter to Millie Warne, she referred to the suffragist movement, writing, " What games there seem to be with the Suffragettes! It is very silly work" (qtd. in Lane 106).

tendencies" (Kutzer 167). Furthermore, according to Makman, Potter "rejected versions of womanhood propagated by her parents and their peers" (Makman 308). Potter's refusal to comply with certain ideals of Victorian womanhood and her construction of a professional career despite her parents' expectations point to a valid identification of her as a New Woman.[11]

Similarly, Potter's writing not only emulates but also surpasses in modernity the prose of New Woman writers who published at the turn of the century. Makman argues that, despite the remote settings of Potter's books, "In her style of language and in the motifs she develops in her writings, Potter is much more a modernist than a Victorian" (Makman 287). While there are significant Victorian Gothic symbols embedded throughout *Sister Anne*, the gendered portrayals of her characters, as well as the motifs that develop out of those characterizations, are modernist in terms of their critical content. The work's modernism is demonstrated through use of the formula for New Woman writings that late twentieth-century literary analyst Elaine Showalter sets forth:

> In their novels and stories there was a new emphasis on female subjectivity and on the heroine as the center of narrative consciousness. Women novelists were seeking to create new kinds of narratives of female experience… availing themselves of a profusion of alternative fictional forms: short stories, dream narratives, fantasies, utopias, dramas, allegories, and fragments. (Sexual Anarchy 64)

Potter's narrative consciousness centers on Anne, and Potter, as in many of her other books, explores the very "alternative fictional forms" that Showalter names. Within *Sister Anne*, specifically, readers can discern forms of both fantasy and allegory. It seems that Potter's creation of *Sister Anne* is her own alternative to the traditional narrative of female experience in other adaptations of "Bluebeard."

Indeed, Potter even offers through *Sister Anne* an alternative to the traditional narrative of female experience at the turn of the nineteenth century. If the Victorian woman is sometimes understood as naïve to the point of helplessness, the New Woman is more than occasionally construed as knowledgeable to the point of defiant autonomy. Fatima's innocent nature contrasted with Anne's sensible nature certainly calls for a comparison of the dependent and the independent woman. Despite its late publication, in *Sister Anne*, Potter alludes to the ideological struggles that she and the other women of her generation experienced because of the physical and mental confinements imposed on the female sex. Many women of the *fin de siècle*, like Potter, rebelled against the stifling societal expectations to which their elders expected them to conform and fulfilled their longing to be free to live their lives as they chose. These New Women, though they did not seek the civil and human rights for which twentieth-century feminists fought, did strive for social, domestic, and economic independence. Meanwhile, many other men and women protested against the New Woman movement, preferring to observe long-established gender norms of the Victorian era.

Nevertheless, Potter's ultimate opinion concerning the gendered stereotypes of the New Woman and the Victorian woman remains less specifically clear in *Sister Anne*. While she focuses the narrator's attention primarily on Anne throughout the narrative, her exclusion of Anne at the end of the tale brings into question her precise views concerning traditional and subversive feminine ideals. In Potter's own life, though she lived very much in the way of the New Woman after breaking free from her parents and establishing her own farms, she did not support New Woman causes such as suffrage. Neither in her own life nor in her writing does she give her audience a directly conclusive answer concerning her stance toward a woman's place in society, but a decisive answer from her is unnecessary. From a twenty-first-century standpoint, Potter's presentation of an intricately complex narrative rejects only certain components

of either the New Woman or the Victorian woman while affirming other elements of these two ideals. Her fiction provokes a much more thoughtful response than would a definitively conclusive statement, for readers must develop their own interpretations of the gendered characterizations in *Sister Anne*.

There are, of course, within the text, many other points of interest to be addressed that have not been given the attention they deserve. Potter's use of the Gothic; her elimination, modification, or incorporation of specific plot elements of the Bluebeard legend; her portrayals of the minor characters; her narrative imagery; and the influence of World War I on her writing: these are only a few of the topics to be found in *Sister Anne* that call for further scholarly attention. Just as Potter as a person and author was reevaluated after the discovery of her journal, *Sister Anne* deserves serious reconsideration in terms of its place within twentieth-century literature and the "Bluebeard" canon. The commentary this adaptation provides on both nineteenth- and twentieth-century Western cultures remains evocatively configured within the novella. Despite Potter's evident difficulties with editorial polish and the stylistic disparities between *Sister Anne* and Potter's other works, *Sister Anne* comprises a distinctive cultural and historical criticism. Potter brings forth in *Sister Anne* a study of crucial transitional elements that distinguish Victorian and post-Victorian society. This work, as well as the often enigmatic author, certainly deserves further examination.

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Feature: Molecular Modeling with. . .
Kendra Marcus | Chemistry Department

Kendra Marcus is graduating in May with a degree in Chemistry and a concentration in Biochemistry. She is currently working on her Natural Science Seminar thesis called *Life on arsenic? Thermodynamic, kinetic, and dynamic modeling of an arsenatidylcholine membrane system.* Her topic was inspired by a December 2010 paper in the popular research journal *Science* that describes a bacterium that seems to use arsenic, rather than phosphorous, as a chemical building block for its membranes and DNA. The paper has stirred up controversy in the scientific world; arsenic is a known toxin to many forms of life. Many scientists reduce the discovery to an experimental error though others are more optimistic. At this point, more research is needed to draw any definite conclusions from the paper.

Using a Unix-based molecular modeling program called GROMACS, Kendra will model the bacterial membrane, replacing phosphorous with arsenic, and predict its theoretical stability. If she finds the arsenic membrane stable, her research will help uphold the December paper. Kendra commented that "any evidence for an arsenic-based membrane could alter our perceptions about how cells are constructed." If her model membrane is unstable, however, her work will add to the growing body of research discounting the paper. Either way, Kendra's findings will significantly impact the scientific discussion on the bacterium.

Kendra admits that the most challenging aspect of her research has been learning the GROMACS program, which has never been used at WWC before. Kendra spent the year prior to beginning her project learning the Unix operating system and tweaking the program to suit her research needs.

Currently, Kendra is waiting on acceptance into graduate school for master's programs in biochemistry and biophysics. She hopes to attend Tufts but also applied to Yale, Brown, Wesleyan, and Northeastern.

Feature: An interview with. . .
Madalyn Baldwin | Art Department

Madalyn Baldwin is a senior art major with a concentration in printmaking. The image on the cover of this journal is an example of her work. In an interview, she explained her current efforts to incorporate research with her work as a visual artist.

Tell us about your current research.

For my senior art project, I am exploring the same idea in two different ways, visually and verbally. I am contrasting the types of visual repetition found in urban and natural areas, and focusing on the role that the grid has taken as an organizational tool in urban and suburban planning. In my research I am studying the origins of the grid in New York City, popular urban design theory, the origins of suburban "cookie cutter" communities, landscape theory, and how all of these ideas interact and influence our perception of nature. Visually, I'm exploring the same ideas by "building" landscapes out of woodblock prints, combining natural and developed areas and using regular repetition to unify them. In each piece there is a dialogue between urban and rural, built and natural.

What has been your biggest challenge?

I would have to say the most challenging part came at the beginning, when I had to narrow down my ideas and decide exactly what I was doing. It was hard to figure out how to combine the research aspect of my project with the artwork. Once I refined my concept for my senior project, it was easier to know where to begin researching. Another major challenge was that undergraduate research is a new idea for the art department. There were four students and four faculty advisers who started from scratch.

It was a learning process for everyone to figure out how exactly research works with art. We had examples of undergraduate research papers from students at the University of North Carolina-Asheville, but in the beginning it seemed daunting to start with no research experience and end up with a thesis paper and a presentation for Warren Wilson's annual capstone carnival.

Does your project have implications for the community?
I am creating scenes of a modern landscape, and researching the implications of and reasoning behind this modern landscape. The landscapes I've built are not specific to one location but can be appropriated to any environment. Environmentalist undertones definitely exist in my work, though I'm not necessarily claiming that either urban or natural environments are better. Instead I just want to draw attention to their difference and explain their polarized relationship.

What are your plans after graduating?
I would like to learn about farming and I'd like to travel. I expect that eventually I will end up settling down in North Carolina.

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The submission deadline is *May 19th*.

Please note that there is an 8000-word limit for each piece in the journal and a 250-word limit for abstracts.

Journal Crew

Interested in working on design or editing for *Auspex* next year? Contact Julie Wilson, Mary Hricik, or Derek Roy at the Writing Center for more information.