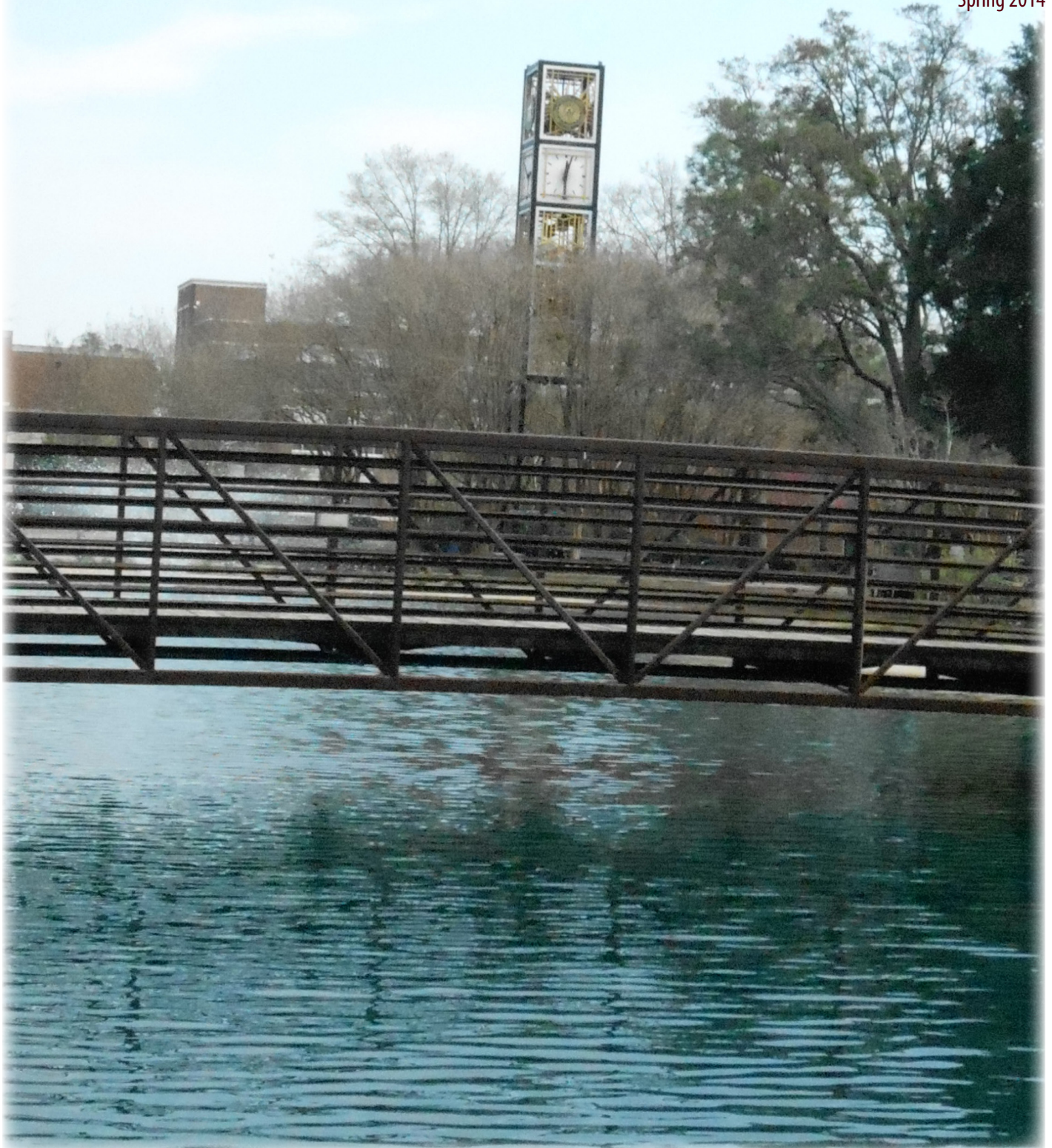


REVISIONS

Best Student Essays of The University of North Carolina at Pembroke

Volume 14
Spring 2014



ReVisions: Best Student Essays is a publication designed to celebrate the finest nonfiction work composed by undergraduate students at The University of North Carolina at Pembroke. This issue was copyedited, designed, and produced by the students in PRE 3450: Computer-Assisted Editing and Publication Design.

Alissa Smiley
Abreyah Smith
Jaime Vela
Sara Oswald, Instructor



Abreyah Smith, Sara Oswald, Allisa Smiley

Essays may cover any topic within any field of study at UNCP. We encourage submissions from all fields and majors, but we do not publish fiction or poetry. All submissions must be nominated by a UNCP faculty member. Students who believe that they have a strong essay for submission are encouraged to ask a faculty member to sponsor that essay. Nomination forms are available at <http://www.uncp.edu/et/revisions>.

Manuscript requirements: no more than 3,000 words in length and double-spaced. Do not include any names or identifying information on the essay itself; use the nomination form as a cover sheet, making sure to fill out all parts of the form. Please submit electronically the nomination form and the nominated essay in one Word or RTF file to teagan.decker@uncp.edu.

All essays will be read and judged in a blind selection process. If a submission is chosen for publication, the author will be notified and asked to submit a brief biography, and a photograph of the author will be taken to be included in the publication.

Nominations to be considered for publication in the Spring 2014 issue will be accepted until December 2014. For further information, contact Dr. Teagan Decker, Lowry Bldg. 131, (910) 521-6437, teagan.decker@uncp.edu.

Editor

Teagan Decker

Dept. of English, Theatre, and Foreign Languages

Managing Editor

Sara Oswald

Dept. of English, Theatre, and Foreign Languages

Selection Committee

Bill Brandon

Dept. of Chemistry and Physics

Joanne Hessmiller

Dept. of Social Work

Jaime Martinez

Dept. of History

David Nikkel

Dept. of Philosophy and Religion

Jesse Peters

Dept. of English, Theatre, and Foreign Languages




The cover photo shows the bridge over the water feature with the Lowry Bell Tower in the background. These two campus landmarks appeared on the banners that were displayed throughout campus during the 2013-2014 academic year.

REVISIONS: BEST STUDENT ESSAYS

Vol. 14

COMMERICAL HOG FARMING: THE SMELL OF CHANGE.....	4
William B. Baxter II	
BIO 4320: Conservation Biology	
AN UNCANNY CALLING IN <i>JANE EYRE</i> : BELIEVE IT OR NOT.....	8
Paulette DeGrood	
ENGS 4010: Senior Seminar: Film Adaptations of Literature	
KARA WALKER IN <i>SLAVERY! SLAVERY!</i>	14
Vivienne S. Leaven	
ART 2090: Survey of Art II (WE)	
EFFECTS OF BACKGROUND MUSIC AND CHANGE OF LOUDNESS ON READING COMPREHENSION PERFORMANCE	17
Corey Oxendine	
PSY 3000: Research Methods Capstone	

Click on any title in the Table of Contents above to go to the start of that essay. Click on the  at the end of any essay to return to the Table of Contents page.

COMMERCIAL HOG FARMING: THE SMELL OF CHANGE

By William B. Baxter II



William Baxter II graduated in Spring 2013 with a B.S. in environmental science. He would like to pursue a career in environmental consulting, conservation, or biological research. There are still a large number of unknowns hidden within the environment, and he thinks it would be awesome to discover something new.

Eastern North Carolina has become a hot spot for commercial hog farming practices over the last two decades, as North Carolina ranks second in pork production among all fifty states (NCGE 2007). Along with the countless hog farms came the noxious smell, animal rights issues, and the environmental woes that are tied to the industry. Government regulations attempted to construct standards for hog farming operations, but those regulations are too lenient on the environmentally hazardous aspects of the system. As the consumer demand for pork remains high, the pressure is on the hog industry to keep up. In turn, environmental concerns are often overlooked. With that being said, the process of commercial hog farming needs to be revised for the sake of the surrounding environment and the health of people living in surrounding areas.

Commercial Hog Farming

The effects of commercial hog farming are far reaching, as there is a worldwide demand for pork products. The domestication of swine (*Sus scrofa*) originated roughly ten thousand years ago, with the modern industrialized practices being implemented in the late 1970s and early 1980s (Coppin 2003, Furuseth 1997, Loughrin et al. 2006). These industrialized practices are also known as Concentrated Animal Feeding Operations (CAFO) or Intensive Livestock Farming Operations (Ponette-González and Frye 2012, Ramsey et al. 2013). Hog farming has inundated the coastal plain of eastern North Carolina, with the largest concentrations of hog farms

in Bladen, Duplin, Robeson, and Sampson counties (NCGE 2007). In the early 1990s, a plant in Bladen County had the capacity to slaughter 120,000 hogs in the span of only one week, making it the largest of its kind (Coppin 2003, NCGE 2007). On a national level, Iowa is the leading producer of pork in the country (NCGE 2007). Roughly sixty percent of the commercial hog farming industry can be traced to four states, North Carolina being one of them (NCGE 2007). Compare the previous statement to the fact that on a global scale, about ten percent of the pork production can be attributed solely to the United States (NCGE 2007). Global competition is high as commercial hog farming is prominent in North and South America, Europe, Asia, and Australia. The United States has also reached into foreign markets to form partnerships to reduce the risk of competition (NCGE 2007). Whether it is the rural areas of North Carolina, a French countryside, or the Australian outback, commercial hog farming is mar- rying the landscape.

Economic influences often triumph over environmental issues, and this was one underlying reason hog farming took over North Carolina. Historically, North Carolina has largely cultivated tobacco, and with the risks of tobacco use more widely known, the focus of farmers had to be shifted to find another way to produce a profit (Furuseth 1997). With a high demand for pork, the commercial hog farming industry proved to be a good option and the industry grew in excess of a billion dollars within North Carolina alone (NCGE 2007). The top two pork-producing companies in the United States are Smithfield Foods and Tyson Foods respectively (NCGE 2007). As noted, pork production in North Carolina became a large asset to the state's economy. This notion can be added to the fact that even when environmentally unsound practices were threatening the surrounding areas, North Carolina had found a way to fill the gap left by the decreasing tobacco production. Despite local opposition, mainly due to the unhealthy odors and local environmental effects, the profit margins were just too great (Furuseth 1997, Loughrin et al. 2006).

When looking at the overall set up and design of commercial hog facilities, several issues become apparent. Commercial hog farms utilize large structures that are specially designed to house a large quantity of swine (Furuseth 1997). Separate structures are used for specific stages of development (Furuseth 1997). The stages of breeding, gestation, farrowing, and weaning all take place in one structure, whereas nurs-

ing and grow-finishing stages have their own structures respectively (Furuseth 1997). These structures are usually accompanied by one or more lagoons to hold the waste that is produced by the hogs (Furuseth 1997). Inside the structures are usually small confined pens to house each pig, with an area no larger than two feet by six feet (Furuseth 1997, Coppin 2003). All operations within the confined facilities are controlled by a computer, including feeding schedules, whereas the only time the pigs have human interaction is for medical purposes (Furuseth 1997). As Coppin (2003) states, the number of hog farms in the United States was on the decline in between 1967 and 1996 while the number of hogs increased. This relationship suggests that commercial hog farms were more concentrated in their distribution, and the size of the hog housing structures increased (Coppin 2003). Also, hogs are genetically altered in ways that help increase the efficiency and economical value (Coppin 2003). The invention of commercial hog farming, and the ease at which the process is completed, has allowed for humans to overexploit swine.

Environmental Concerns

The methods that are in place for commercial hog farms, primarily dealing with wastes, pose a great environmental danger and can be a human health hazard as well. Waste lagoons have been the driving force behind various environmental hazards. The lagoons are used as makeshift water treatment for the wastewater to be applied to crop fields for the nutrient value (Furuseth 1997). Anaerobic processes are used to treat the raw sewage before it is applied to cropland as fertilizer (Loughrin et al. 2006). After the wastewater is applied, rainfall can wash excess pollutants into nearby rivers or lakes and can alter the chemical balance of the water causing algal blooms and harmful effects on fish (Ponette-González and Frye 2012). Even though there are strict regulations on the building of the waste lagoons, the possibility of leaks or overflows remains, and this became evident in eastern North Carolina in 1995 when millions of gallons of raw sewage breached several waste lagoons and ended up polluting nearby watersheds (Furuseth 1997). Natural disasters, such as hurricanes, can also breach a lagoon sending harmful nutrients and raw sewage into the surrounding environment, which can have harmful effects on plants, animals, and fish, and can cause large algal blooms (Ponette-González and Frye 2012). Along with water and land, the air is polluted with odors that contain harmful chemical components, with ammonia being the most notable (Ponette-González and Frye 2012). As cited by Ponette-González and Frye (2012), a study from eastern North Carolina concluded that individuals within

3.2 kilometers of a large commercial hog farm suffered a variety of medical issues, ranging from minor skin and eye irritations to respiratory illnesses. However, there was less of a medical hazard observed in individuals living near other animal farms or those that were not in the proximity of any commercial animal facility (Ponette-González and Frye 2012). Employees of commercial hog farming operations are highly susceptible to contracting future chronic illnesses, such as bronchitis, from the unhealthy conditions to which they are exposed (Ponette-González and Frye 2012). If the use of commercial hog farming must persist, then more attention needs to be given to the treatment of the wastewater and to reducing the impacts to the air, land, and water.

Activism and Legislation

Legislation regarding commercial hog farming in North Carolina has been mediocre in dealing with controversial aspects of the industry. There is a “Right to Farm” statute in place that allows commercial hog operations to operate without interference from the public, as stated by Furuseth (1997). Alarming enough, commercial hog farms were not subject to local zoning policies after 1991 (NCGE 2007). The “Swine Farm Siting Act” of 1995 proposed distance requirements from municipal areas and watersheds (EDF 2002). However, the distance requirement from any watershed was only a measly fifty feet (EDF 2002). The issue at hand here is that fifty feet does not allow much room in the event of an overflow or leak. In 1996, “An Act to Implement Recommendations of the Blue Ribbon Study Commission on Agricultural Waste” was another piece of legislation that fell short of fixing environmental threats (EDF 2002). So-called “nondischarge permits” are used to influence farmers to develop a waste management plan and each commercial hog farm must be inspected twice a year to ensure standards are being met (EDF 2002). Also in this act was an increase in the distance any commercial hog farm can be from an adjacent property line; however, there was no further limit on the distance from nearby watersheds. Instead, the act increased the punishment farmers would face in the event of environmental disturbance to a \$10,000 repair. Lastly, this act gave responsibility to the farmer to notify all surrounding households before constructing a commercial hog farm, although no power in preventing the farm is given to the surrounding residents. Water conservation became more apparent in 1997 when “The Clean Water Responsibility and Environmentally Sound Policy Act” was placed into effect (EDF 2002). This act returned some power to local governments in the form of zoning regulations, and also halted any further de-

Hog farms literally dot the landscape of North Carolina's coastal plain. William Baxter's "The Smell of Change" is a nice job of "detective" work. He exposes key forces that have led to a thriving pork industry in the state, while leaving hog farm neighbors largely powerless in their objections to the industry. If not already familiar with the hog industry, you may be a bit appalled to learn of the conditions in which hogs are now reared. Read William's essay to learn about a lucrative industry that shows little indication of "going green."

~Dr. Lisa Kelly

COMMERCIAL HOG FARMING: THE SMELL OF CHANGE

velopment of commercial hog farms for a fixed period of time. With an emphasis on water pollution, this act placed further distance requirements in relation to bodies of water that service the public, as well as the distance that wastewater-treated fields are relative to nearby rivers and streams. Also stated was the fact that the current process of handling wastes needs to be revised. In 1991, “An Act to Provide for The Registration of Swine Farms Associated with Swine Operation Integrators and to Extend the Moratorium” simply required farmers to register the company with whom they are affiliated, and it prolonged the period for which no more commercially operated hog farms could be built (EDF 2002). State legislators also provided a series of incentives for farmers wanting to start a commercial hog farm (Furuseth 1997). Numerous tax exemptions are in place regarding almost every aspect of production, from feed for animals to property used in the operation (Furuseth 1997). Even after many legislative works, the same environmental hazards still remain.

Several agencies and groups are fighting to mitigate concerns surrounding the commercial hog farming industry. The United States Environmental Protection Agency has played an integral role with regard to waste management issues with the “Clean Water Act” (USEPA 2008). This act helped install a system of permits that manage the amount of wastewater that is released into the environment. The United States Department of Agriculture has an impact on the commercial hog industry as well, and it has several sub-agencies with specific tasks (USDA, ERC 2012). The Agricultural Marketing Service can rescue farmers with financial worries by purchasing meat for federally funded programs. The Animal and Plant Health Inspection Service has a role in preventing diseases from infecting livestock. The Farm Service Agency is in place to help farmers in the aftermath of a significant event, usually weather related. The National Resources Conservation Service has implemented several programs in an effort to encourage farmers to adopt environmentally friendly techniques (USDA, NRCS 2013). The most notable effort is that of the Environmental Quality Incentives Program which helps farmers address areas of environmental concern on their land, while giving the farmer the tools and monetary support to do so. A non-profit organization called the People for the Ethical Treatment of Animals speaks out against commercial hog farming, among other topics (PETA 2013). PETA (2013) notes all of the gory details and horrors of the hog industry and strongly urges people to join their effort by not eating meat. The Humane Society is another non-profit organization that also has

complaints against the hog industry, and attempts to win over the hearts of humans by sensationalizing the mind-boggling statistics and surprising genetic traits of swine (HSUS 2009). Organizations such as PETA and the Humane Society have the capacity to gain followers from around the world as there is power in numbers whether it is through petition or protest. The only issue is that people have to take an interest in order to make a difference.

Problem Areas with Possible Solutions

As discussed earlier, due to zoning restrictions made at the state level, local governments could not prevent large hog facilities from being constructed (NCGE 2007). Gaps between local and state governments need to be filled and the two need to work together to enforce regulations and prevent environmental catastrophes. Loopholes in legislation need to be altered so that they are clearly understood. Singlehandedly, loopholes are what allow the structures to be able to hold such a large capacity, as Furuseth (1997) seems to suggest. As discussed earlier, legislation that was passed mainly ignored the potential harm that could be placed on the environment and favored the economic benefits. State legislators need to be more environmentally conscious when adopting new standards for hog farms to operate by. Through careful consideration and ethical ideals, the hog industry can be revitalized while keeping the economy thriving without straining the environment.

When considering alternative options regarding the hazards of lagoons, a few possibilities become apparent. Humans use wastewater treatment plants to process waste, and Loughrin et al. (2006) applied the same idea in a study. In the study, a full wastewater treatment facility was built on a commercial hog farm and a series of measurements of water quality and gaseous substances were documented. As one would expect, the experiment concluded that land, air, and water pollution were greatly reduced; however, wastewater treatment facilities carry an expensive price tag. Also cited by Loughrin et al. (2006) was the state funded concept of environmentally superior waste management technologies, or EST. These technologies were part of a greater effort between two top pork-producing companies, dubbed the “Smithfield Agreement,” to fund the research (NCGE 2007). A total of sixteen ideas were proposed on the pre-determined basis of a set of five environmentally sound categories, and only two ideas were deemed to qualify (Loughrin et al. 2006). One idea was a water treatment facility to break down solids while reducing the nitrogen and phosphorus concentrations, whereas the other idea revamped the waste lagoon with an alternative anaerobic process. Another method that can be


employed is the idea of using a lagoon cover (Regmi et al. 2007). As Regmi et al. (2007) explained, lagoon covers can be produced using natural or artificial components. Experimentation concluded that lagoon covers were effective in odor control, mainly those covers that used artificial components. However, a major downfall to using lagoon covers is that the environmental impact of waste still remains. Nguyen et al. (2010) suggested the idea of using the emissions from waste lagoons as an energy source. In response, air quality is increased as the harmful chemicals are displaced into fuel. Mueller (2007) added that even though there are multiple benefits to using waste for energy production, there are few hog farms that have taken part in this initiative. With this method, surrounding areas of commercial hog farms will be able to breathe a little easier.

Future Outlook

Commercial hog farming will likely continue into the future as the demand for pork, or any food source for that matter, will remain high. Governments need to stop being as careless and oblivious to issues regarding the environment as they have in the past. NCGE (2007) boasts that North Carolina's research of EST's has made the state a forerunner in the future of managing hog waste. Nonetheless, waste still manages to provide a challenge. Waste lagoons have become an obsolete technology, and they need to start being treated as such. In my opinion, the over-exploitation of swine is an argument based on ethical merit, which is oftentimes overlooked. Education on CAFOs in local, state, and federal governments as well as the general public should be of utmost concern. The more widely known the issues at hand are, the more likely the issues are to be addressed, and the greater the pressure on legislators to reform commercial hog farming. At the very least, stricter policies specifically regarding the environment need to be developed. If the government can give tax breaks for operating a hog farm, they should also provide tax breaks for those using environmentally friendly techniques. In doing so, farmers will have an incentive to lessen the ecological footprint of their hog farms.

Conclusion

Since CAFO's have been in existence, they have been inundated with opposition to the controversial processes that are involved. Various forms of legislation have focused attention to all areas except major environmental concerns. A happy medium needs to be found between the economic and environmental disciplines in order to achieve a more sustainable operation. Hazards associated with waste lagoons need to be eradicated instead of regulated.

Just as they have in the past, the large pork-producing companies need to configure a plan to address specific issues. All of the previous suggestions are perfectly viable options from which to choose. The environment is priceless, and there should be no cost that is too great to protect it. 

References

- Coppin, Dawn. 2003. "Foucauldian hog futures: the birth of mega-hog farms." *Sociological Quarterly* 44 (4) (November): 597–616.
- EDF. 2002. Major North Carolina Laws Related to Hog Factory Farms. (http://apps.edf.org/documents/2518_NCHoglaws.pdf, November 2002). Environmental Defense Fund, Washington, D.C.
- Furuth, Owen J. 1997. "Restructuring of hog farming in North Carolina: explosion and implosion." *Professional Geographer* 49 (4): 391–403.
- HSUS. 2009. (http://www.humanesociety.org/animals/pigs/pigs_more.html, 2 November 2009). The Humane Society of the United States, Washington, DC.
- Loughrin, John H, Ariel A Szogi, and Matias B Vanotti. 2006. "Reduction of malodorous compounds from a treated swine anaerobic lagoon." *Journal of Environmental Quality* 35 (1) (January): 194–199.
- Mueller, Steffen. 2007. "Manure's allure: variation of the financial, environmental, and economic benefits from combined heat and power systems integrated with anaerobic digesters at hog farms across geographic and economic regions." *Renewable Energy: An International Journal* 32 (2) : 248–256.
- NCGE. 2007. Hog Farming. (http://www.soc.duke.edu/NC_GlobalEconomy/hog/overview.shtml, 23 August 2007). Center on Globalization, Governance & Competitiveness, Durham, NC.
- Nguyen, Thu Lan T, John E Hermansen, and Lisbeth Mogensen. 2010. "Fossil energy and ghg saving potential of pig farming in the EU." *Energy Policy* 38 (5): 2561–2571.
- PETA. 2013. Pigs Used For Food. (<http://www.peta.org/issues/animals-used-for-food/pigs.aspx>, 2013). People for the Ethical Treatment of Animals, Norfolk, VA.
- Ponette-González, Alexandra G, and Matthew Frye. 2012. "Pig pandemic: industrial hog farming in eastern Mexico." *Land Use Policy* 27 (4): 1107–1110.
- Ramsey, Doug, Victoria Soldevila-Lafon, and Lourdes Viladomiu. 2013. "Environmental regulations in the hog farming sector: a comparison of Catalonia, Spain and Manitoba, Canada." *Land Use Policy* 32: 239–249.
- Regmi, Shekhar, Maneerat Ongwandee, Glenn Morrison, Mark Fitch, and Rao Surampalli. 2007. "Effectiveness of porous covers for control of ammonia, reduced sulfur compounds, total hydrocarbons, selected volatile organic compounds, and odor from hog manure storage lagoons." *Journal of the Air & Waste Management Association* 57 (June): 761–768.
- USEPA. 2008. (<http://cfpub.epa.gov/npdes/index.cfm>, 12 March 2009). Environmental Protection Agency, Washington, DC.
- USDA, ERC. 2012. (<http://www.ers.usda.gov/topics/animal-products/hogs-pork/policy.aspx#.UU-iyRykoTo>, 28 May 2012). United States Department of Agriculture, Economic Research Service, Washington, DC.
- USDA, NRCS. 2013. Financial Assistance. (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/>, accessed on: 1 March 2013). United States Department of Agriculture, National Resources Conservation Service, Washington, DC.

AN UNCANNY CALLING IN *JANE EYRE*: BELIEVE IT OR NOT

By Paulette DeGrood



Paulette DeGrood will graduate in May with a B.A. in English education and a minor in history. She enjoys promoting literacy in schools and volunteers her time through programs such as The Literacy Commons and by reading to preschoolers. Her favorite hobby is spending quality time with her husband and young daughter.

Charlotte Brontë's *Jane Eyre* is a timeless classic that has been subject to numerous film adaptations, some more successful than others. Fans of the original novel seem to be the films' largest audience and worst critics, which can make an adaptation's success difficult. One key scene criticized in many adaptations is the uncanny summons Jane receives from across the moors that sends her conveniently running back into the arms of Rochester. In many adaptations, the mysterious summons seems almost plopped into the film as an easy solution for the reunion of Jane and Rochester. Therefore, the scene's believability is questioned and sometimes even ridiculed. This very concern was addressed upon the release of the 2006 *Jane Eyre* mini-series adapted by Sandy Welch and directed by Susanna White. In a review of the film, Andrew Billen describes this moment as "the creepiest in the book, not to mention the most absurd. I hope this magical adaptation has the sorcery to make us accept it." He acknowledges the difficulty for films to depict this scene in a believable manner. After all, "on the page, you have Jane's voice to make credible the incredible. On television, you rely on your actors. White has cast perfectly" (Billen). Ruth Wilson as Jane and Toby Stephens as Mr. Rochester are commendable in their performances; however, this scene takes much more than exceptional acting to make it believable. The bulk of this responsibility belongs to the director. White presents a Gothic version of the novel while representing Jane's first person perspective from the novel through a visual stream of consciousness, which leaves viewers questioning

whether the source of the summons is internal or external. The end result is an ambiguous version of *Jane Eyre* and its pivotal scene that appeals to both those who embrace the supernatural and those in search of more rational explanations for these events.

To understand how White depicts the summons in the film, one should examine how Brontë presented this event in her novel, which has been criticized as well. A scathing review in the *Christian Remembrancer* in April 1848 reads, "the plot is most extravagantly improbable, verging all along upon the supernatural, and at last running fairly into it" (qtd in Allott 90). Brontë's novel does contain elements that can be interpreted as supernatural events; after all, it is in some ways a Gothic novel. However, the novel also offers a rational explanation of these events for those who refuse to embrace the supernatural. Much that occurs in the novel can be explained by Jane's creative imagination or as coincidence. The summons, on the other hand, is much harder to explain. However, Jane attempts to do so herself in a reflection of the event the following morning, as she recalls, "I questioned whence it came, as vainly as before: it seemed in me—not in the external world. I asked, was it a mere nervous impression—a delusion? I could not conceive or believe: It was more like an inspiration" (Brontë 411). Jane's self-examination, obviously overlooked by some readers, should be enough to dispel most criticism concerning the summons in the novel because it places reasonable doubt in the minds of readers. Yet, Jane soon discovers that Rochester cried out her name on the exact same night at the exact hour of the uncanny calling, which questions the rational explanation that just emerged from her self-reflection. This ambiguous pattern Brontë skillfully implements throughout the novel. By developing the creative character of Jane, a first person narrative that reflects Jane's thoughts and the Gothic eeriness of the novel, Brontë carefully constructs a plot that supports both interpretations, and White seems to have taken good notes for the 2006 mini-series.

Brontë creates a highly imaginative character in Jane, especially as a child, to accommodate unexplained events in the novel. Therefore, readers tend to blame some of the strange phenomena occurring early in the novel to the over-reaction of a child's imagination. From the beginning of the novel, Jane is depicted as a lonely child who is alienated and abused by the Reeds. Maggie Berg explains that "In her loneliness Jane turns to books, and so begins the love of literature and art that carries her through an otherwise unhappy early life" (35). As a child, then, Jane

uses books to escape from the torments at Gateshead. However, one should recognize that Jane's love of books as a child does not necessarily mean she loved to read them, which is what Berg implies. Instead, Jane uses books to jump start her imagination so that she could escape reality. Perhaps Debra Gettleman explains this more accurately:

Despite Jane's obvious familiarity with these books, the heroine is rarely seen actually reading in the sense of paying attention to the book's content. When depicted with a book open in front of her, her attention is punctuated by activities of mind that take place independent of—even in seeming opposition to—the page: by attentions that wanders, daydreams that insert themselves, visions that become as engrossing as the text. (565)

Instead of reading to escape, Jane uses the books as kindling for her imagination. Her love of books is due to their aid in creating her own imaginative stories.

Bronte portrays Jane's highly imaginative nature from the very beginning of the novel. The novel begins with Jane hiding in a window seat with a copy of *Bewick's History of British Birds*, which she liked especially for its pictures. As Gettleman implies, Jane is not actually reading this book, which is evident from the detailed descriptions she gives of the pages. Although the book is about birds, she relays images of landscapes, graveyards, and ships at sea instead. Jane admits that "Each picture told a story; mysterious often to my undeveloped understanding and imperfect feelings, yet ever profoundly interesting" (Bronte 21). Therefore, it would be more accurate to say Jane used her imagination as an escape from reality. The books offered pictures that she used to transport herself to places she had never seen. Jane's imagination was groomed by many such instances of escape. Her obvious preference to this state of being is evident when she comments, "With Bewick on my knee, I was then happy: happy at least in my way. I feared nothing but interruption, and that came too soon" (Bronte 22). Bronte establishes Jane's imaginative skill in such a way because it is essential in generating reasonable doubt for unexplained events later in the novel and represents a reasonable source for the mysterious summons.

Following Bronte's example, White felt it important to depict Jane's creative nature as well. Instead of relying completely on voice-overs to capture Jane's thoughts, she "interprets Jane's mental wanderings through fairy-tale imagery that immediately positions the viewer in relation to her interiority" (Kapurch 95). Without any oral descriptions or written

words, viewers are able to glimpse inside Jane's imagination through vivid visual representations. It is obvious that "White has a clear understanding of mis-encene which is apparent and well played throughout, and the combined stunning visual compositions, use of color, landscape and music composition balance and complement the original text" (Boyce 77). White wisely chooses to represent Jane's inner thoughts through a visual stream of consciousness throughout the film. Instead of solely relying on an internal monologue or a voice-over, viewers experience many of Jane's mental processes through visualizations. In fact, it is "through these cinematic choices, [that] the audience is required to begin the film in Jane's imagination," which immediately alerts readers to the highly imaginative skill Jane possesses while alluding to her unhappy living arrangements with the Reeds (Kapurch 95). Jane's ability to create her own reality and her over-active imagination provide a reasonable cause for events that some would interpret as supernatural or improbable.

White begins this opening scene in a desert, with a long shot that shows Jane (played by Georgie Henley) in a red and gold sari while she walks away from the camera leaving footprints in the untouched sand. A mysterious piano melody in the background and high-contrast lighting complement the scene. White cuts to the bright blue sky with just a hint of clouds and begins a circular pan that stops with a long shot of Jane now sitting facing the camera. Her head is down as she watches sand running through her fingers. As she looks up, White cuts to a subjective shot that shows a long shot of the desert landscape that retains a perfect dream-like quality. The camera horizontally pans the desert until it does a complete 180-degree turn and stops with a close-up of Jane's face. White then zooms into an extreme close-up of Jane's eyes that "functions as a transitional image to Jane Eyre in her contemporary setting reading *Voyages and Travels: Illustrated in a window seat*" (Kapurch 95). White also uses a blue filter to depict a change of place and mood as the camera zooms back from Jane's eyes to a medium shot of her, now at her aunt's home, Gateshead. The lighting is low contrast and dismal. As Jane looks at a book in her lap, White zooms into an extreme close-up of a picture of an English garden with the sound of crickets in the background. Jane turns the page to a picture of a jungle river, and the sounds of the jungle echo from the page. White retains the extreme close-up of the book when Jane shuts the book to reveal the title. Within the first two minutes of the film, White establishes the imaginative skill of Jane that will be a key factor in presenting the uncanny calling in a natural manner.

Paulette DeGrood argues that in a recent film adaptation of *Jane Eyre*, director Susanna White, like novelist Charlotte Bronte, successfully prepares audiences to accept as plausible the climactic "summons" scene that critics consider an unrealistic intrusion of the supernatural. Paulette's scholarly essay confidently engages with current critical conversations, skillfully analyzes specific scenes, and invites readers to revisit from a new perspective both the novel *Jane Eyre* and its film adaptations.

~Dr. Monika Brown

AN UNCANNY CALLING IN *JANE EYRE*

Establishing an imaginative character early in both the film and novel effectively sets the tone for the Red Room scene, which follows immediately afterwards. It is in the Red Room that Bronte first introduces the possibility of supernatural forces at work. Jane is dragged and locked into the Red Room after defending herself against her cousin John. Jane struggled against her incarceration, not only because she felt it unjust, but because she feared the room in which her Uncle Reed had died. As daylight begins to fade, Jane speculates that her uncle must be troubled in his grave due to her poor treatment, and she fears that he may return for vengeance since his last wishes have been violated. During this conjecture, Jane notices a strange light. At first she thinks it is moonlight, but then notices “this [light] stirred; while I gazed, it glided up to the ceiling and quivered over my head” (Bronte 29). Jane becomes terrified, and when she is not allowed out of the room, she loses consciousness in a fit of terror. The source of the light is never explained, which leaves readers to believe that something strange indeed happened to Jane within the room. However, based on Jane’s creative imagination, a rational explanation can be supported as well. Berg justifies such rationality by explaining that “Jane becomes so terrified that a ‘ghost would come’ (49) that she loses consciousness, but it is her own imagination, nothing more, that causes her fear” (Berg 38). Readers are subjected to a plausible explanation for the terror Jane experiences in the Red Room; in addition, the possibility that something out of the ordinary occurred seems possible as well. Just as Bronte intended, readers are left to interpret the event as either a supernatural occurrence or the result of a terrorized imaginative child.

White takes advantage of the Red Room scene to also lay an ambiguous foundation in the plot with a scene that is short but very powerful. She “chooses to place emphasis on Jane’s terror in the Red Room. As we see distorted images of Jane’s dead uncle intermixed with her banging on the door to be let out, there is creepy music chiming in the background worthy of a psychological thriller” (Boyce 78). White exposes Jane’s terror of the Red Room while she is literally being carried to her cell. In a precursor to the Red Room, White begins with Jane running through the halls of Gateshead in an attempt to escape her jailers. The sound of Jane’s footsteps echo off the wall as her breathing can be heard in short hard gasps while she flees. Once captured, “the intensity of Jane’s resistance is evocative and unsettling: shaky camera work and reverberating sounds intensify the chaos as a horrified Jane repeatedly screams ‘no’” (Kapurch 97). In an absolute state of terror, the chaos is silenced as Jane

is locked within the Red Room. White has carefully and successfully prepared the audience for the possibility of two interpretations of the events that immediately follow.

Although White has prepared viewers for a rational explanation of the events in the Red Room with a fully terrorized imaginative Jane, she leaves no doubt that supernatural forces could be present in the Red Room scene as well. Ida Martesson describes, “This scene brings on a supernatural effect which complements, even though in a rather drastic method, the Gothic atmosphere in this part of the story” (6). White decides to use a birds-eye-view to begin this scene, which results in Jane appearing small and powerless. Jane is sitting with her back facing the door, her knees drawn up to her chest, and her arms wrapped around her legs. White uses a filter to cast an overpowering red glow throughout the room resulting in a creepy otherworldly appearance. Jane’s head is on her knees and she is sobbing. White cuts to a close-up of Jane’s face whose eyes are shut tight. Between sobs, Jane pleads aloud, “Don’t come back Uncle Reed, please don’t come back” (White 2007). Jane begins to raise her head and open her eyes, and White cuts to a subjective shot from Jane that shows a figure sitting in a heavily draped four poster bed. Lightening fills the room as the camera quickly zooms to a medium shot of the figure, which is brightly illuminated from the side facing the window. Through the subjective view, Jane locks her gaze with the figure’s dead opaque eyes before White quickly cuts back to her in a medium shot. With wide eyes, Jane gets on her feet, spins around, and throws herself against the door pounding and screaming to be let out. As she pounds, the camera slowly zooms into the back of her shoulders as the haunting music score rises in crescendo matching Jane’s mounting terror. White suddenly ends the scene with a cut that jumps to the Reeds sitting for a portrait while Jane is once again in her window seat. In the film, viewers are left to their own imaginations as to what actually happened to Jane during and after her experience in the Red Room; it could be that Jane’s imagination got the best of her, or that she really did experience a visit from the beyond. The important factor to note is that it could be either one. Through the established imaginative character of Jane, one can interpret the ghostly figure as a child’s imagination run amuck; through the Gothic nature of the film, one can interpret the figure’s appearance as a supernatural event.

During the first four minutes of the film, White wastes little time in establishing two of the same key factors Bronte used to make her story believable to two different audiences: believers and non-believers

in the supernatural. Both will play important roles in how the summons is interpreted later in the film. After these first few intense scenes, White throws a little fuel on both sides to stoke the fire along the way. Shortly after the Red Room scene, White makes another minor addition to support the supernatural theory. In a conversation with her Aunt Reed before being shipped off to Lowood, Jane confronts her aunt concerning her treatment. In the novel, this represents Jane's first victory against her tormentors. In the film, White adds a slight twist to Jane's dialogue in which she blames her aunt's mistreatment for the haunting of the Red Room by her uncle; therefore, she seems to verify the occurrence of supernatural phenomena. Jane says "My uncle's dying wish was that you treat me as one of your children. You have not tried to . . . That is why he haunts the Red Room, 'cause you have disobeyed him. And on the day you die God will know who's telling the truth whatever you or I say now" (White 2007). In addition to inserting almost extreme measures to introduce the possibility of the supernatural, White stays true to the overall Gothic theme of the novel where some adaptations forsake this in favor of the love story. Jim Heinrich comments on White's inclusion of this theme when he writes, "This miniseries retains the conventions of the gothic genre—the spooky castle, the nighttime screams, mysterious midnight stabbings and maulings, the Gypsy fortune-teller, the supernatural carryings-on..." Although White makes her point with somewhat drastic additions, she also incorporates Brontë's overall Gothic theme to pave a road to the summons.

Jane's childhood and time at Lowood in the film are brief compared to the novel; the bulk of the film takes place at Thornfield, which will be the setting for two additional key elements concerning the summons. It is during Jane's time at Thornfield that viewers are first introduced to Jane's recollections that White depicts through a visual stream of consciousness, which also represents Jane's imaginative skill as an adult. White introduces the audience to Jane's inner thoughts through this technique when she returns to Gateshead upon the request of Mrs. Reed, who is now on her deathbed. White represents Jane's thoughts and memories in two ways during this scene: visually and verbally. However, it is the verbal disembodied voices from her recollections that are most significant in this scene. Although the scene does include a small visual, it largely consists only of voices belonging to distinct figures from Jane's past. White's introduction of these voices in Jane's recollections, which will occur more frequently once Jane arrives at Moor House, conditions viewers so that the mysterious summons does not seem absurd or out of place.

White begins this scene with a long-angle shot of the exterior of Gateshead, which portrays the structure as intimidating despite the bright sunny day. White uses a shaky subjective shot as Jane walks through the hall; however, the terrified breathing and running footsteps indicate the point-of-view White is using is that of Jane as a child. The adult Jane is actually recalling her flight as a child to avoid the Red Room. Similar to the opening scene, White uses a visual stream of consciousness to represent Jane's memories. She cuts to a medium shot of Jane as she approaches the foot of the stairs appearing transfixed in thought with the terrified screams of the child Jane still echoing off the walls. White then resumes the subjective shot and quickly pans up the stairs in a tracking shot with the sound of the child Jane screaming in resistance. The camera meets her Aunt Reed in a low angle shot as an intimidating memory from childhood standing at the top of the stairs, right before cutting back to the adult Jane as she stands looking up at the stairwell with her childhood screams still audible. A medium shot shows Jane beginning to climb the stairs, but White quickly cuts back to the subjective shot with Jane now atop the stairwell. She approaches the very painting the Reeds were sitting for directly following her imprisonment in the Red Room. As the camera zooms in for a close-up of the painting, a recollection of her cousins' response to the artist's suggestion that she be included in the portrait can be heard: "Jane Eyre? She's not part of the family" (White 2007). White chooses to use only a verbal recollection of the cousins' response, which marks the introduction of disembodied voices in the film. Therefore, Jane is not hearing ghostly voices during this scene; she is simply recalling them from memory, and these verbal recollections will play a fundamental role in validating the summons as not only possible, but reasonable as well.

The second key element during Jane's time at Thornfield occurs shortly after her return from Gateshead. Jane and Rochester's romance quickly escalates upon her return to Thornfield. As in the novel, Rochester's proposal takes place under the chestnut tree. The scene is very short, but very meaningful, and White portrays it as symbolically as the novel does. After Jane's emotional outburst, the sunny weather turns stormy reflecting the intensity of their emotions. Once Rochester finally professes his love and begs her hand in marriage, thunder rolls in the background as they seal their love with a kiss. Rain begins to fall on the happy couple as White depicts the scene with an extreme long shot that places the couple next to the huge chestnut tree. They happily join hands and run towards the camera and out of the scene to

avoid the rain with the camera still fixed on the huge tree. As soon as they are out of the scene completely, lightening strikes the chestnut tree. White's choice in portraying the lightening strike immediately following the proposal was most likely due to time constraints and did not alter the meaning of the event. As in the novel, the lightening strike can be interpreted in different ways. It could be merely coincidence, a reasonable explanation in the middle of a thunder storm, or "it could be argued to have the same interpretation as in the novel, with the split tree representing an impossible true reunion [sic]" (Martensson 15). With the chestnut tree scene, White quickly reminds viewers that despite all her effort in establishing a probable cause within the film, one should not overlook the supernatural.

Although White has provided a glimpse into Jane's inner thoughts through recollections, it is when Jane is at Moor House that White explores this concept in depth. The film does not portray Jane's trip through the moors or her departure from Thornfield in chronological order. Instead, Jane simply awakes under a rock in the moors after falling asleep in her bed at Thornfield directly following the discovery of Bertha. After wandering for days, Jane is near death before St. John discovers her. He carries the unconscious Jane home, and she claims amnesia when she awakes. Whether she really suffers from this malady or pretends to is unclear; however, Jane begins to have recollections of her life at Thornfield similar to the ones she experienced at Gateshead. Her first recollection occurs in an empty church in which Jane wanders. The significance of the recollection is not that Jane may be regaining her memory—it is not clear she actually lost it—but that the recollection is again both verbal and visual. However, one should note that White uses more verbal recollection than visual. In this particular recollection, Jane hears the voice of the priest from her wedding day with only short bursts of visual memories to complement the scene. Just as Gateshead prompted memories from her childhood, the empty church prompts memories of her disastrous wedding day. White incorporates these types of recollections to fill in the plot of Jane's departure from Thornfield; however, she also uses them so that the upcoming summons appears as a natural event.

The reason many find the summons unbelievable in many Jane Eyre adaptations is due to the shock of hearing Rochester's disembodied voice for the first time. Therefore, it seems unnatural. White avoids this problem by fully preparing the audience for just such an occurrence. She has carefully paved the way with many representations of Jane's memories in the same exact manner. As Jane finds moments of soli-

tude at Moor House, viewers often hear Rochester's voice as she remembers past conversations while deep in thought. White uses these recollections to depict what occurred after Jane locked herself in her room at Thornfield following the wedding. In one particular flashback, Jane hears Rochester's voice while in her room alone. He says, "You cannot hate me Jane, I did not mean to deceive you" (White 2007). Jane lies back on her bed in Moor House, closes her eyes as Rochester's voice continues, and she is transported back to Thornfield, now visually reliving this memory. Rochester's voice does not seem out of place during White's depiction of these memories; instead, they flow naturally while inviting viewers into Jane's innermost thoughts and memories.


Although White has meticulously laid a supporting trajectory towards a believable summons, her efforts cannot be appreciated unless compared with a version that falls short. Cary Fukunaga's *Jane Eyre* adaptation offers such a comparison. Fukunaga abandons the Gothic nature of the novel for a more romantic version of *Jane Eyre*. Geoffrey Macnab points out that "other than in the early scene in which Jane (played as a child by Amelia Clarkson) is locked in a room and knocks herself out by banging her head on the door—does the film crank up the tension or use horror-movie conventions." Frankly, the Red Room scene to which Macnab refers to is not very scary at all, nor is it Gothic. Although Fukunaga uses numerous flashbacks, they are all visual without any preparations for a disembodied voice booming across the moors. Instead, Fukunaga begins the film with Jane fleeing from Thornfield. Therefore, much of the story is told through flashbacks. Furthermore, Owen Gleiberman notes that "the film never conveys that something larger is at work." During this scene of the summons, St. John is angry with Jane because she will not agree to marry him. As Jane becomes upset at St. John's anger, Rochester's voice softly calls her name. As this gains her attention and she begins to wildly walk around calling back to the voice, Rochester's voice booms across the moors once more. Viewers are likely to react in the same manner as St. John during this scene; Jane has lost her mind. The film does follow the novel's original plot more so than White's during the uncanny calling, but it lacks any of the preparation that Bronte and White implemented; therefore, it comes across as out of place and unbelievable.

White's illustration of the mysterious summons is very different than Bronte's, yet, it is still just as effective. Some could criticize the film based on the issue of fidelity. However, "the argument of whether or not this adaptation is loyal to the text or if one should

base criticism on fidelity is seemingly silly when so many other elements of the film matter . . . it is clear the adaptation mirrors the text—the action, thoughts and inferences” (Boyce 89). White has obviously taken notes on Bronte’s techniques in presenting a believable plot. One should expect an “adaptation [to be] automatically different and original due to the change of medium” (Stam 75). White’s deviations from the novel’s plot are the result of transforming literature into film. Due to this process, there is no confrontation concerning the marriage proposal between St. John and Jane. She calmly leaves St. John after his proposal and contemplates her answer as she walks the wild moors alone. Jane is shown completely lost in thought as she walks with a disposition viewers easily associate with the highly imaginative Jane that White has carefully crafted. After various cuts depicting Jane’s thoughtful journey across the moors, Jane is shown sitting alongside a small babbling fall, which will be the location of the summons.

White begins this scene with a shot beginning at the base of the babbling fall. The camera slowly pans vertically and stops in a long shot of Jane sitting on some rocks beside the fall. During Jane’s entire thoughtful journey through the moors, the same sad regretful score is used that was also used in her other recollections at Moor House. The camera cuts to a close-up of Jane’s darkened profile against the backlit sky. With the sound of water running down the rocky fall, Rochester’s voice is heard urgently calling “Jane.” Jane does not seem to acknowledge the voice until it calls once more, which causes Jane to jerk her head in search of the source. White quickly cuts to the running fall with the almost inaudible sound of thunder mixed with the sound of the water before quickly cutting back to Jane. Another call from Rochester is heard, three in total, with White cutting each time to the fall to repeat the process. Jane stands, without saying one word, and begins running back to Moor House and immediately returns to Thornfield. In White’s version of the summons, which is far less melodramatic than other adaptations, it flows naturally with the rest of the film without causing a disruption.

The manner in which White presents the uncanny calling can be interpreted in two different ways. One can assume that the imaginative Jane simply made a decision she went to the moors to ponder. After all, White shows Jane in deep thought during this entire scene. Throughout the film, especially Jane’s time at Moor House, viewers have often heard many disembodied voices through Jane’s recollections. One would assume that while Jane contemplates a loveless marriage proposal from St. John, it

would be natural for her mind to focus on the love she lost with Rochester. Therefore, the calling seems perfectly normal for those who seek a rational explanation for the calling. On the other hand, White has throughout the film interjected many allusions to supernatural forces at work. The faint sound of lightning striking is reminiscent of the blasted chestnut tree. For those open to such an interpretation, one can easily believe that a larger force is at work in the film, which finally reaches out to Jane by beckoning her to return to Thornfield. In Jane, White has developed a special character who embodies certain qualities that make the impossible possible. These qualities conditioned her imaginative character to escape persecution, instilled an inner strength to overcome her past, and developed intuition to guide her future decisions; qualities that make Jane, Jane. Just as skillfully as Bronte, White has built a supporting frame for both theories that surround a character for whom anything seems possible. 

Works Cited

- Allott, Miriam ed. *The Brontes: The Critical Heritage*. Boston: Tintling, 1974. Print.
- Berg, Maggie. *Jane Eyre: Portrait of a Life*. Boston: Twayne, 1987. Print.
- Billen, Andrew. “An Eyre of Intelligence.” *New Statesman* 2 Oct. 2006: n.pag. 5 Mar. 2013.
- Boyce, Joy Wohlman. (2012). “Framing Jane: Film Adaptation and *Jane Eyre*, 1943-2006.” M.A. Thesis. Eastern Illinois U, 2012. Web. 10 Mar. 2013.
- Bronte, Charlotte. *Jane Eyre. Case Studies in Contemporary Criticism*. Ed. Beth Newman. Boston: Bedford, 1996. 1-441. Print.
- Fukunaga, Cary, dir. *Jane Eyre*. Perf. Mia Wasikowski, Michael Fassbender. BBC, 2011. DVD
- Gettelman, Debra. “‘Making Out’ *Jane Eyre*.” *ELH* 74.3 (Fall, 2007): 557-581. JSTOR. Web. 14 Apr. 2013.
- Heinrich, Jim. “TV Review: A Breath of Fresh Eyre.” *Pittsburgh Post-Gazette*. 21 Jan. 2007. Web. 3 Mar. 2013.
- Kapurch, Katie. “‘Why can’t you love me the way I am?’: Fairy Tales, Girlhood, and Agency in Neo-Victorian Visions of *Jane Eyre*.” *Neo-Victorian Studies* 5.1 (2012): 89-116. Google Scholar. Web. 21 Mar. 2013.
- Martensson, Ida. “Setting the Scene: A Comparison of Charlotte Bronte’s *Jane Eyre* and its 2006 Film Adaptation.” Seminar paper. Lund University, 2010. Web. 20 Mar. 2013.
- McDougal, Stuart Y. *Made into Movies: From Literature to Film*. New York: Holt, Rinehart and Winston Inc., 1985. Print.
- Stam, Robert. “Beyond Fidelity: The Dialogics of Adaptation.” *Film and Literature*. Ed. Timothy Corrigan. New York: Routledge, 2012.74-88. Print.
- White, Susanna, dir. *Jane Eyre*. Perf. Ruth Wilson, Toby Stephens. BBC, 2007. DVD.
- Yeazell, Ruth Bernard. “More True Than Real: Jane Eyre’s ‘Mysterious Summons.’” *Nineteenth-Century Fiction* 29.2 (1974): 127-143. JSTOR. Web. 20 Mar. 2013.

KARA WALKER IN *SLAVERY! SLAVERY!*

By Vivienne S. Leaven



Vivienne Leaven is a junior at UNCP. She is a double major in art and computer science. Vivienne enjoys college and is excited and eager to learn whatever knowledge UNCP has to offer her.

Kara Walker is seen as one of the most visually and emotionally compelling artists of her time. Her most famous compositions are simple and beautiful, yet express the dark and painful essence of Southern US history. Her work is influenced by her innate struggle as an African American woman, as she combines complex and unique themes from romance novels and the antebellum South. In one of her most famous works of art, *Slavery! Slavery! Presenting a GRAND and LIFELIKE Panoramic Journey into Picturesque Southern Slavery or Life at 'Ol Virginny's Hole (sketches from Plantation Life)*¹ (Figures 1-2), three topics are seen: power, sexuality, and violence. These topics are vividly prevalent in her other compositions but are also the main characteristics of the legacy of the antebellum South.

In 2005, Kara Walker described her work and imagination in an interview at the San Francisco Museum of Modern Art. She stated that she has an “uneasy relationship” with her imagination.² Because she is an African American woman who creates racially stereotypical and vicious images that would normally be repulsed and repressed by African Americans, her creativity is ironic. Her irony as an artist may stem from the culture shock she experienced as child when she and father moved from California, regionally known as the West, to Georgia, regionally known as the South.³ Her works depict stereotypes of the 19th-century antebellum South and fragments stemmed from harlequin romance novels, movies, folklore, and black memorabilia. She would rather express her imagination through her artwork than keep all of her

thoughts and feelings inside of her head and become strange.

In 1997, Kara Walker created an 18 by 25 foot mural called *Slavery! Slavery!* that includes over 30 life-size silhouetted figures made out of cut black paper and adhered to a single white circular wall (Figure 1). When an audience literally walks into the mural, they are surrounded by large black figures composed in a continuous narrative having neither a beginning nor an end. Kara Walker wanted the viewers to become surrounded by the work, as if to suddenly become a part of the mural themselves. Although the figures are simplified depictions of individuals with no unique identification, Kara Walker uses common stereotypes such as caste and race to force the audience to identify the individuals themselves. *Slavery! Slavery!* is composed of various short narratives, many of which are explicit and disturbing. Many of these narratives evoke curiosity, uneasiness, and awe. For example, one narrative depicts an African American woman portrayed as a fountain with water or liquid spraying from her genitals, her mouth, and her armpits (Figure 1, the third figure from the left). This short narrative automatically catches the viewer's attention from the vertical dominance of the form and the curves and dips of the liquid which evoke alertness. After only a few seconds, the viewer is suddenly shocked at the realization of what the figure depicts. Even though it is a silhouette, the figure is very graphic. This figure evokes curiosity from the viewer because of our automatic desire to analyze works of art and find the symbolism behind them. Her race is assumed by the stereotype of hyper-sexuality or explicitness among black women and, because she is nude, it signifies dignity or respect African slaves were denied. One would ask why is this African American girl being portrayed as a fountain? Why is she nude and what is the meaning behind the water or liquid pouring from these specific parts of her body? Uneasiness and awe would then take over the viewer and distract from the intellectual complexity of the figure's symbolism.

Because of the sexual, violent, and dominant imagery of Kara Walker's numerous works stemming from the 19th-century antebellum South, and controversies that were sparked by them, one might ask if Kara Walker's perception of slavery is exaggerated or inaccurate. However, even though some subjectivity is unavoidable, I feel that Kara Walker's perception of slavery and the 19th-century South is actually quite precise to that time period.

As mentioned above, the three main topics of



Figure 1



Figure 2

Kara Walker's work are power, sexuality, and violence. Power is seen both in her work and in history by the inequality between blacks and whites in the antebellum South, and by the visual stereotypes of blacks and whites in her works. An example of this would be Kara Walker's *Slavery! Slavery!* In Figure 2, there are various characters, once again without any labels or identification, so the distribution of power is recognized by the audience. Because her work has the essence of slavery, we identify those who are slaves and those who are not using stereotypes we have learned. For example, the woman on the far right would most likely be a slave because she is barefooted, hunched over, working, her hair texture is not the texture of a European and her clothing doesn't seem to be well kept. The woman on the far right is mostly likely not a slave because she has shoes, walks without being hunched over, and her hair texture seems to be that of a European. Her clothing also looks well-kept and expensive. By giving us just a little information, we identify, label, and define power and dominance through our assumptions and stereotypes.

Kara Walker's depiction of the power and inequality is no exaggeration given societal norms in the 19th-century antebellum South. In 1862, laws called the Slave Codes were created for slaves living in Washington, D.C.⁴ Slaves were seen as property and not as human beings, so they did not have regular human rights. Slaves could be sold, won, and received as gifts. If a Caucasian man was to rape a slave, he would only be charged with trespassing on the owner's property if the event were ever recorded, which they rarely were. If a slave were to rape a Caucasian woman, he would be put to death. It was forbidden for slaves to read and write, and they could not assemble without a Caucasian overseer present. Since slaves were seen as property, marriages between them were basically void, thus making the marriage not legally binding, resulting in couples being separated from their loved ones if sold.⁵ The Slave Codes of 1862 are a blatant and highly evident example of power and whom it belonged to, which translates itself visually into the work of Kara Walker.

Sexuality can be observed in several works of Kara Walker. The artist created numerous pieces that depicted graphic sexuality, the most graphic being rape. For example, in one of her works, *Untitled* (Figure 3), the figure depicts perhaps a Caucasian male, performing sexual intercourse on what seems to be an African American slave girl which suggests not only rape but child molestation as well.

Sexuality, whether forced or consensual, was a component of slavery in the 19th-century antebellum South. An example of this would be a 1787 recorded

documentation of a rape victim in Maryland when two Caucasian men forced an enslaved African American man to rape a free African American woman.⁶ Rape, as a form of violence, was used as punishment, or to establish power. Consensual fornication took place as well, although slaves who consented to relations with their masters did so in a very unequal environment. Not all slaves hated their masters, and not all masters hated their slaves. However, many female slaves were used as concubines or child bearers. Even though this was not legally classified as rape, female slaves had no choice but to consent to this. Kara Walker's art may seem inaccurate and overly exaggerated to the viewer and to some critics, but the artist may have exaggerated her work on purpose. None of us were alive in the antebellum South. We hear about the terrors of slavery, and the disturbing sexual accounts we see in movies and in books, but we only see the facts, we do not feel the emotion. By creating these harsh and vulgar portraits, we automatically become emotionally engaged in the work. We become uncomfortable, disgusted, and fearful. In a way, we become the victims or the main characters of her works of art, thus proving emotionally that the sexual horrors seen in the works of Kara Walker are in fact accurate to the sexual horrors seen in the 19th-century South as we perceive them today.

The final theme, violence, is seen in both history and Kara Walker's compositions. Violence is not demonstrated as strongly as sexuality and dominance in her works, but was, historically, the coal that fueled slavery in the South. An example of the correspondence between her art and history would include Kara Walker's *Salvation* (Figure 4). This portrait depicts a female African American slave who seems to be drowning herself at the bottom of a body of water. Because the title is *Salvation*, one would suggest that she is escaping slavery by committing suicide.⁷ This same concept or perception can also be seen historically. During the transatlantic slave trade, many slaves would revolt, or escape enslavement, by committing suicide. Another example would be Kara Walker's *Darkeytown Rebellion* (Figure 5). This composition depicts several characters, perhaps African American slaves, marching confidently with some of them carrying flags. There were many rebellions throughout the 19th century, including perhaps one of the most famous, Nat Turner's Rebellion of 1831. Nat Turner was a slave who led one of the most violent slave rebellions in history. He and about 40 other slaves killed over 55 Caucasians, including women and children.⁸ Kara Walker's *Darkeytown Rebellion* may not show all of the graphic violence that can be seen in U.S history, but just reading the name of the work



Figure 3

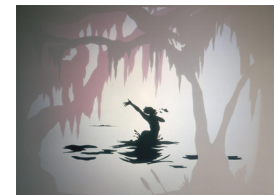


Figure 4


Vivienne does an impressive job exploring cultural values as she discusses the work of artist Kara Walker. She clearly demonstrates how the artist explores themes of power, sexuality and violence in the antebellum south and how these issues still resonate today. Vivienne's paper shows how works of art are more than aesthetic objects in the museum vacuum, but rather are dynamic expressions of cultural ideas.

~Dr. Richard Gay



Figure 5

automatically sets the tone, making the viewer or audience interpret the composition as violent. Here, Kara Walker again forces the viewer to perceive the individuality of the piece for themselves.

The three main themes in the famous works of Kara Walker are sexuality, power, and violence. Even though some may call her perception of the 19th-century antebellum South and works of art over exaggerated and inaccurate, I believe the opposite. The works and perceptions of Kara Walker are similar to the U.S. history of the 19th century. Power is congruent in both her work and history by the inequality among blacks and whites shown in *Slavery! Slavery!* and the Slave Codes of 1862. Sexuality is seen in both the work and slavery by the secluded or blatant relationships between blacks and/or whites and the numerous historical accounts of rape and intimate relationships between master and/or slaves. Violence, which is the backbone of slavery, is seen in both history and the work of art by the graphic and brutal images of *Slavery! Slavery!*, *Darkytown Rebellion*, *Salvation*, the numerous incidents of slave suicide, and Nat Turner's Rebellion of 1831. Kara Walker's numerous works of art should not be looked at as inaccurate, exaggerated, or offensive, but should be analyzed as her perception of that time. Besides, what is art besides one's visual expression of themselves? 

Notes

1. Later in the paper the title is shortened for the convenience of space.
2. "Kara Walker on her 'uneasy relationship' with her imagination." Dir. SFMOMA. Perf. Kara Walker. SFMOMA, 2005. Interview. *Youtube*. SFMOMA, 2005. Web. 20 Mar. 2013. <http://www.youtube.com/watch?v=o6t-S_DfXCI>.
3. "The Art of Kara Walker." Kara Walker. Walker Art Center, n.d. Web. 20 Mar. 2013. <<http://learn.walkerart.org/karawalker/Main/Biography>>.
4. Ushistory.org. "27b. Slave Life and Slave Codes." *Slave Life and Slave Codes*. Independence Hall Association in Philadelphia, 2008. Web. 20 Mar. 2013. <<http://www.ushistory.org/us/27b.asp>>
5. Ushistory.org. "27b. Slave Life and Slave Codes."
6. Foster, Thomas A. "The Sexual Abuse of Black Men Under American Slavery," *Journal of the History of Sexuality*. 20, (2011): 445.
7. Kaltenbacher, Kelly, Pooja Mehta, and Rebekah Nahas. "Antebellum Slavery/Interstate Slave Trade: Ship Life." *Antebellum Slavery/Interstate Slave Trade: Ship Life*. N.p., 1999. Web. 20 Mar. 2013. <http://cghs.dadeschools.net/slavery/antebellum_slavery/interstate_slave_trade/ship_life.htm>.
8. PBS Online. "Nat Turner's Rebellion." *Africans in America*. PBS, 1999. Web. 20 Mar. 2013. <<http://www.pbs.org/wgbh/aia/part3/3p1518.html>>.

Figures

(Figure 1). Walker, Kara. *Slavery! Slavery! Presenting a GRAND and LIFELIKE Panoramic Journey into Picturesque Southern Slavery or Life at 'Ol' Virginy's Hole (sketches from Plantation Life)* 1997. Exhibited at Whitney Museum of American Art, Fall 2007. N.p.: n.p., n.d. N. pag. *ARTstor*. Web. 17 Mar. 2013.

(Figure 2). Walker, Kara. *Slavery! Slavery! Presenting a GRAND and LIFELIKE Panoramic Journey into Picturesque Southern Slavery or "Life at 'Ol' Virginy's Hole (sketches from Plantation Life)"* 1997. Exhibited at Whitney Museum of American Art, Fall 2007. N.p.: n.p., n.d. N. pag. *ARTstor*. Web. 17 Mar. 2013.

(Figure 3). *Untitled*. 1996-97. Exhibited at Wooster Gardens, Fall 1997. N.p.: n.p., n.d. N. pag. *ARTstor*. Web. 17 Mar. 2013.

(Figure 4) Walker, Kara. *Salvation*. 2000. Baltimore Museum of Art Friends of Modern Art Fund, Baltimore, Maryland. N.p.: n.p., n.d. N. pag. *ArtStor*. Web. 17 Mar. 2013.

(Figure 5). Walker, Kara. *Darkytown Rebellion*. 2001.

Bibliography

- "The Art of Kara Walker." Kara Walker. Walker Art Center, n.d. Web. 20 Mar. 2013. <<http://learn.walkerart.org/karawalker/Main/Biography>>.
- Art21 Inc. "Kara Walker." PBS. PBS, 2003. Web. 20 Mar. 2013. <<http://www.pbs.org/art21/artists/kara-walker>>.
- Foster, Thomas A. "The Sexual Abuse of Black Men Under American Slavery." *Journal of the History of Sexuality*. 20, (2011): 445-64.
- Kaltenbacher, Kelly, Pooja Mehta, and Rebekah Nahas. "Antebellum Slavery/Interstate Slave Trade: Ship Life." *Antebellum Slavery/Interstate Slave Trade: Ship Life*. N.p., 1999. Web. 20 Mar. 2013. <http://cghs.dadeschools.net/slavery/antebellum_slavery/interstate_slave_trade/ship_life.htm>.
- "Kara Walker on her 'uneasy relationship' with her imagination." Dir. SFMOMA. Perf. Kara Walker. SFMOMA, 2005. Interview. *Youtube*. SFMOMA, 2005. Web. 20 Mar. 2013. <http://www.youtube.com/watch?v=o6t-S_DfXCI>.
- PBS Online. "Nat Turner's Rebellion." *Africans in America*. PBS, 1999. Web. 20 Mar. 2013. <<http://www.pbs.org/wgbh/aia/part3/3p1518.html>>.
- Ushistory.org. "27b. Slave Life and Slave Codes." *Slave Life and Slave Codes*. Independence Hall Association in Philadelphia, 2008. Web. 20 Mar. 2013. <<http://www.ushistory.org/us/27b.asp>>.

EFFECTS OF BACKGROUND MUSIC AND CHANGE IN LOUDNESS ON READING COMPREHENSION PERFORMANCE

By Corey Oxendine

Music is an important element in everyday life. Music plays a major role in improving behavioral conditions, and is often used in therapy and stress reduction techniques (Huang & Shih, 2011). Loud noise is something heard in everyday environments such as an office or at home with children (Huang & Shih, 2011). Researchers have conducted a variety of studies to examine the effects of music on cognitive performance (as reviewed by Dobbs, Furnham, & McClelland, 2011) with personality characteristics such as introverts and extroverts. In addition, studies have shown that disliked music has an effect on cognitive performance such as series recall (Perham & Sykora, 2012).

However, researchers have presented two rival hypotheses to examine cognitive performance while people are listening to music (Perham & Sykora, 2012). These contradicting hypotheses are the arousal hypothesis and the distraction hypothesis. According to Cassity, Henely, and Markley (2007), arousal can be identified as a heightened response and increased cognition to pleasant stimuli. Thus, the arousal hypothesis predicts that a pleasant stimuli increases spatial abilities by boosting the mood and arousal within individuals prior to cognition (Cassity et al., 2008). Researchers have identified this phenomenon as the Mozart Effect, which occurs when a certain composer's music is predicted to increase IQ and spatial abilities by increasing positive mood and arousal in people (Cassity et al., 2007). Perham and Skyora (2012) suggested that distraction is a disruption of two concurrent items such as sound and task completion, which are involved in dividing attention that create auditory discrimination. Researchers noted this finding as the irrelevant sound effect (concurrent auditory phenomenon). In particular, this auditory phenomenon happens when a stimulus is repeated in background music that disrupts cognition such as attention and concentration levels (Perham & Vizard, 2010). Past studies have explored how those contradicting hypotheses affect cognition.

Perham and Sykora (2012) tested these contradicting hypotheses by having participants complete a repeated measure design with three different sound conditions: quiet, disliked, and liked, for a series recall task. Participants recalled their assigned list of eight consonants in chronological order for 20 seconds (Perham & Sykora, 2012). In addition, the sound conditions appeared occasionally during some of the recall sessions. Using a rating questionnaire, the researchers measured the participants' performance. The questionnaire was designed to measure a pre-



dicted percentile of performance and perception of the disliked background music (distraction, likeability, offensiveness, etc.) in each sound condition (Perham & Sykora, 2012). They found that series recall performance was best in quiet conditions amongst all sound conditions. Most importantly, they compared conditions of disliked and liked sound (music) and revealed that performance was better in the disliked sound (music) condition. Thus, these results supported the distraction hypothesis that disruptions in series recall performance through concurrent musical properties (waveforms and acoustical elements) during a task, rather than the preference of music, boosts arousal and cognitive performance (Perham & Sykora, 2012).

In contrast, Cassity, Henley, and Markley (2007) tested the arousal hypothesis on cognitive performance. They predicted that the arousal hypothesis is the response to any liked stimuli such as music preference (Cassity et al., 2007). To test this hypothesis, the participants were randomly assigned to complete a gaming task that involved skating through a virtual course under two different sound conditions (Mozart or Red Hot Chili Peppers) in 6 minutes. Performances of the participants were measured by two variables: the number of tricks completed during the sound conditions and the type of music preference used for in-game performance. Their results revealed two important findings: (a) preference of music enhanced the performance of participants in game and not Mozart music (b) the gender of participants showed different levels of cognition in spatial

Corey Oxendine was born in Troy, North Carolina. His family is Native American and they are originally from Robeson County. He is currently a senior at UNCP majoring in psychology with a minor in American Indian studies. He enjoys poetry, playing games with friends, and has a strong interest in traveling around the world to see the most beautiful places on Earth.

EFFECTS OF BACKGROUND MUSIC AND CHANGE IN LOUDNESS

performance and ratings for music preference on the skateboarding task. Therefore, Cassity et al. showed findings that supported the arousal hypothesis because performance was better in the preferred condition than Mozart music (2007). This study presented internal validity that preferences for music during a concurrent task are potential factors that increase spatial abilities on cognitive task performance (Cassity et al., 2007).

Similarly, a study conducted by Huang and Shih (2011) suggested that background music affects the concentration and attention rates of workers in workplace environments. Two hypotheses under investigation were: (a) background music presents an affect on attention that requires sensation and identification of items, and (b) individual opinions about types of background music may potentially affect cognition (Huang & Shih, 2011). Four different groups (one group completed the test in a quiet condition) completed an attention test during three music conditions (pop music, light classical and traditional Chinese). Huang and Shih revealed that attention rates are best in the presence of no background music (2011). The overall performance and mood of the participants in the workplace environment was either dependent on their perception of the background music or the lack of contact with it (Huang & Shih). This study supported the arousal hypothesis because arousal and mood in workplace environments were determined by pleasant stimuli such as music preference.

Furthermore, Anderson and Fuller (2010) presented a study on how reading comprehension rates of adolescents were affected by background lyrical music. Two relevant hypotheses were investigated to determine potential effects: (a) reading comprehension scores generally differ in regards to environments with sound (lyrics) and without sound (b) in either environment the preference for study habits are determinable to the reading comprehension rates of participants (Anderson & Fuller, 2010). The assigned task required participants to do an equivalent reading comprehension test in each condition. Also, while participants completed the assigned task they were exposed to 35 minutes of music. Most importantly, the results supported the hypotheses presented in this study. They found that performance for reading comprehension scores were lower in the environment with sound (lyrics). In addition, a relationship was present between the participants' performance and study habits. Results showed that participants who did not prefer music while studying performed better than participants that preferred music while studying. Furthermore, these results supported the distraction hypothesis and theories about attention, because the study presents two contradiction stimuli, speech and text, that diverted attention and increased distractibility on cognition.

In addition, Dobbs, Furham, and McClelland (2011) presented a study that focused on two key elements that affect cognition: (a) examination of background sound on cognition (b) personality characteristics such as extroversion. Dobbs et al. predicted two essential hypotheses: (a) that in silent conditions performance is strongest on cognitive tasks and background music is the second highest for performance (b) that extraversion and distraction produce a strong interaction, but no effects are present in silent conditions (2011). The hypotheses were tested using a 3x3 design consisting of three cognitive tests (perceptual, general, and verbal reasoning) and three different conditions (noise, music, and silence) at constant room volume. The results were measured on an IQ scale to determine the affects of background music and noise on cognitive performance with extraverts. The compared results of this study revealed that silence had no effect on the participants' cognitive performance (Dobbs et al., 2011). These results showed that by comparing the music and silence condition to the noise condition, performance in music was second highest amongst all three conditions (Dobbs et al., 2011). These findings support the distraction hypothesis by showing that individual factors (extraversion and sound) and cognition can compete with attention tasks and create distractions.

From the previous studies, it is clear that background music has an effect on cognitive performance. In particular, these studies focused more on music manipulation on a given task with concurrency of music. In contrast, the relevant background information for loudness is limited. Past studies ignored the loudness effect by keeping music volume constant in experimental conditions during cognitive task performance. For instance, several studies used a volume of 60-75 decibels (dB) that is similar to the sound of a washing machine or alarm clock (Anderson & Fuller, 2010; Perham & Sykora, 2012; Perham & Vizard, 2011). In addition to loudness, literature showed that lyrical music compared to instrumental music creates a more potential distraction by facilitating a discriminatory attitude towards a certain stimuli (Anderson & Fuller, 2010). Past studies have investigated the effects of sound intensity on cognitive performance and spatial abilities (Dobbs et al., 2011). Those results showed that sound intensity of 50-75 dB implies that cognition is in a consistent state of processing that produces no effect on a given task (Dobbs et al., 2011). Another important point that past research re-

Corey is an extremely hard-working student who strives for academic excellence. In this class, students complete independent research projects and write a complete APA style research report based on their research results and relevant literature. Therefore the end product is a scientific manuscript ready for submission to a scholarly journal. Corey's attention to detail and diligence is reflected in this research paper, which exactly follows the APA style in terms of organization, writing and format; therefore it could serve as a sample APA paper for other students who will take this class.

~Dr. Freya Liu

vealed is that high volume in background music indirectly influences work efficiency, concentration, and attention rates (Huang & Shih, 2011). In contrast, studies have shown that disruption is not a result of sound intensity, but rather participants with individual preference for music and study habits which make sound difficult to measure and use in studies (Perham & Vizard, 2011).

Does background music and loudness have an effect on performance? By expanding from previous research we proposed to manipulate the loudness effect by presenting the participants with different levels of volume during a study. Thus, we attempted to find if changes in volume and non-lyrical background music are potential factors for affecting reading comprehension rates. To solve this issue, we utilized a 2x2 factorial design. In addition, we selected instrumental music for this study. It contained two levels: popular instrumental music (Maroon 5) and non-popular instrumental music (Rebecca Black). The change in loudness variable also consisted of two levels: high volume (washing machine 80 dB) to low volume (refrigerator humming 40 dB) and low to high volume. Participants were measured on two variables: a reading comprehension score and completion time. We predicted that the loudness of background music would have a negative influence on reading comprehension scores and completion time, that low-high volume and background music type would have a positive influence on reading comprehension scores and completion time, and the combination of loudness and music preference would significantly decrease performance on reading comprehension scores and completion time.

Method: Participants

Data for this study was collected from 40 college students at the University of North Carolina at Pembroke. We recruited participants for this study through flyers, Facebook, and general questioning at the Jones Fitness Center on campus. Therefore, a convenient sample was obtained. Gender consisted of 17 males (42.5%) and 23 females (57.5%) between 18 and 26 years of age ($M = 20.02$ and $SD = 1.89$). Of all participants, 60 % were African American, 7.5% were American Indian, 17.5% were Caucasian, and 15% were of mixed ethnicity. There were 60% first generation college students (first in their family to attend college). The participants received compensation at the end of the study.

All 40 participants were randomly assigned amongst four conditions resulting in 9 to 11 participants per group. The University of North Carolina at Pembroke Institutional Review Board gave approval for this research. All participants reviewed and signed

a consent form before the study began. All participants were treated in accordance with the American Psychological Association's ethical code (American Psychological Association, 2002).

Materials

One comprehension test and two questionnaires were used. Participants were assessed with a modified reading comprehension worksheet entitled "Escaping the Endless Adolescence" with five additional questions (Allen & Allen, 2009). The worksheet consisted of a short narrative with 10 multiple choice questions (4 to 5 items per choice selection). Scores and completion time questions served as the dependent variable to examine how well participants implied and identified main statements pertaining to the narrative. Pen and paper questionnaires were used. The demographic sheet consisted of 6 closed-ended questions that identified sex, ethnicity, family history about college, age, major, and favorite subject. A post-survey questionnaire was used to measure characteristics of the participants on a variety of topics (mood, music preference, study habits, performance, etc). The questionnaire contained 15 questions (6 open ended and 9 closed ended). The closed-ended selection simply asked participants to mark yes or no. For instance, participants rated their mood, music preference (music pertaining to the study) and study habits such as reading with either yes or no. The questions asked participants to rate performance on a Likert-type scale ranging from 5=outstanding to 1=poor for the levels of either distraction or concentration when they were completing the reading comprehension sheet.

The study took place in the Jones Fitness Center at the University of North Carolina at Pembroke. The classroom was adequate to hold approximately 30 to 40 students. A sound-level meter was used to measure the sound intensity of the background music prior to experimentation. The sound was played at a low-volume output of 10 (42 dB) and high-volume output of 90 (80 dB) through Windows Media Player from overhead speakers.

The music chosen for this study was predominantly instrumental. Preferred and non-preferred music was chosen from *Billboard's Top 100* artists of 2012. The number one artist from the list was pop-rock group Maroon 5. The preferred music contained five songs: "She Will Be Loved," "Moves Like Jagger," "Misery," "One More Night," and "Payphone." The non-preferred music consisted of songs by pop singer Rebecca Black that included "Friday" and "My Moment." The music was downloaded from YouTube and converted onto a CD. A cellphone timer was used to keep track of participants' time while completing the reading comprehension worksheet.

EFFECTS OF BACKGROUND MUSIC AND CHANGE IN LOUDNESS

Design

A 2x2 between factorial subject design was employed that consisted of two independent variables: background music with two levels: (a) preferred music by Maroon 5 (b) non-preferred music by Rebecca Black. The second independent variable was change in loudness with two levels: (a) high volume at 80 dB (b) low volume at 42 dB. The participants were measured by two variables: completion time and reading comprehension score. Completion time was measured by length of time participants took to complete the reading comprehension worksheet. The score of participants was measured by the quantity of correct answers marked on the assignment sheet. Scores were measured with a ten-point scale with a lowest score of 0 (0 out of 10 correct) and the highest score of 100 (10 out of 10 correct).

Procedure

Participants that joined through Facebook were emailed a designated time, location, and assigned condition for the study. Researcher A presented participants with a greeting form to begin the experiment. Researcher A informed the participants that this study was used to measure college students' performance on reading comprehension assignments. Participants were then asked to turn off all electronic devices. During the greeting process, researcher B passed out two sheets to the participants: two consent forms and a demographic sheet. Participants filled out these sheets and then were asked to turn them over. Participants were asked to keep one consent form and turn in the other sheet to researcher A. Next, the participants received the reading comprehension sheet and were instructed to complete it.

The music and timer started when participants began to read the assigned task. The participants were exposed to 15 to 20 minutes of background music while they completed the assigned task. We tested four groups: (a) preferred music by Maroon 5, high to low volume (b) non-preferred by Rebecca Black, high to low volume (c) non-preferred music, low to high (d) preferred music, low to high. Researcher C changed the intensity of music that was alternated at the six-minute mark on Windows Media Player (volume 10 to 90 low to high and volume 90 to 10 high to low).

Researcher B, who was administrating time at the front of the classroom, received the completed demographic and comprehension sheet from participants. Participants were given a time at the top of their sheet once turned in. After turning in the required sheets, Researcher B assessed participants with the post-survey questionnaire. Shortly after participants completed the questionnaire, Researcher A

handed them a debriefing sheet and cupcake while they exited the classroom. Once all the conditions were completed, the comprehension task sheets were graded on a ten-point scale with an answer key.

Results

Data was entered and analyzed in SPSS. Table 1 shows the group mean, SD of score and completion time in minutes, and sample size per group. A 2x2 factorial univariate ANOVA was used for data analysis for the dependent variable score. The results did not show a significant main effect of the music variable on reading comprehension score, $F(1, 36) = .37, p = .55, \eta^2 = 0.10$. Participants who listened to preferred music ($M = 6.20, SD = 2.04$) showed no difference on reading comprehension score than participants who listened to non-preferred music ($M = 5.84, SD = 1.97$). The result did not show a significant main effect of the change in loudness variable on reading comprehension score, $F(1, 36) = .001, p = .99, \eta^2 = .001$. Therefore, participants that listened to high to low volume ($M = 6.09, SD = 1.84$) showed no difference on reading comprehension score than participants who listened to low to high volume ($M = 5.84, SD = 2.17$). Results did not show a significant interaction effect of music and change in loudness on reading comprehension scores, $F(1, 36) = 3.36, p = .08, \eta^2 = .09$ (Figure 1).

The same data analysis was used for the dependent variable of completion time. The results did not show a significant main effect of the music variable on completion time, $F(1, 36) = 3.21, p = .08, \eta^2 = .82$. Thus people who listened to preferred music ($M = 6.95, SD = 1.74$) showed no difference on completion time than participants who listened to non-preferred music ($M = 8.14, SD = 2.13$). The results did not show significant effect of the variable change in loudness for completion time, $F(1, 36) = .169, p = .68, \eta^2 = .005$. Therefore, participants that listened to high to low volume ($M = 7.79, SD = 1.28$) showed no difference for completion time than participants who listened to low to high volume ($M = 7.59, SD = 2.70$). The results did not show a significant interaction effect for the independent variables of music and change in loudness on completion time $F(1, 36) = 1.24, p = .27, \eta^2 = .033$ (Figure 2).

Discussion

Our first hypothesis that stated the loudness of background music would have a negative effect on reading comprehension scores and completion time was not supported. The hypothesis that stated low to high volume and background music type would have a positive effect on reading comprehension scores and completion time was also not supported. Fur-

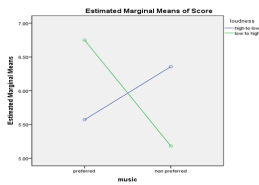


Figure 1. The figure shows no significant interaction effect of the independent variables music and change in loudness on reading comprehension score.

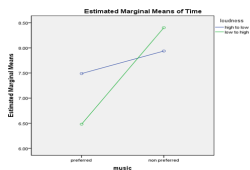


Figure 2. The figure shows no significant interaction effect of the independent variables music and change in loudness on completion time.

thermore, our hypothesis that stated an interaction of loudness and background music would decrease performance on reading comprehension scores and completion time was also not supported. This study was notable because the focus was on volume manipulation, which was ignored in past research. It did not solve this problem because the study presented many limitations.

Consequently, this affects our ability to generalize our results to the target population. The power of our study was too low to detect any significant difference that existed between groups. However, there was a difference in scores and completion time between non-preferred and preferred music conditions. Results from our study suggest that in the preferred music conditions, participants scored higher with lower completion times than participants who listened to non-preferred music while completing the reading comprehension test.

The results are consistent with findings from studies that presented similar task manipulation. For instance, in our study a reading comprehension test was administered to participants that asked them to find interpretative and detailed answers. Similarly, past studies that focused on computer occupations, virtual gaming, perceptual and general reasoning tests, and equivalent reading comprehension task also found similar results in preferred music conditions (Cassity et al., 2007; Dobb et al., 2007; Furnham & Allas, 1999; Lesiuk, 2010). Taken together, perhaps these findings suggest a similarity in the type of cognitive processes (e.g. long-term memory) used for the assigned tasks. Therefore, results suggest that preferred music may be better for task performance that requires a method of in-depth thinking.

In contrast, the results are inconsistent with findings presented by Perham and Sykora (2012) and Huang and Shih (2011) that tested serration and series recall in the presence of background music. However, it is notable that these studies did not aim at cognitive processes that require in-depth thinking. Our data did not support their findings because we have chosen a different task. Our data showed that in non-preferred music condition scores were lower with higher completion time. Thus it shows that a different type of cognitive processing (e.g. short-term memory) was required to complete the assigned tasks in the preferred music condition. In addition, our study was statistically similar to the Perham and Huang studies that found no difference in performance between music conditions. This similarity would be explained by the presence of low power detected in the study.

Furthermore, the results of this study are inconsistent with findings that differ in the relation-

ship between exposure of music and completion time. Our study exposed participants to 15 to 25 minutes of background music with a short reading comprehension task. Conversely, past studies that exposed participants to 35 minutes of music with a longer reading comprehension task found scores to be lower in preferred music conditions (Anderson & Fuller, 2010). Therefore, more content coverage with longer completion time can increase the chances of distractibility on task performance. Thus high exposures of music can mediate the Irrelevant Sound Effect (concurrent auditory distraction phenomenon) as described in the Perham study. In addition, their findings possibly suggest that confounding variables such as fatigue and task difficulty can determine a difference in group performance.

Studies that utilized a closer time frame (12-13 minutes) did yield similar results to our study. Furnham and Bradley (1997) found that extroverts scored higher than introverts on reading comprehension in a ten-minute time frame. The Furnham study is similar to our study because preferred music enhanced performance. In contrast, Furnham did detect a main effect for background sound but not on personality factors. Perhaps preexisting study habits (studying with music) of participants explain the performance in both studies. However, it is also clear that personality is not an important factor for determining results. Instead the results suggest that shorter time exposure for completion time may work best for different cognitive processes. For instance, Perham and Skyora (2012) used a 20 second time frame for completion time in series recall. The results are inconsistent with the findings of our study. Perhaps when participants are exposed to pleasant stimuli in series recall, the arousal levels are inhibited or slowed for long-term memory. This possibly could explain why series recall worked best for disliked music conditions with a lower completion time of 20-second time frame as compared to a task that requires a 15-minute time frame. Furthermore, possibly the unpleasant stimuli could have quicker reaction times in short term memory processing for tasks that use memorization.

Similarly, findings from our study are inconsistent with types of music used in past studies. For instance, Anderson and Fuller (2012) used lyrical music during reading comprehension. We implemented instrumental music in the current study. Results from our study showed that scores are higher in the popular instrumental condition. In contrast, the Anderson study results showed that scores were lower in the popular lyrical condition. The findings suggest that environments with sound (lyrics) and without sound presents a distraction to the participant by

EFFECTS OF BACKGROUND MUSIC AND CHANGE IN LOUDNESS

creating discrimination between attention of speech and task engagement (Anderson & Fuller, 2012). However, findings are also consistent with studies that used high-tempo music. Furnham & Bradley (1997) used high-tempo music (upbeat pop songs, fast paced, etc.) to examine introverts and extroverts. In addition, Cassity et al. (2007) used a similar type of music with virtual task such as skateboarding for spatial abilities. They found that performance was best in preferred music conditions. The findings possibly suggest that these types of sounds enhance similar cognitive processing and not the task assessment.


A theoretical significance of this study is related to the arousal and mood literature that suggests that increased performance is a result of the arousal hypothesis as discussed in the introduction. Past researches have already stated that a pleasant stimulus can enhance performance by elevating a person's arousal and mood level for cognition on a given task (Cassity et al., 2007). Our data supports this hypothesis because in the preferred music condition the participants had higher scores with lower completion times than the participants who listened to non-preferred music. In contrast, participants who listened to non-preferred music scored lower on reading comprehension scores with higher completion time.

Two limitations of the study are various environmental factors (classroom location and music volume) and individual factors (apathy, not comprehending instructions well, etc.) that were assumed to have a significant influence on the reading comprehension scores. The area for experimentation (classroom) was located in front of a gymnasium. Interference came from a variety of sources (door slamming, yelling, and lectures heard through the wall, etc) during the study sessions. Furthermore, these interferences made the selected level of 40 dB hard to measure. Experimentation should be done in a classroom location with fewer occurrences of physical activity (e.g. main buildings on campus). In addition, the volume should have been kept constant at 45 dB. Most importantly, the participants should have been told to take the reading comprehension task seriously in the greeting process to address the issue of apathy. In addition, pre-surveys should have been administered to identify preexisting mood and behaviors prior to experimentation.

Another limitation of the study was that unequal numbers of participants were used in the experimental groups. Recruitment of more participants would have been better for power and perhaps approaching significance in our results. Two more limitations of the study are the complexity of music and the reading comprehension task. For the complexity

of music, the tempo of music selected for this study was fast and upbeat and it contained various pitch frequencies. Thus it was hard to precisely administer the selected 40 dB level of loudness. In addition, one song contained a hook (Rebecca Black's "My Moment") that presented a potential confound for internal validity. Solving this problem requires the selection of a slower-paced tempo (opera, slow songs, etc.) with instrumental music. As for the reading comprehension task, it should have been examined more thoroughly to present an equal level of difficulty to the participants' academic environment (college material, high school material, etc.).

Since the study presented many limitations, future researchers should take into consideration several individual factors. The study was designed to examine the effects of background music and loudness on reading comprehension. However, it lacked the examination of personality variables such as introversion and extroversion, it placed no emphasis on gender performance, and prior study habits were not thoroughly investigated. Future studies may understand such issues better by utilizing more time-exposure designs to examine the differences in cognitive processing when listening to background sounds. In addition researchers should put more emphasis on the loudness effect of background music for detecting distraction. Perhaps researchers should examine longer task performance with series recall by having participants memorize sentence structures while listening to preferred instrumental music. After listening to instrumental background music, researchers should have participants write an analytical essay on a given passage. This may help improve the cognitive process in writing by memorizing grammatical errors. Furthermore, research on arousal should be done by using a wider range of relaxation music and techniques that increase cognitive performance.

In conclusion, the topic under investigation requires future research to address the issue of volume manipulation. Although results did not show a significant main effect and interaction effect, the study is notable because our data supports the arousal hypothesis that suggests preferred music increases performance on reading comprehension. However, the results of our study are not significant due to many limitations and low power. Furthermore, many questions remained unanswered. It does raise the question for how instrumental music that consists of high tempo can serve as a stimulus for influencing cognition on a given task. This is important to the study for addressing college students' functionality in such environments that contain a variety of distraction factors. 

References

- Allen, J. P., & Allen, C. W. (2009). *Escaping the endless adolescence: How we can help our teenagers grow up before they grow old*. New York: Ballantine Books.
- American Psychological Association. (2002). *Publication manual of the American psychological association*. Washington DC: American Psychological Association.
- Anderson, S. A., & Fuller, G. B. (2010). Effect of music on reading comprehension of junior high school. *School Psychology Quarterly*, 25, 178-187.
- Cassity, D. H., Henley, T. B., & Markley, R. P. (2007). The Mozart Effect: musical phenomenon or musical preference? A more ecological valid construction. *Journal of Instructional Psychology*, 34, 13-17.
- Dobbs, S., Furnham, A., & McClelland, A. (2011). The effects of background music and noises on cognitive test performance of introverts and extroverts. *Applied Cognitive Psychology*, 25, 307-313.
- Furnham, A., & Allas, K. (1999). The influence of musical distraction of varying complexity on the cognitive performance of extroverts and introverts. *European Journal of Personality*, 13, 27-38.
- Furnham, A., & Bradley, A. (1997). Music while you work: the differential distraction of background music on the cognitive test performance of introverts and extroverts. *Applied Cognitive Psychology*, 11, 445-455.
- Huang, R., & Shih, Y. (2011). Effects of background music on concentration of workers. *Journal of Prevention Assessment and Rehabilitation*, 38, 383-387.
- Lesiuk, T. (2010). The effect of preferred music on mood and performance in a high-cognitive demand occupation. *Journal of Music Therapy*, 47, 137-154.
- Perham, N., & Sykora, P. (2012). Disliked music can be better for performance than like music. *Applied Cognitive Psychology*, 26, 550-555.
- Perham, N., & Vizard, J. (2010). Can preference for background music mediate the irrelevant sound effect? *Applied Cognitive Psychology*, 25, 625-631.

Table 1

Mean Reading Comprehension Score and Completion Time in Minutes, SD and Sample Size per Group

Groups	Preferred Music	Preferred Music	Non-Preferred	Non-Preferred
	High to low	Low to high	High to low	Low to High
Score M±SD	5.57±2.14	6.75±1.91	6.36±1.69	5.18±2.18
Completion Time M±SD	7.49±1.45	6.48±1.96	7.94±1.24	8.40±2.96
N	7	8	14	11

UNIVERSITY of NORTH CAROLINA
P E M B R O K E

Funding for this issue of ReVisions was provided by the Office of Academic Affairs and the Department of English, Theatre, and Foreign Languages at The University of North Carolina at Pembroke.

This publication is available in alternative formats upon request. Please contact Disability Support Services, DF Lowry Building, 521-6695.