Message from the Program Committee:

Welcome to the eighth annual meeting of the SC Upstate Research Symposium! The SC Upstate Research Symposium Series offers faculty and students the opportunity to showcase their current research, scholarly, and creative activities while interacting with other researchers and community leaders throughout the Upstate. Participants in this year’s symposium include faculty and students from USC Upstate, Converse College, Wofford College, Spartanburg Methodist College, Spartanburg Community College, Southern Wesleyan University, Lander University, Sherman College, North Greenville University, Clemson University, Spartanburg Day School, Greenville Technical College, and Francis Marion University.

We would like to sincerely thank our primary sponsors: Milliken & Company and Dr. Lilly M. Lancaster, the William S. Moore Palmetto Professor in Quality Studies in the George Dean Johnson, Jr. College of Business and Economics. Such support from prominent regional businesses and individuals is greatly appreciated and essential for the advancement of academic research in the Upstate. Our academic sponsors are USC Upstate, Wofford College, Greenville Technical College, Francis Marion University, Lander University, and Spartanburg Methodist College.

This year’s event will include a keynote speech by Dr. Thomas Moore, Chancellor of USC Upstate.

If you have any questions or comments about this Symposium Series, or would like to receive an additional printed copy of the most recent Symposium Proceedings, please contact Dr. Sebastian van Delden, (864) 503-5292, svandelden@uscupstate.edu. More information can also be found on the Symposium website: http://www.uscupstate.edu/Symposium.

Once again, welcome!
The Program Committee

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Dr. Lilly M. Lancaster, the William S. Moore Palmetto Professor in Quality Studies in the George Dean Johnson, Jr. College of Business and Economics is also sponsoring the Eighth meeting of the Symposium. The George Dean Johnson, Jr. College of Business and Economics offers programs leading to the degree of Bachelor of Science in Business Administration. In addition to the Spartanburg campus, courses are also offered at the University Center Greenville.

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Dr. Thomas Moore, Chancellor, USC Upstate. Dr. Tom Moore began serving as Chancellor of the University of South Carolina Upstate on August 1, 2011. Moore’s appointment is the high point of a 30-year career in higher education in which he has worked closely with various constituencies, including students, faculty, administrators, alumni and business, community and political leaders.

Prior to coming to USC Upstate, Moore served as vice president for academic affairs and dean of the faculty at Winthrop University from 2003 until 2011. He joined Winthrop in 1986 as chair of the department of chemistry and physics, a post he held until 1994. In 1991, he became director of the Master of the Liberal Arts Program. Moore served as dean of the College of Arts and Sciences from 2001 until 2003 and in the top position of faculty governance, representing faculty before Winthrop’s Board of Trustees, from 1996 until 2000. Moore is active in higher education initiatives nationally and has served on committees of the National Collegiate Athletic Association, the Southern Association of Colleges and Schools and the Association of Graduate Liberal Studies Programs. He earned his bachelor’s degree in chemistry from Huntingdon College in Montgomery, Ala., and his doctorate in inorganic chemistry from USC.
# PROGRAM SCHEDULE

**Eighth Annual SC Upstate Research Symposium**

April 20, 2012 – hosted by Milliken & Company

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Promotion of Cell Growth by Graphene Oxides

Pengju G. Luo1,2, Baojiang Wang3, and Ya-Ping Sun1
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Abstract — Graphene oxides (GOs) as coating on solid-state substrates, including the composite coating with carbon nanotubes, were found to be significantly enhancing mammalian cell growth, despite the fact that GOs in a more concentrated aqueous suspension were somewhat toxic to the same cell lines. The promotional effect on cell growth was much less significant for reduced GOs (rGOs) in the same coating configuration.

Keywords — Graphene Oxides, Cell, Growth Promotion

1. Introduction

Graphene and related carbon nanomaterials have captured much recent attention for their unique properties and a variety of application potentials,1–3 including those important to biology and medicine.4,5 Among presently widely pursued bioapplications of graphene materials are those in drug delivery, molecular imaging, tissue engineering, implantable materials, and antibacterial functions.5–8 In an effort to produce bulk quantities of graphene, a wet chemical exfoliation route has been developed, in which graphite is exhaustively oxidized under harsh conditions9,10 and then exfoliated to yield graphene oxides (GOs, commonly referring to those well-exfoliated to primarily single-layer sheets), followed by their reduction to recover some of the graphene structures and properties (rGOs).10–13 GOs are readily dispersed in aqueous medium to form a solution-like dispersion. As a result of the excellent aqueous compatibility, there has been growing interest in potential bioapplications of GOs.12,13 Studies on cellular interactions of GOs have been centered on their cytotoxicity evaluations. For example, Wang, et al. looked at effects of GOs on human fibroblast cells for an evaluation of biocompatibility.14 According to their results, the aqueous GOs at a lower dose (less than 20 g/mL) showed no significant toxicity to the cells, but at a higher dose (more than 50 g/mL) exhibited obvious toxic damages, such as decreased cell adhesion, increased apoptosis, and so on.14 Similar dose-dependent toxicity of GOs was observed in vivo, without meaningful toxicity in mice for the amount of GOs up to 0.25 mg, but chronic toxicity at a high dosage of 0.4 mg, such as the formation of lung granuloma and the death of almost half of the mice.14 Chang, et al. examined effects of GOs on the morphology, viability, mortality and membrane integrity of A549 cells.15 Their results also suggested that while GOs were generally non-toxic to the cells, at high concentrations GOs could induce dose-dependent oxidative stress and result in some cell viability loss. Films of GOs were similarly found to be biocompatible at the cellular level,16 so were those of rGOs.17 Beyond cytotoxicity, however, the cellular interactions of GOs apparently have other consequences.13 Here we report a more systematic study demonstrating that mammalian cell growth could be enhanced significantly on the GO surface (GO-coated glass slides or wells), suggesting potentially exciting applications of GOs in cell culture in general. Results for a comparison of cell growth on other surfaces based on carbon nanomaterials, including rGOs, carbon nanotubes, and composites of GOs with carbon nanotubes, are presented and discussed.

2. Results and Discussion

Graphene oxides (GOs) of mostly single-layer sheets were prepared from a commercially supplied sample of expanded graphite by using the Hummers method with minor modification,9 coupled with the subsequent exfoliation procedure already established in the literature.18 The as-prepared aqueous GOs were highly acidic, due to the oxidation of carbons at graphene sheet edges and defects into carboxylic acids, so they were converted to the salt form in base treatment to make the resulting aqueous dispersion more stable and also more compatible with the subsequent cellular experiments.19 Raman spectroscopy results suggested no meaningful difference between the acid and salt forms of GOs, with the G-band and D-band features for both samples similar to those already reported in the literature.20 The X-ray
diffraction results of the GOs exhibited no graphitic peaks, as expected. GOs produced from the Hummers method are known to be inhomogeneous, with sheets of different sizes and various numbers of oxygenated sites on the sheets, for which centrifuging field is generally in favor of larger sheets. Thus, the aqueous dispersion of GOs was centrifuged at 10,000 rpm (Eppendorf 5417R) to retain the sediment, which was then resuspended to obtain the targeted dispersion for the subsequent experiments.

Glass slides (2.5 cm x 2.5 cm) were coated with the GOs by air-spraying the aqueous dispersion, followed by evaporating the water and drying. The GO-coated slides and those without coating as control were sterilized with UV irradiation for 1 h and then placed into a cell culture dish for the cell adhesion study.

Colorectal adenocarcinoma (HT-29) cells in the number of 1.5 x 10^6 were seeded, followed by incubation in a humidified atmosphere at 37°C. The cell enlargement, spreading, morphology, and growth at various time intervals were closely monitored under optical microscope, and the representative images taken after incubation for up to 24 h are compared in Figure 1 (not shown due to space limitation). The difference in cell growth on the GO-coated slide from the control became noticeable after incubation for a few hours, more obviously after 6 h and longer, with cells on the former enlarged and spread nicely, characteristic of more effective cell attachment and growth (Figure 1, not shown due to space limitation). The results suggest that the GO film (as coating on glass slide) is more than just biocompatible without any significant cytotoxic effects, and it actually promotes mammalian cell attachment and proliferation. More quantitatively, the HT-29 cells after incubation for 8 h were detached with trypsin-EDTA, and the number was counted by using a hemocytometer under microscope. It was apparent that in comparison with the control the cell number on the GO-coated slide was substantially higher (by up to 200%, Figure 2). The same experiments were extended to another cell line, human breast cancer MCF-7 cells. There was a similar pattern in the cell attachment and growth to that described above for HT-29 cells, with the MCF-7 cells on GO-coated slides after incubation for a few hours well attached and started to enlarge, spread, and multiply, while those on the control slides exhibited little or no growth. Quantitatively, the cell counting revealed a similarly substantial increase (185%) for cells on the GO-coated slide after incubation for 8 h (Figure 2).

The promotional effect on cell growth was apparently manifested on the surface of GO composites with single-walled carbon nanotubes (SWNTs) as well. As reported previously, aqueous GOs are excellent in dispersing SWNTs for the fabrication of nanocomposite films or coatings. In this study, SWNTs were suspended in water with the assistance of GOs to yield a stable dispersion of GOs-SWNTs (8/1, wt/wt) for the spray-coating of glass slides. Slides coated with only SWNTs were also tested for comparison. The former was obviously more effective than the later in promoting the HT-29 cell growth, 260% vs 150% in reference to the control after incubation for 8 h (Figure 2), again reflecting the promotional effect of GOs.

The GOs coated on glass slides were reduced in thermal annealing for their conversion to rGOs. In the literatures there were qualitative data suggesting that rGOs could enhance cell adhesion and spreading. As compared in Figure 2, however, the rGOs on glass slides were apparently not as effective as GOs in promoting the mammalian cell growth (especially considering the fact that the simple thermal annealing could not convert GOs to rGOs completely). The results presented above all suggest that solid-state GO films coated on glass slides are clearly more favorable to cell growth in a culture dish. Quantitatively in a different experimental configuration, the promotional effect was confirmed in the evaluation of cell growth in a 96-well plate (with each well seeded with the same number of cells). In the experiment, a 96-well plate (pureGrade from Brand Tech Scientific) was spotted with the selected carbon nanomaterial (10 g GOs, SWNTs, or GOs-SWNTs) in suspension by using a micropipette, followed by drying in air to result in a film coating in each well. The 96-well
plate was then treated by UV irradiation for 1 h for sterilization. HT-29 cells (1 x 10^4 per well) were seeded into the sterilized plate containing wells coated with different carbon nanomaterials and the control (no coating). Upon incubation for 24 h, cells in each well were detached and then counted by using a hemocytometer under optical microscope. As shown in Figure 3, the cell growth was favored in wells coated with SWNTs, but obviously much more so in those coated with GO-SWNTs (similarly with GOs), reaching nearly 30,000 cells/well. The same experiment with the growth of MCF-7 cells yielded similar results, again suggesting that the promotional effect of the GO surface was independent of the cell lines.

![Figure 3](image)

**Figure 3.** HT-29 cell growing on 96-well plate coated with various carbon nanomaterials. Each well was seeded with 1 x 10^4 cells. (A, C, D) Micrographs showing cell morphology after 24 hours of incubation on control, SWNTs, and GO-SWNTs; (B) Quantitative cell counting after 24 hours of incubation.

The results presented above from the cell adhesion assay and quantitative 96-well plate cell counting assay clearly indicate that the surface based on GOs is considerably more favorable to cell growth. However, the same promotional effect apparently does not apply to suspended GOs. In fact, there were literature reports on toxic effect of hydroxyl, carboxyl, etc.) in the GO structure, as those groups are mostly eliminated in rGOs (with significantly less promotional effect). Further investigations are justified for both fundamental and practical aspects of this interesting property of GOs.

### References

The Effects of Lead on the Metabolites of *Eisenia fetida*

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Abstract — The effect of lead on the metabolites of the earthworm, *Eisenia fetida* was examined using one- and two-dimensional Nuclear Magnetic Resonance (NMR) spectroscopy and principal component analysis (PCA). Results of this study showed that the metabolic profiles of earthworms exposed to 6 µg/mL lead nitrate did not differ significantly from the unexposed (control) group while the metabolic profiles of the earthworms exposed to 12 µg/mL changed significantly. The NMR spectra of the latter suggested an increase in the following metabolites: Histamine, Glycine, Alanine, Valine, Leucine, Isoleucine, Formate, Fumarate, Histidine, Hxanthine, Inosine, and Maltose. Further studies using higher dose of the contaminant and quantification of the metabolites using Gas Chromatography and Mass Spectroscopy are suggested to determine the validity of these initial results. Identification and quantification of major metabolites can provide useful biomarkers in detection of sublethal levels of lead that can elicit toxicity or stress.

Keywords — metabolonomics, *Eisenia fetida*, earthworm, NMR, lead

1. Introduction

The heavy metal lead, a contaminant that often remains in the soil after industrial use, is hazardous to humans even in low concentrations. Lead poisoning most often affects harm in the nervous, renal, reproductive, and respiratory systems [1]. The major focus in humans has been the occupational exposure to high-level doses of lead, but there is increasing evidence that prolonged exposure to low-level doses of lead also causes these pathologic conditions [2]. Most soil chemical tests will not detect very low concentrations of lead in the soil. Therefore, there is a need for a direct method to detect and to understand the toxic effect of lead on the biochemistry of the organism exposed.

The metabolite profiles of an organism are the result of metabolic processes which are influenced by gene regulation and may be altered when exposed to a contaminant. Monitoring changes in metabolites of earthworms can help identify how the particular contaminant disturbs the organism’s biochemistry, which is an indicator of long-term effects due to the particular contaminant. Environmental metabolomics analyzes changes in the metabolic profile of an organism that has been exposed to a particular contaminant [3]. NMR spectroscopy has been frequently used in the identification and quantification of these metabolites. Earthworms have been used as test organisms in these studies because they are in direct contact with the soil and because they ingest the soil along with its contaminants. The species *Eisenia fetida* is frequently used because it is readily available, reproduces rapidly, and can be reared conveniently and inexpensively under laboratory conditions. [3,4,5].

Soil chemical analysis and gross toxicity studies of earthworms alone often do not detect the sublethal effects of these chemicals. To understand toxic mechanisms of lead at a molecular level the metabolites of the exposed and control groups of *E. fetida* was analyzed. The use of NMR spectroscopy and multivariate analysis to identify and quantify changes in major metabolites in earthworms will be useful in the early detection of lead contamination. Observing the effects of lead and the manner in which this contaminant affects the metabolites of the worms will provide knowledge on how the contaminant will affect other organisms in the food chain.

2. Materials and Methods

2.1 Maintenance of earthworm (*E. fetida*) cultures, depuration, and lead exposure

The earthworms were purchased from Carolina Biological Supply, NC. The culture, depuration of worms, and exposure procedure were done according to the protocol published by Brown et. al [6]. The LC50 for lead nitrate was determined previously to be ~40µg/mL for these worms. To determine the sublethal effect of lead, contact exposure was done by placing individual worms in a 4oz amber jar lined with Whatman GF/A glass-microfiber filter paper [6] treated with 1 mL of the appropriate lead nitrate solution (0 µg/mL(dH₂O), 6 µg/mL, and 12 µg/mL). Each group consisted of ten worms for each trial. Individual worms were exposed to the treatment for 48 hours and their
responses to light touch were assessed. All the worms were alive throughout the exposure period.

2.2 Solvent extraction of earthworm tissues, \(^1\)H NMR acquisition, and data analysis

After exposure to the test substance, each worm was flash-frozen with liquid nitrogen, transferred into bead beater tubes, lyophilized, and stored at -80°C freezer until ready to be processed for NMR. The lyophilized worms were homogenized, weighed, and samples were extracted from the dried tissues using non-polar and polar solvents (chloroform and water; methanol and water) according to the protocol established at the Hollings Marine Laboratory Metabolomics Laboratory in Charleston, SC. Samples containing 550µL of the supernatant was added to each 5mm NMR tubes for analysis.

\(^1\)H NMR spectra of earthworm tissue extracts were acquired with a Bruker Avance 700-MHz spectrometer. The mean spectrum for each set of worms exposed to sublethal concentrations of lead was calculated and compared with that of the control group. Principal component analysis (PCA) was performed to identify whether \textit{E. fetida} exposed to 6 µg/mL, and 12 µg/mL lead nitrate were distinct from the unexposed (control) worms. NMR spectra for each group were compared and the metabolites were identified.

3. Results and Discussion

The PCA plot (Fig. 1) of the Control and Dose 1 (6 µg/mL) group overlap indicating no significant difference between the metabolites of these two groups. The NMR spectra for control (Fig. 2) and Dose 1 (Fig 3) further confirm this finding indicating that the concentration for Dose 1 was not high enough to show a significant metabolic change. However, Dose 2 (12 µg/mL) does not overlap with the control and Dose 1, indicating that Dose 2 concentration was high enough to elicit a metabolic response in the profile of the earthworms. It is possible that this concentration is close to the lower limit on the lead concentration that will produce a metabolic response. NMR spectrum for Dose 2 (Fig. 4) shows that there is a possibility of Histamine at δ 7.91 ppm and the possibility of amino acid with the alkyl side chain (Glycine, Alanine, Valine, Leucine and Isoleucine) at around δ 1.0 ppm. Other metabolites noted were Formate (8.4 ppm), Fumarate (6.5 ppm), Histidine (7.9 ppm), Hypoxanthine (8.2 ppm), Inosine (8.3 ppm), and Maltose (5.4 ppm). However, quantification of these metabolites (possibly by gas chromatography and mass spectroscopy) may be necessary to authenticate these initial results.

Maltose was the compound that showed the most notable increase in concentration in Dose 2 worms which is consistent with that reported for other species of earthworms using different contaminants [5, 6]. However, the change for the Maltose anomeric protons showed some significant variations with the batch grouping. There was also the frequent appearance of HEPES in the spectra indicating some stress factors involved.

It is advisable to perform a comparative test using higher sublethal dose of lead to determine the minimum sublethal concentration that could elicit a metabolic response. In future studies, other possible sources of stress to the organisms must be reduced to minimum by limiting the number of people doing a particular task. It is also worth trying to culture earthworms from cocoon to ensure that the worms are from the same genetic strain and developmental stages.

4. Conclusions

In this study, the concentration of lead used was low enough to be sublethal but also high enough to generate a metabolic response. The way that the worms are handled may have caused some stress on the worms and therefore affected the changes in metabolite concentrations. Consistency in experimental procedure is therefore critically important when dealing with small changes in metabolite concentrations. The possible role of maltose as well as all the other amino acids detected warrants further study. Nevertheless, results of this preliminary study show that \(^1\)H NMR is useful in detecting the toxic effects of soil contaminants at sublethal levels which are otherwise undetectable using routine soil chemical analysis.

Acknowledgements

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Ipilimumab and Metastatic Melanoma: 
A Retrospective M.D. Anderson Cancer Center Study

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Abstract — Melanoma is the sixth leading type of cancer in the United States, with an estimated 1 in 55 lifetime risk of developing melanoma. The 5-year survival rate for metastatic melanoma patients is less than 10%. Current first-line therapies include chemotherapy and high-dose interleukin-2 if brain metastases are absent. Current second-line therapy attempts exhibit low response rates and poor overall survival. To address this situation, an anti-CTLA4 monoclonal antibody, ipilimumab, was developed, and the purpose of this retrospective study was to evaluate the efficacy of ipilimumab use in metastatic melanoma patients, with a particular interest in its effects on brain metastases. I reviewed 78 patient charts, examining variables such as prior systemic treatment, other lesions, cancer stage, presence of brain metastases, and overall survival from treatment. Our results suggest that although ipilimumab is no more effective than existing treatments for non-brain metastatic melanoma, it may be beneficial in patients with brain metastases.

Keywords — Ipilimumab, metastases, melanoma, brain, survival

1. Introduction

Originating in the melanocytes, melanoma is the sixth leading type of cancer in the United States. An estimated 68,000 new cases were diagnosed in 2010, with approximately 8,700 deaths occurring. The incidence of occurrence has been rising more rapidly than for any other type of cancer, second to only lung cancer in women. With our changing lifestyles and social habits, the lifetime risk of developing melanoma in the United States is now 1 in 55 (Culver et al. 2011).

Over the past three decades, the incidence of metastatic melanoma has also increased, leading to a more quickly rising death rate as compared to most other cancers (Hodi et al. 2010). For metastatic melanoma patients, the median survival time is less than 1 year, with an expected 2-year survival rate of 10 to 20% (Robert et al. 2011). It has been said that “metastatic melanoma has been the most desperate area in solid tumor oncology, proving to be more drug resistant than almost any other tumor we know” (Fricker 2010). If detected early enough, surgery with adjuvant therapy has improved outcomes for patients, however 20% of patients with early-stage melanoma develop metastases, of which only 5% survive more than 5 years (Fricker 2010). Dacarbazine (DTIC) has been the standard of care for advanced melanoma for nearly 30 years, and temozolomide has been used due to its enhanced potential to cross the blood brain barrier to target brain metastases (Fricker 2010). With response rates in the range 7-15% in single agent chemotherapy, multi-drug combinations were evaluated (Fricker 2010). Although response rates were higher, toxicity also increased with the use of multiple agents without any demonstration of survival advantage over single-agent DTIC (Fricker 2010). Thus, no therapy is approved beyond the first-line approach, and enrollment in clinical trials is the usual standard of care (Hodi et al. 2010). With increasing knowledge of the immune response to cancer, however, the cytotoxic T-lymphocyte-associated antigen 4 (CTLA-4) has become a target for drugs such as ipilimumab (Fricker 2010; Hodi et al. 2010; Robert et al. 2011).

CTLA-4 is characterized as the “brake” preventing the interaction of CD28 on T cells with co-stimulatory molecules on antigen-presenting cells, which inhibits further T cell activation (Fricker 2010). Under normal circumstances, this mechanism is vital in preventing hyperstimulation of T cells that could lead to autoimmune reactions (Fricker 2010). In cancer therapy, however, this mechanism can be manipulated in order to utilize the immune system to attack cancer cells (Margolin et al. 2010). Thus, ipilimumab is a fully human monoclonal antibody that blocks CTLA-4 to promote antitumor immunity (Margolin et al. 2010). In a 2010 phase III, randomized controlled trial, ipilimumab was shown to have a longer median overall survival time as compared to glycoprotein 100 (gp100) control vaccine in patients with metastatic melanoma who had undergone previous treatment (Hodi et al. 2010). This study was followed by a 2011 phase III study to determine the overall survival benefits of using a combination of dacarbazine and ipilimumab (Robert et al. 2011). Results showed an improved overall survival in patients receiving the
combination therapy as compared to dacarbazine plus placebo in patients with previously untreated metastatic melanoma (Robert et al. 2011). Immunotherapy is also being investigated for its effectiveness in combating brain metastases in melanoma patients, a complication found in at least 1/3 to 1/2 of patients in clinical practice (Margolin et al. 2010).

As ipilimumab is relatively new as a treatment option for metastatic melanoma patients, the aim of this study is to contribute to the knowledge of its effectiveness, with a specific interest in its effects against brain metastases in these patients.

2. Methods

A list of patients diagnosed with metastatic melanoma and treated with ipilimumab in clinical trials was obtained from the cancer registry at the M.D. Anderson Cancer Center (MDACC). There were a total of 81 patients included in this retrospective study, with three eventually excluded due to complications in retrieval of treatment dates, leaving 78 patients in our study.* Using ClinicStation electronic patient record database, each patient’s records were obtained and reviewed. The variables collected and analyzed for each patient included demographics, prior systemic treatment, other lesions and/or metastases, cancer stage, serum LDH, presence of brain metastases, disease progression in the brain, and overall survival from treatment. The data was then analyzed by the statisticians of MDACC.

3. Results

Although several variables were collected for each patient, preliminary statistical analysis focused on survival rates of patients treated with ipilimumab, particularly comparing survival of patients with and without brain metastases.

3.1 Other preliminary data

Median time to disease progression (PD) in patients who developed brain metastases was 0.21 years (95% CI = 0.17-0.24 years). In addition, nearly 42% of the treated patients had disease progression or recurrence while on ipilimumab treatment.

4. Conclusions

Based on the results of the current study, in melanoma patients treated with ipilimumab, metastases to the brain did not significantly decrease overall survival (OS) as compared to patients who did not develop brain metastases. Thus, it seems ipilimumab treatment may have led to an increased overall survival time in patients with brain metastases. In addition, with a nearly 42% disease progression/recurrence rate, ipilimumab did not appear to prevent these phenomena in the brain more effectively than current treatment options as this recurrence/progression rate is not lower than what we would expect from chemotherapy treatment options. This finding leads us to ask whether ipilimumab is more effective as treatment for metastatic melanoma patients as compared to current standard options. Future directions include a completion of data analysis at the M.D. Anderson Cancer Center (MDACC), including a necessary comparison of overall survival and progression-free survival of our patients with those not receiving ipilimumab treatment. As this drug is fairly recently approved for use in metastatic melanoma, further studies are required to compare its effectiveness to other available treatment protocols and to investigate any trends that may develop in patient populations treated with ipilimumab. These further studies will allow physicians to provide the most effective and safe treatment options to their metastatic melanoma patients.

Acknowledgments

Kevin Kim, M.D. (M.D. Anderson Cancer Center, Houston, TX)

References


**Figure 1.** Overall survival time for patients who developed brain metastases as compared to patients without brain metastases.
Comparison of Historical versus Recent Musculoskeletal Improvement outcomes following Chiropractic Intervention: What the future holds

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Abstract — There are changes in Chiropractic education and practice that warrant careful accounting of historical events for a better understanding of the contributions made by Doctor's of Chiropractic. This study compares 2010-11 musculoskeletal outcomes with treatment outcomes obtained from a 1949-50 field practitioners' survey conducted by the International Chiropractors Association (ICA). The purpose is to determine if there is any significant difference between recent and past treatments results. Thirty clinic patients were accepted into the study for retrospective review of their records. Records were obtained from the Sherman College Health Center which is staffed by student interns who are supervised by licensed Chiropractic instructors. Percent patient improvement is analyzed with a paired Student's t-test (Microsoft Excel). Final outcomes are taken from the last clinic visit and were categorized similar to the 1949-50 ICA format. The term “well” in the ICA survey is replaced by the term “resolved” in the recent review. Categories of improvement outcomes are 1) resolved 2) much improved 3) slightly improved 4) no change and 5) worse. Results showed no significant difference between the ICA patient surveys and the college clinic outcomes (p= 0.996). Conclusion: Past vs. present quality of care for musculoskeletal conditions appear to be consistent.

Keywords: Chiropractic; Chiropractic History; Improvement Outcomes.

1. Introduction

Clinical retrospective studies that compare various techniques and procedures encountered in chiropractic practice are numerous in the chiropractic literature. However; studies that compare recent versus more historical outcomes are rare, if not non-existent. In the present study four musculoskeletal conditions often encountered in chiropractic practice were reviewed; they are: 1) headaches, 2) neck pain, 3) lower back pain, and 4) radicular pain. The purpose of the study is to determine if there is significant difference between past (International Chiropractors Association ICA survey 1949-50) and present (selected patients that received chiropractic care in the Sherman college of Chiropractic Health Center). This study has historical significance for Sherman College because the director of the 1949-50 ICA survey is the individual for whom Sherman College of Chiropractic is named, Dr. Lyle W. Sherman. Dr. Sherman was a renowned chiropractic educator and researcher, who served during this period as the assistant director of the B.J. Palmer Chiropractic Clinic at Palmer College of Chiropractic in Davenport, Iowa.

2. Methods

The present study was reviewed and approved by the Sherman College of Chiropractic Institutional Review Board (IRB) for the protection of human research subjects. The more recent group referenced in this study will be referred to as the Sherman group (SG) from which files from 2010 and 2011 are selected with no particular regard other than the year of chiropractic service. The files were retrieved by Sherman College personnel. Data obtained includes: a) examination findings, b) SOAP notes, and c) patient self-reported evaluation of improvements using an Oswestry pain disability questionnaire for neck and back pain and a Quadruple Visual Analog Scale (QVAS) used for headaches and nerve pain analysis. As stated before, the 1949-50 data was obtained from a survey conducted by the International Chiropractors Association (ICA) and is referred to in the study as the ICA Group. An Oswestry Disability Index (ODI) is the most commonly used outcome measure for low back and neck pain in health care assessments today. It is a self-administered questionnaire divided into ten sections designed to assess limitations of various activities of daily living. Each section is scored on a 0–5 scale, with 5 representing the greatest disability. The index is calculated by dividing the summed score by the total possible score, which is then multiplied by 100 and expressed as a percentage. Thus, for every question not answered, the denominator is reduced by 5. If a patient marks more than one statement in a question, the highest scoring statement is recorded as the true indication of disability.
3. Results

The Quadruple Visual Analog Scale is interpreted as follows: The patient is asked to respond to four questions concerning each of the areas of their pain. Those questions are: 1) what is your pain level right now? 2) What is your average pain level? 3) What is your pain level at its best? And 4) what is your pain level at its worst? A score is obtained by adding questions #1, 2 and 4 and dividing that sum by 3 then multiplying that value by 10. Less than 50 indicate low pain intensity and greater then 50 indicates high pain intensity. The average pain level and pain at minimum and/or maximum for the last 3 months is usually used as the reference. Final patient outcomes are recorded from the patients’ last clinic visit and were categorized using a similar format employed in the ICA survey; the only difference is the use of the term “well” by the ICA group which is replaced by the term “resolved”. The SG categories were: 1) resolved (R); 2) much improved (MI); 3) slightly improved (SI); 4) no change/same (NC) and 5) worse (W). Thirty participants ranging in age from 11 to 77 years of age were included in the Sherman group. The SG contains 10 female and 11 male subjects and the group logged an average of 10 clinic visits per patient. Visual comparison of the two groups is completed by analysis of the percent of improvement from the two groups. That data was analyzed using a paired Student’s t-test (Microsoft Office Excel, 2003). Percent improvement data is further simplified by classification of the five categories into three classes. Class I (High Responders) contains subjects from the “resolved” and/or “% much improved” groups; Class II (Low Responders) contains individuals from the % slightly improved group; and Class III (Under Responders) contains individuals that show “no response” to treatment or became worse following care.

4. Discussion

Although the profession has changed tremendously since the days of D.D. and B.J. Palmer, the basic tenets and understanding of chiropractic as a drug-free method of correcting vertebral subluxations continues. The major change today comes from the profession’s accrediting agency, the Council on Chiropractic Education (CCE). The changes address clinical competencies and requirements for faculty, preceptors and student training within chiropractic institutions of higher learning. These new standards were initiated in January 2012. A second change the profession is undergoing are change in research and technology. For example, the profession now has as an option, by hand only or the use of adjusting instruments, such as, the pro/adjuster and the Atlas Orthogonal adjusting system; 7 Both are percussion type instruments. In addition, most radiography is digitized. The encouraging news from the this study is that despite the many changes that are occurring throughout the profession, “for better or worse”, apparently, the high quality of chiropractic service has essentially remained the same for the pass 62 years. However, more study is needed to substantiate this finding. In an era of rising cost and cutbacks by insurance carriers, as well as, governmental third party programs a predictable question arises among current members of the profession and students as well: What does the future hold for chiropractic? Over the past 30 years, the profession has struggled for recognition and acceptance by other (main-stream) groups. This process has been frustrating for some doctors but they have endured and emerged as a group to become an important and vital member of today’s health care delivery system. Today chiropractic is the third largest primary health care profession after medicine and dentistry and has earned the respect associated with the quality of care delivered to the public for spinal and musculoskeletal complaints. Based on the results of this study, I believe the future of chiropractic is extremely good. However, in order to continue this success the chiropractic academic and private practice core must be congruent in their efforts to development evidence based learning which is achieved through enhanced commitment that encourages the profession to evolve into a group that embraces the research culture. The combination of evidence based training in our schools and the continued desire of practicing doctors to consistently provide patient outcomes of the class I variety will assure that the chiropractic profession has a very bright future in the delivery of outstanding health care.
5. Conclusion

The study showed consistency of the resolution of past and present musculoskeletal conditions.

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Figure 1A. Sherman Group (Neck Pain)

Figure 1B. ICA Group (Neck Pain). Reproduced from Field Research Data August 1950 with permission of the International Chiropractors Association.

The term “well” in the ICA group data below is equivalent to the term “resolved” in the Sherman group data above. M. imp = Much Improved; SL imp or S. imp. =Slightly Improved.

Figure 2A. Sherman Group (Headaches)

Figure 2B. ICA Group (Headaches). Reproduced from Field Research Data August 1950 with permission of the International Chiropractors Association.
The Sherman group data is illustrated in Fig 3A above and the ICA group data is shown in Fig 3B below. The term SI in the Sherman group = slight improvement; and NC = No change; the term S. IMP in the ICA group data equals Slight improvement and W = Worse.

Above Fig 4A shows the findings for nerve pain for the Sherman group above and below the same condition reported by the ICA group Fig 4B.

The graph above shows Class III percentages (“No change” or “Worse”) for the Sherman and ICA groups. Lighter columns above represent Sherman group %’s and the darker columns represents the ICA group. HA= Headaches; NP= Neck Pain; BP= Back Pain; and D= Nerve Pain. There is no significant statistical difference between the two groups (p = 0.254).

Table 1. Comparison of the ICA Group 1949-50 and Sherman Group 2010-11

<table>
<thead>
<tr>
<th></th>
<th>ICA</th>
<th>Sherman</th>
<th>Group</th>
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<tbody>
<tr>
<td>Headaches</td>
<td>R 27.2</td>
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<tr>
<td></td>
<td>MI 44.7</td>
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<tr>
<td></td>
<td>SI 15.5</td>
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<td></td>
<td>NC  4.0</td>
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<td></td>
<td>W   2.0</td>
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<tr>
<td>Neck pain</td>
<td>R 54.8</td>
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<td></td>
<td>MI 34.3</td>
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<tr>
<td></td>
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<td></td>
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<td></td>
<td>W   0.0</td>
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<td>Back Pain</td>
<td>R 47.4</td>
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<td>MI 36.2</td>
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<td>W   0.5</td>
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<td>Paired (T-test)</td>
<td>P = 0.996</td>
<td>Skew</td>
<td>1.011</td>
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The combined percentages of the well resolved and much improved groups from both the ICA survey and Sherman College data are equal to or greater than 50%. R = resolved; MI = much improved; SI = slightly improved; NC = no change and W = worse.
Association between Cancer Mortality, Natural Background Radiation, and other Selected Predictors

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Abstract — This ecological inquiry compares cancer mortality rates in the U.S. to the predictor of natural background radiation (via land elevation means) along with eight other predictors of cancer mortality. Average age-adjusted cancer mortality rates from 2002-2006 were compared to the predictors of land elevation related natural background radiation (NBR-LE) as well predictors of: smoking, educational attainment, no health insurance, income, obesity, health perception, physical activity, and diet. Among the seven predictors considered appropriate for linear multiple regression, three were found to be statistically significant. From strongest to weakest, these three were: 1) NBR-LE, 2) smoking and 3) educational attainment. It is not surprising to find associations between cancer, smoking and educational attainment. However, the finding for NBR-LE as possibly providing a protective effect may however be a surprise and appears to support the theory of radiation hormesis.

Keywords: Radiation effects, background radiation, cancer, mortality

1. Introduction

Various well-known factors have been linked with cancer including radiation, smoking, diet, obesity, physical inactivity (NCI, 2009a); inadequate health insurance coverage (McDavid et al, 2003); educational attainment (Albano et al, 2007); and income (Boyd et al, 1999). While there is no controversy that high levels of radiation are harmful, or lethal if high enough, there is controversy as to whether low level radiation (e.g., an exposure of < 5 rem) is hazardous. One viewpoint is that even the lowest amount of radiation is a health risk (Preston, 2008) while another viewpoint is that low level radiation is innocuous (Nair et al, 1999). Still another view is that low level radiation may provide a health benefit through hormesis (Allright et al, 1983; Jagger, 1998; Luckey, 2006; Scott and Di Palma, 2006). A component of natural background radiation (“NBR”) is based on land elevation (“NBR-LE”) where higher elevations have higher amounts of NBR and vice-versa (NRC, 2009). The purpose of the present study is to compare various strengths of various predictors with cancer mortality, with particular focus on NBR-LE, for all 50 states and the District of Columbia.

2. Methods

Average age-adjusted cancer mortality rates for 2002-2006 for all 51 U.S. jurisdictions were compared to the following nine predictors for each jurisdiction: 1) NBR as a surrogate variable of land elevation, where 1 mrem corresponds with every 100 feet of land elevation (Sonoma State, 2010) calculated from mean elevations (U.S. Census Bureau, 2009a); 2) percent of population who smoke in 2003 (U.S. Census Bureau, 2009b); 3) percent of persons 25 and older in 2003 achieving high school diploma or higher (U.S. Census Bureau, 2009c); 4) percent of population ages 18-64 without any type of health insurance coverage in 2003 (CDC, 2009a); 5) personal per capita income in 2003; (U.S. Census Bureau, 2009d); 6) obesity (BMI 30.0 – 99.8) in 2003 (CDC, 2009b); 7) “excellent” health perception in 2003 (CDC, 2009c); 8) physical activity in 2003 (“adults with 20+ minutes of rigorous physical activity three or more days per week”) (CDC, 2009d) and 9) diet in 2003 (“adults who have consumed fruits and vegetables five or more times per day”) (CDC, 2009e). Linear multiple regression was performed in Stata IC-12 to compare relative strengths of association between the predictors and cancer.

3. Results

Among the seven predictors considered appropriate for linear multiple regression, only three were found to be statistically significant.
Larger t values are considered to show stronger associations than smaller ones. A negative sign on the t value indicates an inverse relationship while no sign, meaning a positive sign, indicates a direct relationship. From strongest to weakest, these three predictors were: 1) NBR-LE (t = -3.86, p = 0.000); 2) smoking (t = 3.61, p = 0.001); and 3) educational attainment (t = -3.37, p = 0.002). Analysis without outliers (all from the District of Columbia) did not change the relative strengths of these three predictors and statistical significance remained essentially unchanged for all predictors.

4. Discussion

The findings for the well-known predictors come as no surprise. What was unexpected is that the not-so-well-known predictor NBR-LE showed the strongest prediction among the well-known predictors. Further unexpected was the inverse finding for NBR-LE, which suggests the presence of radiation hormesis. Since this is an ecological inquiry, where populations rather than known individual exposures are studied, and consistent with other observational study designs, causal inference is not claimed. Still, ecological studies can be the beginning of more rigorous research that seeks to determine cause-and-effect relationships (Grimes and Schulz, 2002). The inverse association between cancer mortality and NBR-LE is consistent with the finding of Jagger (1998) who observed that cancer mortality was 1.26 times greater in low elevation Gulf states of Louisiana, Mississippi, and Alabama) compared to Rocky Mountain states (Idaho, Colorado, and New Mexico). On the other hand, a small increased risk of cancer has been found for nuclear workers exposed to low levels of radiation (Cardis et al, 2005). Clearly, the topic of low level radiation effects is not well understood (Hendry et al, 2009). Another limitation is that there may be other factors related to decreased mortality at high altitudes, such as possible protective mechanism triggered by lower concentrations of oxygen.

References


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The Effects of Single-sex Education Primes on Gender-career Implicit Stereotypes

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Abstract — We examined whether implicit gender-career stereotypes could be reduced by priming females about attending a women’s college. To test this, participants answered a survey followed by a gender-career Implicit Association Test (IAT). Participants who were primed about attending a women’s college displayed significantly less gender-career stereotypes relative to controls. Further, the degree of gender-career stereotype was related to career aspirations (i.e., participants who had male-dominated career aspirations showed the least amount of gender-career stereotypes) and class rank (i.e., freshman had the highest degree of gender-career stereotypes followed by sophomores, juniors, and seniors, respectively). These results suggest that single-sex institutions play an important role in modifying implicit, gender-career stereotypes.

Keywords — Gender stereotypes, implicit associations, IAT

1. Introduction

Most people agree with the historical importance of establishing women’s colleges as a means for providing underserved women with access to higher education. However, over the past twenty-five years, undergraduate women have outnumbered undergraduate men at both co-educational and single-sex colleges and universities. This aggregate statistic begs the question of whether women’s colleges remain necessary. Although undergraduate women currently outnumber undergraduate men, this trend does not hold for students pursuing mathematics or life and physical sciences degrees. For example, in certain science/mathematics/engineering programs, women earn less than 20% of rewarded baccalaureate degrees (National Science Foundation, 2011). This degree of sexual disparity is less extreme for students attending women’s colleges. For example, Sebrechts (1992) reported that females attending women’s colleges are 1.5 times more likely to obtain a mathematics or life and physical sciences degree relative to women attending a co-educational institution. One possible reason for this difference is that women’s college environments may reduce the degree of gender-career stereotypes.

Proponents of women’s colleges often cite a mountain of testimonials and statistics about the positive outcomes achieved by women who have attended these institutions (Sebrechts, 1992). However, the scientific evidence for much of this support is not causal due to the lack of appropriate controls. The goal of the current experiment was to determine whether causal conclusions about the effects of single-sex colleges could be made when appropriate controls were utilized. Specifically, we wanted to determine whether implicit gender-career stereotypes could be reduced by priming females about their decision to attend a women’s college.

Implicit stereotypes are biases about groups of people (e.g., women, elderly, etc.) that are subconscious. Implicit stereotypes have been theorized to form due to one’s cultural history and/or the accumulation of personal experiences (Nosek, 2007). The Implicit Association Test (IAT) was developed nearly 20 years ago and has been shown to be a reliable tool to measure implicit associations (Greenwald & Banaji, 1995). The logic underlying the IAT is that if two objects (e.g., men and sciences) are strongly associated with each other, then it should be easier to learn to make a single response (e.g., pressing “a” on a keyboard) when those two objects are paired together, relative to when two objects that are weakly associated (e.g., women and science) are paired together. Different versions of the IAT have been used to show that the vast majority of people have implicit negative stereotypes against the elderly (Jelenic & Steffens, 2002), African-Americans (Livingston, 2001), Muslims (Park, Felix, & Lee, 2007), etc.

One methodological tool that has been shown to modulate implicit associations is priming. Priming can be defined as the impact a stimulus has on responses to a later stimulus. For example, Bargh, Chen, and Burrows (1996) presented participants with a list of words. In the “elderly prime” group, many of the words on the list were...
highly associated with the elderly (e.g., old, bingo, retired, wrinkle, etc.). In the “neutral prime” group, words on the list were unrelated to age (e.g., thirsty, clean, private, etc.). After the participants read their list, they were asked to walk to an elevator down the hall. The “elderly prime” group took significantly more time to walk to the elevator, relative to the “neutral prime” group.

In the current experiment, we had two goals. First, we wanted to determine whether women who attend a single-sex school have implicit gender-career stereotypes by using the IAT. Second, we wanted to determine whether we could modulate these implicit stereotypes by priming the participants about attending a women’s college. We hypothesized that this priming would result in reduced implicit gender-career stereotypes, relative to a control group that received a neutral prime.

2. Method

2a. Participants

Participants consisted of 114 undergraduate students who attend an all women’s college. There were 73 freshmen, 15 sophomores, 18 juniors, and 8 seniors.

2b. Materials

We used IAT software, developed by Millisecond®, on a laptop in an 8’ x 8’ room. Three short questionnaires were used. The first questionnaire (pre-IAT prime) consisted of four questions related to single-sex and co-education schools. The second questionnaire (pre-IAT control) included four questions about the participants’ cell-phone provider. The third questionnaire (post-IAT) contained questions concerning the participants’ demographic information (i.e., age, race, career goals, etc.).

2c. Procedure

Participants were randomly assigned to a “School Prime” group or a “Neutral Prime” group. For both groups, there were three phases: pre-IAT questionnaire, IAT, and post-IAT questionnaire. The only differences between the two groups were the types of questions on the pre-IAT questionnaire. The School Prime group received questions concerning their perceptions of single-sex versus co-educational schools, while the Neutral Prime group received questions concerning their perceptions of their cell-phone provider. This phase lasted two to three minutes.

During the IAT phase, participants completed a gender-career IAT which took 10 – 15 minutes and included 7 sections. The IAT is a computerized task in which participants categorized men’s versus women’s names, as well as science careers versus non-science careers. During the first section, half of the participants were instructed to press the letter “e” when they saw male names and “i” when they saw female names. The key assignment was reversed for the other half of the participants. During the second section, “e” was associated with science careers while “i” was associated with non-science careers. For sections 3 and 4, both male and female names, as well as science and non-science careers, were presented. The task of the participants was to continue categorizing by using the same instructions that they received during sections 1 and 2. Thus, for half of the participants, a single response was required for both science careers and male names while a different response was required for both non-science careers and female names. Section 5 was the same as section 1 except that the key assignments for men’s and women’s names were reversed. Sections 6 and 7 were the same as sections 3 and 4 except for the instructional change that happened in section 5. Thus, by the end of the IAT administration, each participant completed an equal number of male-science/female-non-science and male-non-science/female-science pairings. After the IAT administration, the post-IAT questionnaire was given and took approximately one to two minutes to complete.

3. Results

The primary dependent measure was the reaction time differential between when male names were paired with science versus when female names were paired with science. Thus, the average reaction time from sections 3 and 4 was subtracted from the average reaction time from sections 6 and 7 for half of the participants, while it was reversed for the other half. Positive scores indicate an implicit male-science bias, negative scores indicate an implicit female-science bias, and scores close to 0 indicate no implicit bias.
3a. Effects of Priming

Our primary hypothesis was that participants who were primed about attending a single-sex institution would have a reduced male-science bias. This hypothesis was supported (see Figure 1; \( t(112) = 2.33, p = .011 \)).

![Figure 1](image)

**Figure 1.** The degree of male-science bias, as measured by the IAT, is shown as a function of experimental condition.

3b. Career Goals

Participants were asked their career goals on the post-IAT questionnaire. Their goals were categorized as being male-oriented (e.g., mortician, lawyer, military consultant, etc.), female-oriented (e.g., teacher, therapist, nurse, etc.), or neutral (e.g., artist, musician, undecided, etc.) career. Figure 2 shows the comparison of male-science bias across male, neutral, and female careers. Although there was no significant main effect of career goal \( (F(2, 105) = 1.33, p = .270) \), nor was there a significant interaction between career goal and experimental condition \( (F(2, 105) = 1.73, p = .183) \), some trends were noticeable. The largest effect was seen in participants who had female-oriented career goals \( (t(70) = 1.77, p = .060) \). One possible reason for the lack of significant findings was that the sample size was too small. For example, for those with male-oriented career aspirations, there were only 13 and 9 participants in the control and prime conditions, respectively.

![Figure 2](image)

**Figure 2.** The degree of male-science bias is shown as a function of stated career goal.

3c. Years of Schooling

Figure 3 compares male-science bias across the participants’ class rank. As can be seen, as class rank increased, the degree of male-science bias decreased. The results approached significance \( (F(3, 110) = 2.42, p = .070) \). Again, one possible reason for our failure to find significant results was that the number of participants in the sophomore, junior, and senior classes were too small (15, 18, and 8 respectively).

![Figure 3](image)

**Figure 3.** The degree of male-science bias is shown as a function of class rank.

4. Conclusions

We found that participants who were primed about attending a single-sex institution demonstrated a reduced implicit male-science bias. Further, the results were highly suggestive that both career aspirations and class rank also have an impact on male-science bias. These findings indicate that single-sex institutions continue to have an important function in higher education, that of helping to decrease implicit gender-career stereotypes.
References


Elizabeth J. Patterson’s Campaign for South Carolina’s 4th Congressional District Seat in the United States House of Representatives, 1986

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Abstract — Elizabeth Johnston Patterson, known to most as “Liz,” grew up in the world of politics, spending much of her childhood as her father, Olin Dewitt Johnston, a South Carolina Governor and U.S. Senator, campaigned across the state. However, Liz made a name for herself in so many other ways. After graduating from Columbia College with Honors in 1961, Patterson joined the Peace Corps. Later, she worked in Washington, DC in the Office of Economic Opportunity until 1964. She also directed the South Carolina Head Start Program. In 1974, Liz ran for Spartanburg County council, where she served until 1976. In 1979, she ran for State Senate and won every box. When four-term Republican Representative, Carroll A. Campbell Jr. retired from Congress in order to run for governor of South Carolina, Liz sought the Democratic nomination and narrowly defeated Republican Bill Workman. She won two more terms in Congress from a district whose political makeup was increasingly Republican. My project primarily focuses on Patterson’s election to Congress, those who influenced her political ambitions, her opponent and his strengths and weaknesses, and the campaign in general. The paper will also include the issues facing South Carolina during the time of Patterson’s campaign, her campaign strategy, and the votes that lead to the defeat of her opponent.

Keywords – Women in History, Democrat, House of Representatives

Prior to 1987, four women had represented South Carolina in the United States Congress. All of them served in the House of Representatives; all were Democrats; and all of them benefited from the tradition of widow’s succession—chosen to complete their husband’s term of respect and sympathy. In 1986, Elizabeth Johnston Patterson became the first woman from South Carolina to actively campaign for national office and that November, was the first to be elected. Like her predecessors, Patterson was a Democrat, but unlike those who served before, Patterson’s victory came at a time when the Palmetto State was predominately Republican. Her election to the US Congress, one of 23 women in the House, from South Carolina’s Fourth Congressional District, resulted from hard work, the support and encouragement of her family, and her passion for people and politics.

Elizabeth J. Patterson, known to most as “Liz,” grew up in the midst of South Carolina and national politics. As a child, Patterson accompanied her father, Olin D. Johnston, as he successfully campaigned across the state, running first for Governor and later for United States Senator. Some might say that Patterson was born into politics. She earned a B. A. degree from Columbia College and did graduate work at the University of South Carolina. During President Lyndon Johnson’s tenure, Patterson worked in Washington, D.C. recruiting participants for the Peace Corps and in the Office of Economic Opportunity. She also directed South Carolina’s Head Start program. In the 1970s, Patterson served both on Spartanburg County Council and in the South Carolina Senate.

Family has always been important to Liz Patterson. Luckily, her husband and children love politics as much as she does. They provided a strong support system during her journey to Congress. Patterson says her role models were her mother, Gladys Atkinson Patterson, and Margaret Chase Smith, long-time Senator from Maine and the only woman in the Senate during Patterson’s childhood. As a young woman, Patterson watched Senator Smith in the Senate. Smith’s success in Congress inspired Patterson to offer for the Fourth District Congressional seat. Patterson’s mother was not only a wonderful mother; she also played a significant role in her husband’s political career. Mrs. Johnston managed his campaigns, wrote his speeches, and even co-chaired President Franklin Roosevelt’s “Campaign for the Women.” Gladys Patterson’s ability to be involved with politics while being a devoted mother and wife impressed her daughter. Liz Patterson adopted her parents’ example as a mother and a politician.

When four-term Republican Representative, Carroll A. Campbell, Jr. retired from Congress in 1986 to run for Governor of South Carolina, Patterson decided to enter the race as a Democrat. Handily winning the nomination in the primary, Patterson faced William D. Workman, III, mayor of Greenville. A Republican in a Republican district, the mayor of the largest city in the Fourth District, Workman seemed the likely winner. Both
candidates were relatively moderate with similar views on many issues and spoke of helping American industries, supporting the country's defense structure, and cutting Washington spending.

Patterson’s platform centered around six key issues: import licensing systems; new multilateral trade agreements; application of the South Carolina Economic Revitalization Act on the federal level; creation of a national trade council; reduction of the federal trade deficit; and restoration of reciprocal trade policies. Her platform was based on Christian values and the need to support the textile industry, the major industry in the Fourth District. These issues resonated loudly in the South Carolina Upstate.

While Patterson had a strong platform and a popular stance on hot-button issues, her political success can be largely attributed to one factor: her masterful campaign strategy. The Patterson campaign was an effective, hierarchical effort composed almost exclusively of volunteers. Only Ron Romine, the campaign manager, and possibly a few others received financial compensation. Other participants were rewarded by their belief in Liz and the fulfillment of their desire to see her in office. Patterson’s team divided the Congressional district into hundreds of areas, each of which had a leader and a contingent of subordinates. This design ensured that volunteers canvassed every part of the district. Patterson focused on personal interaction with voters and relied more on personal phone calls and door-to-door visits than on paid advertisements.

Taking Workman’s victory in Greenville as a given, Patterson’s campaign strategy called for winning Spartanburg and Union Counties. As a state senator from Spartanburg County, Patterson had a base there. Candidates often ignored smaller Union County where Patterson spent a lot of time. The strategy was effective. Patterson won about 60 percent of the Spartanburg County votes, about 45 percent of Greenville County votes, and about 65 percent of the votes in Union County. The vote totals were 61,255 for Patterson, 54,911 for Workman with Patterson winning about 53% of the votes. Many political analysts thought that a Spartanburg resident winning the election would be nearly impossible because Greenville’s population, 304,000, outnumbered Spartanburg’s population by nearly 2 to 1. However, Liz Patterson beat the odds.

Patterson’s success in the November election was due largely to a few key factors. As a woman and a mother, Patterson attracted the votes of many women in the districts as well as those who supported a traditional family structure. Along with that was her charismatic personality and ability to connect with many types of individuals on a personal level. She demonstrated her interest in helping the people of the district by visiting factories and other blue collar areas, meeting with workers and everyday people as she campaigned. During the campaign, Workman focused on relying on voters in Greenville city and county, and campaigned little in the district’s smaller towns. Negative campaigning by the Republican may have contributed to Patterson’s victory as did the fact that her father was a well-known political figure in the area.

Elizabeth J. Patterson, the only woman elected to Congress from South Carolina since it became a Republican state, remains a role model for South Carolina women today. She ignored stereotypes and negative comments and continued to pursue her goal to make South Carolina a better place, even when opponents tried to distract her. Her concerns for veterans, budgeting, and the needs of the working class helped her win that first election and two subsequent elections. Patterson today is a passionate community leader and a symbol of women’s growing importance in national politics and their growing willingness to defy convention.

Acknowledgements

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Power and the Evaluation of Agentic Women

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Abstract — This research examined the effect of high- and low-power roles on the backlash effect (i.e., judging agentic women as less hirable than agentic men). Across 2 experiments, male participants evaluated résumés from male and female job candidates applying for a managerial position. Low-power men were more likely to engage in backlash — rating the female applicant as less hirable and recommending a lower salary for her — compared to high-power and baseline participants. Current research is investigating the underlying cause of this effect. Specifically, data collection is currently underway examining if backlash may have served to alleviate gender-identity threats.

Keywords — gender discrimination; social power; stereotypes

1. Introduction

Women face challenges gaining access to high-power leadership positions. Forty-three percent of managers are women (Catalyst, 2011a), but women are far less likely to occupy the highest leadership positions (e.g., 14.1% of executive officers and 3.6% of CEOs in Fortune 500 companies are women; Catalyst, 2011b). Why does gender inequality persist? One factor to consider is the broader cultural stereotypes of men and women. Managerial roles are typically construed as masculine (for a review see Eagly & Karau, 2002). However, when women possess more masculine qualities, such as assertiveness or other agentic traits, they receive social and economic sanctions. They may be viewed as competent, but may also be viewed as particularly unlikeable and unworthy of hiring — known as the backlash effect (Rudman & Fairchild, 2004). Thus, for women, this represents a major hurdle in gaining access to leadership roles. Exhibiting the traits perceived as necessary to be a successful leader can actually be perceived negatively when the traits are inconsistent with female stereotypes.

To date, several studies have demonstrated the backlash effect in the form of negative evaluations, hiring discrimination, and even outright sabotage (e.g., Rudman & Fairchild, 2004); however, work on perceiver characteristics that moderate this effect is in its infancy. Considering the broader implications and functions of backlash may shed light on characteristics that facilitate backlash.

Backlash functions to maintain status differences between men and women. By keeping gender deviants in less visible, low status roles, those deviant group members are less able to effectively challenge gender stereotypes or serve as role models for disconfirming stereotypes (Rudman & Fairchild, 2004). Consequently, one of the long-term effects of backlash may be a continuance of “gendered power” — with men maintaining their greater access to positions of power. If backlash can serve to maintain power, it seems plausible that possession of power (or lack of power) might make backlash more likely.

Power is defined as control of resources and outcomes (Fiske, 1993) which can occur at the individual (i.e., interpersonal power) or the group (i.e., intergroup power) level. For example, a manager has power over her or his employees (interpersonal power) and men typically have more power than women (intergroup power).

If backlash is a way to gain or regain power, then people might seek to use backlash as a “weapon” when their status is in question or when their current level of power is lower than desired. Low-power backlash seems particularly likely for powerless men. To the extent that a low-power role is viewed as inconsistent with the male role, men may experience threat and respond with backlash. This may occur for a number of reasons. First, men seem to be particularly sensitive to challenges to their masculinity, more so than women who experience challenges to their femininity (Vandello, Bosson, Cohen, Burnaford, & Weaver, 2008); consequently, men may respond in ways that restore their “manhood,” such as displaying physical aggression (Bossen, Vandello, Burnaford, Weaver, & Wasti, 2009). More generally, experiencing a threat to one’s self-image, can lead to stereotypic-impressions and negative evaluations of a member of a stereotyped group (Fein & Spencer, 1997). Together, these results imply that if a low-power role threatens the male-identity, backlash may be the likely result.

Experiments 1 and 2 served as initial tests of whether power roles moderate backlash. Participants — either assigned to (Experiment 1) or primed with (Experiment 2) power roles — evaluated a résumé from a male and female target
applying for a managerial position. Backlash would be evident if the female target was less likely to be hired and given a lower salary recommendation compared to the male target.

2. Experiment 1

2.1 Method

Male participants (N = 83) believed they would participate in a 2-person interaction in which one person would be the high-power supervisor and the other would be the low-power subordinate. Following a filler task, participants completed a résumé evaluation task. Participants were asked to study a job description for a Project Manager position before evaluating the résumés. Next, participants were presented with résumés from Brian Smith and Karen McKay. The résumés were of moderate quality, and pretested to be equal in qualifications. Both targets were agentic in that their résumés stated that they had previous leadership experience (and were both seeking a leadership position). Thus, the primary difference across résumés was the target’s gender. After reading the résumés, participants made hiring and salary recommendations. In a baseline condition, participants received no power manipulation; that is, they were not given any information regarding an interaction and simply completed the dependent measures, starting with the filler task. The resulting design was a 3(Power: high, low, baseline) X 2(Target: female, male) mixed-model design with target gender manipulated within-subjects.

2.2 Results

The primary question of interest is whether men in different power roles would backlash against an agentic woman. More specifically, would high- or low-power men view the agentic female as less hirable and recommend a lower salary for her than for an agentic male target? Participants were first asked to make a hiring decision, using the prompt: “If it were up to me, I would offer the position to...” Responses were coded as 0 (Karen McKay) and 1 (Brian Smith). Testing the applicant choice against 50% within each condition suggested that low-power participants were somewhat more likely to choose the male applicant, $t(24) = 1.89, p = .07$, whereas participants in the high-power and baseline conditions, chose each applicant equally, $ts < .70$, see Table for results of Experiment 1 and 2.

Analyses of salary recommendations yielded similar results. This item was an open-ended response with participants responding to the prompt: “Assuming that starting salaries for the type of position that Karen McKay/Brian Smith is seeking range from $30,000 to $40,000 (depending upon the qualifications and desirability of the candidate), I would be willing to offer Karen McKay/Brian Smith a starting salary of...” There was a significant Power X Target Gender interaction, $F(2, 79) = 5.41, p = .01$, suggesting that only low-power males engaged in backlash. Comparing the low- and high-power conditions, $F(1, 79) = 8.29, p < .01$, and low-power and baseline conditions, $F(1, 79) = 8.03, p < .01$, both revealed significant differences in the impact of gender across power conditions. In the low-power condition, participants recommended a lower starting salary for the female target than for the male target, $F(1, 24) = 8.27, p = .008$. However, in the high-power condition, the recommended starting salaries did not significantly differ, with the recommended salary for the female target slightly higher than for the male target, $F(1, 28) = 2.30, p = .14$. In the baseline condition, salaries did not differ, $F < 1$.

The results of Experiment 1 supported the hypothesis that low-power may facilitate backlash. Men assigned to a low-power role rated a female job applicant as less hirable, recommended a lower salary for her, and tended to choose the female applicant less often compared to a comparable male applicant. This did not occur when men were in a high-power role or a baseline condition. Thus, the goal of Experiment 2 was to replicate the low-power backlash using a different power manipulation.

3. Experiment 2

3.1 Method

The procedure for Experiment 2 was identical to Experiment 1 with the exception of the specific power manipulation. Male participants (N = 84) were first primed with high- or low-power (or were assigned to a baseline condition). Participants were given 3 minutes to write about a time when they had power over someone (high-power prime), someone else had power over them (low-power prime), or their most recent trip to the grocery store (baseline). Following a filler task and descriptive and prescriptive stereotypes measures, participants completed the résumé evaluation task.

3.2 Results

The primary research question was whether the results of Experiment 1 would replicate using a different power manipulation. Specifically, would low-power men be more likely to backlash against...
an agentic female job candidate than high-power men?

All analyses and results paralleled those in Experiment 1. Testing applicant choice within each condition against 50% suggested that, again, low-power participants were somewhat more likely to chose the male applicant, $t(27) = 1.55, p = .13$, although this trend was weaker than in Experiment 1. Participants in the high-power, $t(29) = -1.32, p = .20$ and baseline conditions, chose each applicant equally, $t(26) = -57, p = .57$.

Turning to salary recommendations, analyses revealed stronger support for the low-power backlash hypothesis. There was a significant Power X Target Gender interaction, $F(2, 80) = 3.16, p = .05$. Comparing the low-power to the high-power condition revealed a significant difference in gender effects on recommendations, $F(1, 80) = 6.10, p = .02$; comparing low-power to baseline revealed a marginally significant difference in gender effects, $F(1, 80) = 2.80, p = .10$. In the low-power condition, participants recommended a lower salary for the female target than for the male target, $F(1, 26) = 3.93, p = .06$. However, in the high-power condition, participants recommended a nonsignificantly higher salary for the female target compared with the male target, $F(1,28) = 2.27, p = .14$. In baseline, salaries did not differ, $F < 1$. Thus, the pattern of results is the same as in Experiment 1.

Conclusions

Together, these studies point to low-power men as the likely culprits of backlash. Low-power participants’ hiring and salary recommendations suggested that they were engaging in backlash directed at the agentic female. Across studies, using different power manipulations, and across measures, this pattern was consistent. Although the current studies did not provide any evidence of high-power backlash, it seems reasonable to expect both high- and low-power men will engage in backlash, though perhaps under different conditions and perhaps through different processes.

Future research will need to identify the underlying cause of this effect. As previously discussed, men seem to be particularly sensitive to gender-identity threats (Vandello et al., 2008) and past research has shown that men behave in ways that can presumably restore their masculine identity (Bosson et al., 2009). Thus, one possible explanation for the findings of the current experiments is that being in a low-power role was threatening to the male participants, and they reacted with backlash to alleviate this threat. Follow-up studies are currently underway specifically addressing the potential role of threat in backlash.

Acknowledgements

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References


### Evaluations of Female and Male Job Applicants

<table>
<thead>
<tr>
<th></th>
<th>High Power</th>
<th></th>
<th>Low Power</th>
<th></th>
<th>Baseline</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Evaluations</strong></td>
<td><strong>Female</strong></td>
<td><strong>Male</strong></td>
<td><strong>Female</strong></td>
<td><strong>Male</strong></td>
<td><strong>Female</strong></td>
<td><strong>Male</strong></td>
</tr>
<tr>
<td><strong>Experiment 1</strong></td>
<td><strong>Choice</strong></td>
<td>57%</td>
<td>43%</td>
<td>32%</td>
<td>68%</td>
<td>54%</td>
</tr>
<tr>
<td></td>
<td><strong>Salary</strong></td>
<td>$33,086</td>
<td>$32,672</td>
<td>$33,400</td>
<td>$34,876</td>
<td>$35,292</td>
</tr>
<tr>
<td><strong>Experiment 2</strong></td>
<td><strong>Choice</strong></td>
<td>62%</td>
<td>38%</td>
<td>36%</td>
<td>64%</td>
<td>56%</td>
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<tr>
<td></td>
<td><strong>Salary</strong></td>
<td>$34,410</td>
<td>$33,783</td>
<td>$34,278</td>
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<td>$34,148</td>
</tr>
</tbody>
</table>

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Scarlet Scare: Communist Allegations of Women 1947-1957

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Abstract — Often when assessing cases of subversive activities and espionage during the period of anti-communist hysteria following WWII, factors motivating the accuser often fade in the ensuing bombast and spectacle accompanying the trial of the accused. One group of accused American women between 1947 and 1957 merit further investigation in an attempt to uncover possible factors motivating their accusers. The evidence suggests that many allegations levied against women fitting a certain description during the early part of the Cold War occurred because of an abundance of publicized accounts of female subversives and espionage agents during the same period. That many women popularly perceived of as guilty shared traits with those who while accused were most likely innocent lends itself to the notion that a “guilty” model asserted itself and acted as a primary factor in their being targeted for scrutiny. The collection and analysis of period periodicals, records of congressional hearings and trials, FBI memoranda, and modern scholarship all aid in formulating a theory as to what linked these two groups of women. Additionally, contemporary accounts of those questioned, investigated, arrested, convicted or otherwise maligned aids in understanding both those accused and the motivations of their accusers.

Keywords — United States, Communism, Women, Cold War, Espionage

1. Introduction

The anti-communist hysteria during the early Cold War creates a perfect environment in which to study the American understanding of nonconformity if for no other reason than the true test of character occurs in times of turmoil, struggle and fear. While searching through newspapers published during the early Cold War a rather interesting pattern emerged of the women accused, investigated, arraigned, arrested, convicted or otherwise maligned for alleged communist or espionage activities. Cases involving women like Mary Knowles, a middle-aged librarian from Massachusetts, kept popping up with an eerie consistency. Concerned members of Mrs. Knowles’ community had turned her into the House Un-American Activities Committee when she had refused to swear a loyalty oath. Stubborn, intelligent, vocal, highly educated, and adamantly adhering to her constitutional right to remain silent, the Supreme Court found Mrs. Knowles found guilty of some 58 counts of contempt and sentenced her to a hefty fine and jail time in 1957. Many cases similar to Mrs. Knowles’ occurred across the country. Tantalizing similarities occurred amongst them, so much so that further investigation seemed almost imperative. These women were not housewives, nurses, waitresses, secretaries, farmers or factory workers but rather lawyers, teachers, honor students, publishers, college professor, district attorneys and political analysts. Such specificity in an era vociferously announcing communism as a threat coming from all sides raises several questions. Why target these women and what connections, tangible or otherwise, do they have with one another?

Investigating the accused and the accuser can only improve previous scholarship of this era as the motivations of the accuser occasionally remains shrouded behind red tape and redactions. Studying these women works to reveal the motivations of their accusers while also shedding light onto the actions of those actually guilty of subversion and espionage. In addition, the investigation of these cases honors the memory of women brave enough to thumb their nose at the United States government in the act of maintaining their rights.

2. Guilt or Something Like It

Two events occurred in tandem during the anti-communist hysteria of the early Cold War: guilty people were accused of communist espionage or subversion and innocent people were accused of communist espionage and subversion. Taking into account some contextual knowledge (utilizing secondary sources as a means of establishing the perceived guilt during the era if it was not apparent) the comparison of these women provides a number of traits shared by both halves of the accusatory spectrum. These traits work to create a model which when placed in context strongly suggests a connection between those “actually guilty” and those “guilty but actually innocent.” Rather than both fitting a model in tandem this model instead evolved to define the “guilty.” Concurrently, the nature of the trials during this
period—high publicized, sensationalized, pervasive, nation-wide and thoroughly indicative of the anti-communist fervor—plays a crucial role in understanding how women fitting the model for “actually guilty” came under scrutiny. The push to suspect your neighbors, coworkers and spouse found credibility in the accounts of subversives and spies residing in the most secretive of places.

2.1 Traits

The traits these women exhibited reflected a rising tide of excellence in the United States in the post-WWII era in general. They were highly educated, often middle-aged, intelligent, possessing of a white-collar job, often of nontraditional relationship status (divorced or single but older or amorously connected with someone to whom they are not married), and very often something of an intellectual e.i. a librarian, book store owner, college professor, attorney, political analyst, or book publisher. It is worthwhile to note that in general many of the jobs had only recently become more available to women. Another trait that is more difficult to quantify yet is nevertheless important is the notion of nonconformity. While much of the feminist movement would flower in the 1960s (pun not intended), these women ran outside much of what would have been the established societal norm during the early part of the 20th century. Their vocal nature, the rate with which they excelled, the books they read, the rallies they attended and the things they said (and refused to say) when drawn before a court of powerful Congressmen really testify as to the affect their being ‘different’ mattered when judging their guilt, whether supposed or otherwise.

Conclusions

Many of the traits exhibited by these women placed them outside the societal norms of the era. This is partly responsible for some traits evolving into particulars representing someone guilty of espionage or subversion. Concurrently, highly publicized reports of the time sensationalized cases of women who, guilty of espionage or subversion, often exhibited traits shared with women innocent of espionage or subversive activity. This publicizing aided in redefining these traits as indictors of probable guilt, thus leading to scrutiny of the women who exhibited those traits.

Because some traits exhibited ran against the grain of archetypal societal norms, one could argue that beyond the connection to those of established guilt these traits were in it of themselves targeted for scrutiny based on their level of nonconformity. Additionally

Additionally, one could argue that in many cases a stereotype emerged of a woman who exhibited many of these traits who by nature of nonconforming threatened to change the system and therefore came under scrutiny for that reason.

Acknowledgements

Dr. Jeffery B. Cook, Professor of History, North Greenville University.

References

Sexism in Abusive Language in Mandarin Chinese

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Abstract — Abusive language used by college students reflects current social attitudes and values. This study examines the frequency and perceived severity of abusive language in Mandarin Chinese used by college students; because abusive language often includes sexual connotations this paper employs a particular concentration on sexism. Gender differences and sociocultural influences are mirrored in today’s Chinese profanity. Sexually abusive words, in particular, betray a male bias.

Keywords — Sexism, Abusive Language, Mandarin, College Students

1. Introduction

According to the Oxford Dictionary of Sociology, sexism can be defined as “unfair discrimination on the basis of sex”. It is not an inherent defect; rather sexism is a product of socialization through our social group and medium (Chen, 2005). Language, as a reflection of socialization, inevitably reflects and expresses social attitudes and values, and as such the presence of sexism in most languages is a real phenomenon (Palandri, Angela and Jung. 1991). Being a vital part of language, abusive language mirrors the views and values of a society, sexism in particular. China was ruled by feudal dynasties for thousands of years, and the concept men being superior and women inferior is a typical orientation between man and women in feudal society. This mindset had a great impact on sexism in the development of Mandarin Chinese. The goal of this study is to examine dirty and derogatory words in Chinese with a particular focus on the existence of sexism in the language. We do this by analyzing gender differences in the use of abusive language among college students.

2. Literature Review: Sexism in Chinese Language

Sexism in Chinese language is obvious in several ways: terms of address, the structure of Chinese written characters, and abusive words.

Firstly, women in ancient China normally had only family names without given names, and some even had no family names before marriage. After getting married, women usually bore their husbands’ surname (Chen, 2005). Besides this, when a man addressed his wife in front of others, appellations such as 内 (cheap insider), 糟糠 (rotten chaff) and 黄婆 (yellow-faced old woman) were frequently used (Tan, 1990). Even today children typical take their father’s family names.

Secondly, the structure of Chinese written characters also betrays a male bias. A lot of characters combined by the radical 女 (female) carry negative connotations, for example, 嫉 (jealous), 娼妓 (prostitute), 奸 (traitor or evil), and 婪 (greedy). The character for a man to get married is 娶, with 取 (to take) on the top and 女 (female) below it; the character for a woman to get married is 嫁, combining with 女 (female) and 家 (family). Thus, marriage for a man means to take a woman, positioning her below his act of taking, while for a woman, it means to go to the man’s family (Tan, 1990).

In terms of Chinese abusive language, women are also the focus of discrimination (Chen, 2005). Liu and Liao (2007) note that the majority of bad words in Chinese use sexual organs or actions as their objects, especially women’s, for instance, 操你 (fuck your mother), and 他奶奶的 (his grandmother’s [genitals]). In addition, even the term “woman” also has quite a few deprecating synonyms used as terms of abuse: 水 (disastrous flood), 母老虎 (female tiger [tigress]), and 母夜叉 (female monster of the night) (Tan, 1990).

In the Concise Chinese Dictionary there are seven words for women under the category of ‘sexual immorality’ but only three for men. Similarly, 27 out of 52 terms (52%) used for females in the dictionary are negative, while only one of 29 terms (3%) used to describe male is negative (Chen, 2005).

3. Goals of Study

These studies affirm the existence of sexism in Chinese language, especially in abusive terms. However, these conclusions are based on analyzing the language itself without studying the language in use by real people. This paper, therefore,
explores the frequency and perceived severity of abusive language in Mandarin Chinese as spoken in China today. The discussion will focus on the gender differences in the use of abusive language in Mandarin and the historical and current sociocultural influences which are evident in today’s Chinese profanity.

4. Methodology

As the new generation of a country, college students may represent the most current picture of a country’s culture. Their perspectives illustrate the most current orientation of the society. Hence, college students in China comprise the investigated group of this study. A questionnaire (Table 1) was developed to ask students to list insulting words used to describe their sex, insulting words used to for the opposite sex, and the most insulting word for each sex.

Table 1. Questions asked in the questionnaires.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Number of Female Respondents</th>
<th>Number of Male Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Please list all the insulting words used to describe your gender.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. What’s the most insulting term among these?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Please list all the insulting words used to describe the opposite gender.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. What’s the most insulting term among these?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We administered 170 surveys to college students in Zhejiang Agriculture and Forestry University, southeast of China. Out of these, 131 respondents answered the questionnaires. Twenty-six of the questionnaires were incomplete and therefore eliminated as invalid. The remaining 105 surveys included 51 male respondents and 54 female ones.

5. Results

As shown in Table 2, the majority of both males and females have a longer list of abusive words for women than for men. While 35 out of the 54 female respondents list more names for themselves, only 11 reported more for men. For male respondents, the numbers don’t vary as greatly, but still, 23 out of 51 male respondents have more names for women than for men.

Table 2. Number of respondents in terms of naming each gender

<table>
<thead>
<tr>
<th>Gender Comparison</th>
<th>Female Respondents</th>
<th>Male Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>More Words for Females</td>
<td>35</td>
<td>23</td>
</tr>
<tr>
<td>More Words for Males</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>Equal Words for Both Genders</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Total Respondents</td>
<td>54</td>
<td>51</td>
</tr>
</tbody>
</table>

Contrary to the typical Chinese pattern of responding to all questions when responding to a questionnaire, several of our respondents did not answer questions 2 and 4 (What’s the most insulting one among them?), or wrote “all of these words are very insulting.” The data in Table 3, the most insulting words for female, were collected from surveys that gave specific answers. From these statistics, we find a very interesting phenomenon—all of these words are related to women’s sexual immorality and both genders believe that “prostitute” is the most insulting to women.

The most insulting words for males in Table 4 are also related to sex, but relate to one’s manliness rather than immorality. Seven males regard 鸭 (meaning male prostitute) as the most insulting word. However, female respondents list 小白 (Kept Man) as the top insulting term in this category. Only one of our male respondents considered this term the most insulting one. 阳痿 (Impotent) is listed by four male respondents as the most insulting word, while no female reported thinking this term was most insulting.

Table 3. The most insulting words for female listed by more than three respondents of both genders

<table>
<thead>
<tr>
<th>The Most Insulting Word for Women</th>
<th>Woman</th>
<th>Man</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>* 子 (Whore/Prostitute)</td>
<td>14</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>* 人 (Hussy person)</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>* ** (Whore)</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>* (Chicken—prostitute)</td>
<td>2</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>* (Hussy)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>25</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Total Responses</td>
<td>51</td>
<td>44</td>
<td>95</td>
</tr>
</tbody>
</table>

Table 4. The most insulting words for male listed by more than three respondents of both gender
6. Discussion

In this section, we discuss key questions which arise for the findings in tables 2 through 4 and offer historical and current socio-cultural insights relevant to each key question.

6.1 Why do both females and males generate more names for women (Table 2)?

The traditional concept that “men are superior and women are inferior” has been embraced in the Chinese society for thousands of years, which results in the prejudice towards females. In regard of abusive language, people tend to use more names for women. Furthermore, even when males curse each other, women often become targets of the abusive language. As with娘娘腔 (Sissy) and娘 (Pseudo-girl), calling a man a woman as an insult, further denigrates the female image.

6.2 Why are all the most insulting words for women related to sexual immorality (Table 3)?

In a society based on a peasant economy, women lived under the patronage of men. A woman was regarded as property or auxiliary of her man that could never be defined by as an individual in her own right. Her sexual purity also belonged to her male patron. What’s more, with the establishment of the patriarchal system, women were expected to starve to death rather than lose their virtue. In this regard, it is not surprising that the most insulting words applied to women are all related to losing their sexual purity.

6.3 Why do males regard鸭 (duck) as the top insulting word for men (Table 4)?

That the term ・ (duck), meaning male prostitute, is detested by both genders, especially males, because it goes against the traditional concept. In China's traditional patriarchal society, the existence of male prostitutes was considered shameful to the dominant social status of males, not because male prostitutes were sexually active, but because they took money from women for having sex. This showed unacceptable weakness and demeaned other males as well.

6.4 Sexual ability VS Social ability (Table 4)

Table 4 shows that“陽痿 (男) (Impotence)” is regarded by males as the second most insulting term, while women believe “小白・ (kept man)” is more insulting. This division is founded in the nature of gender differences. Anne Moir and David Jessel (1992:107) write in their book Brain Sex: the Real Difference between Men and Women, “Men want sex, and women want relationships.” Males pay attention to their sexual ability, while women emphasize more men’s social ability.

6.5 Sexual cursing words

From the overall statistical analysis, we find that an overwhelming number of insulting terms are sexual in nature. Based on research in English, we classified the sexual terms into two categories: anatomical and behavioral. A third category also arose from our data relating not to the anatomy or behavior of an individual but to that individual’s mother.

Within the anatomical category, sexual organs are frequently mentioned in abusive words for both genders, such as “・ (dick)” and “逼 (mother’s genital)”. This phenomenon results from the fact that sexual organs are the most private part of a person, and typically not exposed in public. Because normally people are reluctant to mention these organs, when one wants insult another, he or she is likely employ a term from this category.

With regard to the behavioral category, the abusive content of words used for females and males are different when referring to sexual behaviors. For women, abusive words such as“破鞋 (worn shoes),” “破罐子 (broken bottle),” and“二手・ (second-hand things)” are used to describe women who lose their virginity. By contrast,“花心・卜 (radish with flower heart)” meaning playboy and applied solely to males, has a teasing
sense. The abusive content is much lower than “broken bottle” or “worn shoes”. Moreover, the words “小三 (little three)” or “第三者 (the third person)” that refer to destroyers who damage others’ marriages only appears in list of words for women even though women are not the only ones who cause broken relationships. Instead of blaming both sexes equally, however, women become the targets of abuse.

Finally, family is highly valued in Chinese culture, especially the respect of elderly family members. The concept that “Filial piety tops all virtues” is rooted in traditional Chinese virtues and remains in the hearts of nearly every Chinese person. Nevertheless, mothers, rather than fathers, often become objects in cursing words. Names like “・子生的 (son of a whore)”, “狗娘的 (raised by dog-mother)”, “・逼 (mother’s genital)” and “操你” (fuck your mother) are frequently mentioned in our survey while there are no examples of cursing words that include one’s father. This again demonstrates a bias in favor of males.

7. Conclusions

As reflection of social views and values, abusive language in Mandarin Chinese used by today’s college students still betrays a male bias. Cursing words for females are used more frequently than those for males and are more abusive in their content. Moreover, sexual words play an important role in Chinese profanity today. In this regard, sexual immorality is still solely insulting to women. Further, the mindset of men being superior and women inferior, still has an impact on Chinese abusive language as demonstrated by the fact that women often become targets of Chinese profanity.

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Abstract – Modern higher education in China has a history of more than a hundred years. Since the first university was founded, more universities and colleges have emerged and these schools contribute greatly to the further development of the country. However, problems are exposed as challenges and demands from the society change. Aiming at the current issues of higher education in China, scholars promote a change in educational philosophies and the purpose of schooling. Considered as an approach for universities to adapt the needs of society, general education, a common mode of higher education in US, is proposed and practiced in some schools. This paper provides a brief introduction to higher education in China and the current situation of general education's application as well as other issues in the reform. Meanwhile, general education and its problems in American universities can be considered as an instructive source for the reform of Chinese higher education.

Keywords – higher education, general education, reform

1. Introduction

The modern university system originated in the West and the idea of general education in China was adopted from the United States. General education was first proposed by an American professor from Bowdoin College, A.S Packard, in the early 19th century. According to his early definition in The Substance of Two Reports of the Faculty of Amherst College to the Board (Packard, 1829), general education is a comprehensive curriculum system that encourages all-round development. This movement faltered and was not widely employed until one hundred years later when Harvard University issued General Education In A Free Society: Report Of The Harvard Committee in which general education, as opposed to specialized education, is "used to indicate that part of a student's whole education which looks first of all to his life as a responsible human being and citizen" (1950, 51). Since Harvard's adoption of the structure of general education, this approach has been widely accepted for the first two years of higher education in America. For those who follow this mode, the aim of education is to ensure that students acquire understanding about the great ideas of Western civilization. The focus is to teach constant and everlasting truths. Meanwhile, another educational structure emphasizes the learning of facts and knowledge. Advocates for this approach believe a common core of curriculum needs to be transmitted to students in a systematic, disciplined way, and that education should concentrate on the basic knowledge, training students to master disciplined specific contents. This approach is typically followed in upper division courses in the United States and is currently the primary mode for all university education in China.

2. General Education in USC Upstate

In defining general education, establishing an educational system, and designing curriculum, many modern Chinese scholars use American general education as an invaluable reference. However, although the US is the first and the most advanced country in implementing general education, room for improvement remains. For this paper, the general education program at the University of South Carolina Upstate (USC Upstate) serves as an example. According to the General Education Policies and Procedures of USC Upstate, "It is imperative for students to have exposure to a broad range of courses in order to develop the breadth of knowledge necessary for college completion. To that end, a course distribution was created with courses divided into eight general content areas." These content areas are comprised of courses from the fields of science, humanities, foreign language, and math. As general education focuses on the cultivation of well-rounded people and the learning of eternal truth, USC Upstate follows the typical pattern of universities in the United States. In the last two years of university coursework, the educational philosophy and course structure shifts to concentrate on the study of knowledge and hard facts.

This bimodal approach to education is often perceived by students as an inconsistency resulting from an uncertainty about the purpose of schooling and teaching methodology. Students see no coherent goal in the kind of people the schools need to cultivate or how professors teach. Another problem is that some students do not believe two years of general education will provide them advantages in job-hunting. As they do not see or feel any benefit from their general education

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courses, their first two years’ study, aiming at the development of logical thinking and intellectual training, does not seem worthwhile from their perspective. These issues pose questions and demand solutions from educational researchers regarding what the purpose of schooling should be and how to design a curriculum that best matches the core concept of general education as well as students’ need.

3. General education in China

The history of general education in China dates back to 1916 when the first implementation was attempted by Cai Yuanpei, president of Beijing University. However, vocational education fostering the training of pragmatic skills gained ascendency instead. This was mainly due to the scarcity of material goods during the early period of the People's Republic of China. In order to meet the material demands of the society, each university put a great deal of effort into teaching techniques which would propel the development of the newly-established country. In the 1980s, China opened its door to western society, thus bringing more opportunities for domestic scholars to visit overseas, broadening people's insight into the benefits of general education. Meanwhile, American scholars were invited to China for cultural and academic exchange. All these factors led to an increase in interest from Chinese people in general education, and the implementation of general education in Chinese universities finally became a top issue in the 21st century. In the last century (and particularly in the last 20 years), China has made a great progress in economic development; the country is now considered the world’s factory as many corporations in developed countries outsource production to China and many products are finished there. But the labor market tends to be saturated with mid-and-low level technicians and administrators. There is shortage of people with originality and leadership – those qualities which can be fostered best by general education.

As China is confronted with the challenge of moving beyond a manufacturing focus, its universities are expected to assume the responsibility of cultivating a workforce with both skills and creativity. Furthermore, as the explosion of knowledge and information today makes it impossible for a person to remember all the facts pertinent to any given job, the abilities of problem solving and independent thinking have been prioritized. After comparing and researching American universities such as Harvard University, University of Chicago, and Columbia University, Chinese policy makers now consider general education the best way to deal with the workforce issues in China. Ganyang, a researcher from Hong Kong University, summarized this point in one of his lectures, saying "the purpose of general education is to learn the most basic, unchangeable truth. General education is the pursuit of eternal truth, which can train people's logic, rationality and help to form students’ ideas towards moral values and life" (甘阳).

Now, several key universities in China including Fudan University, Tsinghua University and Sun Yatsen University have begun to implement general education as a part of their curriculum. Currently most of these universities design a core curriculum system, and students are required to attend a certain number of elective courses from different fields in order to graduate. The reform, however, faces many difficulties. While schools attempt to introduce the system of general education, some students do not put the same effort into these courses as they do with their major courses, and teachers need to do more revision to their syllabi to engage students from different majors. Furthermore, general education asks for more time from students to cover multi-discipline courses, yet a brief introduction from each field may not be helpful to students' mastery of their chosen subject. Some parents also show their concern, worrying about whether their children will be competitive enough to find a high-paying job after being educated in this new mode.

4. Conclusion

As globalization brings each place closer, the living and educational patterns of different countries homogenize as well. Higher education in China needs change and the idea of general education is an appropriate new model to cure the problems of the status quo. As the Harvard committee observed in 1950, "The term, general education, is somewhat vague and colorless; it does not mean some airy education in knowledge in general (if there be such knowledge), nor does it mean education for all in the sense of universal education" (51). Nonetheless, the success of the reform in China and in the United States largely hinges on how general education is practiced in universities. Not all universities in the U.S. carry out general education that satisfies students’ demands, and even the best model of general education in the U.S. might not be appropriate for China. The best way is not for China to copy the U.S. system entirely but to explore and to device a practical way of practicing
general education that fits the Chinese higher educational system and the needs of Chinese society.

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Literacy in the Middle Grades

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Abstract — The literacy and reading level of a struggling seventh grade student was examined in this single subject case study. During a ten week period various methods were used to assess the student’s reading level and build skills to improve his literacy and reading ability. The case subject was reading at a fifth grade level at the onset of the intervention. After the reading strategies intervention his reading level was consistent however the level of confidence and fluency greatly increased. The experience of tutoring a middle school student in reading and literacy illustrates the importance of implementing reading in more subjects other than the English, Language Arts classrooms. Teachers of all grade levels and content areas should be mindful of their strategies and attitudes towards reading. All educators must strive for all students to read at or above grade level.

Keywords: literacy, middle grades, implementation, science, reading

1. Introduction

Literacy is an important skill every person should have mastered; especially in school when it is expected that all students know how to read and eventually in the middle grades when it is required for students to be able to read to learn (Zhihui, 2006). In the middle grades, students are transitioning from being taught how to read and the importance of reading while the main ideas are pointed out to them to being expected to read and be able to pick out the most important ideas and recall these ideas on a test (Zhilhi, 2006). Though, some students may be strong in reading and vocabulary, finding the main idea and important vocabulary may be more challenging when students enter in science classrooms as the terminology is not familiar. Conversely, there are quite a few students who are not even on grade level for reading and yet are required to read a textbook for understanding. This is beyond what the student is capable of doing based on the reading grade level.

Science is very important because healthy living and many careers stem from a foundation in science. However, to be a successful student, and to enjoy science, it is important to have a strong scientific vocabulary. Bhattacharya (2006) encourages teachers are to take the time to break down multisyllabic words for students to see how words are broken and the benefit of breaking the words down into smaller syllables to allow for better reading comprehension in particularly in science textbooks. Once a student has mastered breaking down multisyllabic words textbook comprehension becomes easier and more enjoyable (Bhattacharya, 2006). If textbook comprehension improves, then students will be more likely to read. As in any sport or music, the more practice done in the particular concentration the better the person becomes. Science textbook reading is another skill that must have practice in order to become more proficient. When students become more proficient in understanding vocabulary they will have stronger analytical reading and reasoning skills (Whimbe, 1995).

According to Radcliffe, Caverly, Hand, and Franke (2008) teachers are encouraged to incorporate textbook reading in their classrooms not only in order to improve literacy but also to help students do well on state standardized tests. They suggested that to increase students’ scientific understanding as well as overall student learning, teachers need to incorporate various strategies such as concept maps, checklists, field notes, and student interviews in the classroom. Students are expected to mature between elementary school and middle school but developmentally students are not ready for the expectation which they are currently expected to meet; which is why students should be taught and guided more through the transition period especially in textbook reading for comprehension and strategies in reading (Radcliffe et al, 2008; Radcliffe et al, 2004). As in any curriculum which spirals from year to year so should reading and literacy. It should still be implemented in all the content area classrooms not just in the English Language Arts classes. Every teacher should implement some sort of literacy into the curriculum and lessons (Fang & Wei, 2010).

2. Implementing Literacy Through Science

According to the National Center for Education Statistics (2007) a measure of the US literacy rate
is reflected in the adult population. “Twenty-two percent of adults [in the US] were Below Basic (indicating they possess no more than the most simple and concrete literacy skills).” Literacy is a learned skill. Illiteracy is passed on generationally by parents who cannot read or write. Because illiteracy is impacting the United States schools and economy, pre-service teachers were challenged to intervene with an at-risk struggling reader. In the fall of 2011, an in-depth single subject case study analysis of literacy and reading of a middle school student was implemented in light of the crisis. An analysis was done on a seventh grade male named David (pseudonym). It was evident through the research that many U.S. students are struggling on various levels: decoding, fluency, vocabulary, sentence structure, recognition of parts of speech, and reading comprehension. David was a student in the researcher’s (pre-service teacher) science class whose favorite subject was science. This information led to the integration of science and literacy into the intervention tutoring sessions.

At the initial meeting, it was evident that working with David was going to be challenging. His extremely quiet, reserved demeanor was an obstacle that was faced during the sessions. David’s reading struggles were with understanding the main idea, recognizing important vocabulary, and putting ideas in order. In science, these three skills are critical to being a successful science student. Planning intervention strategies that were of interest to David and would improve his literacy and reading skills was challenging.

2.1 Assessment

David’s literacy and reading level was assessed by using the SENIOR RFU: Reading for Understanding Placement test. The placement test is designed to assess students on an upper elementary reading level an undergraduate college level. The sixty questions on the test were all objective reading comprehension. The assessment was designed to progressively get more difficult with vocabulary and inferential and analytical type questions. For each question David had to read a passage and answer a question by picking out the best answer from a choice of four. Out of the sixty questions on the assessment, David was only able to answer 25% of the questions (15 of 60). Of those answered, David correctly answered ten (40% of the fifteen). David’s reading comprehension level was below a fifth grade level. This is two or more grades below proficient. His low reading skill was evidenced when David arrived at the sixteenth question and said “I don’t think I can go any further.” He showed determination while painstakingly trying to work through each question.

2.2 Reading Intervention

After David’s reading level had been assessed and it was evident that much work needed to be done in order to improve his literacy. Various methods of reading intervention were used to improve David’s reading level. The first few sessions were spent using analytical reading and reasoning strategies and activities which focused on vocabulary usage and reading aloud (Whimbey, 1995). David was asked to point to each word while reading aloud in order to assess his reading and determine, if while reading, he skipped or misread words. He found this activity to be difficult but eventually became comfortable with the concept of reading aloud and pointing to each word. With this practice, his reading fluidity improved. Some of the skills being taught, practiced, and assessed were not helping David and he did not appear to be enjoying the activities or applying the strategies.

Various web sources were used during planning to help activities that would capture David’s interest. One activity was focused around poetry which was recommended by a seventh grade language art teacher. The poetry session included activities to practice finding the main idea, reading comprehension and recall, determining the genre of the poem, and vocabulary (http://www.superteacherworksheets.com). It became evident that David enjoyed this activity much more than the previous. Gardiner’s (1984) children’s book Top Secret was introduced to David because in his science class David was learning about photosynthesis so this book was a perfect fit for integrating the tutoring and his science lesson. Top Secret is about a nine year old boy who insists on doing his science project on photosynthesis.

Each tutoring session David read one to two chapters aloud and pointed to the words on the pages. To get through the reading more quickly, David and the researcher (Caitlin McCaustland) took turns reading the chapters aloud. By reading the chapters, Caitlin modeled her goals for David and what she hoped he would achieve during their sessions together. After reading one to three chapters during the forty-five to fifty minutes of tutoring, David then worked on worksheets which corresponded to the chapters read that day during tutoring. By creating worksheets which corresponded to the chapters, as the tutor, Caitlin could pick and choose which skills she felt David needed more practice. Most of the lessons focused
on finding main idea and recalling important facts. Finishing up the book, David and Caitlin would summarize aloud what happened in each chapter.

2.3 Post-Assessment

The same assessment was given to David at the end of the ten weeks spent tutoring in literacy and reading it is important when assessing a student in any content area to assess using the same assessment or to have an assessment that models and mirrors the pre-assessment. On the RFU: Reading for Understanding test David answered eleven out of the fifteen correctly which is only one more than what had been answered on the pre-assessment. The progress and confidence seen in David while taking the assessment could not have been measured in a grade. His resulting reading level was still on a fifth grade level but the skills learned during this time were immeasurable and the goal during the time was to introduce him to strategies to test taking, reading, and recall.

3. Conclusions

It is important that students on all grade levels be reminded of the importance of reading and be taught skills that can be used in any area. Teachers need to focus their attention to this crisis in schools and learn how to do something about the low levels of literacy and reading. The job to teach students how to read does not just fall on the English, Language Arts teachers and the reading specialist. Every teacher, in every grade level, in every subject is capable and should teach students the skills need to master textbook reading, to master vocabulary understanding, and to realize the importance of reading beyond in the classroom.

Reading should be assessed at every grade level and in every subject area as students might better favor one subject over another which reflects in the comprehension for the particular subject. If students are not assessed in their reading ability, then how will teachers, faculty and administration be able to better the learning environment for students and when necessary provide the appropriate accommodations or guide students on better ways of succeeding in school? Literacy should not be the reason students do not graduate from high school. If this important skill is not taught during the middle school years and the importance of reading for understanding then students will struggle in high school. Success in high school can determine the path students take through college and the rest of their lives.

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Dr. Lori Tanner, the literacy and reading professor at The University of South Carolina Upstate made all of this possible. By reminding me how I learned to read and the struggles faced during my early years, and reminding me too that reading can be fun and it is fun. It is just up to the classroom teacher to make it fun and to encourage students to read, as not all reading material is boring. Without Dr. Tanner my passion for reading and tutoring students would not be where it is today and the outcome of the sessions with David would not have been as successful.

References


An Adult with Down Syndrome Learns to Use Facebook: Mini-Task Analyses as Accommodations

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Abstract — This collaborative project to document progress of an adult with Down syndrome learning to use Facebook used task analysis to provide the steps to be assessed, and data collection to check off steps that were: met with accommodations (notes on her computer), met with verbal prompt(s), or met independently. A college student majoring in special education tutored her in spring 2011 and the 2011-2012 school year to assist her in learning to use Facebook. The sessions were filmed and documented in written form including assessment with the use of task analysis and ongoing progress monitoring. They developed seven goals to accomplish. These goals included: logging on to her computer; logging off; getting to Facebook; using minimize, restore, and close keys; using the space, backspace/delete, and enter keys; replying to a message; and sending a new message. Accommodations included a note for each goal that listed the necessary steps to complete each task and these notes were placed on her computer. Now she is able to complete all tasks without the use of the notes. Five out of the seven tasks she completes independently, while two, replying to and sending a message, still require verbal prompting.

Keywords—Down syndrome, Facebook, task analysis

1. Introduction

This project was inspired by weekly tutoring sessions begun in spring of the 2010-2011 academic year. At the time, a 46-year-old adult with Down syndrome, who we will refer to as Donny, was seeking to enter the world of social networking in order to keep in touch with out-of-town family. Her brother wanted a Special Education major to help her with this challenge through tutoring. Up until age 42 she lived with her mom; she had no real concept of money, and had trouble making decisions on her own. After moving to a group home, she became more independent. Now she has a busy and structured schedule, including a job. At the time her brother approached the school for tutoring, her computer skills were limited. In the 2011-2012 academic year those tutoring sessions evolved into a Creative Collaboration project through which her progress has been documented.

2. Project

The research conducted in this project consisted of assessing Donny's abilities before tutoring began, the progress she made, what happened after a lapse of time of no sessions during summer break, and her progress after returning for sessions in the fall. The first step taken was assessing what she could do and could not do on her laptop. At that time, she had no general knowledge about how to maneuver on her computer and had problems with clicking and using the track pad, and typing letters. Goals were put into place. The goals included logging on to Facebook both via a link and the long way (as opposed to clicking her shortcut), replying to a message, sending a new message, and turning off the computer. Other goals came into play when it became obvious there were other aspects of the computer she needed to know in order to accomplish her goals. These other goals include using the restore, minimize and close keys and the space, backspace/delete, and enter keys.

From those goals, several task analyses \[1\] [2] [3] were put into place. Each goal had steps which were typed onto their own note and then placed on her computer. The steps ranged from 2-6 steps on each note, for each task. They were short and written in a very direct manner so that they would be quick to read and easy to understand. She then learned to utilize the steps necessary to complete each task. The notes are color coded to show where the space, backspace/delete, and enter keys were on the computer. Several of the notes have colors and symbols to help indicate where they can be found to enable her to find and utilize them on her own as needed. For example, to help Donny open Facebook, the note says “Find * and click (top)”. After the first few sessions with Donny, we realized she responded very well to visual cues, so they were incorporated into her notes. Over time, she has committed some of the steps to memory and those notes were removed from her computer; she is still...
evaluated on how well she can successfully follow each step without the assistance of the notes.

Each session we practice as many of the goals as we can. On days where she has a message in her inbox, we practice sending a reply message; on days where there are no messages, we send a new message. Sometimes we are able to do both. Throughout the session when it is apparent Donny is losing interest and redirecting is required, we use reinforcement in the form of looking through pictures of friends and family. Donny really enjoys sharing information about her friends and family, so when she works hard, she gets to look at whatever she wants on Facebook and can talk about her memories. As the sessions progressed, she was able to get through more tasks without taking breaks so our reinforcement has shifted to her sharing one of her favorite CDs from home after the session concludes.

Donny has overcome many challenges to date. We decided to make “going to Facebook the long way” a goal because on our second session we were surprised to find her shortcut icons had disappeared and the background had changed. She had been playing with the computer at home and changed the background, but lost the shortcuts in the process. We wanted her to know how to get to Facebook the longer way in case this happened again. Originally, she had been given visual and verbal prompting after an appropriate amount of time had passed and she did not know what to do next. In the beginning, she needed to be reminded to look at her notes to see what step was next. It took her a while to even find the note for a specific task on her computer. After a while, she began to automatically know where on her computer to look when she needed reminding of what to do next. At first she needed practice typing in her password to log on to her computer without making mistakes, so a note was added to her computer to point out the location of the backspace, enter, and space keys. Eventually, she was able to find and utilize them on her own. Currently, she does not need that note and knows when it is necessary to use those keys. In order to turn off her computer she needed to know how to close the Internet browser, so a note with the symbols indicating the minimize, restore, and close keys was added to the screen. We called them “to hide it,” “to make it big or small,” and “to close it,” respectively. That note is no longer needed. Clicking and using the trackpad were also challenges for her at first, but she improved with practice. She presently has no issues with logging on to Facebook. She types in her Facebook email and password, copying what her tutor had written down on the first session and then saved in order to cut down on memorization.

3. Conclusions

In conclusion, Donny is now independent with five out of the seven tasks and no longer uses notes. She can perform the tasks of logging on, going to Facebook, using the minimize, restore, and close keys, using the space, backspace, and enter keys, and turning off the computer. However, she still needs verbal prompting on replying to a message and sending a new message. Those tasks are more of a challenge than the rest because the concepts of replying and sending a new message are similar in steps to one another. Logging on to Facebook and turning off her computer have been easy for her since the beginning. She caught on to utilizing the space, backspace/delete, and enter keys pretty quickly as well. For other tasks such as, using the minimize, restore, and close keys, she needed the accommodation of the note for a longer period of time because we worked on them less and she therefore had a lapse of memory when we did come back to practice those tasks again. The other tasks were more of a priority to learn. The restore and minimize keys were a goal in case she accidently clicked those keys. She needed to know what they did. The close key is important because she uses it every time we go on the computer.

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References

Physical Education Teacher Education (PETE) Majors as Role Models for Physical Fitness

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Abstract – The National Association of Sport and Physical Education (NASPE) (2002) has taken a strong stance on the importance of adequate fitness levels of physical education teachers stating that physical education teachers have the responsibility to model an active lifestyle and to promote fitness behaviors. The current study compared fitness levels of Physical Education Teacher Education (PETE) majors to non-PETE majors. The study consisted of 43 subjects enrolled in a small southeastern university with ages ranging from 18 to 58. There were 25 females and 18 males, 18 of the subjects were PETE majors and 25 were non-PETE majors. PETE majors and non-PETE majors participated in a physical fitness test that included: 1) a one-mile run, 2) skinfold measurements, 3) curl-ups, 4) pushups, 5) sit & reach, and 6) handgrip dynamometer measurement. Though the sample was small, there was a significant difference in fitness levels between the two study groups. There has been very little research conducted on this subject. The current study should be used as a challenge to other PETE programs to determine if their PETE majors are more physically fit than their non-PETE majors on their campuses.

1. Introduction

The National Association of Sport and Physical Education (NASPE) (2002) has taken a strong stance on their belief of fitness levels of physical education teachers. They have stated that physical education teachers have the responsibility to model an active lifestyle and to promote fitness behaviors. It is important that physical education professionals “walk the walk” instead of simply “talking the talk”. Melville and Maddalozzo (1988) suggest that physical education teacher education major (PETE) program faculty have the responsibility to address fitness issues with their students, even suggesting that holding students to fitness standards would not be out of line. Because physical education teachers are role models for children and teenagers, it is not unreasonable to investigate the fitness levels of pre-service physical education teachers. NASPE (2002) supports the belief that physical education teachers that live a life that promotes physical fitness have a positive influence on the youth they serve. The more physically fit the students’ physical education teacher the more positive their feelings towards physical education (Cardinal, 2001). Melville (1999) contends that physical education teachers who allow their fitness level to decrease seriously impair their teaching effectiveness. Students will view a physical education teacher’s message as insincere and is lacking credibility. Therefore it is imperative that physical education teachers model a healthy lifestyle. In the field of physical education, modeling appropriate behaviors is important. It is critical that physical education teachers understand they are role models. Physical education teachers cannot be selective as to when they are going to be role models (Dean, Adams, & Comeau, 2005).

NASPE (2002) emphasized three key points when dealing with the issue of fitness levels and physical education teachers: (a) the behaviors of physical education teachers influence the learning of their students; (b) participating in physical activity increases the health and wellness of physical education teachers and is an essential behavior; and (c) there is an expectation that physical education teachers meet and maintain accepted levels of fitness. This underlines the importance that PETE majors need to understand the impact they will have as teachers.

2. Conclusions

This study found that PETE majors were only significantly different than non-PETE majors in the one-mile run. This study was limited by its small sample size and needs to be revisited. Perhaps a longitudinal study would reveal more significant differences between the groups. There has been very little research conducted on this subject. Therefore, the findings of the study should have an impact on PETE programs across the nation. As Melville and Hammermeister (2006) state, “it is apparent that our future physical education teachers will need to be leaders in school and community efforts to foster regular activity, good nutrition, and positive health practices,” (69). This study should be used as a challenge for other PETE programs to determine if their PETE majors
are more physically fit than their non-PETE majors on their campuses.

References


Strategies for Effective Case Study Preparation in the Nonprofit Classroom

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Abstract – As the need for well-prepared leaders in the nonprofit sector increases, so does the importance of identifying effective educational strategies to prepare emerging professionals. The case study method has been widely used in many disciplines to bring reality into the classroom. These cases are used to prepare emerging professionals to critically evaluate problems and issues and develop action plans to address these needs. As more case studies become available in the nonprofit literature, instructors need to give careful consideration on how to help the student effectively prepare for case discussions, analysis and reporting. This paper addresses practical instructor and student strategies that will increase the likelihood of a successful case study experience.

Keywords – case study, case study analysis, student preparation strategies

1. Introduction

The increasing complexity of the third sector requires nonprofit faculty to continuously search for effective instructional methodologies and training resources in the nonprofit undergraduate classroom. The case study approach has long been a popular method across various disciplines (Sankar, 2010, Anthony, 2009, McClam, 2005, Platt, 1992). It offers a practical approach to studying complex issues and has proved to be useful in providing in-depth, real world learning experiences that encourages a critical analysis of practice (Hewitt-Taylor, 2002, Vallis, 2000). Recently there has been an increasing number and variety of published on-line cases related to the nonprofit sector for instructors to utilize (Caseplace, n.d., Center for the Advancement of Social Entrepreneurship, n.d., Electronic Hallway, n.d., Harvard Business Publishers for Educators, n.d., Philanthropy Central, n.d.). To maximize the utility of the case study methodology, it is imperative that classroom instructors understand what the case study is, its basic characteristics, and how to best prepare students for its use.

The definition of a case study varies considerable, one of the most widely used definitions has been provided by Yen (Zucker, 2001, Tellis, 1997). Yen (1994) defines the case study as “...an empirical enquiry that investigates a contemporary phenomenon within its real life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used.” Regardless of how the case study is defined, its structure ranges from a simple story with a message, a content-specific situation that involves a decision to be made or a problem to be solved (Kyburz-Graber, 2004), to a narrative of a topic with an intellectual dilemma that stimulates inquiry, critical thinking and problem solving (Brickman, 2006). Ellet (2007) suggests that any case must contain at least three characteristics: an important issue or issues, enough information to form conclusions, and no stated or confirmed conclusions. Unfortunately, the availability of nonprofit case studies has only recently begun appearing in the literature leading many instructors to adapt existing cases from other sectors and attempt to incorporate them to fit the course content as best they can.

Case studies are useful in introducing principles of good practice for undergraduate education. Pedagogically, they provide opportunities to actively engage students in analyzing, synthesizing, and evaluating problems or issues to discuss and identify appropriate solutions (Kunselman & Johnson, 2004; Wolfer & Baker, 2000, Chickering, 1987). Boehrer (1990) suggests that a student-centered learning experience is created that fosters critical thinking, encourages student responsibility for learning, develops collaborative skills and teaches self-directed learning. And according to Holst (1994), case studies can be particularly useful in helping students learn to frame problems, spontaneously think and speak, improve writing communication, build social capital with other students and increase subject matter knowledge in the discipline. Lundberg and Enz (1993) suggest that the emerging profession benefits by practicing managerial skills, connecting analysis to action, dealing with the absence of information, and developing a managerial point of view.

Though the published literature on case selection is extensive, little attention has been focused on the most effective means to prepare the learner for a successful experience. While it is essential to select the case for analysis that fits into...
the global course goals and ultimately the learning and teaching objective, it is also important to plan on how to prepare the students to participate in the case process. Strategies to prepare students for cases extend beyond what is typically necessary for the lecture method. When student preparation skills are examined in the literature it is typically addressed only in a superficial manner. Herried (2007) has highlighted the importance of encouraging student preparation for class, especially with case study teaching. To familiarize students with the case content, they are typically asked to read the material carefully and answer questions supplied by the instructor. These questions generally address student recommendations to solve the particular case dilemma or debate. While this approach may be adequate in some circumstances, greater levels of complexity and ambiguity may require further thought.

This article addresses methods to prepare students for effective participation in the nonprofit case study process. Planning strategies are presented for both instructor and student strategies that range from general recommendations regarding student behavior and the class environment to specific comments on strategic introductions and process.

2. Instructor Oriented Strategies to Increase Student Preparation

A complex case study requires considerable and systematic student preparation. For the most efficient and effective use of time, the instructor should plan to address issues including desirable student study behaviors, classroom culture and the environment.

2.1 General Strategies

The case study method requires regular preparation prior to class. Simply reading the case and having a general awareness of the issues is usually insufficient preparation for most students to provide a sophisticated case analysis in a fast moving discussion. There are numerous strategies used by instructor to increase preparation for case discussions. Good practice dictates that students always be informed at the beginning of the semester about the expectations necessary for a successful experience. It is sometimes helpful to allow students time to offer their views on how they have seen effective case discussions work in other courses and what they should do to maximize the positive approaches. Class time for periodic ice breakers early in the semester may increase students’ comfort levels and as much as class size permits, instructors should learn each student’s name and encourage students to learn each other’s names. Since students tend to talk to those across from them, arrange seats in a circle pattern to promote face to face interaction. It is particularly important for instructors to limit their comments and allow students to explore their ideas and responses with one another.

Instructors should also explicitly define what is meant by participation (Golich, Boyer, Franks, & Lamy, 2000). Unfortunately many students define participation as attendance. One effective activity on how to emphasize the importance of participation in the case study is to administer the Participation Experience Inventory (Golich et al., 2000). This inventory has the respondent indicate the extent of involvement on a wide range of classroom activities from previous classroom experiences. Ideally the use of the inventory will increase the instructor’s awareness of the students’ past engagement history and assist in identifying opportunities for improvement. Davis (1993) has suggested a number of insights to help create a classroom in which students feel comfortable enough to take risks and share ideas. Class members may be selected to lead discussion sessions. When using this strategy it is best to meet with the discussion leaders prior to the case to review questions and format issues. Roles such as a summarizer, recorder, timekeeper or designated first speaker may be assigned. The use of email to send questions to students and a follow-up distribution of the responses to the class can be utilized to initiate class discussion.

2.2 Evaluation Strategies

Herried (2007) has offered advice on how to encourage the “perennial problem” of getting the student to prepare for a case. Ironically, the first suggestion is to use cases that do not require outside preparation. Each case is a self-contained unit that provides needed information as the case unfolds. In this method grades would be based on follow-up assignments. Other evaluation options to encourage pre-case preparation is to administer a quiz at the start of each case, use small group grading where peer pressure prompts student to prepare ahead of time, or have students turn in a product such as a short paper before the case is to be covered. Failing grades may be awarded for problem students that fall below a certain threshold. Some instructors grade on individual participation where a tally of students contribution with a good (+), bad (-) or indifferent (o) score is used.
Making participation part of the evaluation process can be an effective means to increase student preparation. Golich et al., (2000) has presented three evaluation formats that focus upon preparation, speaking and listening. The first is a self preparation evaluation that asks each student to assess themselves according to four criteria: attendance, preparation before case, listening skills during the discussion and contributions or analysis on topics during the discussion. The second evaluation relates to the case analysis question(s). Students are asked to reflect upon how they would change their case analysis after the class session and to report on overall lessons learned and goals for the next case. The third format is a team case preparation evaluation. Students are asked to record a grade, along with an explanation, for themselves and their teammates on a scale of 0 to 5 (0 = did not participate and 5 = an exceptional team member). These evaluation formats may easily be adapted for instructor preferences. Golich et al., (2000) suggests that instructors consider administering the evaluations several times during the semester to provide feedback, reinforcement and goals for future classes.

2.3 Strategic Introduction Strategy

Strategically introducing the case prior to students reading or otherwise learning about the case issues to be addressed has been proposed by Brickman (2008). According to the author, “the introductions that precede case reading (or listening or watching) are often quick and superficial, with little thought given to engaging students’ motivation to learn from the cases and preparing students to debate issues related to the cases.” Advance organizers should include a clear and concise overview of the case content to be presented, time for students to search for relevance and personal connections to the content, and efforts to create an accepting environment where everyone feels comfortable asking questions and sharing opinions. Students should be reminded that all views that are “informed, logical, and communicated in a respectful way are welcome.”

3. Student Oriented Strategies to Improve Preparation

Students accustomed to learning passively through traditional lecture approaches often have to refocus their study habits in order to have a rewarding and successful experience. Changing the classroom culture is frequently required. The goal of an effective case study is one in which active preparation and participation is not only the expectation but the norm. Guidance from the instructor can help organize the thinking about the case in order for students to plan for classroom discussions, analyze factual information, reflect upon the relevant meanings to key issues and communicate persuasively.

The in-class discussion for the case study requires a thorough knowledge of the facts and some level of independent analysis. Lundberg and Enz (1993) illustrate a sequential set of steps that instructors may present to students to help organize their efforts in a timely fashion. The first step is becoming familiar with the case’s general situation and the major issues. Recognizing symptoms in Step 2 addresses the awareness of the differences between problems and symptoms. A symptom is an indication that something is not the way it should be. An early recognition of symptoms will reduce the risk of confusing them with problems later in the analysis process. Identifying goals from the organization or individual in the case comes in Step 3. This step will help in the identification of problems to be addressed. A systematic understanding of what criteria to use in solving problems, e.g., ideas, models or theories, is a key component in Step 4. The making the diagnosis step (Step 5) requires the identification of the gaps between goals and performance. Finally, the best alternatives to solve the problem or issues are identified and the implementation strategies are chosen (Step 6). When identifying alternatives, Acadia University (2006) suggests that students remember to be realistic and that solutions should fit within the constraints of the case situation. Since alternatives may have to be used in the future, students should avoid using the “meat sandwich” approach. This occurs when two or more undesirable alternatives are chosen to make one alternative look better by comparison. It is important to keep in mind that all alternatives reported should have a reasonable chance of being successful if implemented.

4. Conclusions

The case study method is a well-established teaching tool used in many disciplines. Increased opportunities for nonprofit instructors exist as more cases become available for use. In choosing a case study, instructors need to critically evaluate which case best fits the pedagogical issues important to the course and that can be generalized to a wide range of leadership or managerial issues or concerns. In addition, instructors may find that careful time and planning is needed to develop tactics to make sure students are prepared to learn and analyze case material.
Relatively little attention has been given to issue in the published literature. Existing literature suggests that numerous instructor and student strategies should be taken into consideration. These strategies include motivating students to be prepared before class by informing them early in the process about expectations, types of evaluations, study questions and ways to work effectively in small teams. Changing the class culture from the more traditional lecture model to one where students take primary responsibility for their learning is critical. The introduction of study techniques such as the case analysis process along with having a classroom environmental that is conducive to sharing informed, logical and respectful communication are vital to the learning in the case study process.

References


Sam Gilliam: An African American Artist Following His Own Vision

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Abstract — Sam Gilliam (b.1933) is a painter of the Washington Color Field School. He creates abstract draped canvases and collages. Although he is African American, he made the decision to not portray overtly “Black” images, or symbolism in his artwork. That decision has led to more acceptance of his work in the highly competitive, often exclusive, white-dominated world of museums and galleries. It has also brought criticism from some African American artists, who feel it the responsibility of black artists to present Afrocentric themes and images in their work. The problem is that these types of themes tend to keep African American art separate from “mainstream” art. This paper explores the history behind the categorizing of, and dismissal of “Black Art” by curators and patrons. It also explores the decision of Gilliam, as well as other black artists, to pursue their own course of aesthetics in an attempt to gain more exposure, as American artists.

Keywords — Sam Gilliam, Abstract Expressionism, Washington Color Field School, African American Art

1. Introduction

Sam Gilliam’s paintings are described as sculptural for their shapes which are twisted, cut, suspended from the ceiling, or placed on the floor. These are Gilliam’s draped paintings, innovative works, the first of which was created in the 1960’s. Gilliam’s technique involves the discarding of stretchers on his canvases. This allows him the freedom to manipulate, tie, and hang his canvases. These pieces then become not only paintings, but also sculptures and architecture; the viewer becomes a participant in the work, able to walk around, through and under many of the pieces. The average viewer would not be able to ascertain from his work that Gilliam is African American. His abstract style aimed to reach a wide, even a universal audience, but it was questioned by some critics in the 1960s and after, who felt that black artists should depict the black experience. These critics wanted to see an identifiable subject matter that related to politics and identity in the African American community, sometimes this type of art is referred to as “Black Art”. As stated by Romare Bearden in A History of African-American Art, “Although never satisfactorily defined, Black Art was characterized as a realistic or figurative art created by black artists, addressed to black Americans that communicated a spirit of black pride and solidarity, of power and militancy in the struggle for full rights as Americans.” This paper weighs the pros and cons of this debate and provides a biography of the artist and a historical context for Gilliam’s works along the way.

2. Gilliam’s Biography

Sam Gilliam was born in Tupelo, Mississippi in 1933. He grew up in Louisville, Kentucky, where, after receiving a Masters degree of Fine Arts from the University of Louisville, taught art in the public school system. He married in 1962, moved to Washington, D.C. where he also taught, and became involved with the Washington Color Field School.

Gilliam decided early in his career to seek another vision other than that of “Black Art”. This decision had its foundation in graduate school at the University of Louisville, where Gilliam studied with internationally renowned artists, Ulfert Wilke and Charles Crodel, both of whom had respectively, barely escaped, or been victim to, the atrocities inflicted on Jewish people by Nazi Germany. Wilke and Crodel, because of their experiences as part of the Jewish Diaspora, had empathy with the black art students, and nurtured them. In addition to art courses, black students were urged to take courses in art education as a back-up plan. Gilliam was influenced by both Wilke, who was an Abstract Expressionist, and Crodel, who was a German Expressionist. He was also influenced by the works of the Bay Area artists, David Park, Richard Diebenkorn, and especially Nathan Oliveira. These artists steered away from the trend of non objective imagery and toward an abstract figurative style. Gilliam had to make a decision on whether to pursue figurative painting or delve into abstraction. The Bay Area style gave him the opportunity to gradually move in the direction of abstract painting.
3. Gilliam’s Art in Context

The decision to paint abstractly has led to criticism of Gilliam’s artwork by some in the African American community for its lack of “Black” imagery. He has been accused of ignoring the plight of blacks in his works, and essentially viewed as a traitor. Since the period of the Harlem Renaissance in the 1920’s, black artists have been urged to present images in their works relevant to the black community. Black scholars, W.E.B. DuBois and Alain Locke advocated the creation of art from an African perspective. Locke, the first African American Rhodes Scholar, in the book entitled The New Negro, 1925, praised artist, Aaron Douglas’ works for its proud portrayal of his people. Locke states in the book: “We ought and must have a school of Negro art, a local and racially representative tradition.” Aaron Douglas was one of the many black artists to follow in this tradition.

Crucifixion, 1927, is one of seven illustrations rendered by Douglas for James Weldon Johnson’s book, God’s Trombones, 1927, and is of an abstract African style. Another was Augusta Savage, a portraitist, whose sculpture entitled, Lift Every Voice and Sing (The Harp), 1939, was commissioned for the 1939 New York World’s Fair. It was inspired by James Weldon Johnson’s poem of the same name, which is sometimes called the Black National Anthem.

Over time, the call to produce “Black art” dwindled, but had a strong resurgence during the civil rights era of the 1960’s, and the Black Power movement of the 1970’s; to some extent, it remains true even today. Educator and activist, Ron Karenga, (creator of Kwanzaa) in an excerpt from Black Cultural Nationalism, 1968, stated: “For all art must reflect and support the Black Revolution, and any art that does not discuss and contribute to the revolution is invalid, no matter how many lines and spaces are produced in proportion and symmetry and no matter how many sounds are boxed in or blown out and called music.” Gilliam’s works have tended to skirt the racial themes. His early figurative works, which are similar in style to that of the Bay Area artists, seem race-less, and with no political agenda, as illustrated by Untitled, c. 1961, oil on canvas (Fig. 1). This is a moody piece of a lone figure standing in a space devoid of surroundings.

4. The Early Years

After joining the Washington Color School movement, Gilliam became enthralled with the art of Hans Hoffmann, and his theory of composition building contained in the phrase, “Push answers with Pull, and Pull with Pull”. The resulting experimentation with bold colors produced such works as Shoot Six, 1965, acrylic on canvas (Fig. 2). The vivid colors of reds, yellows and blue, converge at the lower right corner of the canvas, and flare upward and outward diagonally, contained only by crisp white lines, and creating a dynamic composition.

Gilliam began to experiment in new ways of making images by pouring paint onto the canvas, by raking the paint across the canvas, or by staining it. An example of the result is Red Petals, 1967, acrylic on canvas (Fig. 3), which, as described by title is basically red. Unlike Shoot Six; there are no hard edges here. It has hazy shapes of blue and yellow which seem to bleed or float on the red field.

Seeking an innovative approach of presenting his artwork, Gilliam began using beveled edges on his pieces, an idea which he has admitted stealing from another artist, Ron Davis. Using chamfered stretchers allowed Gilliam bring a new dimension to the canvas, away from the flat surface of the wall, as demonstrated with the treatment of Snakebite, 1968, acrylic on canvas (Fig. 4). The back edges are chamfered, and according to Binstock, “appear to float and sometimes even to slip and slide, detached from the gallery wall.”

Eventually, Gilliam eliminated stretchers, altogether, leading the way to his most acclaimed works of art. He began creating the draped paintings, such as Light Depth, 1969, acrylic on canvas, 120” x 900” flat (Fig. 5). It hangs as a site-specific installation. It has swirls and twists that drape almost from the ceiling to the floor at the intersection of two walls.

5. Politics vs. Abstraction

In answer to some black criticism of his work, Gilliam has indicated that while he admires the militant black artists’ contributions, he feels that it is just as important to pursue his own style, and to gain access into the mainstream world of art. Gilliam has also been criticized for his ambivalence toward civil rights issues. His participation in the 1963 March on Washington was his last time supporting those causes. According to Jonathan P. Binstock, “Gilliam emerged from the movement disenchanted’, wrote Vivian Raynor in a 1974 human interest story on the artist for the New York Times Magazine: ‘Not only did white insubigence, especially in the unions, remain virtually unchanged, he felt, but the sum total of his activism had amounted to little more than gaining political honors for others.’

After the assassination of Dr. Martin Luther on April 4, 1968, Gilliam painted a series of abstracts.
dedicated to the slain civil rights leader, including *Red April*, 1970, acrylic on canvas (Fig. 6). Although not depicting Black imagery, the red splatters across the canvas evoke images of historical violence inflicted on blacks, and the title gives a clue to the fateful event symbolized. Gilliam immortalizes Dr. King in his own style. He strives with imagery, color and title to elicit a universal response of anguish.

In January, 1969 Gilliam participated in a symposium which included Romare Bearden, Richard Hunt, Jacob Lawrence, Tom Lloyd, William T. Williams and Hale Woodruff. During the symposium, Gilliam, while speaking of the importance of the past, stated: "This was the overriding consideration: What the artist was concerned with and what I looked for as a kid, and what I dealt with when I was painting figuratively. But later on, you're a mature artist, maybe a great one, if you can personalize yourself, move from identification with something outside yourself to your own thing."

Gilliam spoke of the absence in quality of artistic knowledge within the Black community. He questioned why, during the Washington, D.C riots, when whites stayed in the suburbs, museum attendance fell so drastically. He also spoke of the need for better art education, focusing on “the quality of aesthetic experiences available to persons within the Black community, and raising the level of this quality.”

This statement gained validity in June, 1969 when Gilliam, William T. Williams, Melvin Edwards, and Stephan Kelsey (a white artist) held an exhibition at the Studio Museum of Harlem entitled, *X to the Fourth Power*. The Harlem community was outraged by their art, and “by the time the show closed, abstract artists, particularly Gilliam .... were discouraged from exhibiting there in the future.”

The issue of raising the level of aesthetic experiences does not only exist in the African American community, but in the community as a whole. The scope of art education needs to be re-evaluated. The question is: why is most of the work created by black artists separated from “mainstream” art? Why is there inclusion? So much of the so-called “Black Art” of the past and present is not militant in nature. But it does contain Afrocentric images, from which white curators tend to shy away. African American artists receive minimal exposure in mainstream venues, and when exposure occurs, it is usually in exhibitions designated to African American art. One such exhibition entitled *The Chemistry of Color – Contemporary African American Artists*, was held at the Columbia Museum of Art from February 5 – May 9, 2010. Works of Sam Gilliam, Jacob Lawrence, Romare Bearden, Faith Ringgold, Betye Saar and many other African American artists were exhibited. With the exception of Gilliam, Bearden and Saar, these artists’ works are rarely seen outside of this type of venue. Sam Gilliam’s experience raises the question of how the art community can generate interest in artwork that transcends cultural and racial lines and, without qualifying the term “American” represent all genres equally, as American art.

In the world of museums and galleries “high” art has always been judged by European aesthetics, with ethnic art often being de-valued, or belittled. At times, it has led to cultural appropriation, described as “the superficial and inappropriate copying or mimicking of cultural artifacts and symbols.” It has also been subjected to sexual connotations. The history of these perceptions is complex, but involve the long period of colonization and domination of third world people. These people were considered savages, their artwork primitive, and therefore unworthy of consideration as “high” art. The intrinsic impulse among the hierarchy of the art world is to dismiss anything related to “primitive.” The terms “Primitivism” and “Orientalism” are used to describe the fascination held by Europeans for non-western cultures, the pre-conceived ideas of the naivety of these cultures, and fantasies revolving around the women of these cultures, as sexual objects.

Even early modernist artists who claimed admiration for, and inspiration from African sculpture and masks, portrayed images derived from African artwork as sensual, yet grotesque. In her article, *Making Primitive Art High Art*, Duke University Professor, Marianna Torgovnick states: “Continuing and expanding an older tradition of using blacks as signs of sensuality, paintings of the modern movement, from Manet’s *Isles d’ Avignon*, had used blacks and black art in connection with debauchery, especially in the depiction of prostitution and brothel life.” Although Gilliam’s works are not overtly ethnic, and do not conjure up images of things to be feared or sexualized, they are, I would argue, inherently African or African American. The bold patterns and colors are reminiscent of the designs found in African textiles. Artist and art historian, David C. Driskell, feels that Gilliam’s works are the “equivalent to jazz, blues and gospel” in black American creativity.

Sam Gilliam’s works are highly sought after, in this country as well as others. They are not only included in numerous museum and gallery collections such as the afore-mentioned Studio
Museum in Harlem, the Museum of Modern Art in New York, and the Smithsonian American Art Museum in Washington, D.C., but also in religious and public spaces. Gilliam created a temporary installation entitled Of Fireflies and Ferris Wheels: Monastery Parallel, 1997, polypropylene (Fig. 7) for the chapel gallery of the Kunstmuseum Kloster Unser Lieben Frauen in Magdeburg, Germany. Another piece, Color of Medals, 1998, (Fig. 8) is constructed of acrylic, polypropylene, and digital prints on birch plywood with aluminum and piano hinges, and installed at the Department of Veterans Affairs in Philadelphia, Pennsylvania.

6. Conclusions

The kind of success achieved in the art world by Sam Gilliam is rare for any artist, black or white. He had a vision and, although criticized by some, remained adamant in his convictions. Hopefully, he has opened the door for young African Americans to participate in a variety of styles of art, as artists and as viewers. Aaron Douglas’ and Augusta Savage’s works are wonderful, but so are the works of Alma Thomas, William T. Williams, and Sam Gilliam.

As artist, Raymond Saunders stated in his 1967 pamphlet entitled, Black is a Color: “Racial hang-ups are extraneous to art, no artist can afford to let them obscure what runs through all art—the living root and the ever-growing aesthetic record of human spiritual and intellectual experience. Can’t we get clear of these degrading limitations, and recognize the wider reality of art, where color is the means and not the end?” These words are more relevant today than ever.

Acknowledgements

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References

Figure 2. **Shoot Six**, 1965

Figure 3. **Red Petals**, 1967

Figure 4. **Snakebite**, 1968

Figure 5. **Light and Depth**, 1969

Figure 6. **Red April**, 1970

Figure 7. **Of Fireflies and Ferris Wheels: Monastery Parallel**, 1997
Figure 8. Color of Medals, 1998
Clementine Hunter: Canonical American Folk Artist

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Abstract – Most disciplines in the humanities have a body of canonical producers and works. Art history is no exception. The art historical canon is dominated by white male artists who have been at the forefront of culture by inventing and transforming art into new forms of media, techniques, and concepts. These canonical works are universally praised and valued by critics and historians and are considered a fundamental part of the education of any new up and coming artist. Canonical works are highly prized by curators and much sought after by collectors. They are often worth a great deal of money and are known and recognized by most people. Historically, African American artists have been excluded from the art historical canon and have struggled for recognition (Poldosky). Occasionally, African American artists are accepted into the fine art canon, but not in the numbers that they should be given the amount and quality of their work. This exclusion shows that the canon is influenced by access to privileges that go beyond the merit of the work itself. Folk art is a category of production that has proven more welcoming of diversity. This paper goes outside of the art historical canon and into the realm of folk art to present the case of Clementine Hunter (1886-1988), an African American folk artist. Her art is not in the canon, but its value is based on alternative criteria of greatness and shows that art historical innovation belongs to all races and all identities.

1. Biography of Clementine Hunter

Clementine was a descendant of slaves, born in the late 1800s. James Wilson’s 1988 biography, Clementine Hunter: Folk Artist traces the biography of Hunter’s life. The artist’s biography is also illustrated in her paintings. She lived and worked on several plantations in Louisiana, as a free person, over the course of her life. After working in the fields, having five children and two marriages, Hunter was in her forties before she found herself in a higher position at the Melrose Plantation. The Melrose Plantation was known for encouragement, from the plantation owners, of open freedom to create art by the plantation worker or passing visitors, specifically African Americans. As Hunter became more aquatinted with the surroundings of the plantation home and watching other artist paint and draw, she thought she could paint just as the others could. In 1938, at the age of fifty-four, Hunter painted her first artwork on the top of a shoebox with paint that had been left behind by others. After her first painting experience, Hunter would continue to paint and illustrate her life and the lives of other African Americans she knew.

Though Hunter has not been a leading pioneer in the art world, she created over 4000 works of art in her lifetime, each showing a specific story illustrating her life as an African American woman and work and human relations on a plantation. Her paintings have not been exhibited in world-class museums, but many viewers appreciate Hunter’s ability to document her life and express her emotions through her art. Because she had no formal training in creating art her paintings are categorized as folk art. Folk artists rarely if ever make it into the fine art canon, but, over time, folk art has been studied and appreciated as its own genre and Hunter definitely belongs to the canon of respected folk artists.

2. A Brief Overview of Hunter’s Memory Paintings

Hunter is also categorized as a memory painter. This technique involves painting images from memories, pulled from her childhood and life experiences. Her memory paintings are illustrated in simple arrangements, such as, Baptism Procession or Wash Day (1970) (Figs. 1 and 2). Clementine Hunter’s untrained hand, allows her to paint images that are powerful in shape and color. Her paintings are developed from what she creates inside her mind and the inspiration she draws from her childhood experiences or memories of her African American heritage. She is identifiable in the folk art world by several techniques and characteristics. These techniques include the use of painting all human forms in profile, as well as, lack of proportion in form, use of baselines and the heavy use of a flat perspective. These two paintings are typical of her art and serve as good examples of how folk art compares to the traditional historical art canon. Canonical works are often prized for realism and mastery of complicated techniques and for conceptual innovation. Folk artists, on the other hand, often paint intuitively and expressively, their main goal is often communication, not innovation. For example,
Baptism Procession (Fig. 1), which was created towards the end of Hunter’s life, displays memories of her childhood baptism. We see several females, all in profile view, walking from the church down to the river. Hunter creates a brown baseline at the bottom of the piece that allows a marked place for her to build her painting upwards. The use of trees and large human forms shows a lack of concern for the concept of proportions. Hunter’s techniques do not fit neatly within the fine art canon, but her thought process and themes are clearly communicated. And while her techniques are not formal or rigorous, Hunter’s subject matter depicting this religious rite has been used innumerable times over centuries of art history.

Some African American artists, especially those working at the same time as Hunter was at the end of her career, in the 1970s, believed that to make art relevant to life it must express or inspire political action. Hunter’s memory paintings do not do this overtly, but they do tap into a longstanding call from within the African American community to represent the reality of everyday life. Hunter’s memory paintings document first hand experiences of an African American worker in a white dominated society. That work is represented in Wash Day and in many of her other paintings as dignified, orderly, and productive. While it is perhaps less politicized than some of her peers might have liked, there is room for many different kinds of expressions of the African American experience.

3. Conclusion

Although increasingly recognized within the fine art canon, African American artists’ contributions have been strongly represented in the folk art canon for decades. Folk art has proven much more open to broad definitions of art and its ultimate purposes. This paper argues that within the field of folk art we can find artists and artworks that are just as aesthetically powerful and historically important as those found in the traditional art historical canon. Clementine Hunter, like many other folk artists, worked under harsh conditions, but, despite her hardships, she managed to illustrate poignant stories of everyday life through her large series of memory paintings. These works are just as worth of our attention and historical preservation as more canonical works of fine art.

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Oliver “Ollie” Harrington

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Abstract – Political cartoonist Oliver “Ollie” Harrington is noted for his satiric jabs concerning race relations, the Middle East, and poverty in Third World countries. His cartoons often comment on the inequality and corruption of the George W. Bush and Ronald Reagan years. From experiencing racism as a soldier in WWII and being a Civil Rights activist, Harrington’s work evolved from a comical commentary on human folly such as Harlem night life in the 1930s, and a new found popularity in Abstract Expressionism in the mainstream art world, to more controversial issues such as lynching in the South, government conspiracies, and the exploitation of Africans and their resources. Harrington publicizes the hidden social atrocities occurring in the United States, and pushes African Americans to become politically involved and unveil racism, injustice, and the plight of the neglected and oppressed (Fabre). McCarthyism in the United States also influenced Harrington’s anti-patriot commentary. Harrington’s publications as well as his active role in the NAACP during a time of anti-communist hysteria incited an investigation by the House of Un-American Activities Committee for alleged communist behavior. As a result, Harrington fled to Paris in 1951 and later moved to Berlin. Though removed from America, Harrington’s bitterness from a life of turmoil and racist saturation remained persistent in his work. While in Germany, he published more political cartoons against American racism and corruption. He published his autobiography Dark Laughter: The Satiric Art of Oliver W. Harrington (1993) featuring over one hundred of his cartoons ranging from the early to late 1990s. Harrington seldom dated or titled his work, allowing the reception of the viewer to speak for the subject. Not long after his book’s publication, Harrington died in 1995 in Berlin, trapped by the Berlin Wall (Watkins).

Keywords – Harrington, Oliver W., political cartoonist, Bootsie, African American Art

Political cartoonist Oliver “Ollie” Harrington was born in February 1912, in the small suburban area of Valhalla, NY. Harrington became inspired to begin cartooning out of loathing for his racist sixth grade teacher Miss McCoy. Over time, Harrington perfected his subject, earning a Bachelor of Fine Arts degree from Yale University in 1940. Later he attended the National Academy of Design in New York City. His humorous commentary on war, racial injustice and stereotypes, and the rift between classes in the United States, granted him the title “African Americans’ favorite satirist” by his close friend and leading writer of the Harlem Renaissance Langston Hughes (Humphrey). Ollie partnered with Langston to produce a series of cartoons narrating the entertaining life of the character “Bootsie” in the 1930s. Bootsie became the first national African American cartoon. Bootsie is described as a fat, mustached, lady’s man, who often finds himself in mischievous situations, sometimes unintentionally. His Harlem adventures in nightclubs, and the emerging world of African American art and literature, made Bootsie a household figure (Pace). Harrington’s “Bootsie” and other works were found in the African American newspapers such as The Chicago Defender, and The Pittsburgh Courier. These, and other influential newspapers, collectively referred to as the Black Press, helped organize the fight against racism in America and became instrumental to achieving the goals of the Civil Rights Movement. Although focused on the United States, some of these newspapers also examined race relations on an international scale. Harrington’s work is noted for its satiric jabs concerning race relations in the US, but also for dealing with politics in the Middle East, and poverty in Third World countries. His later cartoons often comment on the inequality and corruption of the George W. Bush and Ronald Reagan years.

From experiencing racism as a soldier in WWII and being a Civil Rights activist, Harrington’s work evolved from a light-hearted, comical commentary on human folly in scenes of everyday life, to incisive political commentary and critique. For example, his early subjects included depictions of Harlem night life in the 1930s and parodies of the then newly founded Abstract Expressionist style in the mainstream art world. For example, the Bootsie panel in the New York Amsterdam News depicts Bootsie critiquing his comrade Slim’s Abstract Expressionist painting. Like most of Harrington’s cartoons, this panel is untitled, however Harrington provides text, “No, it don’t make no sense to me neither Bootsie. But white folks jus’ won’t buy nothin’ if it makes sense!” This critique reflects the social constraints many African American artists encounter in art articulated as
“double consciousness”. This term coined by philosopher and black activist W.E.B DuBois describes a psychological turmoil within many African American artists who feel obligated to present black subject matter in their art as a tribute to their race, and to facilitate change in the plight of their communities. However, by creating black art many African American’s are excluded from the mainstream art world, thus hindering them economically and socially. As Slim paints what appear to be geometric shapes and lines on canvas, mimicking the work of Kandinsky, a popular Abstract artist during the time, he explains he has no understanding for the popularity of Abstraction. Slim explains that this type of work is what white people buy, so he is creating abstract art, though he has no interest in the style himself. This illustrates the desire to feel included in mainstream, and the economic need to make money through a social cannon that has through time excluded African Americans. Harrington’s comical critique of society through the adventures of Bootzie and Slim were often light hearted, however as time moved on and the struggle for Civil Rights in the African American community gained more momentum, his attention shifted to more controversial issues such as lynching in the South, government conspiracies, and the exploitation of Africans and their resources. An untitled cartoon featured in the People’s Daily World reaches to the sensibility and emotion of basic humanity, as Harrington depicts starving Africans groveling in hunger and death at the feet of what appears to be a well-dressed, well-fed white woman. Harrington writes, “Save the wild beasts of our forests from cruel extinction! The rhinos and elephants.” This clearly illustrates the neglect and hypocrisy Harrington felt the rich exemplified and the belittlement of Africans not only as less than human, but also less valuable than the “wild beasts of our forests”. Similarly another untitled work shows a line of starving Americans waiting for their ration of soup, while standing next to the State Capitol and a U.S. satellite overhead. Harrington is expresses America’s lofty spending in the Space Race in the mid-1900s, while Americans grew poorer. The State Capitol in the background symbolizes a dream deferred, the American Dream. Scholars have documented this shift in Harrington’s art and explain how he helped call attention to the hidden social atrocities occurring in the United States, and pushed African Americans to become politically involved by unveiling racism, injustice, and the plight of the neglected and oppressed (Fabre).

Harrington’s publications as well as his active role in the NAACP triggered an investigation of the artist by the House of Un-American Activities Committee for alleged communist behavior. This was during the era of McCarthyism, a period of anti-communist hysteria in the U.S. when many politically active African Americans were targeted unjustly by the government and pressured into silence, exile, and in some cases, were jailed as conspirators against the government. As a result, Harrington fled to Paris in 1951 and later moved to Berlin. Though removed from America, Harrington’s justified bitterness from a life of turmoil and racism remained persistent in his work. While in Germany, he published more political cartoons against American racism and corruption. He published his autobiography Dark Laughter: The Satiric Art of Oliver W. Harrington (1993) featuring over one hundred of his cartoons ranging from the early to late 1990s (Thomas). Harrington seldom dated or titled his work, allowing the reception of the work up to the viewer. He wanted the work to speak for itself. In 1995, not long after his book’s publication, Harrington died in Berlin. His work is significant through his analytical depiction of corruption of government and the exploitation of citizens. His work was so impactful as to provoke government action against him, showing that visual statements are most influential for change. It was through Harrington’s work that he was able to illustrate for the Black Press and the NAACP, political structures and organizations known for communicating justice and independence in African American communities, and also means to impact government policies for equality.

I became interested in political cartoons in sixth grade when I first began analyzing them in my social studies class, mainly because they often use humor to exact a serious message. Harrington’s work relates to me as an African American artist on issues of economic and social equality, as well as his sympathy for the oppressed outside of the U.S. I find that humor is a welcoming tactic in its versatility and intimacy, directly relating to the viewer on some level. Until researching Oliver Harrington, I had never contemplated the idea of an African American political cartoonist. As an African American, I find that most of the curriculum I am taught concerns white males. Therefore, I usually assume that anyone in a major publication or has some notoriety as cartoonist or a writer is a white male. The Boondocks (2005) an animated television series by Aaron McGruder is noted for its controversial jabs at government control and African American stereotypes. Like Harrington in his time, McGruder is a little known writer whose work is seen on late night television away from the mainstream. The shows questionable language and nudity, may account for
its late night debut, however many daytime television shows exact the same type of material, but are made by white writers. For example, Seth MacFarlane’s *Family Guy* (1990) started on nighttime television, but quickly moved to daytime and is incredibly popular. It is plausible that censorship is more imposed on African American work for undue fear of socialist reform, similar to the communist hysteria that drove Harrington to Europe in the 1950s. As we move into the future, hopefully, more artists will pick up the legacy of social and political critique that made Harrington such an important artist throughout most of the twentieth century.

**References**


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**Figure 1.** Miss McCoy!
Date unknown. Size Unknown. Pen and ink.

**Figure 2.** Dark Laughter (Bootsie)

**Figure 3.** Untitled
*People’s Daily World*
Figure 4. Untitled
*People's Daily World*

Figure 5. Untitled
*People's Daily World*
Abstract – This paper comes out of original research conducted for my African American Art History class in the Fall of 2011. The paper provides biographical information about Winston Wingo, a Spartanburg based neo-expressionist painter and sculptor who has earned an international reputation for his work. I was privileged enough to meet Wingo at his studio in the Hampton Heights neighborhood of Spartanburg, South Carolina (Fig. 1). We discussed some of the formal properties of his work as well as his conceptual focus and philosophies about making art in a small southern city for a global audience.

1. Winston Wingo: A brief biography

Winston Wingo was born in Spartanburg, South Carolina (1952– ). He received a B.A. in Art Education from Claflin University in Orangeburg, SC and a Master of Fine Arts in Sculpture from Clemson University in Clemson, SC. His postgraduate studies were at the Instituto Statue D’Arte in Lucca, the Luigi Tammasi Foundry and the Artistica Mariani Foundry in Pietrasanta, Italy. Wingo has exhibited throughout the United States, Italy, France and Canada and has received numerous commissions. His regional public commissions include a bust of Martin Luther King, Jr. for Group 100 of SC, Harmony a cast bronze in Spartanburg, SC, Technofigure for the SC Governor’s School for the Arts in Greenville, NC and he created Stop the Violence for USC Upstate in Spartanburg.

Wingo is a painter, sculptor, and art educator. He teaches in the Spartanburg public school system. He is currently teaching art at Carver Junior High of School District Seven. Winston has also taught at Claflin University, and has been an adjunct instructor for Converse College, South Carolina State University and the University of South Carolina Upstate, Spartanburg, SC. He is currently working and maintaining a studio in Spartanburg, SC. Mr. Wingo is represented by the Ward-Nasse Gallery in New York as well as Mason Murer Gallery in Atlanta Georgia.

2. Formal Analysis of Wingo’s Work

Wingo’s painting Along the Tracks (Fig. 2) shows two young African American men walking and hanging out in the after school hours in a remote place. Crossing the iron bridge, a historic landmark in Spartanburg county, leads the subjects into a town that was often unwelcoming, whereas, on the other side of the bridge the men remain on familiar domain. This painting has a mixture of cool colors accented by warm highlights. Highlights of gold and orange tints dominant, while the whites are used to supply greater detail in the brushwork, which some consider an abstraction. However, in our conversation about the painting, Wingo notes that there are no abstractions in his work. Lyrical brush strokes yes, but not abstractions. His lines and markings define and detail this composition as a whole. Wingo notes that light is being exaggerated through the use of the golden color palette. This composition is unified through the use of strong diagonal and horizontals embedded in the art work. Even the two subjects’ individual perspectives create strong parallel diagonal lines that echo those found in the bridge and at the midpoint of the picture plane. Also at that midpoint, the train tracks are expressed as a definite division between the two African American males and the city. Both men seem to acknowledge the city, but their expressions communicate some kind of discomfort about what they are perceiving. Wingo noted that the chiaroscuro lighting palette is inspired by Rembrandt’s use of strong contrasts between lights and darks to create tension and drama. The high contrast between light and dark elements is definable from the sun in the background.

Wingo gathers inspiration from personal experiences. This painting is in fact a personal reflection about his own memories of Thompson Street near downtown Spartanburg. Thompson Street (Fig. 3) is a rendition of Wingo’s old neighborhood. The house in the middle of the picture plain is where Wingo grew up. The house no longer exists and many other things have changed. So it is important to note that this painting was created from Wingo’s memory. The two water towers no long are present and the church is also gone. For Wingo, this is a personal place and the perspective is of Wingo’s physical existence in this place, but in the past. Lyrical lines in the composition delineate certain forms while adding contrast to others. Stark shades and tints...
add “pop” to distinguish time of day and direction of light. The light source is accented by a bright yellow, which exaggerates the hints of daylight on the side of the building in the lower left of the picture plane as well as the dirt road (Fig. 4). The lemon-colored light source also acts as a directional guide throughout the composition. It unifies the background and foreground through the use of light and direction. The mood is somber. The sun has set and it is somewhat depressing due to the maple color palette, which also adds a vintage effect, underscoring that this is a time and place from the past.

Wingo continues the theme of home and memory in Mary Lou Wingo (Fig. 5) a portrait of the artist’s mother. This painting also has a warm color palette, but it is complemented by green accents. Lyrical lines meet hard rectilinear lines that accentuate the painter’s gesture and the physicality of his technique. Wingo explained that the subject matter is not just his mother, but also a representation of mother Earth. Hence, the warm colors and the expressions of love on Mary Lou’s face are extremely important. She smiles in the kitchen that Wingo paints from memory, rendering this special time, person and place in his life. He noted that this day his mother’s words of wisdom for a young African American artist in a trying world uplifted him and coerced him to succeed anyway he could in the fine arts world. Pay close attention to the juxtaposed kitchen elements between the background and the foreground. They form a triangle from the subject and back over to another kitchen appliance. Even the subject herself is a dominant triangle. Those specific triangles create a harmony and balance within this composition. Wingo’s works are formally composed to create a sense of order and harmony and this is underscored by his choice of subject matter, which is personal, but also broadly relatable to most viewers of his works. As an artist, I find his design process most exciting to experience.

Acknowledgements

I would like to thank Winston Wingo for graciously welcoming me into his studio and allowing me to interview him.
Figure 4. Winston Wingo, *Thompson Street*, detail

Figure 5. Winston Wingo, *Mary Lou Wingo*
The School of Education is the only South Carolina institution to offer a graduate program in Special Education for Teaching the Visually Impaired.

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Voice Activated Interactive Ambient Information Display

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Abstract — Normally the primary purpose of an information display is to convey information. If it can be aesthetically interesting, that is an added bonus. Recent research experiments with reversing this imperative. An information display, which is first - aesthetically pleasing and second - is able to display information, is designed and implemented. The display presents an e-mail title in a visual form as a collage of images - each image corresponding to one or more words. It next filters the collage through aesthetic properties specified by an artist, such as colors, texture, and shape. This filter renders the original collage as a pleasing art. We propose an extension of this work by: adding a voice activation module; displaying information of user’s request (versus displaying e-mail titles only); and presenting the display in a form of a decorative digital painting hanging on the wall. The advantages of this approach are: being ambient - in a sense of: entering person’s attention when needed, and largely disappearing into the environment when not needed; and being interactive - as in providing information per user’s interest through speech recognition. This produces new interactive, ambient system for aesthetic information display on user’s demand.

Keywords — ubiquitous computing, speech recognition, image collage, aesthetic display, human-machine interface.

1. Introduction

As computer use has shifted into wider aspects of life, the requirements that it has faced have shifted as well. The value of computing technology was traditionally measured by its results - largely its usefulness in solving problems of interest. As computational technology moves beyond the confines of the work environment and into the rest of our lives, we have begun to see an additional requirement emerge: desirability. Products such as Apple iMac and iPhone have shown that selling computer technology is starting to be about "nice", and "interesting" and even "beautiful", as well as "understandable" and "easy to use".

Our proposed system addresses this trendy desirability requirement by its easy to use voice activated information request; and by displaying information in an understandable, pleasing manner, where we use images versus text, and we present them in a form of beautiful art.

Traditionally, we used to think of computers as a glass box, a workstation with keyboard, mouse and monitor sitting on a desk that we seek out when we want to do some work. A shift in thinking, together with technological advances, led to a new generation of user-computer environments including virtual reality; multimedia; as well as pen, eye-movement, and agent-based interfaces; tangible interfaces; and ubiquitous computing. A turn to the "social", "emotional", and "environmental" began shaping the new designs.

The trend is towards a ubiquitous computing experience, in which computing devices become so commonplace that we do not distinguish them from the 'normal' physical surroundings. The idea is that a ubiquitous computing device would enter a person’s attention when needed, and move to the periphery when not needed, enabling the person to switch calmly and effortlessly between activities without having to figure out how to use a computer to perform a task (Rogers, Preece, & Sharp, 2007). In essence, the technology would be unobtrusive and largely disappear into the background.

Weiser (1993) marks the birth of ubiquitous computing idea; where, computers would be designed to be part of the environment, embedded in everyday objects, devices, and displays. Today this theme is seen by its research community as the future of computing. Our proposed system taps into this future computing idea, by its design to blend into the "normal" physical surroundings, i.e., into the environment.

The rest of the paper is organized as follows: section 2. reviews related work, section 3. describes our proposed system, and section 4. concludes and discusses directions for the future.

2. Related Work

2.1 Aesthetic visual displays

Unlike traditional information visualization, ambient information visualizations reside in the environment of the user rather than on the screen of a desktop computer. Currently, most dynamic information that is displayed in public places consists of text and numbers. Skog, Ljungblad, and Holmquist (2003) argue that information
visualization can be employed to make such
dynamic data more useful and appealing. However,
visualizations intended for non-desktop spaces will
have to both provide valuable information and
present an attractive addition to the environment
and they must strike a balance between aesthetical
appeal and usefulness. Authors implement this
idea, with aesthetic filter inspired by the Dutch
artist Piet Mondrian, for real-time visualization of
bus departure times. The information display is
deployed it in a public space.

Lau A. and Vande Moere (2007) propose a
model, which reveals information aesthetics as the
conceptual link between information visualization
and visualization art, and includes the fields of
social and ambient visualization. Authors model
focuses on visualizing large datasets. While
information visualization predominantly focuses
on effectiveness and functional considerations, it
may be neglecting the potentially positive influence
of aesthetics on task-oriented measures. Aesthetics
has been identified as one of the key problems to
be solved in information visualization research
(Chen, 2005).

In previous work, (Redstrom, Skog, & Hallnas,
2000) and (Holmqquist & Skog, 2003) have been
drawing inspiration from famous artists when
designing information visualization, creating so-
called informative art. By basing visualizations on
well-known artistic styles, the hope is to create
ambient information visualizations that literally
look “good enough to hang on the wall”, while still
providing useful information (Skog et al., 2003).

In our proposed system, we adopt the
information visualization aesthetic filter from
Fogarty, Forlizzi, & Hudson (2001), which is based
on the well known Kandinsky (Barnett & Barnett,
1989) artist style.

2.2 Ambient information displays

Using the physical environment to present
information has been explored previously, in
particular in ambient media (Ishii & Ullmer, 1997).
In ambient media, information displays are
designed to present information in the periphery
of the user’s attention. For example, Ishii and Ullmer
(1997) introduced a lamp that uses different
intensity to indicate variations in an information
source. Closely related to this is the term calm
technology, which was coined to define technology
that moves between the periphery and the centre of
the user’s attention (Weiser & Brown, 1995). When
correctly designed, calm technology should become
a natural part of the user’s everyday surroundings.
An example of calm technology was the dangling
string, an installation where a hanging piece of
wire would shake more or less depending on the
traffic in the local network.

Many ambient displays have been based on
physical constructions, but this puts limitations on
the flexibility of the display and the complexity of
the information that can be shown. A natural
choice would therefore be to use computer
graphics for ambient displays. In the past, the cost,
size and capabilities of computer screens has been
a hindering factor. However, with the rapid
advancing of display technologies, they have
come more become affordable, and therefore it is now
possible to hang a high-resolution display on a wall
as if it was a poster or a painting. In the future,
technologies such as electronic ink and color-
changing textiles may make it possible to display
computer graphics on almost any surface, even
wallpapers or curtains (Holmquist & Melin, 2001).
Several peripheral displays using computer
graphics have been presented recently. A common
approach seems to be to take information from
traditional wall-hung art to inform the design and
use of such displays. InfoCanvas are specialized
computer displays that provide awareness of some
source of information using images, creating a
form of “virtual paintings” (Miller & Stasko, 2002).

Information collages are automatically
generated, aesthetic collection of images in the
style of certain artists that reflect dynamic
information (Fogarty et al., 2001). Normally the
primary purpose of an information display is to
convey information. If it can be aesthetically
interesting, that is an added bonus. Research by
Fogarty et al. (2001) experiments with reversing
this imperative. An information display, which is
first - aesthetically pleasing and second - is able to
display information, is designed and implemented.
The display presents an e-mail title in a visual form
as a collage of images - each image corresponding
to one or more words. It next filters the collage
through aesthetic properties specified by an artist,
such as colors, texture, and shape. This filter
renders the original collage as a pleasing art.

2.2 Voice activated displays

Welch and Bergman (2001) propose a voice-
operated, interactive message display system
designed for inter-vehicle and extra-vehicle
communications. The system includes one or more
display units having a matrix of light-emitting
elements to transmit a message to other vehicles
either to the front, rear, side, or combination.

Anderson (2009) presents a multifunction in
dorm automation system (MIDAS). It is an
elaborate automation system featuring web
control, voice activation, a security system, with
large continuously running information displays. The system was implemented and it functions providing voice activated control for lights, electric blinds, music server, and LED displays. The information on the LED displays is presented in the form of scrolling text. We are unaware of any previous work on voice activated ambient information display using images, or aesthetic collages.

3. Voice Activated Ambient Information Display

Our proposed system is presented to user as an organic LED display, which blends into the environment. It produces the equivalent of a painting or a poster hanging on the wall in a home or office setting. The user is then able to walk to it, and say a word or a sentence that he/she would like information about. In the background, the system connects to a search engine, retrieves the titles of the top results, and converts them into images.

It next filters this collage through Kandinsky (Barnett & Barnett, 1989) artist inspired system to represent the images as decorative objects (Fogarty et al., 2001). The user is presented with the requested information in a visual form of beautiful art.

Our proposed method is an extension of the aesthetic information collages system, which we adopt from Fogarty et al. (2001). We enhance the system by adding a speech recognition module, a search engine capability for displaying information of user's interest, and we make this system ambient by presenting it in the form of a virtual painting hanging on the wall. It, therefore, blends with the intended environment to be used in. Our proposed method is illustrated on Figure 1.

3.1 Speech recognition and search engine connectivity

Our proposed system utilizes the Sphinx speech recognition engines (Kumar, Kim, & Stern, 2011) from Carnegie Mellon University, USA. User's speech is transcribed into text. The text is fed through an XML file into a Google search engine API. We use the Google AJAX Search API, a free web service available through Google Code, which allows us to programmatically search for keywords, and retrieve results. The top search results are retrieved. Each result is saved as a string of words.

3.2 Image collages and aesthetic filter

A string of textual words is fed to the image collage system. It queries a database of indexed images. The related images are retrieved as a result. This collage of images is likely to reflect the semantic content of the inputted string of words. Example collages are illustrated on Figure 2. The database used is from PhotoDisc Inc. (Ojala, Pietikainen, & Harwood, 1996) and contains approximately 24,000 royalty-free photos.

Finally, the produced image collage is run through an aesthetic filter based on the well known Kandinsky (Barnett & Barnett, 1989) artist style. Aesthetic templates are the central mechanism for expressing the aesthetic properties. Properties of interest include: color, texture, edges and lines, direction, shape, and relative contrast. An aesthetic template is composed from a layered set of regions (Fogarty et al., 2001). Example image collage, an aesthetic template, and the result are shown on Figure 3.

4. Conclusion and directions for the future

We produce a novel information display system. It is voice activated through interaction with the user, displays information per user's request, and it blends into the environment. The proposed approach presents an improvement over a previous aesthetic information collage system by creating an interactive ambient information display.

We are unaware of any previous work on voice activated ambient information display using images, or aesthetic collages.

Our proposed system addresses the trendy desirability requirement of today's computing. It is easy to use, and it displays information in an understandable, pleasing manner. Our technology is unobtrusive and largely disappears into the background.

To better blend into the environment, this work can be extended by adding a context aware element. An embedded mini camera or a small sensor can be added to the virtual painting, which takes a photo of the surroundings. From the photo context information can be inferred such as: colors of the room walls, of the sunlight, of the person's clothes, and the furniture. These colors can be used in the aesthetic filter to match the colors shown on the display. Additional information inferred could be the amount of surrounding light - used to adjust the display's brightness; also the shape of the furniture can be used to match shape of aesthetic elements on the display.
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**References**


Figure 1. System diagram of the proposed method.

Figure 2. Example image collages.
Figure 3. Image collage run through the aesthetic filter.
Mathematical Study on the Effect of Catheter on the Peristaltic Transport of a Viscous Fluid

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Abstract — In this work we investigate the peristaltic transport of viscous Newtonian fluid in a vertical annulus. One dimensional mathematical model is developed and governing equations are obtained using long wave-length approximations. Analytical solutions are obtained for velocity and pressure rise per wavelength. Additional physical effects such as the influence of heat transfer and magnetic field are also taken into account. We prove in this work that existing solutions (Mekheimer & Elmaboud 2007) of this problem are flawed and here we present correct analytical solutions.

Keywords — Peristaltic pumping, viscous, endoscope

1. Introduction

Peristalsis is a well known process of liquid transport that is used by many systems in a living body to propel or to mix the contents in a tube or channel. Peristalsis is a mechanism of pumping fluids in cylindrical tubes when a progressive wave of contraction or expansion propagates along the walls of a distensible tube containing liquids. In general, it includes propulsive and mixing movements and pumps the fluid against pressure rise. Physiologically, peristaltic action is an inherent property of smooth muscle contraction. It is an automatic and vital process that drives the urine from the kidney to the bladder, food through the digestive tract, blood in small vessels and has applications in many other similar situations.

Mathematical and computer modeling of the peristaltic motion has attracted the attention of many researchers starting with the work of Shapiro et al. (1969). Later on, Pozrikidis (1987) extended the idea and used numerical simulations using boundary integral method to study the peristaltic flow in a channel for Stokes flow and studied the relationship of molecular convective-transport to the mean pressure gradient. After the pioneering work of Shapiro and Pozrikidis, studies of peristaltic flows in different flow geometries have been conducted analytically, numerically and experimentally by a number of researchers.

Considering the importance of heat transfer in peristalsis and keeping in mind the sensitivity of liquid to the applied magnetic field an attempt is made to study the combined effect of magnetic field and heat transfer on peristaltic flow in an axisymmetric vertical annulus. There are several investigations to study the effect of endoscope on peristaltic transport (Naby 2004).

Present day, we use many different types of tubes for medical diagnosis. Health professions rely on endoscopes to see inside the digestive tract and small intestine to have a visual examination of a problem. Moreover doctors often use catheter to go inside a vein and presence of a catheter in an artery alters the flow field and modify the pressure distribution (Sankar & Hemalatha 2007).

2. Formulation of the Problem

In developing a mathematical model, we consider MHD flow of an electrically conducting Newtonian fluid through the gap between two coaxial vertical tubes. The inner tube is rigid and is maintained at a temperature $T_1$ and the outer has a wave travelling down its walls and is at temperature $T_0$. The geometry of problem is shown in Fig.1.

We assume that the fluid is incompressible with uniform properties, i.e., density and electrical conductivity are constant. The walls of the tube are set to a given temperature. We assume that fluid is subject to a constant transverse magnetic field. A very small magnetic Reynolds number is assumed and hence the induced magnetic field can be neglected.

Figure 1. Schematic of problem
The fluid fills the gap between coaxial uniform tubes, such that the inner tube is rigid and outer tube with sinusoidal wave travelling down its wall. The flow is considered to be axi-symmetric with a uniform magnetic field applied in the transverse direction to the flow. The geometry of the wall surface is described as:

\[
R_1 = a_1, \\
R_2 = a_2 + b \cos(\frac{\pi z}{L}),
\]

Where \(a_1, a_2\) represent the radii of the inner and outer tube, \(b\) is the amplitude of the wave, \(\lambda\) is the wavelength.

### 2.1 Governing Equations

We start with full Navier-Stokes equations in cylindrical coordinates. Using model assumptions of axi-symmetry, the non-dimensional governing equations under the long wavelength and low Reynolds number approximations are given as:

\[
\frac{1}{r} \frac{\partial}{\partial r} \left( r \frac{\partial w}{\partial r} \right) + \frac{\partial^2 w}{\partial z^2} = 0 \quad (2a)
\]

\[
\frac{\partial p}{\partial r} = 0 \quad (2b)
\]

\[
\frac{\partial}{\partial r} \left( \frac{\partial \Theta}{\partial r} \right) + \frac{1}{r} \frac{\partial}{\partial r} \left( r \frac{\partial \Theta}{\partial r} \right) + \beta = 0 \quad (2d)
\]

We solve the system of equations given in (2) for \(\Theta\) and \(w\), subject to boundary conditions:

\[
w(r_1) = -1, \quad w(r_2) = -1, \quad (3a)
\]

\[
\Theta(r_1) = 1, \quad \Theta(r_2) = 0, \quad (3b)
\]

where \(r_1\) is constant and \(r_2 = 1 + \phi \cos(2\pi z)\).

Notice that equations given in (2d) for \(\Theta\) is decoupled and can be solved independently subject to boundary condition (3b) to give a solution:

\[
\Theta = \frac{1}{4 \ln \pi} \left[ 4 + \beta (r_2 - r_1) \right] 4 \ln r - \beta (r_2 - r_1) \ln r_1 + \beta (r_2 - r_1) - 4 \ln r_1 \right].
\]

With the solution for \(\Theta\) known, we can re-write the equation for axial velocity as follows:

\[
\frac{1}{r} \frac{\partial}{\partial r} \left( r \frac{\partial w}{\partial r} \right) + M' w = M'^2 - \frac{p}{2} + \frac{Gr}{4 \ln \pi} \left[ 4 + \beta (r_2 - r_1) \right] 4 \ln r - \beta (r_2 - r_1) \ln r_1 + \beta (r_2 - r_1) - 4 \ln r_1 \right].
\]

From equation (2b), it is clear that pressure does not depend upon \(r\). Therefore we can solve the above non-homogenous differential equation using method of variation of parameters.

The solution for \(w\) is given as

\[
w(r,z) = \alpha I_0(Mr) + \beta K_0(Mr) - \frac{1}{M^2} \left[ M^2 + \frac{P}{z} - \gamma Gr \right] - \frac{\beta Gr}{M^2} \quad (5)
\]

Where \(\alpha, \beta, \gamma\) are constants with long and complicated expressions, and are not given here due to space limitations.

### Conclusions

Mathematical model is developed to study the peristaltic transport with endoscope effects. Using long-wave length approximations, we derived a simplified mathematical model which we solve analytically to find solutions for the energy fields and velocity of the fluid. The influence of different physical parameters is discussed and results are plotted. Present work corrects the existing solutions for this kind problem considered earlier (Mekheimer & Elmaboud 2007).

### Acknowledgements

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### References


Survival Probabilities with and without the use of Censored Failure Times

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Abstract — The analysis of time-to-event data arises in diverse fields and survival functions are used to determine the probability of an individual surviving beyond a certain time. The analysis of survival experiments, however, is complicated by issues of censoring, where an individual's life length is known to occur only in a certain period of time. It stands to reason that if we do not consider censored times it should be obvious that the estimate of a survival function does not show a true representation of the survival function. As such we do not wish to have a large standard error or a large bias. Now when these censored times are considered we are supposed to get a more realistic representation of our intended survival function. Thus in this study we test to see whether the use of or exclusion of censored data can cause a severe effect on survival probabilities and we concluded that the inclusion of censored data produces the less biased functions with the smaller standard error from the true survival function.

Keywords — Survival analysis, censored failure times, Kaplan-Meier estimator, Cox model

1. Introduction

The time-to-event data analysis is used predominately in biomedical sciences where the interest is in observing time to death either of patients or of laboratory animals and survival functions are the quintessential quantities for describing the probability that an individual will survive beyond a specified time. The problem of analyzing time-to-event data, however, arises in a lot of applied fields, such as biology, public health, engineering, economics, and demography. In the case of machinery or products, the survival function actually measures the products failure rate, or time until the products fail, and thus the survival function is also referred to as the reliability function. To be specific, let \( X \) be the time until some specified event. Then the survival function is defined by the probability of an individual surviving beyond time \( t \), \( S(t) = \Pr(X > t) \). The survival function is a non-increasing function with a value 1 at the origin and 0 at infinity. Then Kaplan-Meier (1958) proposed an estimator for estimating the survival function. A plot of the Kaplan–Meier estimate of the survival function is a series of horizontal steps of declining with jumps at the observed event times. The size of these jumps depends not only on the number of events observed at each event time, but also on the pattern of the censored observations prior to event time. Suppose that the events occur at distinct times \( t_1 < t_2 < \ldots < t_k \). Then, the Kaplan-Meier estimator is a product of the form

\[
\hat{S}(t) = \frac{n_i - d_i}{n_i},
\]

where \( n_i \) is the number of survivors just prior to time \( t \), and \( d_i \) is the number of deaths at time \( t \). In medical studies we are also interested in comparing two or more groups of time-to-event. In comparing two survival functions, we may plot the standard estimates of the Kaplan-Meier survival estimators, and McCracken and Hyun (2010) plot the standard estimates of the survival functions and visually examine these curves. The subjects in the groups, however, may have some additional characteristics that may affect their outcome. For example, subjects may have demographic variables recorded, such as age and gender, or physiological variables, such as blood pressure and heart rate. Such variables can be used to predict the distribution of the time to some event. So another function useful in survival analysis is the hazard function, \( h(t) = \lim_{\Delta \to 0} \Pr(t < X < t + \Delta \mid X > t) / \Delta \). See Klein and Moeschberger (1997) for more details. The widely used proportional hazards model allows us to quantify the relationship between the time to event and a set of explanatory variables, Cox (1972). For an individual with covariate vector \( Z \), the hazard rate at time \( t \) is modeled as follows:

\[
h(t \mid Z) = h_0(t)e^{\beta Z},
\]

where \( h_0(t) \) is an arbitrary baseline hazard rate and \( \beta \) is a parameter vector. In survival analysis, however, a lot of reasons make it difficult to get complete data in studies of survival times. A study is often finished before the death of all patients, and we...
may keep only the information that some patients were still alive at the end of the study. So it is common that these data sets contain censored observations. Most common censoring schemes are right censoring, where all that is known is that the individual is still alive at a given time. One possibility to deal with censored data is to be unaware of them, and compute the statistic only on the rest of the data. However we may lose some information ignoring censored data, and actually our estimator will be biased because ignoring right-censored data means ignoring data which has the property to be greater than a given value. In this case, the expectation of our estimator is smaller than the real value of survival time. Therefore in our study we are looking at whether or not censored data has a bearing on the reliability of a survival function, i.e. we test to see whether or not the use of, or exclusion of, censored data can cause an obvious and severe effect on survival probabilities. Now when these censored data are considered we are supposed to get a more realistic representation of our intended survival function.

2. Methods

Our testing is carried out using a statistical analysis program, R (2008). Using the R software, there is a ready-to-use package Survival which provides some tools we need to fit our model. We generate that we have \( n \) independent, identically distributed lifetimes, \( X_i \), with exponential distribution function, and \( n \) independent, identically distributed censoring times, \( C_i \), with exponential distribution function. The actual observations consist of \((T_i, d_i)\), where \( T_i = \min(X_i, C_i) \) and \( d_i = I(X_i \leq C_i) \) is an indicator of the censoring status of \( T_i \). As such we program R to produce twelve graphical representations with each graph showing our true exponential survival function and fifteen estimates of each simulation. The graphs are as follows: for each sample size \( n=50, 100, \) and 200, we make two plots at a censoring rate of thirty percent (30%) and two at a censoring rate of sixty percent (60%), then one graph from each censoring rate was produced with the censored data considered and once without the censored data. We present the two graphs with the sample size \( n=100 \) here. While doing this we also consider the Cox models in regards to standard errors and overall bias.

3. Results

Through our Cox proportional models in Table 1, we find that for the sample size of \( n=50 \) with 30% censoring rate, the bias is 0.09 and sample standard error is 0.48 parted from the true parameter 0.5 while including the censored data. Without censored data included the bias is -0.28 and sample standard error is 0.49. At a censored rate of 60%, the sample size of \( n=50 \) produces the bias of 0.16 and sample standard error of 0.67 when the censored data are considered. When censored times are removed, the bias is -0.66 and it has the sample standard error of 0.75. As expected, this shows larger bias when we ignore the censored data. Clearly, the bias increases as the degree of censoring increases. With censored data included the bias decreases as the sample size increases, but with exclusion of censored times the bias increases as the sample size increases. For different sample sizes, we have similar results. We also present the Kaplan-Meier estimates of the true exponential survival function with the sample size of \( n=100 \).

![Figure 1](image-url)  
Figure 1. Fifteen estimated survival functions with and without censored times considered and the true exponential survival function. We can see that the estimates are quite close to the true one when censored times are considered. The estimates, however, are under-estimated to the true one when censored times are excluded.

As the censoring rate increases and censored times are excluded, the graphs show that the majority of our estimates are showing cease times, or failure rates, earlier than true intended failure times and we can see significant bias when compared to the true one when ignoring the censored data.

Conclusions

After our experiment we note that our graphs distinctly show that those that included the
Censored data seem to match our true exponential survival function with the graphs being more evenly matched to our true function more often than not. Meanwhile the graphs of our functions that excluded the censored data show a weaker match for our true exponential survival function and actually the graphs show cease times that fit well below our true survival function in most cases. From this we can see that the Kaplan-Meier estimates including the censored data are more often less biased, either positively or negatively, from our intended function. Similarly each time the censored data are included we have much smaller standard errors, meaning that our tests prove that the functions including the censored data are much closer on average to the true functions plotted points. From Table 1 we are actually able to see how different the estimates actually are from the true parameter. As shown in Table 1, the cases in which the censored data are included provide a much smaller bias from the true parameter. Therefore we have found that in survival analysis it is best to keep all censored data in order to maintain a minimum level of bias and to avoid misrepresenting the true survival probabilities or reliabilities.

### Acknowledgements

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### References


### Table 1. Summary statistics for the simulation results: Bias, the mean of the estimates of minus; SEE, the sample standard error of the estimates.

<table>
<thead>
<tr>
<th>Censored times</th>
<th>n=50</th>
<th>n=100</th>
<th>n=200</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>30% censoring rate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With censored times</td>
<td>Bias: 0.0910</td>
<td>Bias: 0.0420</td>
<td>Bias: 0.0101</td>
</tr>
<tr>
<td></td>
<td>SSE: 0.4796</td>
<td>SSE: 0.3177</td>
<td>SSE: 0.2090</td>
</tr>
<tr>
<td>Without censored times</td>
<td>Bias: -0.2806</td>
<td>Bias: -0.3175</td>
<td>Bias: -0.3518</td>
</tr>
<tr>
<td></td>
<td>SSE: 0.4927</td>
<td>SSE: 0.3342</td>
<td>SSE: 0.2136</td>
</tr>
<tr>
<td><strong>60% censoring rate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With censored times</td>
<td>Bias: 0.1588</td>
<td>Bias: 0.0628</td>
<td>Bias: 0.0188</td>
</tr>
<tr>
<td></td>
<td>SSE: 0.6651</td>
<td>SSE: 0.4052</td>
<td>SSE: 0.2626</td>
</tr>
<tr>
<td>Without censored times</td>
<td>Bias: -0.6572</td>
<td>Bias: -0.7240</td>
<td>Bias: -0.7621</td>
</tr>
<tr>
<td></td>
<td>SSE: 0.7487</td>
<td>SSE: 0.4521</td>
<td>SSE: 0.2900</td>
</tr>
</tbody>
</table>
Biased Transport of Brownian Particles in a Curved Channel

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Abstract — The biased transport of Brownian particles is considered in a channel with the same width, which is induced by the confinement of a periodic potential. Asymptotic analysis is applied to analytically calculate the average velocity in the case of the small ratio between the channel width and the length of one period. The result shows that the normalized average velocity does not depend on the Peclet number and is inversely proportional to the length of the channel length.

Keywords — Transport, Brownian particles, average velocity, asymptotic analysis.

Introduction

The diffusive transport of Brownian particles in a confined region with or without external driving force is a fundamental problem in the process of continuous separation of different species in microfluidic devices [1,2,3,4], mathematical modeling of drug delivery [5], and the transport of particles in biological cells [6]. Recent works [7,8] focused on transport properties of Brownian particles confined by soft boundaries by using asymptotic analysis and Brownian dynamics simulation. This work focuses on the transport in a channel with the same width.

2. Mathematical Model

The dimensionless long-time asymptotic probability density, \( P_\infty(x,z) = \lim_{t \to \infty} P(x,z,t) \), is governed by the equation,
\[
\nabla \cdot J_\infty = 0.
\]

The probability flux \( J_\infty \) is given by
\[
J_\infty = \varepsilon \left[ \left( P_\infty - \frac{\partial V}{\partial x} \right) P_\infty - \frac{\partial P_\infty}{\partial x} \right] \hat{x} + \left[ -\frac{\partial V}{\partial z} P_\infty \right] \hat{z}.
\]

Equivalently, the dimensionless governing equation for the long-time asymptotic probability is
\[
\varepsilon^2 \frac{\partial}{\partial x} \left[ \left( P_\infty - \frac{\partial V}{\partial x} \right) P_\infty - \frac{\partial P_\infty}{\partial x} \right] + \frac{\partial}{\partial z} \left[ -\frac{\partial V}{\partial z} P_\infty - \frac{\partial P_\infty}{\partial z} \right] = 0.
\]

Here the Peclet number is defined as \( Pe = FL/k_B T \) and measures the relative importance between convective and diffusive transport, where \( F \) is a uniform external force driving the particles in the \( x \)-direction, \( L \) is the length of one period, \( k_B \) is the Boltzmann constant, and \( T \) is the absolute temperature. And the Stokes-Einstein equation is used to write the diffusion coefficient \( D = \frac{k_B T}{\eta} \) where \( \eta \) is the viscous friction coefficient. We assume that the characteristic length scale in the cross-section is given by \( \varepsilon L \), where \( \varepsilon \) is the aspect ratio.

The far-field condition in \( z \) is a vanishingly small probability density and flux due to the confining potential,
\[
j_\infty^z(x,\pm\infty) = 0.
\]

Finally, the reduced probability is obtained by imposing periodic boundary conditions in \( x \),
\[
P_\infty(0,z) = P_\infty(1,z),
\]

and the normalization condition
\[
\int_0^1 dx \int_{-\infty}^{\infty} P_\infty(z) dz = 1.
\]

Once we solve for \( P_\infty \), we can obtain the average velocity along the channel by applying macrotransport theory [9],
\[
\langle v \rangle = \int_0^1 dx \int_{-\infty}^{\infty} j_\infty(z) dz = Pe \int_0^1 dx \int_{-\infty}^{\infty} \frac{\partial V}{\partial z} P_\infty(z) dz.
\]

2.1 Transport of Brownian Particles confined by a Parabolic Potential

The simple case is a parabolic potential, which confines particles in a curved channel with the same width in the cross-section (Fig. 1). The potential in the dimensionless for is,
\[
V(x,z) = (z + \lambda g(x))^2,
\]

where \( \lambda \) is the ratio between the fluctuation amplitude of the boundaries and the characteristic length in the transverse direction, and \( g(x) \) is a periodic function, i.e., \( g(x) = g(x + 1) \).
In the case of a narrow channel $\varepsilon \ll 1$ with $\lambda \sim O(1)$, the solution of probability distribution is proposed in the following form,

$$P_\omega(x,z) \sim p_0 + \varepsilon^2 p_1 + \varepsilon^4 p_2 + \cdots.$$ 

Therefore we have corresponding expansions for the probability flux,

$$J_\omega(x,z) \sim J_0 + \varepsilon^2 J_1 + \varepsilon^4 J_2 + \cdots.$$ 

After solving for the probability density described above, we calculate one important macroscopic transport parameters, i.e., the average velocity in Eq. (7),

$$\langle \nu \rangle \approx Pe - \varepsilon^2 \lambda^2 Pe \int_0^1 \left( \frac{dg}{dx} \right)^2 dx.$$  

This average velocity is a linear function of the Peclet number, which is different from the previous results [7, 8] of the transport of particles in a channel with the varying cross-section. Furthermore, the normalized average velocity by the Peclet number is inversely proportional to the length of the channel when $\lambda$ is small,

$$S_{channel length} = \int_0^1 \sqrt{1 + \left( \frac{\lambda}{d} \frac{dg}{dx} \right)^2} dx \approx \int_0^1 \left[ 1 + \lambda \frac{dg}{dx} + \cdots \right] dx.$$ 

**Conclusions**

Asymptotic analysis is applied to study the average velocity of Brownian particles in a soft channel with the same width confined by a periodic potential. The result shows that the average velocity linearly depends on the Peclet number. The normalized average velocity is inversely proportional to the length of the channel when the ratio $\lambda$ between the fluctuation amplitude and the average channel width is small.

**References**

Blending Teaching and Research in the Ecology Laboratory:
The Biology of Antlions as a Case Study

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Abstract — As a laboratory exercise in USC Upstate’s Ecology and Evolutionary Biology course, we conducted a field study investigating antlion larvae and their prey in the wild. Specifically, we used linear regression analysis to test the hypotheses that (1) the size of a pit trap is dependent on the size of the antlion that constructed it and (2) the ability of ants to escape from antlion pit traps is dependent on the size of the pit traps. Data we collected supported our hypotheses; in each case, the variables were positively associated and the relationship was mathematically significant (p-values < 0.05). However, the r² values were low, indicating that the predictive nature of each relationship was weak. In each case, less than 50% of the variation in the dependent variable was explained by variation in the independent variable. From an ecological standpoint, this indicated that other factors impact both the size of pit traps and the likelihood that ants will escape from pit traps. Our laboratory exercise represents one example of a hypothesis-driven field study that engaged students as active researchers and demonstrated the role of biostatistics in ecological investigations.

Keywords — experiential learning, biostatistics, holometabolous insects

1. Introduction

Antlions (genus Myrmeleon) are predatory insects that live in areas with sandy soil. Like many insects, antlions have a larval form and a winged adult form. The larvae feed on ground-dwelling insects by constructing pit traps (Fertin and Casas 2006). Ants fall into the funnel-shaped pit traps, often sliding to their death. The larval antlion has large jaws that it uses to kill the ants. If an ant escapes the antlion’s initial attack and tries to climb up the pit wall the antlion often responds by throwing sand at the ant (Heinrich 1984). Throwing sand starts avalanches that often carry the prey back to the bottom of the pit and into the waiting predator’s jaws. The larvae grow, and make a cocoon, and then the antlions metamorphose (like a caterpillar changing into a butterfly) into the winged adults. These adults mate and then the females lay their eggs in the sand to start a new generation. Antlions are considered holometabolous insects, since their transformation from the larval stage to the adult stage is a complete metamorphosis (Truman and Riddiford 1999).

As a laboratory exercise in USC Upstate’s Ecology and Evolutionary Biology course, we conducted a field study investigating antlion larvae and their prey in the wild. We collected data and used a form of statistical analysis known as linear regression to evaluate the data. In regression analysis, one variable (the independent variable) is used to predict the value of a second variable (the dependent variable). In linear regression it is assumed that the relationship between the two variables can be expressed in a straight line: \( y = m(x) + b \), where \( y \) is the value of the dependent variable, \( m \) is the slope, \( x \) is the value of the independent variable, and \( b \) is the y-intercept (Sokal and Rohlf 1994). Linear regression analysis uses a series of y values and a series of x values to estimate both \( b \) and \( m \). In addition, the analysis provides a value that indicates the strength of the relationship between the \( x \) and \( y \) variables. This value is the correlation coefficient (r). The correlation coefficient can range between -1 and 1, where -1 indicates a perfect negative (inverse) relationship, 0 indicates no relationship, and 1 indicates a perfect positive relationship between the \( x \) and \( y \) variables. The value of \( r^2 \) (the coefficient of determination) is also a useful statistic calculated using regression analysis. It can range between 0 and 1 and indicates the proportion of the variation in the \( y \) variable that is explained (associated) with variation in the \( x \) variable. In our study we used linear regression analysis to test the hypotheses that (1) the size of a pit trap is dependent on the size of the antlion that constructed it and (2) the ability of ants to escape from antlion pit traps is dependent on the size of the pit traps.

2. Methods

We used Wofford College’s Goodall Environmental Studies Center as the study site for data collection. Two lab sections of SBIOw301L (Ecology and Evolutionary Biology lab course) collected data on 9/14/11 and 9/15/11, respectively. We divided the
students in each lab section into groups of three for data collection. In order to test hypothesis one, each group was responsible for collecting data on 10 antlions and their pit traps. For each pit trap and antlion used, students followed a particular sequence of data collection. First, they used a standard ruler to measure the diameter of an antlion pit trap (to the nearest millimeter). Once they recorded the pit diameter measurement, they scooped up the sand encompassing the pit trap in order to capture the antlion associated with the trap. Once captured, a group member measured the total body length of the antlion (to the nearest millimeter).

Once each group completed data collection for hypothesis one, they proceeded to collect data relevant to testing hypothesis two. We found an ant colony and scooped a large number of ants into a holding bucket. Each group used a particular sequence of data collection to evaluate how long it took ants to escape from pit traps. First, one group member measured and recorded the diameter (to the nearest mm) of a pit trap. While the pit trap was being measured, another group member obtained an ant from the holding bucket. This group member brought the ant back to the measured pit trap and dropped the ant into the center of the pit trap. As soon as the ant hit the ground, the third group member used a stop watch to record how long it took the ant to escape (in seconds). The procedure was repeated by all groups for the remainder of the lab period.

For the purposes of this study, we combined data collected from both lab sections. We provided the combined data sets to the students for statistical analysis. We used linear regression analysis to evaluate (1) the relationship between antlion size and pit trap diameter and (2) the relationship between pit trap diameter and ant escape time. We used EXCEL (2007) for data management and analysis.

3. Results

The students captured 160 antlions and measured the diameter of their respective pits. Antlion lengths ranged from 0.3mm to 20mm, while their corresponding pit trap diameters ranged in size from 2mm to 120mm. We found a positive association between antlion length and pit trap diameter (Figure 1). The regression equation that summarized the relationship was \( y = 13.2x + 14.8 \) and the correlation coefficient \( (r) = 0.66 \). Linear regression analysis indicated that the positive relationship between antlion length and pit trap diameter was statistically significant \( (p<0.01) \). However, only 45% of the variation in antlion pit size was explained by variation in antlion length \( (r^2=0.45) \).

The students measured the diameter of 172 individual pit traps and recorded the time it took for ants to escape from the traps. The pit trap diameters ranged in size from 1.5mm to 135mm, and the ant escape times ranged from 0.15 seconds to 324 seconds. We found a positive association between pit trap diameter and ant escape time (Figure 2). The regression equation that summarized the relationship was \( y = 0.8x + 26.9 \) and the correlation coefficient \( (r) = 0.22 \). Linear regression analysis indicated that the positive relationship between pit trap diameter and ant escape time was statistically significant \( (p=0.02) \). However, only 5% of the variation in ant escape time was explained by variation in antlion pit size.

4. Conclusions

Data we collected during this study supported our hypotheses that antlion length impacts pit trap diameter and pit trap diameter impacts the ability of ants to escape from the traps. In each case, the variables were positively associated and the relationship was mathematically significant \( (p-values < 0.05) \). However, the \( r^2 \) values...
were low, indicating that the predictive nature of each relationship was weak. In each case, less than 50% of the variation in the dependent variable was explained by variation in the independent variable. From an ecological standpoint, this indicated that there are other factors impacting both the size of pit traps and the likelihood that ants will escape from pit traps.

Future studies could extend our work by having students design experiments exploring the impact of factors other than antlion size on pit trap size. Similarly, the outcomes from the study can be used to have students design experiments exploring additional factors that impact antlion foraging success. A starting point would be instructing students to conduct literature searches for published studies that have identified factors impacting pit trap size and foraging success of antlions. They would discover that factors such as soil particle size, sand depth, feeding regime and conspecific density can impact pit trap size and antlion foraging success (e.g., Farji-Brener 2003; Scharf et al. 2008). The results of their literature searches could be integrated into a class discussion of their project results, individual lab reports summarizing the project, or the design of future experiments.

Experiential, inquiry-based learning opportunities that increase the level of student engagement are the focus of many recent curriculum initiatives (Healy 2005). Ecology courses provide an ideal conceptual framework for developing integrative, interdisciplinary field studies that use the outdoors as a classroom and expose students to the process of science (Lisowski and Disfinger 1991). Field exercises allow students to work with organisms in their natural environment, which is relevant to topic coverage in a discipline focused on understanding how the environment impacts the distribution and abundance of organisms on the planet. Field settings allow students to practice scientific measurement and data collection in a more dynamic setting relative to that of a traditional classroom. Practicing science in less predictable settings facilitates the development or refinement of reasoning and critical thinking skills. Our laboratory exercise represents one example of a hypothesis-driven field study that engaged students as active researchers and demonstrated the role of biostatistics in ecological investigations.

Acknowledgements

We thank the SBI0301 students who helped collect data for this project. In addition, we are grateful to Wofford College, in particular Dr. Kaye Savage and Dr. John Lane, for allowing us to use the Goodall Environmental Studies Center as an outdoor classroom. We appreciate that the Office of Sponsored Awards and Research Support financially sponsored Chelsea Kross as a Teaching Assistant for SBI0 301 during the Fall 2011 semester.

References


Influence of Microhabitat on the Abundance of White-Footed Mice (*Peromyscus leucopus*) in Urban Greenways

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Abstract — Urban greenways in Spartanburg contain a higher density of white-footed mice (*Peromyscus leucopus*) than rural forests. Previous research has suggested that white-footed mice are abundant in habitats that contain dense vegetation. In this study we sought to quantify the ground, horizontal, and canopy cover of 3 urban greenways and 3 rural forest (control) sites in Spartanburg County. We found that horizontal cover is most dense at urban greenways, especially the Chinquapin and Cottonwood Trails. Canopy cover was similar across all sites; however, urban greenways tended to have a greater number of small trees and a higher stem density than the control sites. We will use this vegetation data to perform a discriminant function analysis that will allow us to determine which habitat features are best at predicting the occurrence of white-footed mice in urban greenways and rural forests.

Keywords — vegetation, canopy cover, horizontal cover

1. Introduction

As a result of urban sprawl, wildlife habitat is turned into disjunct fragments embedded in a human-dominated landscape (Tabarelli & Gascon, 2005). One method by which expanding urban areas may preserve biodiversity is through the retention and creation of urban greenways. An urban greenway is linear parkland maintained in a more natural condition than typical urban parks. A common example is forested land along urban streams and rivers. Greenways are often multi-use habitats that contain trails for hiking and other recreational purposes (Schafer, 2000). Although wildlife conservation goals are often stated in greenway retention plans, the actual contribution of urban greenways to wildlife conservation remains unclear (Fabos, 2004).

Within forested ecosystems in Spartanburg County, South Carolina, the white-footed mouse (*Peromyscus leucopus*) is the most common small mammal; however, its abundance varies both within and between sites (Johnson et al. 2011). *Peromyscus leucopus* tend to occur in habitats containing dense vegetative cover (Anderson & Meikle, 2006). Such habitats features may contribute to a lower risk of predation as well as enhancing the density of food sources such as invertebrates (Anderson et al., 2003).

In this study we sought to (i) characterize the macro- and microhabitat of urban greenways and rural forests and (ii) determine which microhabitat features are the best predictors for the occurrence of *P. leucopus*. We hypothesized that the linear, fragmented nature of urban greenways would contribute to a greater density of vegetative cover at urban greenways than within rural forests.

2. Materials and Methods

We assessed the canopy, ground, and horizontal cover at 3 urban greenways (Chinquapin Trail, Cottonwood Trail, and Palmetto Trail) and 3 rural forests (2 sites within the Pacolet River Heritage Preserve and Peter’s Creek Heritage Preserve) in Spartanburg County, South Carolina. Canopy cover was assessed using a GRS densitometer at each of the 125 small mammal live trap locations within each field site.

2.1 Measuring Ground Cover

At each of the 125 live trap locations we counted the number of stems (woody and herbaceous) within a 1 m radius of each trap. We only counted woody stems for shrubs and trees less than 2 m tall. We also visually estimated the percentage of each of the following forms of ground cover (bare soil, grass, fern, small tree, rock, downed woody debris, leaf litter, lichen, and moss). We measured leaf litter depth in the 4 cardinal directions at 0.5 m distance from each trap.

2.2 Measuring Horizontal Cover

We measured horizontal vegetative cover at 20 randomly selected locations at each field site using a 2 m long profile board. The proportion of the profile board that was visible from a distance of 15
m was visually estimated and scored such that: 1 = 0-19% visual obstruction, 2 = 20-39% obstruction, 3 = 40-59% obstruction, 4 = 60-79% obstruction, and 5 = 80-100%. The horizontal cover index was used to characterize the cover at 0-0.5 m, 0.5-1.0, 1.0-1.5, and 1.5-2.0 m above the ground.

We used MANOVA with a post hoc Tukey HSD to distinguish between the proportion of each ground cover type across sites. We only distinguished between sites if the ground cover variable constituted at least 5% of mean cover at one of the sites. We performed a Kruskal–Wallis one-way ANOVA test with a post hoc Tukey HSD to compare the horizontal cover between each field site. A Discriminant Function Analysis was used to determine which ground cover features were most closely associated with the capture of P. leucopus at each site. All analyses were performed in Statistica.

3. Conclusions

Ground cover across all sites was relatively similar; however, the urban greenways tended to have a greater number of small trees and a higher stem density than the control sites. This difference was most pronounced at the Chinquapin and Cottonwood Trails. We found significant variation in horizontal cover between sites (Kruskal – Wallis ANOVA; H = 70.80; p < 0.001; Fig. 1). The horizontal cover at Cottonwood was significantly greater than the cover at cottonwood (p = 0.004) as well as the other 4 sites (all p < 0.001). In addition, horizontal cover at chinquapin was significantly greater than of Pacolet East (p = 0.009). There was a non-significant trend for the horizontal cover at Chinquapin to be higher than at Peter’s Creek (p = 0.055) and for the cover at Pacolet West to be higher than Pacolet East (p = 0.054).

Acknowledgements

We thank the small mammal field crew members for collecting the mark-recapture data. We thank the USC Upstate Tenure and Productive Scholarship committee and the Center for Undergraduate Research and Scholarship for funding the small mammal mark-recapture research.

References


Table 1. Mean ± SE proportion for each ground cover category across study sites. Different letters constitute a significant difference (P < 0.05) between sites using a post hoc Tukey HSD. Sites were only compared if the variable constituted at least 5% of the mean ground cover at least one site.

<table>
<thead>
<tr>
<th></th>
<th>Urban Greenways</th>
<th>Control sites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chinquapin Trail</td>
<td>Cottonwood d Trail</td>
</tr>
<tr>
<td>Bare Soil</td>
<td>2.9 ± 0.8</td>
<td>3.1 ± 0.7</td>
</tr>
<tr>
<td>Grass</td>
<td>0.4 ± 0.2 A</td>
<td>45.3 ± 3.5 B</td>
</tr>
<tr>
<td>Fern</td>
<td>0.1 ± 0.0</td>
<td>0.4 ± 0.2</td>
</tr>
<tr>
<td>Small Tree</td>
<td>23.6 ± 1.8 A</td>
<td>20.0 ± 2.0 A</td>
</tr>
<tr>
<td>Rock</td>
<td>0.1 ± 0.1</td>
<td>0.0 ± 0.0</td>
</tr>
<tr>
<td>DWD</td>
<td>6.6 ± 0.5 A</td>
<td>8.9 ± 0.9 A</td>
</tr>
<tr>
<td>Leaf Litter</td>
<td>66.2 ± 1.9 A</td>
<td>22.4 ± 2.1 B</td>
</tr>
<tr>
<td>Lichen</td>
<td>0.0 ± 0.0</td>
<td>0.0 ± 0.0</td>
</tr>
<tr>
<td>Moss</td>
<td>0.1 ± 0.0</td>
<td>0.0 ± 0.0</td>
</tr>
<tr>
<td>Stem Density</td>
<td>43.6 ± 3.1 A</td>
<td>34.1 ± 2.7 B</td>
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<tr>
<td>Leaf Litter</td>
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<td>1.1 ± 0.1</td>
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<tr>
<td>Canopy Cover</td>
<td>72.0</td>
<td>68.8</td>
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</table>

Figure 1. Mean horizontal cover index score across all 4 vegetation heights at 3 urban greenways (Chinquapin, Cottonwood, and Palmetto) and 3 rural forests (Pacolet East, Pacolet West, and Peter’s Creek) in Spartanburg County. Error bars represent 95% confidence intervals.
Small Mammal Community Structure in Urban Greenways

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Abstract - A key contributor to the current decline in species diversity is the loss of native habitat due to urban sprawl. Urban greenways, linear parklands maintained in a more natural condition than typical urban parks, represent one method by which wildlife might be conserved within urban areas. We sought to determine whether urban greenways in Spartanburg, South Carolina, provide effective habitats for native small mammals. We compared the small mammal community structure at three urban greenways to that of three rural forest sites. We conducted a capture-mark-recapture study during June-September of 2011 at each site. Across all sites, the white-footed mouse (Peromyscus leucopus) is the most common small mammal. Given the similar species composition between urban greenways and rural forests, our results suggest that greenways provide effective habitat for small mammals. The density of white-footed mice was greatest at the Chinquapin and Cottonwood Trails, likely as a result of the greater density of vegetation at these two sites.

Keywords – mark-recapture, Peromyscus, Program MARK, urban greenway

1. Introduction

Due to urban sprawl, wildlife habitat is turned into disjunct fragments embedded in a human-dominated landscape (Tabarelli & Gascon, 2005). The continued loss of habitat has led some biologists to suggest that the best way to protect wildlife is by designing urban areas to co-function as reserves for wildlife (Rosenzweig, 2003). One method by which expanding urban areas may preserve biodiversity is through the retention and creation of urban greenways. An urban greenway is linear parkland maintained in a more natural condition than typical urban parks. A common example is forested land along urban streams and rivers. Greenways are often multi-use habitats that contain trails for hiking and other recreational purposes (Schafer, 2000). Although wildlife conservation goals are often stated in greenway retention plans, the actual contribution of urban greenways to wildlife conservation remains unclear (Fabos, 2004). Thus, research on urban greenways is needed to provide wildlife managers with the tools to design and manage greenways in a manner that will benefit both humans and wildlife.

There has been much research on the use of urban greenways by birds (Mason et al., 2007; Sandstrom et al., 2006); however, less is known for small mammals. In addition, much of the existing work on small mammals has been done outside of North America. In one of the few studies done in the United States, Mahan and O’Connell (2005) compared small mammal diversity in urban parks to that of a rural forest. They found that urban parks supported a diverse native small mammal community similar to that of the rural forest. However, this study was short-term (only 4 days of sampling/site) and did not examine demographic parameters such as survival, estimated abundance, and density. Survival, in particular, may be a critical parameter for small mammals, as greenways often contain feral domestic cats (Felis domesticus) which are predators of small mammals (Baker et al., 2003).

The purpose of this study was to determine whether urban greenways in Spartanburg, South Carolina provide effective habitat for native small
mammals. In particular, we sought to compare the species abundance and diversity of small mammals in urban greenways to a rural riparian forest. In addition, we wished to determine whether small mammals in urban greenways have a lower survival rate than small mammals in rural forests.

2. Materials and Methods

We live-captured small mammals at three urban greenways (Upper Chinquapin Greenway, Cottonwood Trail, and the USC Upstate Palmetto Trail) within the city of Spartanburg. Both the Cottonwood Trail and the Palmetto Trail consist of riparian forest along Lawson’s Fork Creek. We compared the small mammal community at these 3 sites to rural riparian forests in eastern Spartanburg County (Peter’s Creek Heritage Preserve and 2 sites at the Pacolet River Heritage Trust Preserve designated as ‘East’ and ‘West’). We live trapped mice at the Cottonwood Trail, Palmetto Trail and Peter’s Creek during June and August of 2011 and at the Upper Chinquapin Greenway, Pacolet River East and West during July and September of 2011. At each site, a 5 x 20 array of H.B. Sherman live traps (H.B. Sherman Traps, Tallahassee, FL) was used to capture small mammals. Captured individuals were then given a unique ear tag (National Band and Tag Company, Newport, Kentucky) and released. Each site was trapped for 5 continuous days each month. Traps were baited with a mixture of rolled oats and peanut butter wrapped in perforated wax paper and then checked before 0900 each morning. For each captured individual, we recorded the mass, gender, age class (adult or juvenile) and reproductive condition (male: scrotal or non-scorotal; female: pregnant or lactating). On nights in which temperatures were projected to be below 7°C, two cotton balls were added to the live trap to provide bedding. We calculated the apparent survival rate for P. leucopus using the Huggins closed robust design in Program MARK (Huggins, 1991; White & Burnham, 1999). We estimated the density for these species at each site by dividing the abundance estimate by the effective trapping grid area as determined by the mean maximum distance moved (MMDM) by white-footed mice (Wilson and Anderson, 1985). All procedures were approved by the University of South Carolina Animal Care and Use Committee.

3. Conclusions

Our research suggests that urban greenways in Spartanburg provide effective habitat for native small mammals. Although introduced species such as the house mouse (Mus musculus) often dominate urban habitats (Cavia et al., 2009), all captured individuals at urban greenways were native species. In addition, the urban greenways were similar in species composition to that of rural forests (Table 1. Across all sites, the most common species captured were P. leucopus and B. carolinensis. Both of these species are common residents of eastern deciduous forests in South Carolina (Webster et al., 1985). The white-footed mouse was most dense at the Upper Chinquapin and Cottonwood Trails, likely as a result of the greater vegetative cover at these field sites.

Acknowledgments

We thank the USC Upstate Center for Undergraduate Research and Scholarship for providing a mini-grant to R. Dolewski and Jon Storm to help fund this research.

References


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Response of Southern Field Crickets (Gryllus rubens) to Rabidosa rabida Chemical Cues

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Abstract - Prey animals often exhibit adaptive responses when in the presence of chemical cues left behind by predators. Predator-naïve Gryllus pennsylvanicus have shown a significant response to chemical cues from wolf spiders. We sought to determine if southern field crickets (Gryllus rubens) respond to the chemical cues of rabid wolf spiders (Rabidosa rabida). In contrast to previous studies, we did not find a significant effect of spider chemical cues on either the time spent immobile or speed of movement by crickets. Cricket mass did not have a significant effect on time spent immobile. Crickets exposed to cues of larger spiders showed a significant increase in time spent immobile.

Keywords - Acheta, Rabidosa, antipredator behavior, prey

1. Introduction

Chemical cues from predators have been shown to influence the behavior of prey in various ways. These chemical cues are any number of secretions left behind in the environment by predators, including hair, urine, or fecal matter. The ability of prey to detect these cues lead to adaptive responses, increasing the probability of survival for prey (Kats and Dill, 1998). Terrestrial insects have been shown to recognize chemical cues associated with mate attraction (Eisner and Meinwald 1995) and foraging (Dicke 2000). Field crickets have previously been shown to recognize the chemical cues of wolf spiders. For example, when fall field crickets (Gryllus pennsylvanicus) were exposed to wolf spider cues, they increased their time spent immobile and moved at a slow speed relative to unexposed crickets (Storm and Lima, 2008). This behavior is adaptive because wolf spiders are sit-and-wait predators that attack moving prey (Persons and Uetz, 1997; Rovner, 1996).

In this study, we sought to determine whether southern field crickets (Gryllus rubens) would respond to the chemical cues of the rabid wolf spider (Rabidosa rabida). We hypothesized that field crickets would exhibit increased time spent immobile and a reduced speed of movement when in the presence of spider cues. We also hypothesized that larger crickets would exhibit a weaker response to spider chemical because large crickets have a reduced risk of predation. In addition, we hypothesized that large spiders would deposit more chemical cues and induce a more dramatic behavioral response by crickets than small spiders.

2. Materials and Methods

We established a breeding colony of G. rubens from individuals hand-caught in Spartanburg, South Carolina during the summer and fall of 2010. We added additional crickets to this colony during summer 2011 to reduce genetic drift within the colony. The colony was housed in 120 L plastic containers which contained ad libitum ground rabbit chow and cricket quencher and egg crate cover. Female crickets laid eggs in plastic dishes containing moist sand. Approximately every 7 days, we removed egg dishes and placed them in 5 L plastic containers for rearing juvenile crickets that emerged from the eggs.

We collected rabid wolf spiders in a grassy field adjacent to the campus of the University of South Carolina Upstate in Spartanburg, South Carolina during July and August of 2011. Spiders were kept individually in round plastic containers containing approximately 3 cm of moistened sphagnum peat moss. The spiders’ diet consisted of house crickets (Acheta domesticus) placed in the container every 7-10 days. Both crickets and spiders were kept at 25 ± 1 °C and a 12h light:12h dark cycle.

We assessed the behavior of juvenile crickets in round arenas (12 cm height and 16 cm diameter) assembled from PVC tubing with a Plexiglas base. During trials, the bottom of the arena was lined with filter paper containing the chemical cues of a rabid wolf spider, domestic cricket (Acheta domesticus), or blank filter paper as a control. Spider cues were collected after feeding the spider an adult domestic cricket. If a spider did not eat, it was not used for trials. Within 12 h of feeding, the spider was placed onto a sheet of filter paper lining the base of an arena and was kept there for 24h to deposit chemical cues. Domestic cricket cues were
collected as a positive control by placing a single domestic cricket in a filter paper-lined arena for 24 h. All trials occurred within 24 h of cue deposition.

Trials were conducted within an environmental chamber kept at 25 ± 1 °C. To begin each trial, one lab-reared juvenile cricket was placed into a holding tube placed within an open space in the middle of the filter paper. After a 60 sec acclimation period, the tube was lifted and the cricket was free to move within the arena. Trials began once the cricket walked onto the filter paper and continued for 20 minutes. The movement of cricket was monitored with an infrared-sensitive camera. Two light bulbs (25 W) were placed 50 cm above the arena, and provided a dim red illumination. We used a Videomex-One behavioral monitoring system (Columbus Instruments, Columbus, Ohio) to score cricket behavior. After each trial, the filter paper was discarded and the arenas was rinsed with a 1:1 mixture of acetone and isopropyl alcohol and then rinsed with deionized water.

3. Results

We assessed behavioral responses from 49 juvenile field crickets. Overall, there was not a significant difference in the time spent immobile by crickets placed on blank filter paper or exposed to the chemical cues of house crickets or rabid wolf spiders (ANOVA; F_{2,46} = 0.86; p = 0.429; Fig. 1). When exposed to chemical cues from a rabid wolf spider, field crickets exhibited a non-significant increase in time spent immobile relative to cues deposited by house crickets and the control group. Furthermore, there was not significant variation in the speed of movement by crickets placed on blank filter paper or exposed to the chemical cues of house crickets or rabid wolf spiders (ANOVA; F_{2,46} = 1.18; p = 0.318).

We found no relationship between cricket mass and time spent immobile by crickets exposed to the chemical cues of rabid wolf spiders (r = -0.056; df= 22; p=0.799). In contrast to the cricket mass data, we found a significant positive relationship between wolf spider mass and time spent immobile by crickets (r = 0.52; df= 22; p=0.011; Fig. 2).

4. Conclusions

We did not find a significant increase in time spent immobile by crickets exposed to the chemical cues of rabid wolf spider. In addition, crickets did not exhibit a significant decrease in speed of movement on wolf spider cues. This contradicts previous research with field crickets and suggests the need for a larger sample size. When exposed to chemical cues of wolf spiders varying in body mass, field crickets exhibited a significant increase in time spent immobile in response to the cues of large spiders. This suggests that crickets are able to detect chemical cues and may respond more strongly to cues from larger spiders because they pose a greater risk of predation. Alternatively, larger spiders may simply deposit more chemical cues than small spiders.

Acknowledgments

We thank the USC Upstate Center for Undergraduate Research and Fellowship for a Research Assistantship awarded to Regina Ferris. We also thank the USC Upstate Tenure and Productive Scholarship committee for funding. We thank S. Ferris for assistance collecting spiders.

References


**Figure 1.** Mean (±1 SE) time spent immobile by juvenile predator-naïve southern field crickets (*Gryllus rubens*) when exposed to chemical cues from *Acheta domesticus* (n= 17), blank filter paper (n= 9), or *Rabidosa rabida* (n= 23) during a 20 minute trial.

![Bar graph showing time spent immobile for different treatments](image1.png)

**Figure 2.** Influence of the cue-depositing rabid wolf spider (*Rabidosa rabida*) on time spent immobile by juvenile predator-naïve southern field crickets (*Gryllus rubens*; n=23).

![Scatter plot showing correlation between spider mass and time spent immobile](image2.png)
Mammalian Carnivore Communities within Urban Greenways and Rural Forests in Spartanburg County, South Carolina

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Abstract — Small mammals living in urban greenways may face a heightened risk of predation relative to rural forest sites. This greater predation risk is often the result of non-native predators such as domestic cats (Felis catus). Previous research on small mammal communities within urban greenways in Spartanburg suggests that white-footed mice (Peromyscus leucopus) within urban greenways have lower survival rate than mice from rural forests. In this study we sought to quantify the abundance and species richness of potential predators within urban greenways and rural forests. We found that greenways and rural forests have similar species richness. In addition, domestic cats were not encountered at any of the study sites.

Keywords — Urban greenways, predators, urbanization, mammals

1. Introduction

Urbanization is a major factor influencing the loss of biodiversity (Ordeñana et al. 2010, Marks and Duncan 2009) as it removes natural habitat and increases fragmentation across the landscape. Urban greenways are one method by which natural habitat can be protected within urban landscapes (Mahan and O’Connell 2009). Urban greenways also serve functions unrelated to wildlife such as flood control and recreational opportunities (Schafer, 2000). Previous research at urban greenways in Spartanburg, South Carolina has suggested that white-footed mice (Peromyscus leucopus) may face a high predation risk within greenways relative to rural forests (Johnson et al. 2011). In particular, non-native predators such as domestic cats (Felis catus) can be abundant within urban habitats, and their presence may lead to reduced survival for native wildlife within urban greenways (Marks and Duncan 2009). In this study, we sought to document the relative abundance of domestic cats within urban greenways in Spartanburg. We also sought to document the presence of native mammalian predators within urban greenways and rural forests. If urban greenways contain a greater density of carnivorous mammals, this could explain the heightened mortality rate of white-footed mice in urban greenways.

2. Methods

We used non-invasive survey techniques to document the occurrence of mammalian carnivores at 3 urban greenways (Upper Chinquapin Trail, Cottonwood Trail, and the USC Upstate Palmetto Trail) and 3 rural forests (two sites at the Pacolet River Heritage Preserve, and Peter’s Creek Heritage Preserve) in Spartanburg County, South Carolina. During June of 2011, we surveyed the Upper Chinquapin, Pacolet River East and Pacolet River West for 12 continuous days. We surveyed the Cottonwood Trail, Palmetto Trail and Peter’s Creek for 12 days during July of 2011. Each site was monitored for an additional 15 days during November – December of 2011. During each survey period, we place one infrared, motion-activated wildlife camera within the middle of the study site. We also deployed a sooted track plate at each end of the sampling grid used for our live trapping work on small mammals at each study site. All carnivore survey work occurred during months when live trapping of small mammals was not occurring.

Each camera trap was mounted to a tree at approximately 2 m height. At a distance of 3-5 m in front of the camera, we placed one frozen chicken thigh within a metal suet feeder that was strapped to a tree trunk using bungee cords at a height of 2 m. We also smeared approximately 1 teaspoon of a commercial skunk-scented carnivore lure (Caven’s Gusto) onto a tree branch near the chicken bait. Aluminum track plates were coated with soot on each end of the plate using copy machine toner. A 20 cm wide section of Contact paper was placed in the middle of the plate to collect prints. The sooted plate was set within an enclosure () made of Coroplast to keep rain off the plate. A single cotton ball containing a 2 mL of a 1:1 mixture of salmon oil and mink gland extract was placed within a metal mesh envelope strapped to the inside roof of the Coroplast enclosure directly above the contact paper. Trail cameras and track plates were checked
every 3 days during the survey period and the bait or lure was replaced during each visit.

3. Conclusions

We documented a similar assemblage of species using wildlife cameras and sooted track plates; however, the wildlife cameras detected some species (coyote, *Canis latrans* and domestic dog, *Canis familiaris*) that are too large to enter the track plate enclosure. Although we detected several species of preying upon white-footed mice, we did not encounter domestic cats at any of our study sites.

Acknowledgements

We thank the Division of Natural Sciences & Engineering for funding this research.

References


Table 1. Number of independent detection events for mammals using trail cameras at each study site.

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<tr>
<th>Site</th>
<th>Raccoon</th>
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<th>Virginia Opossum</th>
<th>Coyote</th>
<th>Domestic Dog</th>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Cottonwood</td>
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<td>1</td>
<td>--</td>
<td>--</td>
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<tr>
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<td>1</td>
<td>--</td>
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<td>--</td>
<td>3</td>
<td>--</td>
<td>7</td>
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Table 2. Number of detection events for species encountered using sooted track plates at each site.

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<th>Site</th>
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<th>Gray Fox</th>
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<th>Striped Skunk</th>
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Tarnish Protection of Silvered Telescope Mirrors using Crosslinked Self-Assembled Mono Layers

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Abstract — For over a century, astronomical mirrors were made reflective via the fairly simple, low cost chemical deposition process of silvering. Today, most mirrors are made reflective through a vacuum process which consists of a thin aluminum reflective layer and a clear, hard, transparent overcoat. This method has the advantage since the reflective layer does not tarnish over time as unprotected silver does. While the process is not expensive for small mirrors, it rapidly becomes more expensive as mirrors get larger because large vacuum chambers are expensive to build, maintain, and operate. Since the cost of vacuum aluminizing and overcoating appears that it might actually exceed the cost of the large, lightweight, low cost mirrors, we decided it was time to reconsider the chemical deposition of silvering and a way to reduce tarnishing. Self-assembled mono layers containing sulfur are used to reduce the tarnishing of silver. However, this approach only reduces the tarnishing for a short time. If the SAMs had the capability of being polymerized after adhering to the silver, the tarnishing could be reduced for a much longer time. Our research concentrates on three different crosslinked SAMs and their reduction of tarnish on silvered substrates.

Keywords — Self-Assembled Mono Layers; Chemistry; Astronomy

1. Introduction

As suggested above, non-vacuum silvering via chemical deposition and astronomical mirrors went together for over a century. However, once vacuum aluminizing and overcoating became available, recoating tarnished silvered mirrors became a burden. Furthermore, the bare silver coatings were not scratch resistant, making mirror cleaning a delicate job. If the problem of tarnishing could be solved by some non-vacuum chemical deposition problem, then perhaps mirrors could be silvered and overcoated at very low cost without having to be shipped to a distant vacuum coater.

The mirror in Newton’s first 1.3-inch reflecting telescope in 1668 was made from speculum (Latin for mirror), a metal alloy of roughly two-thirds copper and one-third tin—often with a touch of arsenic. Because speculum tarnished rapidly, the mirrors had to be re-polished and refigured at frequent intervals. This process was facilitated by having at least two mirrors for each telescope; one was refigured while the other was used to observe.

It wasn’t until 1856, almost 200 years later, that Karl von Steinheil and Leon Foucault were able to chemically deposit a very thin layer of silver on glass to create first-surface astronomical mirrors. When the silver tarnished, it could be removed chemically and a new silver layer deposited without having to re-polish and refigure the mirror. Thus only one mirror was required per telescope.

Silvering produced high quality optical mirror surfaces for many years, and the process was refined and simplified in the 1930’s when William Peacock (the founder of Peacock Laboratories) invented a spray process that combined the reactants at the last second as they came out of twin nozzles and were sprayed onto the mirrors.

Several chemical processes have been used to reduce the tarnishing of silver. These include the addition of chromates and the use of organic coatings, but problems arise with these methods. Self-Assembled Mono Layers (SAMs) can easily be added to silver surfaces and are also being used to reduce tarnish on silver alloys for jewelry, silverware, and other accessories. This process delays tarnish, but only for a short time. Neither is crosslinking of SAMs a new concept, and is used for the production of thin films with specialized properties. We accepted the challenge to review and try some chemical processes, such as the crosslinking of SAMs, to see if a suitable transparent overcoating material could be found for silvered mirrors.

We realize, of course, that while the final optical quality of a chemical deposition overcoating process probably will not match that of a multi-layer vacuum overcoat, there are still a number of astronomical applications where gathering large numbers of photons at low cost is appropriate, and the optical quality of the coating is not critical. One such application is on-axis flux collectors, i.e. light buckets.
2. Experimental Procedures

Glass slides were silvered to form a substrate on which 3 different alkane thiols were bonded. Each alkane thiol was used to form its own SAM by allowing silvered slides to sit in solutions for a given amount of time. After rinsing, glycerol was added to another set of alkane thiol solutions in an attempt to create cross-linking between the alkane chains and possibly, further decrease the likelihood of the silver substrate tarnishing through oxidation.

2.1 Silvering

Glass slides were silvered to create a substrate for the binding of alkanethiols. The slides were cleaned by rinsing with concentrated nitric acid then distilled water. Tollen’s reagent was then prepared by adding 50 mL of 0.1 M silver nitrate to a beaker. With the addition of ammonium hydroxide, a brown precipitate was formed in the solution. Drops of ammonium hydroxide were added until the solution became clear. Next, 25 mL of 0.8 M potassium hydroxide was added to the solution. This caused a brown precipitate to form once again. Ammonium hydroxide was again added drop-wise until the solution cleared. A dextrose solution consisting of dextrose dissolved in 4mL of distilled water and 1 mL of ethanol was then added to the beaker. The solution was immediately poured into a 1000mL beaker with glass slides taped around the interior wall. The solution was swirled in the beaker for several minutes and as the silver precipitated out, the solution turned a brownish yellow then became cloudy and dark. The silvered slides were rinsed with distilled water and allowed to dry. For other slides, the Peacock Laboratories silvering process was used. This process involves three steps. First the glass slides were degreased by applying a 3% solution of #77 cleaner, followed by deionized (DI) water rinsing. Secondly, the glass is sensitized by applying a 3% PChrome D solution, followed by DI water rinsing. Finally, the silvering is accomplished by spraying a 3% solution of PChrome S silver solution and a 3% solution of PChrome RX reducer solution until a bright, highly reflective first surface mirror is obtained. This is followed by rinsing with DI water rinsing and drying the mirror completely before the final step of overcoating with SAMs.

2.1 Application of Self-Assembled Mono Layer

Dilute solutions of 8-mercaptoundecanol, 11-mercaptoundecanoic acid and 16-mercaptohexanoic acid in ethanol were poured into separate bowls containing several silvered slides. The solutions were left to react for 12 hours with gentle shaking. After removal from the solution, the SAMs were rinsed with ethanol and dried with nitrogen.

2.2 Crosslinking of Self-Assembled Mono Layer

Once the mono-layers had assembled and the slides had been rinsed and dried, the slides were put into dilute solutions of glycerol and shaken for six hours.

3. Results

We will be testing the results of the formation and crosslinking of the SAMs in three ways: visual tests of tarnish reduction, a water drop test, and surface infrared spectroscopy. Coated and uncoated slides will be viewed side by side after a month’s time and the tarnishing compared. Also, since the SAMs are hydrophobic, an easy test that will be carried out is the water drop test. This is simply the application of a drop of water to coated and uncoated slides. If the SAM’s have been applied, the water drop contact angle will be greater due to the water “beading up” on a hydrophobic surface. Lastly, IR spectroscopy will be used to monitor the addition or removal of certain functional groups thereby determining if the SAM has formed and if crosslinking has occurred. Future tests are scheduled to observe the results of crosslinked self-assembled mono layers on silvered flat mirrors and silvered parabolic mirrors.

Conclusions

Although the research talked about in this publication is not yet complete, we expect tarnish reduction can be prolonged with the crosslinking of self-assembled monolayers.

Acknowledgements

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Mutational Analysis of the Putative Sterol-Sensing Domain of the Trc8 E3 Ubiquitin Ligase

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Abstract – TRC8, a tumor-suppressor gene candidate, encodes a predicted multi-pass transmembrane protein. The first 5 transmembrane segments bear strong resemblance to the sterol-sensing domain of HMGCR. Our previous work, and the work of others, has shown that the Trc8 protein does demonstrate cholesterol dependent stability and plays a regulatory role in cholesterol homeostasis. This study, for this project, we plan to make pair wise deletions of membrane spanning segments within the putative sterol-sensing domain then determine if these mutations result in elimination of the cholesterol-dependent stability demonstrated by the wild-type protein.

Keywords – cholesterol, tumor-suppressor, mutation, HMGCR, Insig

1. Introduction

TRC8 (translocated in renal carcinoma on chromosome 8) was first identified as a gene interrupted in a reciprocal translocation segregating in a family with classic hereditary renal clear-cell carcinoma (RCC). (Gemmill, et al., 1998) Sequence analysis suggested that the Trc8 protein has 10-12 membrane-spanning segments, the first five of which have significant sequence similarity with the sterol-sensing domains (SSD) of the Drosophila Hedgehog receptor, Patched, and with human 3-hydroxy-3-methylglutaryl coenzyme-A reductase (HMGCR). (Gemmill, et al., 1998) Near the C-terminus there is a RING H2 domain which has been shown to have ubiquitin ligase activity. (Gemmill, et al., 2002) Overexpression of Trc8 in tissue culture and in the nude mouse tumor model results in RING-dependent growth suppression which suggests that TRC8 functions as a tumor-suppressor gene. (Brauweiler, et al., 2007)

In order to understand how loss of Trc8 may lead to tumor formation, it was necessary to understand the conditions under which the endogenous protein might be active. We have shown that the wild-type Trc8 protein demonstrates sterol-dependent stability in a manner similar to HMGCR. (Lee, et al., 2010) This observation led to the investigation of the effects of Trc8 on the overall mechanism of cholesterol homeostasis involving the proteins insulin induced gene (Insig), sterol response element binding protein (SREBP), and SREBP cleavage activating protein (SCAP). (Goldstein, et al., 2006) It was discovered that the Trc8 protein interacts with the known SSD binding protein, Insig-1. (Lee, et al., 2010) Furthermore, overexpression of Trc8 results in a RING-dependent decrease in SREBP1 and 2, while siRNA-mediated knockdown of endogenous Trc8 results in increased levels of SREBP2. (Lee, et al., 2010) Additionally, these results have recently been corroborated and extended to show that Trc8 is also involved in the ubiquitin-mediated degradation of HMGCR. (Jo, et al., 2011)

To formally characterize Trc8 as a SSD-containing protein it is important to demonstrate that the putative SSD is both necessary and sufficient to confer sterol-dependent stability. Our current project focuses on deleting tandem pairs of transmembrane segments making up the proposed SSD, as well as one pair of tandem membrane-spanning segments outside of this region. The mutant proteins will then be tested as in Lee et al. to determine whether sterol-dependent stability is conserved or lost. (Lee, et al., 2010)

2. Experimental Design

Deletion mutant Trc8 expression constructs were generated using the Quickchange II mutagenesis kit (Agilent Technologies). Briefly, 5’ phosphorylated primers flanking, and with 3’ ends proximal to, the region to be deleted were used to amplify most of the pcDNA5-frt/TO-Trc8HA-wt plasmid construct (expresses a wild-type, HA-tagged protein). After amplification, the original template DNA is degraded with the methylation sensitive restriction enzyme, DpnI. Complete deletion DNA fragments were gel purified and recircularized with T4 DNA ligase before transformation into DH5α. Clones were screened by restriction digest to confirm deletion then sequence verified.

These plasmid DNAs will be used to generate stably transfected inducible cell lines using the HEK 293 FlpIn T-rex parental line (Invitrogen). Upon transfection, a recombination event catalyzed by Flp recombinase ensures a single
insertion event into a transcriptionally active region of the genome.

Sterol dependent stability will be tested in two ways. First, transgene expression will be induced in the absence of sterols. This induction will be followed by a change of the culture medium to either sterol-containing or sterol-depleted media. Both will contain cyclohexemide to block protein synthesis. Samples will be harvested at several time points and analyzed by western blot to see any changes in Trc8 abundance over time. Any changes will reflect only the degradation rates of the proteins. Thus, we can determine if the proteins degrade at different rates under the two conditions or at the same rate. Our SSD hypothesis will be supported if deletions within the candidate domain lead to degradation at the same rate under both conditions, while deletions outside this domain maintain rapid degradation in the presence of sterols and delayed degradation under sterol-depleted conditions.

The second experimental procedure involves incubating uninduced cell lines in sterol-depleted media. The FlpIn T-rex cell lines have been shown to have leaky expression of transgenes. The transgenic wild-type Trc8-HA protein becomes detectable in uninduced cells incubated in sterol-depleted media but not in media containing sterols. If deletions eliminate sterol sensitivity, it is expected that the transgenic proteins will not accumulate in sterol-depleted media. Conversely, deletions that have no effect on sterol sensitivity will accumulate over time in the absence of sterols.

References


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Abstract – Accuracy of radiographic findings is an important aspect in chiropractic, particularly with some approaches that measure observed structures in millimeters. In this study three dimensional (3D) assessments of points of interest on a phantom replica of the human skull and cervical vertebrae were evaluated to better understand how structures are represented in space using mathematical methods. Three basic geometric equations derived from the “Law of Similar Triangles” are introduced and measurements are taken directly from radiographs following four trials to demonstrate how 3D data extracted from 2D digitized radiographic pairs, can be utilized to produce coordinate points located at three areas on the atlas vertebrae. Results: An ANOVA test for multiple group comparison show no significant statistical difference between the 4 trials (p= 0.995). In addition, six strong positive correlations are evident using Pearson’s product-moment coefficient test (r = 0.9008 through 0.9977, p= 0.002).Conclusion: It is possible to use coplanar stereoscopic radiographic pairs to define an objects location in 3D space by taking retrospective measurements, directly from 2D digitized radiographs.

Keywords – Manipulation, Chiropractic, Cervical Vertebrae, Radiography.

1. Introduction
In recent years the scientific community has questioned the usefulness and accuracy of measurements from plain radiographs by chiropractor for the purpose of spinal analysis.1–6 The concerns of the scientific community relative to plain film radiographic measurements were related to possible errors in measurement attributed to magnification, distortions, asymmetries and malformations. Any one of these factors can affect radiographic measurements used for the purpose of determining a spinal listing. Listings are shorthand notations derived from radiographic line drawing that describe the direction of spinal misalignment on a radiograph.8 Studies by Wong et al, as well as, others have demonstrated the affects that magnification and distortion have on spinal x-ray measurements. Their studies were designed to statistically compared magnetic resonance imaging (MRI) and plain film radiographs to determine if there was any significant difference in accuracy between the two methods. The studies determined that MRI measurements were significantly more accurate in predicting the level and degree of spinal cord compression relative to conditions, such as spondolosis.1 All studies that were reviewed concluded that indeed the major limitations of measurements from radiographic film directly were magnification and distortion errors. Magnification ratios can be altered by both the focus-to-film and/or object-to-film distances. Bojisen found that the difference between 1 m and 1.5 m focus-to-film distance when taking sagittal canal measurements was 0.5 mm and that a 5 cm change in object-to-film distance changes this measurement by 1.2 mm at the focus-to-film distance of 1 m.9 A difference of 5 cm is significant because it equal the mean difference between men and women regarding shoulder breadth, as well as, falling with in arbitrary patient movement and deformities of the cervical and/or thoracic areas of the back which can affect the final magnification on a radiograph.10, 9 Senol et al and Blackley et al also concluded that plain film radiographs failed to reflect the true size of the spinal canal when compared with anatomical, computed topographic, measurements.10,11 Although much of the prior literature on chiropractic techniques is not derived from peer-reviewed sources, these sources nonetheless provide characteristic and pertinent information for continued studies. In chiropractic, most upper cervical radiographic procedures are modifications of B. J. Palmer’s upper cervical method know as “hole–in–one” (H I O).12 Ralph Gregory and John Grostic were among the first to modify BJ’s HIO which lead to the development of an orthogonal approach where misalignments are measured in small acute angular differences (i.e. the side that contain the acute angle relative to a sagittal skull line is the side of atlas laterality). This approach was adopted and further modified by others technique developers. The following is a list of upper cervical techniques that uses an orthogonal
approach: (1) Grostic, (2) National Upper Cervical Chiropractic Association (NUCCA) (stereoscopic method); (3) Atlas Orthogonal (AO); (4) Torque Specific Cervical Orthogonal; (5) Advanced Orthogonal; (6) Orthospinology Upper Cervical and (7) Upper Cervical Orthogonal (Steroscopic method). Other techniques employ an overlap/underlap method of analysis relative to the atlanto-occipital and atlas/axis articulations. These techniques are as follows: (1) Kale Upper Cervical; (2) Applied Upper Cervical Biomechanics; (3) Blair Upper Cervical (stereoscopic); (4) Zimmerman upper Cervical and (5) Sutter Specific Atlas Correction.

Although an atlanto-occipital misalignment syndrome has been described for a number of years in the chiropractic profession, no single radiometric method has emerged as a standard in which the accuracy of other radiographic methods may be evaluated and/or tested. Obtaining such a standard has been elusive because currently used analytical methods: 1) exploit bony landmarks that are remote from the misalignment; 2) have measurement errors relative to the x-ray angles and 3) have measurement errors due to inaccurate focal spot and/or object to film distances. This author proposes the use of a 3D coplanar method in which the actual position of objects in the radiographic field can be calculated retrospectively by mathematical location of inherent system parameters, (i.e.; the central ray, the principal point location and calculation of focal spot to film distance). The goal of this method, as is the case in medicine, dentistry and other disciplines, is to display the true anatomical structures and their positions, relative to the actual positions of other structures observed in the radiograph. From a historical perspective, in 1838 the theory of stereoscopic vision was first introduced by an English physicist, Sir Charles Wheatstone paving the way for many other stereoscopic advances down through the years. The use of stereoscopic radiographic analysis in chiropractic is hallmark by the work of Remier (1938) at Palmer College of Chiropractic and in the 60’s by Dr. W.G. Blair.

Cephalometry is a term that defines a radiographic technique for abstracting the human head into a measurable geometric scheme. Cephalometric radiography is used in medicine, dentistry and chiropractic 1) to describe the morphology and/or growth of the craniofacial skeleton; 2) to plan clinical treatments and 3) to evaluate treatment results. Most of these tasks require identification and location of specific landmarks derived through calculation of various angular and/or linear variables. According to Baumrind et al information taken from co-planar radiographs may be measured directly from the radiographs, providing the following conditions are met: (1) the distances between the two x-ray source positions are known (L1 to L2 “Base”); (2) the distance from the x-ray source to the film plane is known (“H” altitude) and (3) the two views contain the same point of interest (“P”). (Fig 1) The purpose of this study is to introduce a stereoscopic model to the chiropractic profession that mathematically corrects for magnification and distortion associated with measurement errors on plain two dimensional radiographs.

2. Methods

Coordinate values are obtained by first assigning zero for the x, y and z components at the origin, which is located in the centered radiograph where the central ray exposes the datum. The two dimensional (2D) coordinates have origin locations at x and y of (0, 0) respectively and 3D coordinates have origin locations at (0, 0, 0) for x, y and z components. Three orthogonal axes pass through the 3D origin at right angles to each other. The x axis is located in the horizontal position in the film plane and is parallel to the floor. System parameters composed of “B”, “S”, “H” and the origin O are analyzed. The base “B” (distance between L1 and L2) is also horizontal and parallel to the floor. 3D data is obtained from measurements taken from the centered radiographic view and an additional view taken after the tube is shifted 5.1 cm’s to the right. Base distance in the film plane is obtained by measuring the distance from the central ray to the film edge in both the centered and offset radiographs. The y axis is located in the vertical direction in the film plane and is perpendicular to the x axis. The z axis represents the central ray, extends away from the mid-way point at “S” (Base of triangle in film plane) toward the x-ray source. “H” the focal film distance or altitude is defined as the distance along the central ray between the focal spot and the film plane. (Fig 1) In order to calculate the coordinate of a point, designated as any point “P” four geometric formulas are derived through the use of the law of similar triangles (triangles are similar if there corresponding angles are congruent (equal) and/or the ratio of their corresponding sides are proportional). In addition, the ratio of the base to altitude between similar triangles are also equal. Calculation of coordinate values require that equation #1 (below) be solved first for the value of Z at point P. Zp is then used to solve for Xp and Yp in equations #2 and #3 respectively. Data is obtained from measurements taken from point’s p1 or p2 to the origin in the horizontal direction or y1 or y2 in the vertical directions. Because a two
generator stationary x-ray system is not used in this study and the spatial relationship between the x-ray tube positions and the film surface is not known before the images are generated it is necessary to do a calibration at the time the radiographic images are exposed.  

Equation #4, which is also derived from the “Law of Similar Triangles”, is solved by taking the data obtained from measurements from radiographic images created by four calibration rods. (Fig 2) That data is used to calculate the focal spot to film distance “H”.

Equations:  
#1. \[ Zp = SH/B + S \]  
#2. \[ Xp = xP_1/H (H - Zp) \]  
#3. \[ Yp = yP_1/H (H-Zp) \]  
#4. \[ L_I-O_I/RT-RB = O_I-RT/RI-RB \]  

2.1 Calibration

A calibration is completed by imaging upon each overlapping coplanar stereo radiographic pair an opaque array which consists of four 22.86 cm metal rods. (Fig 2) The precise relationship of the rods to each other is known (15.29 cm x 20.32 cm) in advance of image generation. The rod tops are physically located on a plane, parallel to the film plane, between the subject and the x-ray source. As the rod extends toward the film plane the rod bottoms, located on a second plane parallel to the first but physically located between the subject and the film plane projects a smaller more medial set of points onto the radiographic datum. The back and front surfaces of the array unit are composed of a ridged plexiglass material that holds the rods in a fixed position. (Fig 2) The array is placed in the x-ray field of each exposure. As a result, eight images of the rod tops and rod bottoms are arranged in four pairs near each corners of each radiograph (Fig 3). A total of 192 system parameter measurements associated with the four superimposed rods were measured directly from the radiographs.

3. Results

Base distance measurements for trials 1 through 4 are: 34.96 cm; 35.17 cm; 32.71 cm and 33.49 cm respectively. The altitudes (H) results for trials 1 through 4 are 92.35 cm.; 89.71 cm.; 88.17 cm.; and 86.41 cm respectively (Table 1) The calculated x, y and z coordinates results for the three atlas locations are shown in Table 2. An ANOVA test revealed no statistical difference between the four trials p= 0.995. Correlations between trials 1 through 4 using Pearson’s product-moment coefficient are strongly positive for all six comparisons.

4. Conclusion

The data shows that it is possible to obtain stereoscopic information from 2D coplanar x-ray pairs and retrospectively measure system parameters and used that data to calculate 3D coordinates of structures of interest. The next step is to assess the systems ability to evaluate the alignment of structures above, below and lateral to various calculated points of interest on the radiograph. Point location and alignment assessment potentially will lead to the development of a chiropractic listing system that is based on the actual location of observed structures in 3d space.

References


Bring Back Letterpress

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Abstract — In the spring of 2012, Hannah C. Smith, a senior graphic design student took on the craft and art of letterpress as an independent study under the guidance of Professor Richard Mack. The content of this independent study is to intensely study the history and processes of letterpress and to utilize the acquired research for practical art and design applications. Ms. Smith’s poster presentation exhibits these findings in visual form with several printed works.

Keywords — Letterpress Design

1. Introduction

In seemingly all digital, high-tech, and fast-paced world, the need for slower-paced, do-it-yourself projects that use older, possibly out-of-date practices are becoming a preference for designers and artists everywhere. Over the past few years there has been an evident growth to use the traditions of letterpress for industry, art, and education. This poster presentation exhibited by Hannah C. Smith addresses practical application, innovations and creative expression of letterpress practices as studio medium and as an educational device for furthering graphic design skills.

The poster presentation displays the fundamentals, equipment, processes and experiments of letterpress design by Hannah C. Smith. Letterpress design and application has a very long history as a primary form of written and visual communication dating back to 1450. After the invention of the computer and word processing programs letterpress began a fast and steady decline in everyday use. In the past ten years however it has made a comeback as a teaching tool for graphic design students, as a practical application for boutique print shops, and as a medium for artists to print a variety of relief artwork. Hannah C. Smith is currently researching and using acquired knowledge through references and hands-on training to accomplish her independent study goals.

2. Conclusions

This independent study and its findings are currently in process. The expected result will be a series of relief prints, photographic documentation, an interactive/online blog, and a series of relief prints. Another expected result is that Ms. Smith is documenting her findings and accomplishments in visual and written form so that future students will pick up the “lost” craft of letterpress and use her findings as a guide towards bettering their design abilities.

Acknowledgements

The author of this poster presentation would like to acknowledge the Visual Arts program in the Fine Arts & Communication Studies Department of the University of South Carolina Upstate for making this opportunity possible and the West Main Artists Co-op located at 582 West Main Street, Spartanburg, SC 29301 for providing the equipment to perform letterpress design work.

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The primary books listed below were used as instructional references and as a historical research.

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Physiology of Self-Control: Does Blood Glucose Level have an Effect on Self-Control?

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Abstract — A growing body of literature claim that self-control relies on a resource. This research claims that when self-control is exerted this resource, which is reported as glucose, is depleted from the peripheral blood. It is also reported that when this resource is unavailable individual will be able to exert less control. An opposing view claims that self-control is regulated by a motivational mechanism rather than metabolic. In this project, I investigated the effects of glucose on self-control as well as the self-control vs. non-self-control task on the depletion of glucose from blood by using rats as a model system. My results show that self-control tasks do not deplete glucose neither does the injection of glucose improve self-control. I also used Scratch visual programming language to create scenarios to simulate self-control, immediate reward and forced trials. I also created an interactive scenario that allows the observer to suggest a condition and then observe how the rat would respond to this data in real life.

Keywords — Self-control, glucose, blood glucose level, metabolic model, motivational model.

1. Introduction

Self-control is defined as the restrain exercised over one’s own impulses, emotions or desires. (Merriam Webster Dictionary) Being able to exert better self-control is accepted as a central function of self. Self-control helps people to make decisions on what to eat, how much to sleep, how much time to spend at work, how to communicate their feelings, wants, preferences (negative and positive) to those around them and to follow the regulatory rules and regulations of the society they live in (Baumeister, Vohs, and Tice, 2007). Some of these behaviors provide instant gratification, not penalty, in the short term but have or might have harmful consequences in the long term. Self-control is what enables humans and non-human animals to resist doing what is desirable but unacceptable or potentially harmful. Whereas ability to self-control is considered as a positive trait, poor self-control is associated with negative consequences such as poor performance at school and work, emotional problems, relational problems and failure at various tasks (Baumeister et al., 2007). A variety of behavioral problems such as substance abuse, overspending, overeating, crime and violence, and impulsive behavior are also linked to poor self-control (Baumeister, Heatherton, & Tice, 1994; Tangney, Baumeister, & Boone, 2004; Vohs & Faber, 2007).

Self-control based decisions are regulated by the ventromedial prefrontal cortex (vmPFC) of the brain (Hare, Camerer and Rangel, 2009). Recent research shows that an additional part of the brain contributes to the self-control based decisions in people who can exercise higher self-control. This region of the brain is called dorsolateral prefrontal cortex (DLPFC). Brain scans of volunteers who participated in self-control studies show that vmPFC is active during every decision whereas DLPFC is more active when person use self-control. Since the primary energy source that is available to brain is glucose (Marty, Dallaporta, & Thorens, 2007; Levin and Sherwin, 2011; Bingham, Hopins, Smith, Pernet, Hallett, Reed, Marsedn, & Amiel, 2002), this relationship seems reasonable to suggest.

A growing body of literature claim that self-control relies on a resource (i.e., glucose). Data from this literature report that when self-control is exerted this resource is depleted from the peripheral blood. It is also reported that when this resource is unavailable individual will be able to exert less control (Baumeister, Vohs, and Tice, 2007; Muraven and Baumeister, 2000; Schmeichel and Baumeister, 2004; Vohs et al., 2008). In a 2007 review Galliot and his colleagues reported a series of 9 experiments in which he presented evidence that this resource is glucose. Galliot et al., (2007) compared the blood glucose levels of 103 participants before and after a self-control task. Participants were instructed not to eat for three hours prior to the experiment in order to stabilize their glucose levels. The self-control task required participants to watch a 6 minute video without sound, with common words appearing on the bottom corner of the screen. Participants were randomly chosen to either avoid looking at these words (self-control condition) or watch the film as they would normally. Analysis of blood glucose levels before and after showed a decrease in
As the above literature review shows the role glucose play in self control is not well understood and is controversial. Research in this area is done in humans exclusively. At home, the family instills into each individual a sense of self-control. Therefore, even if the people are same age group, come from similar experiences (such as college student) their “training” and past experiences related to self-control will influence their ability to self-control regardless of their blood glucose level. This introduces an additional variable to the self-control studies when the research is perform on human. It can also explain the conflicting outcome in human studies. In this study I investigated if the relationship between blood glucose levels and self-control is present in rats. These rats have not been a part of a self control study before and they are free of previous self-control “training” concerns as with human. This gives me better control of the variables.

In order to investigate this question, I investigated if performing a self-control task reduced glucose levels relative to non-self-control
tasks. I also compared the glucose levels of subjects treated with glucose vs. placebo over a period of time as subjects performed a self-control task. As an extension of this study, I created a computer program which simulated the conditions of the experiment in order to teach this topic as a virtual laboratory for interested individuals.

2. Materials and Methods

Twenty four approximately 6 month old Wistar rats were used for the experiments. Rats were housed in a specially designed animal facility kept at 20°C. Rats were fed immediately after each session, which resulted in approximately 23 hours of food deprivation before each session. Water was given ad libitum except when in experimental chambers. Five identical operant boxes were used for training and testing. Each box had two response levers with corresponding lights, and a food chute trough where award pellets were dispersed.

The rats were trained to press the levers via an autoshaping procedure before the experiment proper. Each training and testing session consisted of 48 trials, 40 self-control and 8 forced choice trials. The session was subdivided into 4 subsessions, each of which had 2 forced and 10 self-control trials. During forced trials rats were presented only one choice. The purpose was to periodically allow the rats to experience the outcomes of each lever. During self-control trials both levers were presented at the same time. If the rat pressed the left lever, it received one pellet of food immediately and a light flashed for 0.1 second. If the rat pressed the right lever, it received two pellets of food after a 6 second wait, during which the light was on continuously. Half way through the training phase, the levers were switched in order to assure that rats pressed the lever as a choice, not habitually.

The experiment proper started when rats chose each lever between 25% - 75% of the time. During the experiment proper, all rats received an intraperitoneal injection, with one half receiving glucose (1.25 g/kg) and the other half receiving isotonic water. After three days in this condition, each rat was placed in the opposite condition for an additional three days. This is a within-subject control group, which compared the animals to themselves as well as the other animals being tested throughout the experiments.

At the completion of this experiment, I also compared the blood glucose levels of rats that performed a self-control task to those that completed a non-self-control (forced) task. The self-control task was same as previously described, while in the forced task, all 48 trials consisted of only 1 lever coming out, thus, no self-control choice could be made.

Since these experiments determined the change in the behavior of rats, I excluded rats who showed near exclusive positional bias. Positional bias was defined as preference for right or left levers. The rats that had 75% or greater choice of one lever were excluded for being positionally biased. Nine rats met the criteria for experimentation; therefore the results were evaluated only for those rats.

To evaluate the blood glucose levels, I generated a glucose curve by using 23 rats. I measured the fasting blood glucose level of each rat by drawing blood from the tail using a lancet (Butler 1995). Then I gave an intraperitoneal injection of glucose (1.25 g/kg). The blood glucose levels were then measured every 20 minutes for 80 minutes. (a similar glucose curve was produced with the 9 rats who met the criteria and the resulting graph was compared to the one made with 23 rats. They were found to be similar, therefore I used the graph I prepared from 23 rats in my report).

Data obtained from the self-control trials as well as the forced trials were analyzed by using Repeated Measure ANOVA.

Scratch programming language was used to create an interactive animation of the data for teaching purposes. I created a virtual Skinner Box and repeated the experimental steps of this project in a virtual environment. Spites, characters that move on the screen, were created to represent control and the treated rats, as well as each component of a Skinner Box. After this, interactive Scratch stages were created to represent the self-control and immediate reward scenarios, as well as the forced trials. Data from the actual experiments were entered as data sets in order to simulate the actual responses of a rat under selected conditions.

3. Results

3.1 Glucose curve

The average fasting glucose level in rats that fasted for 24 hours was 97 mg/dl. There was minimal variation in fasting glucose levels of the 23 rats that were tested. Blood glucose level increased rapidly 20 minutes following the injection. After this blood glucose level started to decrease gradually and reached to near fasting levels 80 minutes following the injection (Figure 1).
3.2 Does glucose increase self-control?

I compared the self-control levels in subjects immediately following an intraperitoneal injection over a 30 minute period (Figures 2 and 3). Experimental group received 1.25 g/kg glucose whereas the control group received injection of an isotonic solution. The 1st set of 10 trials was completed approximately 7.5 minutes after the glucose injection. The 2nd, 3rd and 4th sets of 10 trials were completed after approximately 15, 22.5 and 30 minutes after the injection, respectively. Values are an average of 10 self-control tasks every trial set. Glucose treated rats showed less self-control when compared to untreated rats at all stages, although only the first two sets were significant at the .05 level (1st: $t(8) = 2.61, p = .031$ and 2nd: $t(8) = 2.59, p = .032$). Glucose treated rats had a steady increase in self-control over 30 minute period but the trend was not found to be significant ($p = 0.5$).

3.3 Does self-control deplete glucose?

I compared the blood glucose levels of rats after a self-control task and a non-self-control task (Figure 4). All rats were injected with 1.25 g/kg glucose before the tasks started. After 30 minutes of self-control and non-self-control tasks blood glucose levels of rats did not show a significant change ($p = .26$).

3.4 Virtual skinner boxes

I used Scratch visual programming language to create scenarios to simulate this research project (Figure 5). Scenarios 1, 2 and 3 simulate the experimental conditions for self-control, immediate reward and forced trials. Scenario 4 shows the actual Skinner Box environment for the self-control experiment by averaging all the data observed. My interactive scenario allows the observer to suggest a condition (i.e. glucose
consumption). Then the program average the observed data to show how the rat would respond to this data in real life.

![Figure 5. A sample scenario created by using Scratch programming language.](image)

### 4. Discussion

My results show that glucose, when injected, does not cause an increase in exerting self-control. I also showed rats that perform a self-control task did not have a higher depletion of their blood glucose levels when compared to those that performed a non-self control task. These data challenge the findings reported by some of the authorities of self-control research (Galliot et al., 2007), but it is consistent with more recent research that reported that self-control is not metabolic. Molden et al. (in press) reported that when sensitive measurements are used glucose intake does not increase self-control. They also observed that individuals who rinsed (but not ingested) their mouth with a carbohydrate containing solution showed immediate increase in self-control without an increase in blood glucose levels. These findings support a motivational regulation model for self-control rather than a metabolic regulation (Painelli, et al, 2010). However, it is possible that a motivational and metabolic model work together to regulate self-control. I recommend further experimentation that investigates the a motivational model by using rats as a model organism to further regulation of self-control.

The virtual labs created during this study are significant contributions to teaching the Skinner box as a teaching tool as well as teaching operant conditioning and self-control experiments for a variety of reasons, including ethical, practical and pedagogical applications. Every year millions of animals are euthanized for teaching purposes. My computer animations will make it possible to teach these concepts without using rats for experimentation. Using animals for research and teaching purposes is expensive. These animations will enable schools to be able to teach these concepts with minimal cost. The 21st century education utilizes computer technology for teaching purposes. Many institutions are offering online courses. Laboratory teaching for some of these courses remain a challenge. My animations will provide a needed resource for students who take online classes.

### Acknowledgements

I wish to thank Dr. Richard Keen for his supervision and continuous support during this project. I also wish to thank the Department of Psychology at Converse College for allowing me to use their equipment and facilities for my project.

### References


Merriam Webster Dictionary http://www.merriam-webster.com/

Using Information Literacy Standards in Writing Center Tutor Training

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Abstract – The concept of information literacy has historically been in the purview of university libraries, but scholars in the field have reported that unless information literacy programs are supported institution-wide, they are unlikely to be as successful. This project is in essence the USC Upstate Writing Center’s Spring 2012 training plan, by which tutors will be introduced to the specific language of the information literacy model and the ways in which they can use that model to inform and improve their tutoring skills, to streamline Writing Center Services and to actively participate in a multi-disciplinary information literacy initiative.

Keywords — writing center, information literacy, training

1. Introduction

James K. Elmborg (2006), in “Locating the Center: Libraries, Writing Centers and Information Literacy,” describes what he calls an “invisible wall” between those who “handle problems with discourse” and those who “handle problems with information retrieval and evaluation” (p. 7), respectively, writing teachers/tutors and librarians. He further notes that these artificially “bifurcated” academic “domains” are “fundamentally interconnected in the work of college students” (p. 7). Because the core services of the USC Upstate University Writing Center (UWC) necessarily entail work in both information retrieval and evaluation in discourse across disciplines, we argue that these domains are especially interconnected in the work of writing center student tutors who, sometimes fresh out of Composition II, must straddle Elmborg’s wall on a daily basis. Elmborg suggests that the instructional foundation for connecting both the research and discourse domains can be found in the “information literacy” movement, formalized for higher education by the Association of College and Research Libraries in 2000 in a document entitled Information Literacy Competency Standards for Higher Education. USC Upstate is fortunate in that our Library employs a Director of Information Literacy, one of whose many responsibilities is to chair the Information Literacy Committee. However, Webber and Johnston (2000) point out that IL programs must be supported across disciplines in order to be successful (p. 384). Awakening UWC tutors to the fact that they are embodiments and even agents of academic interconnectedness in information literacy is essential to the success of their work in the UWC and thus is our starting point. Broader implications for this project, though, may include UWC fostering of campus awareness that the Library is not the only place where “information literacy happens.”

2. Tutoring and Information Literacy

“Information literacy” is defined as a set of skills acquired by an individual to “recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information” (as cited in “Association,” 2000, p. 2). In data collected from records of writing tutorials from Spring, 2002 to Fall, 2011, a full sixty percent of the activities we engaged in with students align directly or indirectly with Performance Indicators or Outcomes in all five of the IL Standards.

Table 1. Writing Center Assistance and Information Literacy Standards Overlap. See Information Literacy Competency Standards for Higher Education for specific standards.

<table>
<thead>
<tr>
<th>UWC Assistance Type</th>
<th>Overlapping IL Standard</th>
<th>Tutoring Instances 2002-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focusing Thesis</td>
<td>1.b</td>
<td>1968</td>
</tr>
<tr>
<td>Organization</td>
<td>2.6.b; 4.1.a</td>
<td>1570</td>
</tr>
<tr>
<td>Developing Ideas</td>
<td>2.4.a</td>
<td>904</td>
</tr>
<tr>
<td>Documentation</td>
<td>2.5.d; 5.1.d; 3.2; 5.5.3.8</td>
<td>973</td>
</tr>
<tr>
<td>Analysis</td>
<td>3.1.b; 3.2.3.4; 3.5.3.8.a</td>
<td>543</td>
</tr>
<tr>
<td>Integrating Sources</td>
<td>3.3.a; 4.1.a; 5.6.c</td>
<td>452</td>
</tr>
<tr>
<td>Details</td>
<td>3.4.a; 5.6; 5.7.5.8; 5.9</td>
<td>784</td>
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<td>4977</td>
</tr>
<tr>
<td>Total Assistance Types</td>
<td></td>
<td>11061</td>
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</tbody>
</table>

It is ironic that most of the available tutor training manuals, including our choice, The Bedford Guide...
For Writing Tutors (2010), are excellent resources for information about the “the writing process” but provide little to no guidance in information retrieval or evaluation. Because our tutors do not have time to write post-consultation narratives, we created a checklist which does include such assistance types as “integrating sources” and “documenting sources,” along with other typical writing center consultation topics such as “focusing a thesis,” “organizing,” “developing ideas,” “including appropriate details,” “analyzing,” etc. We attempted to itemize tutoring tasks from global to local concerns so that tutors might use the list, if necessary, to help prioritize time when tutoring clients with multiple challenges. The IL Standards were also developed with using Bloom’s Taxonomy. Decoding with our tutors the language of the IL standards juxtaposed to the language we use to describe types of assistance is a first step towards clarifying UWC activities and making visible the common pedagogical goals across both the research and discourse domains.

3. Training Plans

In the first of four training sessions dedicated to IL, we plan to ask our tutors how they believe our UWC “assistance types” overlap with or connect to the IL Standards. We have created an interactive exercise by which students can look at an enlarged list of specific IL standards excluding those that without doubt are not in our purview, and have students “flag” them in as many ways possible using our “assistance types.” For example, IL Standards “Reads the text and selects main ideas (3.1.a)” or “Restates textual concepts in his/her own words and selects data accurately (3.1.b)” or “Identifies verbatim material that can be then appropriately quoted (3.1.c.) might be tagged as “analysis” by one tutor, or “identifying relevant details” by a second or both by a third. We hope that the discussion that ensues will clarify in greater detail the specific skills that both tutors and their clients need to become information-literate.

Our second session will be a workshop in the Library with a Reference Librarian. Prior to this session, students will have blogged about both theirs and their clients’ conceptions and misconceptions about information gathering, information credibility, using Library resources, the roles of Library personnel and any other pertinent topics, which will then be discussed in the workshop. In addition, the Librarian will give tutorials a brief overview of (what we hope) they already know about our collection and the physical layout of the Library. They will also have a “behind the scenes” tour of areas not usually included in freshman Library orientations. Finally, we plan to “role-play” with tutors in “reference desk” scenarios that will give tutors the opportunity to learn how to ask questions more specific to information retrieval and evaluation than to writing.

In our third session, we will have our tutors critique a scholarly journal in a lesson based on one described by Mackey and Jacobson (2004, p. 214), and develop questions to help clients evaluate the journal articles they reference.

Finally, we will ask tutors to write two post-conference narratives about how the IL training sessions may have informed tutoring practices and create a set of questions related to Information Literacy that they have found useful with their clients and that can be used in future semesters and training sessions.

4. Conclusions

As of this writing we cannot report conclusions; however; we predict that our students will find ways through Elmborg’s “invisible wall;” we look forward to reporting our results in April.

References


America’s First Nightmare: Race, Romance, and the Haitian Revolution

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Abstract — The similarities between the 1860s and the second decade of the twenty-first century are eerie. Not unlike the infamous 2008 New Yorker cover “America’s Worst Nightmare,” representations of Abraham Lincoln from the 1860s cast the President as an insurgent, an Islamic sympathizer, and a secret conspirator against the most “sacred” tenets of democracy. For example, a Confederate etching that was first printed in 1861 (and re-published as late as 1896 in Cosmopolitan) features Lincoln in his office in stocking feet, one resting on the Constitution. The artwork surrounding him includes a portrait of “Ossawatomie” Brown and a landscape of “St. Domingo” that depicts naked Haitians sacrificing infants. Entitled “Writing the Emancipation Proclamation,” this visual image places the perceived race radicalism of the Civil War in an insurgent and international context. Several images in the same series depict black Union soldiers kidnapping and assaulting southern white women. These reactionary caricatures provide a dramatic counterpoint to the way that radical abolitionists imagined the Haitian Revolution, cross-racial coalitions, and Christian republicanism as symbols that could shape a post-slavery United States culture of universal emancipation.

Keywords — Haiti, Race Relations, American Literature

1. Introduction

Even in one of the best-known romances of the American Revolution—Abigail and John Adams’s marriage—we find the threat of rebellion. As Abigail reminds her husband in a letter dated March 31, 1776, the potential to “foment Rebellion” is a universal human right, not just an exceptional project that he and his cohorts undertook to break ties with King George. Therefore, as Adams and the other leaders of those North American colonies struggled to exercise a new concept of freedom, they experienced a concomitant anxiety about the limits they would place on that freedom. Although John’s jocular response to Abigail’s entreaty to “remember the Laidies” connects her demands to the rumor that Indians were “slist[ing]” their Guardians and Negroes [growing] insolent to their Masters,” it does not necessarily envision a coalition among those three “tribes” that could loosen the “bands of Government everywhere.” Nonetheless, he names these three “tribes” as separate entities from the newly-independent colonies, whose “Masculine systems” he acknowledges are “little more than Theory.” By no means do I intend to disparage Adams as a sexist or racist by emphasizing his point. Rather, I simply mean to illustrate his acumen in pointing out the exclusions (which he does not naturalize, but attributes to theory) that characterize the birth of a new nation.

2. The Rebellious “Tribes”

This might be one of the foundational moments of the creation, not only of a new nation, but of what Giorgio Agamben calls a “state of exception”—a paradigm of government wherein the “sovereign, who can decide on the state of exception”—or the exclusion of certain subjects from the “Code of Laws”—logically defines himself by the exception (35). In other words, John Adams locates his own sovereignty, not only in Philadelphia proper or in the new political body he has devised, but in his non-tribal identity as an Anglo-American man. He is not an Indian, a Negro, or a woman (nor is he a child, a dependent apprentice, or a naïve student); therefore, he locates himself within the borders of belonging that will define the new nation. Yet as that nation eventually expanded to incorporate more territory and develop direct relationships with the Caribbean in the triangular trade, the anxiety about the boundaries of revolutionary freedom increased. Even for Adams, a rebellion of Indigenes, blacks, or women was not really unthinkable—but the ability of Anglo-American men to maintain their sovereignty within such a context was.

The precedent for such rebellions was very familiar to Adams, who had defended the actions of the British soldiers in the Boston Massacre six years earlier. Pointing out that Adams characterized the black native Crispus Attucks and the “mob” he led as “a motley rabble of saucy boys, negroes, and molattoes, Irish teagues and out landish jack tars . . . screaming and rending like an Indian yell,” Tavia Nyong’o asks “what is the relationship between a potential nationality and
the circum-Atlantic class of slaves, sailors, and commoners” that Attucks represented (50, 41)? Insisting that “we must suspend our dominant conceptions of multiracialism as a hidden source of redemption in the American past,” Nyong'o reads Attucks as a quintessential exception to the image of citizenship in a potential nation (51). It might be premature, however, to read incipient nationalism in colonies that, for the next thirty years or so, tried to remain a loose confederacy of distinctly different and autonomous states, particularly when the relationship of those states to Caribbean trading partners was often paramount to their relationship to one another. Even Boston was extremely divided over the meaning of the 1770 uprising, so I would not hasten to assert that concrete racial meanings solidified in that moment or even that century.

Fears of revolutionary excess reached a new peak in the American political imagination, however, when news of a massive slave rebellion in St. Domingue reached the shores of the United States in 1791. As President, Adams would sign the 1799 Toussaint Clause into law, an act that diplomatic historian Gordon Brown explains “opened up a period of unparalleled cooperation between the U.S. government and a rebel regime, amounting to de facto recognition” (151). Perhaps motivated more by the lucrative trade with St. Domingue that the merchants of Boston, Philadelphia, or Charleston profited from than a recognition of black sovereignty, Adams’s foreign policy, according to Brown, eventually cost him the presidency. Thomas Jefferson, alternately, wrote to Alexander Hamilton that “We may expect therefore black crews, & supercargoes & missionaries thence into the southern states . . . If this combustion can be introduced among us under any veil whatever, we have to fear it” (qtd. in Brown 148).

This second defining revolutionary moment in the Americas had a resounding impact, in part because it proved that the desire for freedom and righteous rebellion could not be limited to white men. Stateside reports of events in Haiti, furthermore, emphasized the slaughter of white men and the ensuing vulnerability of their wives and daughters to the black revolutionaries. The specter of Haiti haunted the new United States political and literary imagination because it evidenced the vulnerability of a system that denied the natural rights of the majority of its constituency in the interest of protecting the privileges of propertied white men. The fictions of the Haitian Revolution that always stood in the shadows of the exclusive United States Revolution often fixated on the African insurgents’ capacity for “savage” and bloody violence and their attendant lust for white women, which made rape a primary expression of black revolutionary freedom. The sanguine language of bloodshed and the sexual language of “blood mixing” were the essential gothic tropes that characterized the effect of the Haitian Revolution on race and gender relations.

With increasing frequency in the nineteenth century, however, fiction and nonfiction writers alike throughout the Americas began to imagine potential relationships that crossed racial and gender lines differently. As a powder keg that could explode the boundaries of patriarchal or colonial nationhood, these cross-racial affiliations could be imagined in two almost diametrically opposite ways. As I just mentioned, gothic memories of the Haitian Revolution could conjure scenes of rape and violence as the casualties of a violent slave insurrection. If interpreted in a romantic context, however, these affiliations could also appear as amorous heterosexual relationships—romances of sorts—or filial ties that transcended the discourses of blood so pervasive in the gothic version. Their explosiveness was then a function of romantic ideals of freedom, the struggle for liberation against seemingly insurmountable obstacles. Often, these stories were written in the genre of historical romance.

By the 1860s, however, the romantic hero in Anglo-American fiction could no longer be a race rebel or, by any means, a woman. As J. Michael Dash has pointed out, Lydia Maria Child’s The Freedman’s Book (1865) presented an extremely pacifist version of Toussaint Louverture (Haiti and the United States 9). Child claims his “harshest action” was to execute his own nephew, General Moyse, for slaughtering whites (Freedman 55). More importantly, Toussaint “knew that the freedom of his race depended on their good behavior after they were emancipated” (56). Published in 1867, Child’s Romance of the Republic subtly invokes the gothic and dark memories of the Haitian Revolution. The story begins in the 1840s in New Orleans and seems to whisper a didactic message about the Haitian past. The epigraph, “Un petit blanc, que j’aime,” is a song that the almost-tragic mulatta Flora sings to a suitor. It subtly and perhaps even inadvertently reminds the reader of the dangers of integrating the Caribbean past into the historical romance of North and South. Described by the novel’s hero, Alfred King, as a song from the “French West Indies” about a “young negress” who falls in love with a white man, the fact that this white man is a “petit blanc” makes the song far more ominous (31). Flora, an “octoroon” and technically a “negress” herself, sings the song in a manner described as “roguish” and “mercurial” if not devilish or bewitching (17,19,72). While not as
obviously connected to her insurgent Haitian ancestry as her maid, who answers the door and serves tea in a “bright turban” (a headdress that became fashionable in pre-Revolutionary Haiti when proud mulatta women were forbidden to wear hats), Flora clearly embodies the enticing, exotic, yet insuppressible sexuality of the beautiful white-looking black woman.

3. Conclusions

Myths of the Haitian Revolution, fears of revolutionary excess, and anxieties about cross-racial sexual relations resounded in the rhetoric of race and rights that developed in the United States from the period of the American Revolution, through the Civil War, and well into Reconstruction. By studying newspaper articles, speeches and even personal letters from the archives of “great men,” Confederate etchings and other forms of visual culture, and the fiction and non-fiction literature of the period, one can see how the prevalent themes of revolution, both the story of the United States and of Haiti, became enmeshed with ideas of romance, cross-racial coalitions, and racial definitions.

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References

Gender-Occupational Stereotypes among Female College Students

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Abstract – This project explores differences in social cognition and investigates the relationship between explicit (outward written or verbal responses) and implicit (interpersonal associations or thoughts) social attitudes. We employed a modified version of the Implicit Association Test (IAT) to study female college students’ gender stereotypes about occupational roles. Women’s roles have changed dramatically in recent history, but traditional gender-based stereotypes have persisted. This study examines traditional gender-based occupational stereotypes among female college students at both a single-sex and co-educational institution. The results demonstrate a significant gender-occupation bias on both collegiate campuses.

Keywords – Gender-occupation stereotype, explicit associations, implicit associations, IAT

1. Introduction

Since the 1960s, the role of women both inside and outside the home has changed dramatically. Women have become an integral part of the labor force, they hold elite positions in the corporate world, they are more likely than men to attend college, and as likely to earn advanced degrees (Rudman & Phelan, 2010). Despite these facts, stereotypes depicting women in more traditionally feminine occupations, such as elementary school teacher, remain. One of the ways to potentially reduce these traditionally feminine stereotypes is to create environments in which women feel empowered to pursue their interests, whatever those interests may be. Women’s colleges, in particular, may be able to accomplish this goal by creating an atmosphere in which women are encouraged to engage in a wide range of academic pursuits. While the establishment of women’s colleges has likely fostered women’s attendance at undergraduate institutions, the question remains whether participation in higher education (and, more specifically, single-sex higher education) results in an attitudinal shift with respect to gender-based occupational stereotypes.

This study investigated gender-occupational stereotypes through measures of both implicit and explicit associations. Explicit associations exist in our conscious awareness, and (when necessary) we are able to express these thoughts in socially desirable ways. Implicit associations exist more subconsciously, such that we may not even be aware of our own implicit thoughts. Explicit associations are usually measured through surveys or questionnaires that allow participants to express their conscious opinions. These conscious opinions are often affected by social desirability biases, such that individuals are more likely to answer controversial questions in socially acceptable ways despite their true feelings.

Implicit associations can be measured through the Implicit Association Test (IAT: Greenwald, McGhee, & Schwartz, 1998), which was developed based on the Stroop Effect (Stroop, 1935). The Stroop Effect shows that a subject will react faster, and with fewer mistakes, when identifying a color when the color word and the actual color are the same rather than when they are different. For example, if we see the letters G R E E N all in the color green, we are able to identify it as the word green much more quickly and with more accuracy than if the letters G R E E N were all in the color red. The IAT employs this same approach to examine social attitudes rather than color naming, and investigates implicit stereotypes by measuring individuals’ automatic associations between two or more concepts. This is accomplished by measuring the speed of a response to a target concept and its associated concept (Greenwald, McGhee, & Schwartz 1998). Therefore, if someone has a stereotype that athletes are bullies, it should be easy to associate athletes with terms related to bullying, rather than terms associated with being friendly (White & White, 2006).

In the present study, we employed a modified version of the “Gender and Science” IAT to examine the occupational stereotypes of female college students at a single-sex, compared to a co-educational, institution. One goal of single-sex education is to empower women in their educational and occupational endeavors. Essentially, our aim is to determine whether attendance at these institutions is associated with reduced explicit and/or implicit gender-occupational stereotypes.

Primary Sponsors: Milliken & Company, Lilly M. Lancaster
2. Method

Participants in this study were 86 female college students in psychology courses at either a single-sex institution (n = 37) or a co-educational institution (n = 49). Participants completed explicit and implicit measures of gender roles and occupational stereotyping on an individual basis, and in counterbalanced fashion such that half of the participants completed an explicit measure first and the remaining participants completed an implicit measure first. The explicit measure consisted of a brief survey in which participants rated 12 scientific and humanities terms along a 9-point continuum (i.e., ranging from exclusively female to exclusively male). Implicit associations were obtained via a modified version of the “Gender and Science” IAT, in which participants first learned to associate masculine terms (e.g., father, son, etc.) with one choice (choice A) and feminine terms (e.g., mother, daughter, etc.) with a second choice (choice B). The participants then learned to associate scientific terms (e.g., engineering, math, chemistry, etc.) with choice A or B (in a counterbalanced manner) and to associate humanities terms (e.g., humanities, literature, history, etc.) with the opposite choice. Implicit associations were measured by differential response latencies for the gender-occupation pairings.

3. Results

Figure 1 shows that there was a significant explicit association between men and the sciences ($t(85) = 10.41, p < .001$), while women were significantly associated with the humanities ($t(85) = 4.19, p < .001$). However, there was no significant difference between single sex and co-educational students in their gender associations for the sciences ($t(84) = -0.34, p = .731$) or humanities ($t(84) = .89, p = .377$). The implicit comparison represented by Figure 2 shows that male terms were more strongly associated with sciences and female terms with humanities for both single sex ($t(36) = 6.00, p < .001$) and co-educational groups ($t(48) = 5.14, p < .001$). The degree of bias within the groups was not significantly different ($t(84) = 1.81, p = 0.73$). With regard to order effects, we found that the implicit gender-occupation stereotype was more significantly prominent when the explicit survey was completed before the IAT ($t(84) = 3.60, p = .001$). However, there was no significant difference in the explicit scores based on initial IAT presentation ($t(84) = .563, p = .575$).

4. Conclusions

Results from the present study indicated that female college students from single-sex and co-educational institutions displayed strong gender-occupation stereotypes. Responses to both the explicit and implicit tasks demonstrated this bias, such that masculine items were more strongly associated with science-based occupations and feminine items were more strongly associated with humanities-based occupations. We did not, however, find any differences in either explicit or implicit biases between the two groups of participants. Based on these results, it would seem that attendance at a single-sex institution does not impact college students’ gender-occupation stereotypes.

While not hypothesized, we identified a significant order effect between the explicit and implicit measures. Specifically, completing the
explicit survey first resulted in a stronger male-science bias on the IAT; however, completing the IAT first did not affect scores on the explicit survey. Based on this finding, further research should be conducted to investigate the effects of potential priming mechanisms. Priming occurs when exposure to a previous stimulus influences one’s response to a later stimulus. As demonstrated by Steele and Ambady (2006), female college students primed with the category “female” or their own gender identity, were more likely to express traditionally feminine stereotypes toward mathematics and the arts in both explicit and implicit domains. A further investigation of this priming mechanism may reveal a means by which female college students attending a single-sex institution are more likely to demonstrate a reduced gender-occupation bias.

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References


Attention-Deficit/Hyperactivity Disorder and Dissociation

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Abstract – The aim of the study was to examine whether there is a relationship between attention-deficit/hyperactivity disorder (ADHD) and dissociation. Participants were 123 undergraduate students who filled out the Dissociative Experiences Scale (DES) and completed the Conners’ Continuous Performance Test (CCPT). Two multiple hierarchical regression analyses were conducted. We predicted and found that the DES predicted inattention errors (i.e., omission errors) over and above the significant demographics, but did not predict impulsive errors (i.e., commission errors) on the CCPT. We also saw that the demographics, especially low age, predicted impulsive errors. The findings suggested that ADHD and dissociation may be interconnected.

Keywords- ADHD, Dissociation, CCPT, DES

1. Introduction

Attention-deficit/hyperactivity disorder (ADHD) is described as inattention, impulsivity, and hyperactivity. These symptoms of ADHD have negative academic effects (Mares, McLuckie, Saini, & Schwartz, 2007). Generally, adolescents with ADHD exhibit problems with planning and organizing, as well as using their working memory (Clikeman, Liotti, & Pliszka, 2008). Planning, organizing, and using working memory are all components of executive functioning, a capacity that is critical to solving problems mentally.

Executive functioning disturbances are not only found in adolescents that have ADHD, but may also be seen in the general population. One aspect of poor executive functioning may be having experiences of dissociations. Dissociations are defined as a lack of normal organization of thought, feeling, and conscious experiences (Giesbrecht, Geraerts, Merckelbach, & Smeets, 2004). Many adolescents report experiences that are dissociative. For example, an alteration in perception such as driving a car while unaware is a common dissociation. However, high levels of lapses in perception are usually associated with a mental illness (Bruce, Bruce, Arnett, Carlson, & Ray, 2007).

Dissociations are measured by the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986). The DES is widely accepted as a valid scale to measure dissociations. One study found that high dissociators showed deficits in executive functioning by using the Stroop task, a measure of selective attention and executive functioning (Phillips, Bull, Adams, & Fraser, 2002). Researchers found that when comparing high and low dissociator’s performance on the Stroop task, high dissociators experienced more interference (Freyd, Martorello, Alvarado, Hayes, & Christman, 1998). Therefore, high dissociators appear to show problems with executive functioning as well.

A number of variables are related to both dissociative experiences and to ADHD. Impulsivity, a well-known symptom of ADHD, is also associated with dissociation (Mares, McLuckie, Saini, & Schwartz, 2007; Dench & Murray, 2005). Also, demographics such as gender, age, and SES may predispose individuals for ADHD and dissociation. For example, gender and age differences were found when researchers administered the CCPT (Conner, Epstein, Angold, & Klaric, 2003). Researchers found that men were faster and more impulsive than women on the CCPT; there is also a higher rate of ADHD among men and boys (Mikami & Lorenzi, 2011). In regard to age, a longitudinal study found that impulsivity decreases over the lifespan (Harden, Tucker-Drob, 2011). Additionally, low SES may also contribute to impulsive behaviors. For example, researchers found that low SES predicted impulsivity, which resulted in higher rates of problem gambling among this population (Vitaro, Arsenault, & Tremblay, 1999).

Executive functioning disturbances have multiple facets. We focus here on the disturbances of impulsivity and inattention. Inattention, a well-known symptom of ADHD, is associated with dissociation as well (Harrison & Wilson, 2005). Demographic predispositions may predict the symptom of inattention. For example, a study that involved ADHD boys and ADHD girls found that the boys had higher levels of inattention (Bauermeister et al., 2007). It may be the case that impulsivity is more closely related to the demographic variables of age, sex, and SES, than inattention. For example, a cross-sectional study found that inattention neither decreased or increased as an individual aged; however,
consistent with the notions mentioned above, the researcher found that impulsivity decreased as the individual aged (Wassenberg et al., 2008). Additionally, even as early as infancy SES contributes to delays of development of low SES infants, showing normal behaviors in attention at a later date than high SES infants (Clearfield & Niman, 2011).

The current study is to examine whether scores on the DES contribute to scores on the CCPT. Specifically, I aim to test the hypothesis that the DES will contribute to omission errors (i.e., inattention) but not commission errors (i.e., impulsivity). However, it is likely that a number of demographic variables will predict commission errors (i.e., impulsivity).

2. Methods

2.1 Participants

The participants recruited in this study were 123 college students that were given extra credit to participate. The participants consisted of 79 females (64%) and 44 males (36%). Race of the participants included 54 African Americans (44%), 52 Caucasians (42%), 13 blended (10%), 2 Hispanics (2%), 1 Native American (1%), and 1 Asian (1%).

2.2 Measures

Dissociative Experiences Scale (DES). In this study the dissociative experiences scale was used (DES; Bernstein & Putnam, 1986). TheDES is a widely accepted scale that has demonstrated good validity and reliability (Beradrdis et al., 2009). Furthermore, the DES is a 28-item self-report questionnaire that measures dissociation. Each of the 28 items ranges on a scale from 0 to 100, with 0 being “never” and “100” being all of the time. Items on the DES are listed on a continuum and ask the subjects how frequent are the experiences using percentages (Freyd, Martorello, Alvarado, Hayes, & Christman, 1998). A typical DES question states, “Some people have the experience of driving a car and suddenly realizing that they don’t remember what has happened during all or part of the trip.” The total score is found by adding up the 28 items and dividing by 28. Conners’ Continuous Performance Test (CCPT). In this study the Conners’ continuous performance test was used (CCPT; Conners, Epstein, Angold, & Klaric, 2003). The CCPT instructs a subject to press a button when the visual stimulus is not “X.” The CCPT is a widely accepted scale that has demonstrated good validity and reliability (Burton et al., 2010). The CCPT is a computerized test that measures inattention and impulsively. Generally, the test takes 14 minutes to complete. For this study, total commission errors were summed to form the variable impulsivity and total omission errors were summed to form the variable inattention (Conners, 2004). An important consideration for this study was that errors may occur for a variety of reasons. For example, some participants may have made errors because they went too fast as compared to others, who took their time. Thus, response time (RT) was used as a statistical control, with higher RTs indicating slower performance.

2.3 Procedure

The data for the current study were drawn from a larger study examining goal setting and executive functioning. Students were shown to a private cubicle to conduct the CCPT, and then moved to a group area to fill out the DES questionnaire.

3. Results

Two hierarchical multiple regression analyses were conducted, one to predict inattention and the other to predict impulsivity, on the entire sample (N=123). In step 1, we entered age, sex, SES, and RT (see Table 1). In step 2, we entered scores on the DES.

In the first regression, the DES predicted inattention errors (i.e., omission errors) over and above the significant demographics, but did not predict impulsive errors (i.e., commission errors) on the CCPT. In the second regression, we also saw that the demographics, especially low age, predicted impulsive errors.

4. Conclusion

The aim of this study was to examine if there was an association between the DES and ADHD. We supported our hypothesis that the DES contributed to omission errors (i.e., inattention) but not commission errors (i.e., impulsivity), and that a number of demographics predict commission errors (i.e., impulsivity).

The current findings suggest that dissociation and ADHD are connected. This corroborates with other findings that people with ADHD and high dissociators both report executive functioning disturbances and higher levels of impulsivity and inattention. Like other studies, our findings link the demographic variable age to the CCPT; unlike other studies our findings link inattention to dissociation.
Although ADHD has been a central focus of the paper, we did not have an ADHD sample. Although some participants may have scored high on the CCPT, we did not have access to medical history that stated an individual had ADHD. A limitation is the use of self-report data. Some of the participants may not have been completely honest when choosing answers, or they may have been rushed and failed to read the questionnaire completely or not at all. Also, some participants may have not understood all of the questions. An additional limitation would be that our sample consisted of people in one geographical area. Our research may not generalize outside the area of our sample. Nevertheless, our results were significant and that warrants more research.

The findings of our research are important; this research is suggestive that ADHD and dissociation may be interconnected. If we identify a relationship between ADHD and dissociation, the knowledge gained will shed more light on ADHD. Future studies, specifically ADHD studies, should include a measure of dissociation. Future studies may also consider comparing levels of healthy goal setting with ADHD individuals and people who score high on the DES.

References


Disabilities and Friendships: Bridging the Gap

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Abstract – Previous research indicates that college students with increased exposure to persons with disabilities report greater acceptance of peers with physical disabilities. The present study examined whether these findings hold true for psychological disorders and for situations involving closer, personal friendships. Does more exposure bridge the gap between acceptance and friendship?

Keywords – Disabilities, college students

1. Introduction

The number of students with disabilities on college campuses has tripled over the past 20 years (Myers & Bastian, 2010), yet peer acceptance remains an issue. The question remains, is increased prior exposure to individuals with disabilities enough to “bridge the gap” from acquaintance to friendship between those with disabilities and those without? The current study was a replication and extension of a previous vignette study (Griffin, Keen, Lehman, & Brown, 2011). Griffin et al. found that participants reporting higher levels of prior exposure to persons with physical disabilities were more willing to communicate with hypothetical classmates who had physical disabilities than those who reported lower levels of prior exposure. It appears that participants with increased prior exposure to those with disabilities recognized that having a physical disability did not define a person’s character.

For the present study, we investigated the same two physical disabilities as in the previous study (i.e., cerebral palsy and deafness) and added two psychological disorders (i.e., Asperger’s and depression). We retained the original measures, assessing general (e.g., communicate in private) and school-related (e.g., ask question about class) items. Additionally, we included several “friendship” items (i.e., ask to lunch, exchange phone numbers, and request to be Facebook friends) as more sensitive measures of participants’ willingness to initiate a more in-depth and personal relationship outside of class. Finally, we refined our assessment of prior exposure to include a third, moderate level of prior contact to persons with disabilities. Thus, in the current study, we extended our investigation to determine whether the benefit of a higher level of prior contact to persons with disabilities applies to both physical and psychological disorders and/or to one’s willingness to form more meaningful relationships.

2. Method

We used a 2 (type of disability: physical or psychological) x 2 (visibility of symptoms: high and low) x 3 (level of prior exposure: high, moderate, or low) factorial design. Type of disability and level of exposure were between-subjects variables and symptom visibility was a within-subjects variable. Participants (240 psychology students) each read two vignettes of hypothetical classmates with either physical or psychological disabilities, followed by a brief description of each disability. Afterward, they completed a variety of ratings in which they indicated their likelihood for interaction with each hypothetical student on 8-point Likert-type scales.

Table 1. Level of Prior Exposure

2.1 Sample stimuli

Vignette describing a psychological disorder:

Caroline is 20 years old and has Asperger’s syndrome*. She just moved to Spartanburg and is enrolling at USC Upstate for the fall semester. She is very friendly and likes to meet new people, but she often experiences trouble with the right things to say in social situations. Caroline is very intelligent and excels academically, but may have difficulty working well with others because she has a hard time picking up on social cues. She loves to read about her interests but tends to be overly focused.
on these topics during conversations with others. Change in routine is hard for her to handle. Her disability is very obvious to others.

*Asperger’s Syndrome- an autism spectrum disorder that is characterized by significant difficulties in social interaction, along with restricted and repetitive patterns of behavior and interests.

Vignette describing a physical disability:

Rachel is 20 years old and is deaf*. She just moved to Spartanburg and is enrolling at USC Upstate for the fall semester. She loves to read and is very nice. She is intelligent, but in class has to sit near the instructor in order to lip read. When more than one person is talking at a time she can become confused. She has on and off ringing in her ears, which can make it hard for her to concentrate and she needs for people to repeat themselves. Others don’t immediately know she is deaf though they may notice pronunciation errors when she is speaking. Rachel is very friendly, but sometimes is apprehensive to interact with others because of her difficulty hearing. Her disability is not very obvious to others.

*Deafness- condition wherein the sufferer’s ability to detect certain frequencies of sound is completely or partially impaired.

3. Results

Separate 2 x 2 x 3 analyses of variance were conducted on each dependent measure. In order to report a conservative estimate of our results, a modified Bonferroni approach was used and only results that reached p < .01 were reported. Results revealed main effects for type of disability on 15 of the 20 dependent measures. For each of these effects, physical disabilities received higher ratings than psychological disorders. As can be seen in Figure 1, the main effects for prior exposure indicated that compared to participants with moderate or low exposure, those with high exposure were more willing to interact in general and school-related situations.

![Main effects for exposure on general items](image)

![Main effects for exposure on school-related items](image)

**Figure 1.** Main effects for level of prior exposure on general and school-related items.

4. Conclusions

For all three categories of dependent measures (i.e., general, school-related, and friendship-related items), participants reported greater willingness to interact with individuals who were described as having physical disabilities as opposed to psychological disorders. On the general and school-related items, high prior exposure to persons with any type of disability positively affected participants’ attitudes, such that increased exposure was associated with increased comfort. Our results also showed that the positive effects for prior exposure did not extend to more in-depth personal relationships. Participants who had lived with someone with a disability indicated that they were no more likely to ask that fellow student to lunch, exchange phone numbers, or become Facebook friends than participants who reported no prior contact. Further, on the more sensitive, “first-step-to-friendship” items participant responses were lower than for the general and school-related items. Having had higher levels of prior exposure to persons with disabilities did not make a difference in participants’ willingness to form more meaningful friendships with our
hypothetical individuals. Perhaps something beyond mere exposure is required to make that leap from acceptance to friendship. One area for future research would be to try to identify specific factors that would help cross this barrier in educational, occupational, and social settings.

**References**


A Study of the Correlation between Levels of Intelligence and Vegetarian Food Choice Motives

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Abstract – People have different motivations for eating or avoiding foods or food groups; these motivations are known as food choice motives. One group of people that have distinct food choice motives are vegetarians/vegans. This research investigated whether there was a correlation between levels of intelligence in vegetarians/vegans and their food choice motives. In addition, the general differences in food choice motives between vegetarians, vegans, and non-vegetarians were explored.

Keywords – Vegetarianism, Food Choice Motives, Intelligence, Moral Thinking

1. Introduction

The correlation between vegetarianism and general intelligence has previously been shown to be positive. Gale, Deary, Schoon, and Batty (2007) conducted a study to determine if children with higher IQs were more likely to become vegetarian than children with lower IQs and concluded that this was so.

People whose moral reasoning is more advanced also tend to be more intelligent (Eisenberg-Berg, 1979). In addition, moral values can impact dietary choices (Dietz, Frisch, Kalof, Stern, & Guagnano, 1995). The present study uses SAT scores and the Food Choice Questionnaire (Lindeman and Vaananen, 2000) to explore whether or not vegetarians who differ in reasons for being vegetarian also differ in levels of intelligence.

It was hypothesized that people who were vegetarian/vegan for ethical or philosophical reasons, such as prevention of animal cruelty, would have higher levels of intelligence than those who were vegetarian for personal reasons, such as health. It was also hypothesized that this was the result of their thinking on a higher moral level when it came to food choices (Kohlberg’s Level 6 as opposed to Level 2 or 5).

2. Methods

2.1 Participants

Two hundred and nine 18-24 year olds participated in the study. One hundred and eighty-five were female, twenty-two were male, and two identified as other. Of those 209 participants, 71 were vegetarians of one variety or another, 64 were vegan, and 67 were non-vegetarian.

2.2 Materials

The Scholastic Aptitude Test (SAT) was used a measure of intelligence. The Food Choice Questionnaire (FCQ) was used to determine participants' motives for their dietary choices. The subscales of the FCQ were: Animal Welfare, Environmental Protection, Health, Mood, Convenience, Natural Content, Sensory Appeal, Price, Weight Control, Familiarity, and Ethical Concern.

2.3 Procedure

Four measures were used in an online survey format. The first measure was a demographic questionnaire, followed by a question that asked what kind of diet the participant followed. Next, the participants provided their SAT scores. After that, participants filled out the Food Choice Questionnaire, to determine their food choice motives. Finally, participants were asked to complete the Marlowe-Crowne Social Desirability Scale to assess for social desirability bias.

3. Results

Data was analyzed with SPSS version 19.0 using Analyses of Variance (ANOVA) and post-hoc tests when the ANOVAs revealed significant results. Analyses of Variance were used to compare the SAT percentage scores to the mean scores of groups by dietary type and to compare non-vegetarians to those with diverse motivations for being vegetarian. Correlations among SAT scores and scores on the subscales of the Food Choice Questionnaire were also assessed.

The results of the ANOVA comparing the SAT percentage scores of the dietary type groups showed a significant difference in the groups' means at the 0.004 level (F=5.628). Post-hoc tests showed that vegans had significantly higher SAT
scores than non-vegetarians. There were no significant differences between the scores of vegetarians and vegans or between vegetarians and non-vegetarians (See Table 1).

One striking finding was that when it came to the Food Choice Questionnaire subscales, the only two subscales scores that separated vegetarians from vegans were the Animal Welfare and Weight Control subscales. Additionally, our results revealed that there was a significant difference between the scores of vegans and non-vegetarians on the Familiarity subscale, but no significant difference between vegetarians and non-vegetarians.

Results of our ANOVA indicated that there was a significant difference in SAT percentage scores between groups that had either Ethical/Philosophical reasons or Other reasons for being vegetarian/vegan, or for not being vegetarian/vegan. Our post-hoc tests found that people who stated they were vegetarian/vegan for ethical/philosophical reasons had significantly higher scores on the SAT than the non-vegetarian sample.

Pearson correlational analyses were performed to determine if correlations existed between SAT scores and the subscales of the Food Choice Questionnaire. There was only one significant correlation and this was a slight negative (−0.148) correlation between SAT percentage and weight control.

<table>
<thead>
<tr>
<th>Diet Type</th>
<th>Diet Type</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
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<th>Upper Bound</th>
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<td>0.2219</td>
<td>393</td>
<td>-0.795</td>
<td>0.292</td>
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<td>0.2104</td>
<td>1003</td>
<td>-1.91</td>
<td>0.198</td>
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</tr>
<tr>
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<td>Non-vegetarian</td>
<td>0.4110</td>
<td>0.2034</td>
<td>110</td>
<td>-0.891</td>
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<td>1003</td>
<td>-1.91</td>
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<td>Vegan</td>
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<td>0.4110</td>
<td>0.2034</td>
<td>110</td>
<td>-0.891</td>
<td>0.069</td>
<td></td>
</tr>
</tbody>
</table>

* The mean difference is significant at the 0.05 level.

**Figure 1.** SAT Percentage Differences Between Dietary Type Groups.

4. Conclusions

The hypothesis of this study was not supported; there was no significant difference between the SAT scores of vegetarians/vegans who had Ethical/Philosophical reasons or Other reasons for their dietary choice.

Vegans had significantly higher SAT scores than non-vegetarians and almost significantly higher scores than vegetarians. These results do not support the findings of Gale, et al. (2007), who found that vegetarians had higher IQ scores than non-vegetarians, but that vegans had lower IQ scores than vegetarians.

When it came to the Food Choice Questionnaire subscales, the only two subscales scores that separated vegetarians from vegans were the Animal Welfare and Weight Control subscales. Vegans were more interested in Animal Welfare, while vegetarians were more interested in Weight Control.

Non-vegetarians and vegetarians were significantly more interested in Familiarity than were Vegans.

**Acknowledgements**

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**References**


The Effects of Parental Divorce on Adolescents’ Risk-Taking and Emotional Self-Control

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Abstract – Fifty students enrolled as juniors in a public AA high school completed the BASC-2 and the BRIEF. Results of this study indicated that students whose parents had divorced were more likely to have difficulties with emotional self-control than those students whose parents had not divorced. No statistically significant differences were noted in risk-taking behaviors.

Keywords – Divorce, Risk-Taking, Emotional-Self-Control

1. Introduction

Divorce has become increasingly prevalent in the United States. Until recently, psychologists were unaware of the extent to which divorce affects families (Klinger, 2000). Divorce puts a great deal of emotional strain on families. Custody battles, court dates, and adjusting to the drastic changes emotionally challenge both children and parents. The effects of divorce on children can last a lifetime and can influence risk taking behavior and emotional self-control. We predict that students whose parents were divorced would engage in more risk taking behavior and have less emotional self-control than those students whose parents were not divorced.

2. Methods

2.1 Participants

The participants are 50 high school juniors from a public, AA high school in Florence, South Carolina. They are predominately African American and Caucasian, and roughly half male and female. The students are ages 16-19.

2.2 Design

The study is a 2X2 ANOVA. The independent variable consists of divorced and non-divorced parents, and the dependent variable consists of risk taking and emotional self-control.

2.3 Measures

Demographic Survey. A demographic survey asked the person’s gender, ethnicity and parental occupation(s).

2.4 BASC-2

The BASC-2 (Reynolds & Kamphaus, 2004) relies on self-report data and measures Sensation Seeking by discovering the desire to participate in risky behaviors and the desire for excitement. The combined internal consistency reliability for males and females age 15-18 is .70. Internal consistency is .68 for males and .69 for females. The test-retest reliability for adolescents is .77.

2.5 BRIEF

The BRIEF-SR (Guy, Isquith, Gioia, 2004) was given to participants to measure their self-rated emotional control. The test-retest reliability for the BRIEF, subtest of emotional control, is .86.

2.6 Procedures

All students enrolled in a junior class were selected to participate. Their parents were mailed a consent form to request their permission for their adolescent’s participation in the study. Upon arrival, adolescent assent was obtained via a signed consent form. The first task was a recorded interview. The subject then participated in two computerized tasks, one measuring risk taking behavior and the other measuring executive functioning. Finally, the subject completed the Demographic Survey as well as the BASC-2 and the BRIEF-SR. All subjects received a $5.00 gift card to McDonalds after participating.

3. Results

The data collected via one-way ANOVA testing (between-subjects: divorce and emotional self-control) from the BRIEF-SR proved to be
Our hypothesis that children from divorced families would display more sensation seeking behavior than their counterparts from non-divorced families was not supported. However, in looking at the data, it appears that both groups mean score feel within the clinically significant range. Thus, due to the restriction of range in the scores, it might have been more difficult to detect meaningful differences in this seemingly otherwise heterogenous group. These results may help parents and professionals understand how divorce affects children. Understanding these effects can initiate the creation of programs or coping mechanisms to help children deal with the consequences of divorce.

**References**


Goal Setting Behavior in Students with a History of Abuse

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Abstract — Fifty adolescents were administered a series of self-report measures. We predicted that children who had been in abusive situations would have poorer decision making and goal setting behaviors. Our results indicated the inverse: Individuals who had experienced abuse demonstrated more effective decision making and goal setting behaviors.

Keywords — Adolescents, abuse, goal setting behaviors

1. Introduction

It is well documented that the experience of abuse in childhood has many negative, long term effects on its victims' functioning and well-being (Mullen, Martin, Anderson, Romans, & Herbison, 1996). All types of child abuse (physical, emotional, and sexual) have been linked to increased rates of psychopathology, low self-esteem, and interpersonal difficulties among many other adverse psychological effects (Mullen, Martin, Anderson, Romans, & Herbison, 1996) and are even considered to be a “special destroyer of adult mental health” (Rind, Tromovitch, & Bauserman, 1998, p.22). With this information in mind, it is important to try to understand how victims of child abuse deal with this formidable problem on a daily basis. By studying goal setting behaviors in those with a history of abuse in childhood, we can begin to ascertain how this particular population approaches goal setting.

2. Methods

2.1 Participants

Participants in this study were 50 junior-level students in a public, AA high school in rural South Carolina. The study consisted of 32% Caucasian and 49% African-American students; 41% of participants were female and 59% were male.

2.2 Measures

A demographic survey was given in order to obtain information about each subject’s gender, race, and parental occupation. To measure goal-setting behaviors, we used three tests: the Behavior Rating Inventory of Executive Functioning (BRIEF; Guy, Isquith, & Gioia, 2004), the Iowa Gambling Task (IGT; Bechara, Damasio, Tranel, & Damasio, 2005), and a semi-structured interview. Among other things, the BRIEF measured planning and organizing behaviors and is also the means through which students reported any history of abuse. The Iowa Gambling Task gave us information about the students’ level of risk-taking in the decision making process.

2.3 Procedures

Testing was conducted individually with a researcher and a participant in an approximately one-hour session. First, a semi-structured interview was conducted and recorded. Next, students were instructed to complete the IGT and the BRIEF. Participants were encouraged to ask questions and were made aware that they reserved the right to cease testing at any time without penalty.

3. Conclusions

3.1 Results

Although we are still awaiting the results from the semi-structured interview, the data collected via one-way ANOVA testing (between-subjects: abuse and risk taking) from the IGT proved to be statistically significant (p = .032), but had a small effect size ($\eta^2 = .099$). However, a one-way ANOVA for the planning and organizing data from the BRIEF was not statistically significant (p = .072). However, this small effect will become statistically significant with more participants. We are currently collecting data from additional 50 high school juniors as well as about 300 college freshman. Once this data is collected, we also look forward to looking at this cross-sectional sample to determine if age-setting (high school versus college) is an important factor in goal setting behavior.
4. Discussion

Contrary to our initial hypothesis, our studies have shown that those who suffered from any form of childhood abuse have more effective decision making and goal setting behaviors than the general population. Because many other studies indicate that childhood abuse victims also show increased rates of psychopathology (Mullen, Martin, Anderson, Romans, & Herbison, 1996), we must acknowledge the idea that this particular population also exhibits high levels of resiliency. Children who have been abused appear to have become resilient as their functioning has improved. This replicates other work in the fields of risk and resilience. A qualitative study of 10 women who were abused in childhood suggests that this resiliency comes from the generalization of positive coping skills used during the abuse to their adult lives. According to this study, the most resilient victims of abuse used “educational pursuits, family involvement, social affiliations, sports, religion or spirituality, and career interests…to redirect their thoughts and energy away from their abuse experiences” (Bogar & Hulse-Killacky, 2006, p.323). This ability to refocus this energy in a positive way naturally requires effective goal setting behaviors. It seems that surviving the abuse instilled in the victims a strong set of coping skills which they later generalize to goal setting and decision-making in adulthood thus allowing the healing process to continue.

Acknowledgements

The authors would like to thank the Department of Psychology at Francis Marion University for funding this research.

References


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<th>p</th>
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Changing Strategies for Nonprofit Fundraising: The 2012 BMW Charity Pro-Am Collegiate Challenge

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Abstract – The 2012 BMW Charity Pro Am (S.C. Charities) in the Upstate of South Carolina developed the Collegiate Challenge in an effort to increase its ability to raise funds for local nonprofits in these economic hard times. The Challenge is a competition between four Spartanburg colleges: Converse College, Spartanburg Community College, University of South Carolina Upstate, and Wofford College. Teams representing each school have the opportunity to sell inventory for the 2012 BMW Charity Pro-Am including corporate skyboxes, tickets to the Champion’s Pavilion, and foursomes in The BMW Collegiate Challenge Pro-Am on May 16, 2012. The Challenge gives nonprofit and business students resume-building experience while benefiting their college and local charities. This poster describes the 2012 Collegiate Challenge Plans including: team structures, goals, media coverage, and marketing process.

Keywords — charity, fundraising, collegiate challenge, marketing

1. Introduction
The BMW Charity Pro-Am Collegiate Challenge is a local charity golf tournament sponsored annually in Spartanburg, SC by BMW Manufacturing, where for the first time four colleges and universities will compete against each other to raise funds for the event. In past years there was a lack in promotion for the event in the surrounding Spartanburg communities. As a result the event coordinators decided to involve the colleges and universities in the Spartanburg community in hopes that this will spread the word and excite the community about the BMW Charity Pro-Am. The teams that represent each school have the task of selling corporate sky boxes, Champions Pavilions tickets, and teams for the Pro-Am. The students are required to work with the teams throughout the year to get ready for the event in May 2012.

2. Collegiate Challenge Plans
Teams will meet on a monthly basis from September 2011 to May 2012 to create marketing plans to increase sales for the golf tournament by promoting Skyboxes, Champion Pavilion tickets and Pro-Am teams.

2.1 Team structure
Each team consists of 6 – 8 students and has a faculty advisor. A “lead contract” has been selected to facilitate communication between board of director, local business, and media.

2.2 Team goals
The revenue goals for the USC Upstate Collegiate Challenge Team is to raise $100,000.

2.3 Media Coverage
Teams promote and advertise their involvement in the BMW Charity to increase ticket sales, and create community excitement towards the tournament.

2.4 USC Upstate collegiate challenge team
The team has participated in a joint media day coverage and has been featured in an article in the Spartanburg Herald-Journal, the local newspaper. In March the team will be on a live talk show which airs on WOLT 103.3 FM. The team will also give a presentation during an upcoming monthly meeting of the Spartanburg Rotary Club, and are currently planning a television interview with the local CBS affiliate.

2.5 Marketing Process
Teams are provided with a video, poster brochure, and business cards to use as marketing tools. Local companies will be contacted to request a brief meeting about the benefits of participation. A solicitation packet will be left with the company. Handwritten thank you letters will be mailed within 48 hours and a save the date postcard will be mailed within several weeks. A follow-up contact will be made within two weeks to secure a commitment.

3. Conclusion
If successful, the Collegiate Challenge will serve as a model that may be replicated in other charitable Pro-Am tournaments across the United States.

Acknowledgements
Faculty Advisor – John T. Long, Ph.D.
Narcissism Mediates the Relationship between Extraversion and Risky Behaviors in Adolescence

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Abstract – One hundred and thirty one undergraduate students completed the NEO-PI, the Narcissistic Personality Inventory, and a measure of risk taking behavior. Results of this study indicated that narcissism mediated the relationship between extraversion and risk taking behaviors (i.e. binge drinking, drug use, risky sexual behaviors, etc.)

Keywords – Narcissism, Extraversion, Risk Taking.

1. Introduction

In this experiment, we hope to see how the personality traits of narcissism and risky behavior, narcissism and extraversion, extraversion and risky behavior relate to the likelihood that college students will engage in risky behaviors. Burg, et.al described risky behaviors as “adverse health behaviors” like driving recklessly or using drugs (2004.p.360-361). In this particular study, the behaviors we measured that were considered “risky” were binge drinking, drug use, risky sexual behaviors, drunk driving and reckless driving. Determining what kind of person engages in such behaviors is important because there is a gap in the research. As Katz, et. al put in her 2000 study, a “mechanism whereby personality may influence these [risky] behaviors has not been established” (p. 2). Knowing what kind of person engages in risky acts may help in preventative efforts.

Extraverted people thrive in social and excited environments, and may not always be reliable (Matthews et. al, 2003. Pg.22). It is a logical assumption, then, that these thrill-seekers may be more prone to engage in risky behavior. In our experiment, we used the OCEAN personality inventory to quantify extraversion. This model, also called the “Big Five” model, separates extraversion into three sub-traits: dominance, sociability and positive emotionality (Judge et.al).

Narcissism is defined as self-love. Narcissistic people have a hard time viewing themselves as imperfect (Bunnin et.al, 2004). Research has shown that narcissists have trouble controlling their impulses and are prone to addictive behaviors (Rose, 2007: 76,579). Narcissism has been linked to risky and illogical decision-making (Campbell et. al, 2004: p. 309). Narcissism is also linked to extraversion, with narcissists tending to be more extraverted than non-narcissists (Paulhus et. al, 2002: p. 559).

Because narcissism somewhat mediates both extraversion and risky behavior, and that extraversion itself is associated with risky behavior, we hypothesize that narcissism mediates the relationship between extraversion and risk. According to Lustman, Wiesenthal & Flett (2010): p. 1423; Tasca (2000) people who score high in narcissism were aggressive and easily frustrated these traits are reflective with narcissistic personality disorder (NPD) as they are defensive in maintaining a bigger than life, but “fragile self-image (Rhodewalth & Morf, 1998). Individuals with NPD are more likely to be violent, impulsive and demonstrate risky behavior due to their “inflated and unstable self-views” (Baumeister, Smart, Boden 1996).

Studies also indicate a positive correlation between NPD and self-esteem. The importance of these variables in an individual may display risk-taking and aggressive behavior (Barry, Frick, & Killian 2003; Barry, Frick, Adler & Grafeman 2007a; Barry, Pickard, & Ansel 2009; Emmons 1984; Lau, Marse, Kunimatsu, & Fassnacht 2010; Raskin and Terry 1988; Washburn, McMahon, King, Reinecke & Silver 2004).

2. Methods

Participants in this study were 131 undergraduate students (mean age = 21.6) enrolled in a freshman psychology laboratory course at a small four-year university located within the southeast. Sixty-four percent of the sample was female. Forty-one percent of the sample classified themselves as white, 48% of the sample classified themselves as African American, while the remaining classified themselves as other.
3. Results

Correlations between narcissism, extraversion, and risk taking behavior were established. The results indicate that higher levels of risk taking behavior are positively correlated with extraversion (r = .243, p=.011) and higher levels of narcissism r = .257, p=.003). Following the steps outlined by Baron and Kenny (1986), we determined that there was evidence that narcissism was a partial mediator in our model. We attempted to assess whether this drop from .243 to .144 of the unstandardized regression coefficient is statistically significant. For the purposes of this experiment, the Sobel test was used to examine this difference. Indeed the drop was statistically significant indicating that narcissism does mediate the relationship between extraversion and risk taking behavior (Sobel z-value = 2.305, p = .021). See figure 1.

Results indicate that risk-taking behavior is increased when narcissism increases. However, narcissism reduces the correlation between extraversion and risk-taking, indicating that there is also a relationship between the extraversion and risk taking behavior.

4. Discussion

The purpose of this study was to examine the relationship between the personality traits of narcissism and extraversion to risk-taking behavior in college students. As previous studies seem to indicate, narcissism has been related to both extraversion and risky behavior, and extraversion has been associated with risky behavior. Our results support previous findings. Those who score higher on the personality factor of extraversion do indeed engage in more risk taking behavior than do those who score lower in extraversion. Furthermore, those who score more highly on measures of narcissism engage in more risk taking behaviors than do those who score lower in narcissism. In addition to replicating these results, our results also indicate that individuals who score higher on measures of extraversion and narcissism actually engage in less risk taking behavior. Perhaps narcissism reduces this relationship because those who engage in narcissistic behaviors have unusually self-centered and self-aggrandizing views of themselves, and any other factor that takes the attention away from their self-view, (i.e. risk taking behavior) is ignored. Alternatively, it is possible that the narcissistic behavior in some way becomes a protective factor for those with extremely high scores on extraversion.

4.1 Limitations and Suggestions for Future Research

Because the research was a correlational study, there are variables to consider. Therefore, this study did not seek to prove that extraversion and narcissism cause risk-taking behavior. Instead, this study sought to model the relationships between extraversion, narcissism, and risk-taking behavior. Thus, it is possible that other confounding variables that were not measured are influencing these results. Future research should examine other factors that might be related to adolescent risk-taking behavior.

Selection bias is evident in this study as the study was conducted with a sample of college-age students. Thus, the generalizability of these results to those of other samples is grossly limited. Future studies should attempt to replicate these findings within the general population.

Finally, these results were based on self-report questionnaires. Inherent in this methodology is the need for social desirability. Thus, future research might look at other data collection methods in order to replicate and expand these results.

References


“Any Dream Will Do...” To Fulfill Political Ambitions

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Abstract – Joseph is a favorite Old Testament character, one who's God-given ability to interpret dreams renders him an ingenious leader. As a contrast to this popular sentiment, this paper looks more closely at Joseph's political career, in which his piety becomes compromised in favor of his ambitions. Through close analysis of Joseph’s behavior in the latter chapters of Genesis, this paper explores the interaction of politics and piety, ultimately determining whether the two can work effectively in one leader for the greater good of the state.

Keywords – Hebrew Bible, politics, piety, Joseph

1. Introduction

Joseph, favorite son of Jacob, is one of the more commonly characterized figures in Genesis, often portrayed as a man blessed with a special gift that elevates him to heroic standards for the Egyptian people. Moreover, he is magnanimous enough to forgive the brothers who betrayed him and join Israel again, single-handedly providing for a reunited family. Yet even in this most basic caricature, there lies a fundamental problem – for all Joseph’s abilities as dream interpreter and political administrator, his successes become the catalyst for the centuries-long Israelite enslavement in Egypt. This progression thus suggests an extreme shift from the pious interpretations of dreams through God to a direct disregard for Hebrew welfare in favor of political ambitions. However, a close analysis of the text reveals not a dramatic shift from pietist to politics, but a subtle tension developing between these two forces throughout the Joseph saga. This tension is best illustrated in Chapters 40 and 41 of Genesis, when Joseph uses pious means to interpret Egyptian dreams for ultimate political gain. The linguistic and syntactical nuances of these scenes are specifically constructed so that pious statements are both innocently misinterpreted as political, and purposefully manipulated as such. Through Joseph’s duplicitous intent, the inevitable translation of the pious into the political, the text clearly indicates that piety cannot survive where politics is involved.

2. Joseph as a Dream Interpreter

It is important to first properly situate Joseph within the larger context of biblical dream interpretation. Joseph is first and foremost a dreamer himself. However, Nili Shupak suggests some key differences between the dreams in the Joseph story and dreams elsewhere in the Hebrew Bible. In her analysis, every dream in these chapters, most notably even Joseph’s, contains distinctly Egyptian traits. Thus, even in this introduction to Joseph, Shupak finds implications in Joseph’s nature that are definitively non-Hebrew, and by association, non-pious. To begin, all dreams in Genesis 37-50 (the entirety of the Joseph story), are referred to as “this dream that I dreamed” (Gen 37:6), to quote Joseph’s first dream; they reflexively ensure the reader knows the dream originates from the dreamer. In contrast, all other Hebrew Bible dreams occur as visions, either directly from God or sent through a divine messenger. The author is sure to note their explicitly divine connection (Shupak 104). This first, critical distinction thus gives the reader cause to suspect that Joseph's dreams are not motivated by piety, because they are markedly different from all other Hebraic dreams.

Moreover, Joseph’s dreams contain wheat sheaves and the night sky as subjects (Gen 37:7, 9), both purely natural elements with at best tangential relationships to divine concepts. In fact, as Shupak notes, Egyptian dreams typically contain common images, such as those in Joseph’s dreams, because Egyptians considered dreams a natural progression from conscious awakening, so everyday happenings are continually related in the subconscious (105). In addition, Egyptian dream imagery becomes particularly agrarian because of that culture’s preoccupation with controlling natural processes in sustaining their lifestyle (Shupak 108). While Shupak uses this evidence as further confirmation of Joseph’s Egyptian nature, the content of his dreams denotes a more serious problem for his supposedly pious nature. Just as the Egyptians limit even their subconscious to focus on the temporal because of their need to control nature, so too does Joseph's subconscious focus on nature suggest his obsession with all

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things earthly, as opposed to a more pious orientation. Lastly, these dreams are not pious calls to action, as Jacob’s are. Rather, as the brothers interpret them, the dreams appear to be projections of Joseph’s personal, earthly success, without any consideration of divine providence. In every critical aspect, then, Joseph’s dreams are fundamentally different from the pious visions of his ancestors, implying his later piety as a dream interpreter is falsified.

2.1 Relevant Personal Characteristics

Further underscoring Joseph’s potential malintentions is the fact that Joseph has not truly interpreted a dream until Chapter 40. Although he has visions of his own, he does not interpret them; rather, he presents them to his brothers, who immediately determine meaning from them (Gen 37:8). Therefore, when Joseph posits himself as an authority to Pharaoh’s servants, he again extrapolates power from an action which is not in and of itself remarkable. Even when Joseph appeals to God as the ultimate source of interpretation, the subtle privileged implications of Joseph’s situation overshadows the attempted piety of the moment. His humble setup, mentioning God first and then positioning himself as the dutiful servant, is reminiscent of his earlier smugness in presenting his dreams to his brothers. In Chapter 37, Joseph nonchalantly mentions his dreams of superiority to his brothers, 11 of whom are older and would thus automatically resent the prophecy. His polite request that they “listen, pray” (Gen 37:6), coupled with the dreams’ content, makes clear that the only reason he informed his brothers of the dreams was to have them discern the insulting message. This carefully constructed statement is paramount to understanding Joseph’s manipulative ways. Because he forces his brothers to independently discern the dream’s meanings, they have already vested him with the authority he assumes in the dreams. They gave voice to that authority, and so validate it. Joseph takes a similar approach to his subtle usurpation of authority in Chapter 40, casually linking himself with God so that he appears unassuming, but the reader infers a connection nevertheless. Innocence thus becomes a tool of authority, piety a tool of politics. In this way, Joseph’s personal dream experiences are crucial in understanding his ambivalent position as dream interpreter in jail.

3. Joseph in Jail

For instance, when the servants explain their woes, Joseph immediately responds with two sentences:

“Are not solutions from God? Pray, recount them to me” (Gen 40:8). First he offers an appeal to God, which perfectly demonstrates the duplicity within the text. In one sense, it validates his piety, especially in this foreign environment. These men are polytheists, so Joseph’s adamant adherence to Hebraic beliefs not only rejects their culture, but also suggests a determination to educate these gentiles in Hebrew faith; these servants have asked for a human interpreter, and Joseph immediately responds with God. However, when Joseph instructs them to repeat their dreams to him, he leaves to inference the fact that he is here acting as a divine mediator between the men and God, who is the true giver of meaning. Yet because these people are not monotheistic, they do not assume the distinction between God and Joseph. Indeed, Egyptians recognize humans as God in the form of Pharaohs, so to them, Joseph’s substitution of “me” for “God” equates Joseph with God, and therefore ascribes to him similar authority. In this scene, then, the Egyptian’s political notions preclude any consideration of Joseph’s religious message. In this way, pious intent is inevitably translated into political power, so Joseph’s pious statements cannot be properly received.

Yet in the same statement, where there is miscommunication, there is also deliberate manipulation. If Joseph had truly meant to communicate God’s intentions through these dreams, the interpretation would have been the end of the conversation. There would be no need for further discussion, as the reader knows that Joseph has no privileged position with God. However, Joseph does not simply interpret and let the meaning rest. Rather, he implores the cupbearer to laud Joseph’s abilities, stating, “once it goes well for you…pray to mention me to Pharaoh and bring me out of this house” (Gen 40:14). This plea clearly reveals an ulterior motive for Joseph’s actions, as he gains personally from these interpretations. This statement showcases Joseph’s confidence in his own divining abilities, which contradicts his early insistence that all solutions come from God; here, then, the reader sees Joseph employing pious contentions for personal political merit.

4. Joseph and Pharaoh

Once Joseph’s interpretations come to fruition, two years pass until dreams are once again at the forefront of Egyptian struggles. Chapter 41, therefore, recounts Joseph’s interpretation of Pharaoh’s dreams and his subsequent rise to power within the court. By virtue of the characters involved, the political stakes are automatically
raised, so here the use of piety is that much more deliberate. Joseph’s duplicitous intentions from Chapter 40 are first affirmed by the text when the cupbearer offers Joseph as a competent diviner to Pharaoh. He states, “we recounted to [Joseph] and he solved our dreams” (Gen 41:12). The word “solved” in this quote is crucial, as it directly echoes Joseph’s statement in Chapter 40 that all solutions come from God. In this repetitive diction, the text demonstrates that Joseph has succeeded in assuming God-like qualities. Whether this divine power has been conferred as the result of an innocent misinterpretation or a specific manipulation of pious statements is irrelevant; the text only emphasizes the fact that the piety offered in Chapter 40 has been absolutely replaced by politics. Thus, Joseph enters the Court presuming power.

Whereas Joseph could at least operate under the pretense of piety in jail, here he has already become imbued with mythical, non-pious power. Therefore, any use of piety in this chapter must be employed to a very specific end. For instance, when interpreting Pharaoh’s dream, Joseph repeats variances of the phrase “What God is about to do He has told Pharaoh” (Gen 41:24), substituting “shown” for “told” in some instances (Gen 41:28). This emphasis on two different senses is not arbitrary; rather, it is a pious iteration of the absolutism with which God acts. Pharaoh can verify what will happen not only through deceptive sight, but also through what he has heard. Joseph thus acknowledges the power of God, which directly relates to Joseph’s instructions after his interpretation. Joseph delivers the fate of Egypt, and in a move embodying his heightened political ambitions in this chapter, begins specifically delineating what should be done to deliver Egypt from God’s plan (Gen 41:34-36). These instructions, in context with the admittance of God’s powers, constitute a crucial turning point in this text. Here, Joseph stresses God’s power, then deliberately develops a plan to subvert that power. This sequence of events is thus a decided rejection of piety for politics, even in the face of absolute divine power. This scene, then, strongly emphasizes the fundamental incompatibility of piety and politics, such that political ambition eventually completely blinds Joseph to pious beliefs, even those he admits and emphasizes himself. Joseph becomes viceroy, and piety is unequivocally rejected.

5. Conclusions

Thus, the Joseph story illustrates that piety and politics cannot fundamentally work together, deliberately or not. Political ambitions eventually blind leaders to any pious reality, but perhaps this end to Genesis is fitting – as the patriarchs succumb to ambition, the text suggests the need for an entirely new form of government.

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References

Abstract — The focus of the research was to analyze the writing styles of Deaf American writers and of hearing American writers. We compared a range of memoirs and short stories originally written in English by Deaf and by hearing authors in an attempt to determine if a difference in writing styles existed and if so how that difference appeared. In particular, we looked for differences in three different areas of literary style: a) themes, b) frequency and type of literary devices, and c) average sentence length. To maintain an objective perspective we examined the works from both a quantitative and qualitative perspective. For lengthier pieces such as memoirs, excerpts of 1,000 words were taken from the beginning, middle, and end of each of our chosen literary works to analyze; short stories were looked at in their entirety. To accomplish this, each instance of literary device was sorted according to type and then rated according to a self-designed rubric that accounted for frequency, skill and effectiveness. The qualitative ratings of literary devices were completed according to a rubric in order to ensure consistency and as much objectivity as possible [3]. The rating given to the literary devices and the mean words per sentence were statistically analyzed to determine if a difference in the writing styles between hearing and Deaf authors existed using T-tests and ANOVAs.

Keywords — Deaf authors, literary devices

1. Introduction

The purpose of this research was to analyze Deaf writing not for linguistic elements but for literary style. Just like any other multicultural subgenre, the focus was on what makes Deaf writing Deaf [6]. What literary devices do they use? What themes and conflicts commonly appear in Deaf literature? The researchers were particularly interested in how the Deaf used visual imagery and metaphor. It was expected that the Deaf would be more visually descriptive than hearing authors and that the metaphors would be less frequent and more pictorial.

2. Methods and Results

2.1 Quantitative Methodology

Among requirements for choosing works, the literature had to be written by an American in English within the past 70 years. Deaf authors could not use a second, hearing coauthor, or ghostwriter. The final selections included 26 works, 13 each by Deaf and hearing authors. Six of the 13 were short stories and five were memoirs. A literary device sort was used to perform the quantitative analysis. The literary devices found in the works were categorized according to type, looking especially at instances of imagery and metaphor. To do this, excerpts of 1,000 words were taken from the beginning, middle, and end of each memoir. Short stories were examined in their entirety. For each memoir excerpt and short story, we also counted out the words per sentence and calculated the average for that author in that particular work of literature. Each instance of literary device was sorted according to type and then rated according to a self-designed rubric [1] [2] [8] that accounted for frequency, skill and effectiveness. The qualitative ratings of literary devices were completed according to a rubric in order to ensure consistency and as much objectivity as possible [3]. The rating given to the literary devices and the mean words per sentence [4] were statistically analyzed to determine if a difference in the writing styles between hearing and Deaf authors existed using T-tests and ANOVAs.

2.2 Quantitative Findings

Of the literary devices compared using T-tests (metaphors, sensory imagery, personification, symbolism, hyperbole, onomatopoeia, diction, dialogue [9], litotes, and words per sentence), a statistically significant difference (p< 0.05) resulted for personification (0.0400) and onomatopoeia (0.0130). The Analysis of Variance (ANOVA) obtained value is p=.334 (when p<.05) indicating there is not a statistically significant difference in the overall mean scores of the two groups.

2.3 Qualitative Methodology

A theme analysis process [5] was used to interpret results. Themes were determined on team consensus. Three of the researchers in this project read the plot summaries and determined the mean
purpose, motif and theme(s) of the short story or memoir. These were recorded without discussion. In a separate session, the three researchers discussed themes. Themes selected by two or more were determined to be the most accurate and obvious and were further discussed until a consensus was reached to unanimously include or exclude them.

2.4 Qualitative Findings

After reading and analyzing these texts, several patterns appeared. In many of the selections of the Deaf and hearing writers, it was apparent that the authors frequently wrote of a struggle of some type. For the roadblock the character experienced, there appeared to be some trigger, a struggle, and a mechanism (categories we named in analyzing themes) that lead towards stability or self-actualization of the main character in the writing [7]. These themes seemed to fit a psychosocial journey by the main character in most of the writings of both Deaf and hearing authors that were analyzed. In many cases the “mechanism” towards stability or self-actualization within their writings involved a relationship of some type.

3. Conclusions

Several observations were noted in the process of analyzing the selections of Deaf authors compared with those of hearing authors. The Deaf authors frequently focused on deafness as identity, particularly in the memoirs. With the hearing authors, even in cases where disability or disease existed, this was not true. Hearing authors tended to never directly address the concept of identity; if identity was discussed directly in the hearing texts, it was a side note to the main theme. The hearing seemed to prefer not to dwell on their disability in their development of identity. The Deaf authors, however, were very direct in stating whether or not their identity was defined by their deafness, and in either case the topic was continually discussed if not the main theme of the text.

Contrary to the expectations, Deaf authors seemed to be much more inclusive in their sensory descriptions. The hearing authors favored visual descriptions and did not frequently utilize many other senses.

A higher level of writing was also noticed in those Deaf authors who had a later onset of hearing loss. Those who were prelingually Deaf or who became Deaf at a very early age frequently, though certainly not always, did not achieve that higher level of writing style. The hearing authors typically had a better flow in their writing style than the Deaf authors, both pre- and post-lingual onset.

Acknowledgements

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References

<table>
<thead>
<tr>
<th>Author Status/Genre/Title</th>
<th>Trigger</th>
<th>Roadblock</th>
<th>(Psychosocial Journey)</th>
<th>Stability, (Self) Actualization (the Destination)</th>
<th>Acceptance?</th>
<th>Notes</th>
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<td>court of deafness</td>
<td>isolation</td>
<td>communication</td>
<td>Yes, of deafness</td>
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<td><em>Dear Little Dead Queen</em></td>
<td>onset of symptoms</td>
<td>identity, self &amp; through others</td>
<td>theatre and same sex lover</td>
<td>Yes, of homosexuality</td>
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<td><em>DRIP! Here Dragon Roar</em></td>
<td>tears</td>
<td>grieving, bereavement, capable</td>
<td>experience in China</td>
<td>Yes, capable because deaf</td>
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<td><em>Deal Again</em></td>
<td>deafness</td>
<td>acceptance deafness, advocacy</td>
<td>deaf culture</td>
<td>Yes, of deafness</td>
<td>2</td>
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<td><em>Hidden Frustrations</em></td>
<td>deafness</td>
<td>struggle for acceptance of deafness, advocacy</td>
<td>deaf culture</td>
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<td><em>I Know Why the Caged Bird Sings</em></td>
<td>rape</td>
<td>coping, coming into own, defining self/identity</td>
<td>bibliotherapy</td>
<td>Yes, becomes proud mother</td>
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<td><em>Travel with Lisebeth</em></td>
<td>loss of job and walking</td>
<td>homelessness, independence</td>
<td>relationships - dog, same sex lover</td>
<td>Yes</td>
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<td>divorce, inappropriate patient-client relationship</td>
<td>what is normal? entertaining the truth, mental illness</td>
<td>relationships same sex lover mother shrink harmful</td>
<td>Yes &amp; no, see both options Crossroads</td>
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<td>the experiment, taking the undercover job</td>
<td>financial independence</td>
<td>poverty, reporting, caregiver relationships</td>
<td>No, rejection of social system</td>
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<td><em>Autobiography of a Fool</em></td>
<td>facial surgery</td>
<td>identity/acceptance</td>
<td>image reflection, introspection</td>
<td>Yes, normal</td>
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<td>multiple sclerosis</td>
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<td>family</td>
<td>Yes, control</td>
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<td>alcoholism</td>
<td>decent relationships search</td>
<td>break up w/ girlfriend, reflect</td>
<td>Yes, Independence</td>
<td>2</td>
<td></td>
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<td><em>’Seawall</em></td>
<td>confession of fault</td>
<td>move on, identity (better self)</td>
<td>leave friend</td>
<td>Yes, own person</td>
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<td>‘seeing exam’</td>
<td>blindness, predating</td>
<td>confronted with diagnosis</td>
<td>No, refuses accepted hearing loss</td>
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<td><em>’The Floor Things</em></td>
<td>meeting Alec in art museum</td>
<td>deaf v. art</td>
<td>relationships hearing and deaf same sex lovers</td>
<td>Yes, of art</td>
<td>2</td>
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<td><em>’Yet, Jack Can Hear!</em></td>
<td>new ears</td>
<td>to hear clearly</td>
<td>relationship w/ deaf friends, removal of batteries</td>
<td>Yes, of deafness; No, of ability to hear</td>
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<td>Christmas</td>
<td>mobility</td>
<td>rupture</td>
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<td>late for dinner, refusal to sign</td>
<td>respected</td>
<td>ASL</td>
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<td>ill’s death</td>
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<td>relationship, acquaintance</td>
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<td>man without hands</td>
<td>identity</td>
<td>being photographed</td>
<td>No, angry</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>’Man and Wife</em></td>
<td>child, adult, weaker</td>
<td>confine, abuse, violence</td>
<td>greenhouse</td>
<td>Yes, stage</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>’The Year of Silence</em></td>
<td>loss of sound, and speech</td>
<td>not take moment for granted, awareness, appreciation</td>
<td>the pause</td>
<td>Yes, but forgotten (human nature, adaptation?)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>’The Birds for Christmas</em></td>
<td>being left on the ward</td>
<td>independence, peer vs. self</td>
<td>relationship w/ man, opportunity to get what wants</td>
<td>Yes, society, self and situation, but rejects independence</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>’Proud Good Fortune</em></td>
<td>return of brother</td>
<td>escape, identity</td>
<td>pregnancy</td>
<td>No, realism will like others</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>’May We Be Forgiven</em></td>
<td>adulterous kids</td>
<td>relationship</td>
<td>murder and violence</td>
<td>Yes, family is family</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Psychosocial Journey by Author
Abstract — Business schools teach stockholder and stakeholder perspectives for ethical decision-making, but what are the implications of those perspectives for the management of universities themselves? From the stockholder perspective, faculty are agents in an organization financed by two types of principals—private donors and governments—with goals based on education's social and economic benefits. The essay addresses the stockholder perspective's issues of open and free competition, deception and fraud, and the role of required or desirable objectives. Some university competition is open and free yet some is not. Deception and fraud do not appear significant. Objectives not specified by the principal may be required or desirable in pursuing educational objectives. Next, the stakeholder perspective suggests further parallels between business and academia. Three market failures—externalities, moral hazards, and monopoly power—are readily found in academia. Decisions do not incorporate all costs, there are numerous moral hazards, and monopoly power may arise.

Keywords — academia, universities, ethics

1. Introduction

In 1970, economist Milton Friedman published his famous New York Times Magazine essay “The Social Responsibility of Business is to Increase its Profits”. Friedman was concerned with the twin questions of why and how businesses operate. The title of the present essay is a play on his title, since the object of this essay is to apply concepts from Friedman and others to the workings of universities.

Business schools teach stockholder and stakeholder perspectives to help students make ethical decisions, but what are the implications of those perspectives for the management of universities themselves? Ethics and integrity are a central theme in business debates about corporate governance and corporate social responsibility (CSR), and may refer to concepts like property rights, agency, stakeholders, and market failures. Universities already address ethics and integrity in terms of course content, programs, and research, but this paper has a different purpose—to apply the basic concepts and arguments of those two primary social responsibility perspectives—the stockholder and stakeholder views—to the workings of universities.

Universities address social and ethical issues in teaching and research, but the extent to which they create ethical environments remains a topic for investigation (Cornelius, Wallace & Tassabehji, 2007).

2. Applying the Two Views to Universities

2.1 The Stockholder View

The stockholder perspective (Friedman, 1970) and the stakeholder perspective (e.g., Freeman, 1984; Donaldson & Preston, 1995; Friedman & Miles, 2002) address business goals and decision-making criteria. In the stockholder view, property rights and agency mean business should pursue owners' goals (typically, profits). In the stakeholder normative view, managers ought to be concerned about interests beyond those of stockholders, due in part to market failures within capitalism.

Friedman’s first stipulation is that managers work for owners. In the stockholder view, university administrators and faculty are classic wage agents working for principals (government and government) who invest in education by creating universities. The obvious stockholder concerns that arise are whether the principal's objectives are articulated, whether they are known by faculty and administrators, and whether they are pursued.

Friedman’s second stipulation is the need for open and free competition. Certainly, universities compete for students, tax dollars, donations, jobs for graduates, and reputation. In the quest to attract students, they appear to compete openly and freely on many factors, including programming, instructional quality, location, facilities, network opportunities, and placement resources/record. There is evidence, however, that schools do not always compete openly and freely on price but, rather, form cartels to engage in collusive price-fixing. They may, for example, agree to standardize prices (tuition and board) or discounts (financial aid).
Friedman’s third stipulation is that deception and fraud are unacceptable tools. Although universities may not have significant opportunity to engage in deception and fraud, the tools and training provided to their students clearly may be put to illegitimate use.

Finally, the stockholder perspective requires the organization to invest in non-primary objectives only when they are beneficial. Universities typically enjoy substantial freedom when defining educational objectives and how to pursue them. For example, spending on athletics and infrastructure may be only loosely linked to education.

2.2 The Stakeholder View

University stakeholders include taxpayers, donors, students, employers, faculty and staff, communities, and high schools. There are academic parallels of three particularly significant free-market failures identified in the stakeholder view: externalities, moral hazards, and monopoly power.

Traditional economic externalities are costs like pollution, which is created by transactions but borne by neither party. There are parallels in university growth, including the fully-loaded cost of faculty and the impact on real estate, taxes, and infrastructure.

Moral hazards (failing to disclose known or foreseeable shortfalls or costs to buyers) are numerous in academia—adulteration, false weight, substitution, and stimulation of excess demand. Costs are not fully disclosed. Quality is hard to define and measure—students may get less than they expected, and employers may get less than they expected. Substitute courses also may give less—the depth and effectiveness of online courses, for example, continue to be debated. The desire to maintain enrollment may be at odds with the demand for a school’s graduates. Another form of moral hazard appears in the form of free-riding, or pursuing one’s own objectives at the expense of another. The central values of academia mean that faculty have great freedom. Interestingly, many faculty decisions—course content and methods, research topics, conference attendance, and sabbaticals—rarely are required to be justified to an outside audience.

The third market failure is monopoly power. Universities have monopoly power as gateways to many careers, such as accounting, law, nursing, and engineering. This power protects schools from competition and requires students to be relatively insensitive to the price of education. Further, by developing bundled and specialized curricula, schools effectively lock their students into sole-supplier contracts for education. Monopoly power also exists in department structures, which essentially define the turf of what faculty may teach or study, and what students may learn.

3. Conclusions

The preceding discussion used well-known views of organizational responsibility to look at universities.

From a stockholder perspective, in contrast to Friedman’s stipulations for a healthy system, universities do not always compete openly and freely. Price collusion occurs, as might other anti-competitive behavior.

The stakeholder view reveals a variety of potentially troubling issues in university governance. Particularly strong groups like faculty or administrators may dominate decision making. It is not clear that other stakeholders have strong voices in governance. There may be externalities associated with operation and growth. There are numerous moral hazard possibilities. And, monopoly power has its analogue in academia.

Various topics for further study and discussion come from this process of drawing parallels between business and universities, and from exploring the applicability and meaning of business governance concepts to the institutions which educate people.

The concepts of central interest to stockholder theory include property rights, agency, the need for open and honest competition, and the role of objectives mandated by society or seen as desirable by business. The focal points of stakeholder theory include the groups affected by business decisions and actions and the nature and consequences of market failures such as externalities, moral hazards, and monopoly power. Each of these topics has an extensive body of empirical research, theoretical analysis, and philosophical debate in areas of literature ranging from law to economics to management.

There is a remarkable opportunity to apply those bodies of research, analysis, and debate noted above to the study of universities. Universities can and—I believe—should pursue a greater role in discussions of governance issues of social and ethical/moral importance. Indeed, social and ethical/moral dimensions and implications are often found in our teaching, research, and outreach. Nonetheless, for universities to be viewed as leaders teaching, discussing, and acting on ethical issues, perhaps schools first should explore the ethical implications of their own governance structures, mechanisms, and norms.
It is important to pursue this form of self-analysis, not only so that higher education can operate effectively, but to help fulfill our educational role in society, to strengthen our shared values of intellectual integrity, and to create and share knowledge, ideas, and beliefs.

**Acknowledgements**

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**References**


Have “Millennials” Embraced Digital Advertising as They Have Embraced Digital Media?

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Abstract – “Millennials,” may be the first generation to use digital media more than traditional media, yet, it is not clear how this important group of consumers views advertising on the Internet. A comparison of views about three traditional forms of advertising and Internet advertising found that overall Millennials have a more negative view of Internet advertising. It appears that as for generations in the past, Millennials share the same criticisms of “their” form of media advertising. Implications for future research are discussed.

Keywords – Ethics in advertising, college students, Millennials

1. Introduction

Advertising professionals (e.g., Beltramini, 2011; Precourt, 2011; Snyder, 2011) have called for a renewed awareness of the importance of advertising ethics and have acknowledged that “the rules of engagement have changed. Consumers—not marketers—control the message” (Precourt, 2011, p. 451). Marketers are increasingly aware that what consumers believe to be true about advertising is important in guiding purchasing decisions. Previous research indicates that consumers including college students have negative views of both advertising in general (Haller, 1974; Larkin, 1977; Beard, 2003) and advertising presented by different forms of traditional media e.g., outdoor, newspapers, magazines, radio, and television (Haller, 1974; Mittal, 1994). Although research indicates that in recent decades, attitudes toward advertising have become increasingly negative (Mittal, 1994), in certain areas (e.g., advertising’s role in the economy) attitudes toward advertising have remained relatively constant or even improved (Beard, 2003).

Current college students, also known as “Millennials,” “Generation Y,” or the “digital generation,” may be the first generation to use digital media more than traditional media (Geraci & Nagy, 2004), yet, it is not clear how this important group of consumers views advertising on the Internet. Do the Millennials have the same ethical concerns as previous generations about “their” medium, the Internet, or have they embraced digital advertisements as they have embraced digital media? The purpose of the present study was to examine college students’ ethical concerns regarding advertising presented by three traditional media, i.e., television, print and out-of-home, compared to Internet advertising.

2. Method

2.1 Questionnaire

A 10-item survey was constructed that measured negative perceptions toward four types of media advertising: television, print, out-of-home and Internet. For control purposes, the same ten items were used to assess perceptions toward advertising in all four media. Eight items were selected that could be compared with previous studies. Two additional items were included that represented relatively more recent criticisms of advertising: the effects of alcohol advertising on underage drinking, and whether the use of computerized techniques such as airbrushing or Photoshop to change models’ appearances is misleading. In order to control for simple agreement effects, three items were not worded as criticisms. Each statement was rated on a 5-point Likert scale with the following descriptions: strongly disagree, somewhat disagree, neither disagree nor agree, somewhat agree, and strongly agree. Four variations of the ten-item survey were included in each questionnaire with the only difference being the specific medium listed in the statements. A final nine-item demographic survey was included in the questionnaire.

2.2 Participant Sample and Procedure

Six hundred and thirty-four college students completed the questionnaire during class sessions. Classes were selected for inclusion in the study using a quota sampling method so that the participant sample met two criteria: the number of business and non-business majors would be similar (for future comparisons in a larger study).
and the sample as a whole would be representative of the university demographics. Although more detailed information was collected, the demographic information is presented in categories that matched campus reporting methods as follows: Four of the demographic information questions assessed personal information about the participants: gender, (45% male), age (61% less than 22 years of age), ethnic background (63% white/non-Hispanic), and marital status (81% single). Five questions assessed academic, work and other information: major (41% business majors), class (68% juniors or seniors), enrollment (91% full-time), housing (73% resided on- or off-campus/not at home), and work status (73% work). Participants represented a broad cross-section of college students and reflected campus demographics except for two areas: 41% of participants were business majors and 45% were male students versus 15% and 36% of the campus population, respectively.

3. Results

As noted, participants rated the 10 statements for each of the four types of media advertising. Since each of the statements assessed a different concern about advertising, responses to each statement were analyzed separately by one-way analyses of variance with media as a within-participants variable with four levels (out-of-home, print, television and Internet). In order to report only reliable and important findings, Bonferroni-corrections and Pearson product-moment correlation coefficient, r, estimates of effect size were used. Only comparisons that reached r = .3 or larger are discussed (r = .3 is the value for a medium effect; r^2 accounts for 9% of the variance; r = .5 is the value for a large effect; r^2 accounts for 25% of the variance).

All of the statements were scored so that strongly disagree was coded 1, and strongly agree was coded 5. Positive statements were reverse scored. Therefore, mean scores that were greater than or equal to 4 indicated that participants agreed or strongly agreed with the negative statement; mean scores of 3 were considered neutral, participants neither agreed nor disagreed with the statement; and mean scores that were less than or equal to 2 indicated that participants disagreed or strongly disagreed with the negative statement.

3.1 Traditional Media (Out-of-home, Print, and Television) vs. Internet Advertising

The results indicated a significant effect for the statement, “There is currently not enough regulation and control of advertising,” F(3, 1875) = 113.06, p = .000. Compared to how participants rated out-of-home (r=.50), print (r=.52), and television (r = .39) advertising, they were more likely to agree that there is not enough regulation and control of Internet advertising (Ms = 2.84, 2.89, and 3.07 vs. 3.66). Specifically, participants were neutral toward out-of-home, print, and television advertising, but believed that there was not enough regulation and control of Internet advertising.

There was also a significant effect for the statement “Advertising is offensive or in bad taste,” F(3, 1830) = 74.36, p = .000. Compared to how participants viewed out-of-home (r = .44), print (r = .37), and television (r = .42) advertising, they were more likely to believe that Internet advertising was offensive or in bad taste (Ms = 2.94, 3.09, and 2.97 vs. 3.56). Again, participants were neutral toward out-of-home, print, and television advertising, but believed that advertising over the Internet was offensive or in bad taste.

The results revealed a significant effect for the statement “Advertising promotes harmful products,” F(3, 1848) = 67.79, p = .000. Compared to how they rated out-of-home (r = .48), print (r = .35), and television (r = .34) advertising, participants were more likely to agree that Internet advertising promotes harmful products (Ms = 3.36, 3.57, and 3.58 vs. 3.98). Although participants tended to indicate that the three traditional types of media advertising and Internet advertising all promote harmful products, they were significantly more likely to say that Internet advertising does so.

3.2 Selected Traditional Media (Out-of-home and Print or Out-of-home) vs. Internet Advertising

The results revealed a significant effect for the statement “Advertising is harmful to vulnerable groups such as children and the elderly,” F(3, 1872) = 66.75, p = .000. Compared to what they believed about out-of-home advertising (r=.41) and print (r=.42) advertising, participants were more likely to agree that Internet advertising is harmful to vulnerable groups (Ms = 3.06 and 3.12 vs. 3.68). For this item, participants tended to be neutral toward out-of-home and print advertising, but believed that Internet advertising is significantly more likely to be harmful to vulnerable groups such as children and the elderly.

There was a significant effect for the statement, “Advertising insults the intelligence of consumers,” F(3, 1842) = 35.8, p = .000. Compared to what they believed about out-of-home advertising,
participants were more likely to agree that Internet advertising insults the intelligence of consumers ($M_s = 2.94$ vs. $3.36$; $r = .35$). Participants were neutral toward out-of-home advertising, but believed that Internet advertising insults the intelligence of consumers.

3.3 Mixed Findings

The results indicated a significant effect for the statement, “Much advertising is false and misleading.” $F(3, 1881) = 147.89$, $p = .000$. Compared to how they rated out-of-home ($r = .61$) and print ($r = .45$) advertising, participants were significantly more likely to agree that Internet advertising is false and misleading ($M_s = 3.1$ and $3.45$ vs. $4.03$). In addition, compared to how they rated out-of-home ($r = .45$) advertising, participants were significantly more likely to agree that television advertising ($M_s = 3.1$ vs. $3.68$) is false and misleading. These results are among the strongest effects in the study; participants agreed; they viewed both Internet and television advertising as false and misleading.

There was a significant effect for the statement, “Advertising causes people to buy things they don’t need,” $F(3, 1890) = 75.01$, $p = .000$. Compared to how they rated out-of-home advertising, participants were more likely to agree that Internet ($r = .43$) and television ($r = .46$) advertising causes people to buy things they don’t need ($M_s = 3.26$ vs. $3.86$ and $3.87$). Although participants tended to view all four types of media advertising as causing people to buy things they don’t need ($M_s \geq 3.26$), they viewed both television and the Internet as being equally likely to cause people to do so. The results also revealed a significant effect for the statement, “Advertising makes people more materialistic,” $F(3, 1872) = 18.16$, $p = .000$. Compared to how they rated out-of-home advertising ($r = .31$), participants were more likely to agree that television advertising makes people more materialistic ($M_s = 3.21$ vs. $3.56$). Although the results indicated a significant difference between perceptions of out-of-home advertising and television advertising, participants tended to indicate that they felt all four types of media advertising make people more materialistic ($M_s = 3.21$).

4. Conclusions

The results revealed that our participants hold negative beliefs toward Internet advertising ($M_s > 3.3$). For seven of our ten statements, participants’ attitudes were more negative toward Internet advertising than toward some form of traditional advertising. For one of those statements (i.e., causes people to buy things they don’t need) the negative belief was shared toward television advertising. For only one statement (i.e., makes people more materialistic) were attitudes more negative toward another form of advertising (i.e., television advertising). It is interesting to note that all of these criticisms of advertising were shared by generations in the past toward each of “their” new medium. To answer our question, it appears that Millennials have not embraced digital advertising, and in fact, have more negative attitudes toward their new medium’s form of advertising than advertising on other media. Since Haller’s and Larkin’s classic studies, research has continued to find that consumers (college students, in particular) have grave concerns about advertising ethics, and in fact, transfer those concerns to the medium they use most frequently. Future research is needed to gain insights into why this is so.

References


Abstract – Servant leadership has gained an enormous amount of popularity in organizations by being viewed as a promising resolution to a perceived need for leaders to become more efficient, principled, and employee focused. Yet there is paucity of empirical research to substantiate these claims. This study attempted to fill this knowledge gap. The research questions explored the role played by servant leadership in an organization in respect to its customers. Theoretical foundation for the study was provided by Greenleaf’s work on servant leadership in combination with other prominent leadership theories, such as transformational and transactional theories. In this qualitative study, research questions were answered through in-depth, unstructured interviews with a convenience sample of 21 senior managers drawn from 16 business organizations. The results suggest that (a) servant leadership enhances profits through reduced customer turnover and increased organizational trust, and (b) employee satisfaction increases in organizations where leaders see themselves as servants first. The implications for social change include promoting servant leadership style among larger segments of leaders and thereby increasing employee morale and commitment to organizational effectiveness along with concern for client satisfaction and social responsibility.

Keywords — Servant Leadership, Organizational Culture, Customer Satisfaction

1. Introduction

TDIndustries is an example of a company that implemented and has sustained the servant leadership model for several decades (Glashagel, 2009) with positive organizational results. Robert K. Greenleaf (1977), and his book on servant leadership are referenced on the company website, and employees are required to read the book, and undergo training in servant leadership in order to better understand the theory and how to apply what they have learned to their actual careers. The leaders in any organization or business are ultimately responsible for all of the needs of their stakeholders. At TDIndustries and other organizations, these stakeholders include the employees of the company, as well as customers, vendors, creditors, shareholders, and the community at large (Ehrhart, 2004). Greenleaf (1970) further described a leader as being a servant first to his or her followers by serving in skillfulness, thoughtfulness, and attitude. All of these positive interactions have led to increased profits, customer retention, and greater employee satisfaction (Glashagel, 2009).

Various studies have examined supervisor and subordinate interfaces with Chebat and Kollias (2000) describing the impact of the relationship between a leader and a follower on the customer, suggesting that a company that treats employees well can reap significant benefits, including financial ones. The authors asserted that the employee who is well treated subsequently takes care of customers better, thus, potentially leading both to greater profitability and higher employee satisfaction. McGee-Cooper et al. (1992) found that Southwest Airlines places the needs of others, to include customers, employees, vendors, and shareholders, before its own needs when describing its corporate culture. McGee-Cooper et al. (2007) further chronicled how to become a change agent for servant leadership at Southwest Airlines. Servant leadership was credited with helping Southwest Airlines to gain greater market share through their placing the needs of others before the needs of just the shareholders.

Netemeyer, Maxham, and Pullig (2005) described the importance of the relationship between the employee and the supervisor by identifying its impact on the customer interaction. Their research suggested that the employee would go above and beyond the basic requirements of the job responsibilities when interacting with customers as a result of servant leadership. In keeping with the objective of serving customers, Saxe and Weitz (1982) observed that salespeople were certainly more involved in the purchase process and that the salesperson helped facilitate how decisions were made in an effort to persuade customers and subsequently meet customer desires and needs. The overwhelming conclusion is that as a result of implementing servant leadership, the company and its leaders would be more effective and productive from a financial point of view.

Braham (1999) concluded that there were positive outcomes associated with implementing and sustaining servant leadership that included the organization reducing customer turnover. In
addition, the organization would expect to experience increased and sustained organizational success, a desired outcome that organizations seek in order to maintain competitive. Barbuto and Wheeler (2006) specifically concluded that, through both pretesting and posttesting, an organization would be able to surround itself with employees that placed a high emphasis on meeting the needs and desires of customers. Ultimately, outcomes that would positively impact the organization, such as extra effort by the employee, greater employee satisfaction, and improvements in the overall effectiveness of the company were determined to be realistic goals that when introduced, benefited the company through better financial performance (Sipe and Frick, 2009).

2. Methodology

An interview-driven, qualitative research design was chosen for the present study to allow for a thorough examination of leadership experiences among individuals in various types of organizations following a servant leadership model. Tesch (1994) described the importance of the interview in qualitative studies by stating that respondents and researchers work closely together in order to “arrive at the heart of the matter” (p. 147). In this study, qualitative research was utilized in order to gather, explore, and evaluate data for the express purpose of determining the impact that servant leadership has on businesses and its customers.

As is common in qualitative research, each of the interview questions were open-ended as opposed to close-ended questions in order to allow the participants to expound on the subject of servant leadership in immense detail. The interview questions were designed to allow each of the participants an opportunity to articulate their viewpoints in as thorough and complete of a manner as necessary. All of the interviews took between one and two hours and were recorded on an audio cassette tape recorder. After collection, the data was subsequently coded (Miles & Huberman, 1994), transcribed, evaluated, and analyzed at a later date. The most appropriate criteria used in the participant selection process were developed based on the determination as to the most suitable leaders that would be able to provide the greatest contribution to the study. Specifically, the participant was required to be an owner or senior executive of an organization that used servant leadership as its management model, or the participant was required to be an expert in the advancement of servant leadership. Furthermore, the participant needed to be in a position of leadership, whereby, being able to access information relative to the study.

Criteria related to sales revenues, employee satisfaction, turnover, insurance claims, budget requirements, and even community reputation were all areas that the participant generally needed to have strong data on in order to provide a sufficient amount of necessary information in the interviews so that a detailed analysis and interpretation could be conducted and subsequently

Participants that matched the specified criteria were chosen and consisted of 21 proprietors, leaders, and employees of various businesses and organizations. In keeping true to the specified criteria, the participants consisted of: ten CEO’s, three presidents, six senior vice-presidents, one professor, and one author. It should be noted that both the author and the professor have experience implementing servant leadership. The organizations researched and the individuals that participated in the study were self-identified as servant leaders, or as being in organizations that have followed the servant leadership model from 3 years to more than 40 years, thus giving all of the participants experience with the model of servant leadership.

3. Conclusions

This study in particular was experimental and the results could not be generalized. However, it is the hope that those in leadership positions within various organizations discover that the findings contained in this study are able to be used for the betterment of their organizations and for the followers as well. The further hope is that this piece of research is not viewed as another review of a fad management style and that the conclusions clearly demonstrate a more positive way of leading people and getting the most out of the experience. Greenleaf (1977) certainly had in mind that no further harm should come to those that we are entrusted to lead, and perhaps that comes through in a meaningful way through the results and conclusions of the study. Furthermore, it became clear that greater profits were not the underlying reasons for implementing and sustaining servant leadership according to the research. Profits occurred as a net effect of servant leadership through greater employee satisfaction, reduction in turnover, and greater focus on the customer.


References


Abstract — This research will discuss several facts regarding outsourcing of services in today's business market by naming reasons why outsourcing is used as well as providing data relevant to the research. Research will focus on information found in peer reviewed scholarly journals. Results will show the reasons why businesses turn to outsourcing as a more efficient and less expensive way to maximize profitability and will point out some of the problems associated with outsourcing. The main conclusions are to give a broad overview of how and why outsourcing has become more popular in the business world.

Keywords — Outsourcing, profitability, business market, efficiency, cost

1. Introduction

The workforce today faces the opportunity for careers in a dynamic global environment. Recent development and trends within a competitive world market present managers with challenging situations. Accordingly, these managers and employees alike need knowledge of the international arena in order to maintain and gain competitive advantage in the twenty-first century. This research discusses the widely used and accepted practice of outsourcing in today’s business world. This paper will explain how a company should determine its need for outsourcing as well as some of the problems that come with outsourcing. The specific purpose of this research will be to provide the reader with an understanding of outsourcing as a means to improve or maintain profitability.

2. Reasons for Outsourcing and Its Rise in Popularity

Outsourcing has in the past few years become much more prevalent in companies that want to maximize profitability by freeing up resources or personnel. Outsourcing often provides a company with a less expensive means of accomplishing processes internally, and this is one of the main reasons that some companies turn to outsourcing. McIvor (2011) gives one of the reasons of outsourcing as being relative capability or not being able to replicate the superior performance of competitors’ suppliers. Sometimes managers will discover that no matter how closely the business process is monitored or supervised, competitors are still able to perform it in a more cost-efficient way. In such a situation as this, outsourcing can prove to be a very valuable tool in helping the business remain competitive.

One of the first determinations that needs to be made for any company considering outsourcing any of its business processes is whether or not the process is critical or noncritical. McIvor, Humphreys and McKittrick (2010) define a critical process as having a major impact upon the ability of an organization to achieve competitive advantage either through the ability to achieve a lower cost position and/or create higher levels of differentiation than competitors.

McIvor et al. (2010) define non-critical processes as having a limited impact upon the ability of an organization to achieve competitive advantage. From these definitions it can be clearly seen that any company considering outsourcing its business processes needs to analyze whether or not the process is critical to maintaining a competitive advantage. Only those processes that are determined to be non-critical should be considered for outsourcing. For example, some companies are currently outsourcing their human resource or payroll departments. This allows the company to provide its employees with the uses of these departments but at less expense to the company. Some of these processes are now being sent to countries such as India, where a yearly wage of five thousand dollars is considered to be a middle class wage. This allows a company to save on payroll expense for employees and devote the money saved towards helping to maximize company profits. Kumar and Eichhoff (2006) explain that when looking to outsource, an organization should be careful not to farm out work related to the core competencies of the firm as these competencies are how the organization best provides value to customers.

Often employees are afraid that their company will outsource their particular job. This, at first glance, seems to be hurtful to the American
economy, but research has been done to prove that very often this is not the case. For example, Taylor (2005) recently conducted a study for the McKinsey Global Institute that investigated what happens when an American firm moves work that costs one dollar to India. Out of that dollar, India’s economy garners 33 cents in wages paid in India and profits earned by Indian firms. But 67 cents accrues back to American firms. Indian firms spend 5 cents in buying equipment from American firms. Some American firms own the operations in India that perform the outsourcing and so 4% of profits come back to the United States in that form.

Firms that have time-sensitive tasks to be accomplished can find outsourcing a valuable tool. Gupta (2009) contends that outsourcing can prove to give a firm the most efficient use of its time. Given limited time to accomplish a task, a company that outsources work that can be completed by more than one employee in other parts of the world can finish it in twenty four hours’ time. The same work would have possibly taken three days if left to one employee here in the United States when based upon an eight-hour workday.

One of the negative aspects of outsourcing in recent years has been the wage disparity between outsourced employees and employees who hold the same jobs within the company. For example, Dube and Kaplan (2010) conducted a study on whether two of the lowest paid jobs in a particular firm—guards and janitors—experienced a drop in wages paid to them once a company outsourced its particular jobs. This study compared how these two occupations were paid while employed directly by the company and then after both jobs were contracted out. Their study clearly showed a wage disparity between workers whose jobs are outsourced and workers who remain employed in house. Therefore, companies can save money by outsourcing certain jobs, particularly in the less-skilled sectors of its employment base.

Although there are cost-savings benefits to outsourcing, any firm considering outsourcing also needs to be sure that the vendor performing the outsourced business process has been adequately screened and found to be a reliable source to perform the process. Auditors need to be hired in order to make sure that the company’s reputation for customer service is maintained. This can be accomplished by making sure that a service level agreement has been signed between the firm and the contracted company.

3. Conclusions

Outsourcing can be viewed in one of two fashions. To the displaced employee, it may appear as a threat because it puts the employee out of work. To the firm, it can be viewed as a means of turning a profit more efficiently. Either way, it looks as if outsourcing will continue to be a growing trend as the business world operates in a more globally-based environment. With the current competitive environment growing more vicious every day, outsourcing will continue to be a cost-cutting alternative for companies wishing to remain competitive.

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Graduate Degrees in Psychology

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Nature vs. Nurture

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Abstract – The information that will be provided in this research will discuss the theories of nature and nurture and how the students on the campus of Spartanburg Methodist College feel about the controversy. Being a topic of discussion for many years, it is important to continue studying this topic to see how views change as society change.

Keywords – nature, nurture, negative viewpoint, positive viewpoint

1. Introduction

The nature vs. nurture issue has been discussed and remained to be controversial for many years. Kathleen Stassen Berger (2008) defined the issue of nature as a “general term for traits that each individual inherits genetically from his or her parents at the moment of conception” (p. 55) while nurture is a “general term for all the environmental influences that affect development after an individual is conceived” (p. 55). This topic showed a direct reference to previous philosophers such as Plato, who believe that both nature and nurture contribute to the creation of human beings.

2. Impact on Today’s Society
   (Men and Women)

In today’s society, many people in America as well as members of other countries pre-judge people mainly based on the things they see. The things that one may see on the surface may not truly be an accurate representation of the person. People who are willing to understand these theories will be more willing and accepting of our nation’s melting pot of cultures, beliefs, behaviors, and personalities. These issues have provided American society with both negative and positive ways of viewing the characteristics and behaviors of individuals throughout the world. It is important that we study this topic on a global scale to begin to realize that people are in fact born with certain traits and characteristics and are products of their environments. Coming to this realization leaves one little room for speculation on other people’s behavior. In today’s society, being able to identify the underlying reasons or implications leading to one’s behavior and individuality is something that needs to be learned and respected.

2.1 Current college freshmen

A survey consisting of fifteen (15) male and fifteen (15) female freshmen students was conducted. One simple question was asked, “Are you nature or nurture?” Thorough explanation was provided as regards the nature and the nurture issues. The most common answer received among the male freshmen was nature. This implies that men in the survey perceived of their individualities and personalities as mainly due to genetics. On the other hand, majority of the female students believed in nurture as the reason for their being. This implies that females tend to advocate environmental factors as having a strong effect on their personalities.

A bar graph of the survey results on college freshmen is shown:

![Bar graph showing survey results on college freshmen]

2.2 Current college sophomores

Fifteen (15) male and fifteen (15) female sophomore students were asked the same question, “Are you nature or nurture?” Almost half of the males and of the females believed that both the nature and the nurture issues affect their well-being. They were thoughtful and seem to display a better understanding that genes and environmental factors contribute to creating individuals. Maturity and education seem to have significantly contributed to this understanding.
A bar graph of the survey results on college sophomores is shown:

![Bar Graph]

**Conclusion**

In conclusion, the results of the survey indicate that education and maturity are significant in understanding the issues of nature and nurture. And the same factors are needed for the rest of the community to be tolerant and understanding of people’s individual differences.

**Acknowledgements**

I would like to take this time to thank the students that allowed me to interview them. I would also like to acknowledge Dr. Farmer for allowing me this opportunity.

**References**


Environmental cues in a Simulated Environment, Personality Influence and Risky Behavior

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Abstract — The present study examines the effect of the environment on possible outcomes of risky behavior though a computer simulation game (The SIMS). The results revealed that those place in the rich environment showed a trend for significance because the performed more risk activities.

Keywords — Risky Behavior. Sensation Seeking, Priming, and Computer Simulation

1. Introduction

Risky behaviors are actions that are positively rewarding but come with the potential for negative consequences. Reckless driving, procrastination, substance abuse and risky sexual behavior are all included in this class of behaviors (Bachanas, 2002). For example, risky sexual behavior can result in unplanned pregnancy or sexually transmitted disease, altering the course of an individual's life (Cooper, 2010). A potentially important way to look a risky behavior may be through a computer simulated environment. Computer simulations have been used to place people as “virtual subjects” in such simulations as plant alarm systems (Liu, Noda, & Nishitani, 2010). Virtual subjects are participants who “pretend” that they exist inside the computer simulation. In the current study, the SIMS (EA Games) computer game was used to place participants as virtual subjects in an environment to have them act as though they were in that environment at the given time.

In a previous study using the SIMS procedure (White, Askins, Hall & Herzog, 2010), we hypothesized that males would report higher risky behavior in their day-to-day lives than females would report. However, we found that gender was not associated with real life riskiness. Nevertheless disinhibition was significantly correlated with gender. Disinhibition is one factor of sensation seeking, an important aspect of personality. Individuals who are high on sensation seeking seek out novelty and intense experience. Disinhibition involves seeking experiences that come with punishing consequences (O’Jile, Ryan, Parks-Levy, Betz & Gouvier, 2004). We may have failed to find expectable gender differences in risky behaviors because, in real-life, participants may either not feel comfortable revealing risky activities or they may avoid real life risk because of the consequences that follow. However, an additional explanation is that we may have had too few subjects, resulting in low power.

As a follow-up to the previous study, we increased our sample size and sought to replicate our previous finding. We also extended that finding by asking whether environmental cues presented before the SIMS game would influenced risky behavior. Previous research has found that the way things appear in the environment can influence a behavioral outcome. The Broken Window Theory (Wilson & Kelling, 1982) suggests that the physical appearance of a school influences whether a student and teacher will be more receptive to behavior change. If the building and neighborhood appear in a disorderly state, then there will more likely be increased social problems. If the environment presents order, then the environment may be perceived as safe. The appearance of the environment may present visual cues that effectively prime youths, informing them regarding what behavior is appropriate for the environment (Grana, Black, Sun, Rohbach, Gunning & Sussman, 2010). An additional factor in the Broken Window effect may be that the experience of visually pleasing things elicits happiness. Positive emotion increases thinking to be more flexible and creative. It also increases helping behaviors. Moreover negative emotion leads individuals to be more analytical, critical and aware of their behavior (Carlson, Charlin, & Miller, 1988; Rowe, Hirsh, &Anderson, 2006).

The goal of the current study was to demonstrate the effectiveness of the environment on risky behaviors by placing subjects in either a rich or a risk environment and observing their actions. We enhance the realism of the task by designing individual “Sims” so that the participant would identify the Sim due to a match with gender (i.e., male or female) and race (i.e., African American or Caucasian). We hypothesized that participants placed in a risk environment would
partake in more risky activities in the game than those placed in a rich environment.

2. Method

2.1 Participants

Extra credit was given to introductory psychology students for participating in the study. Ninety undergraduates (59 females, 31 males) participated. Mean age was 19.9 years. Ethnicity consisted of 56% African American, 40% Caucasian, 1% Native American, and 3% endorsing "Blended."

2.2 Measures

Frequency of Risky Behaviors. Risky Behavior. Along with assessing sex, age, and race, 20-items asked students to endorse whether they had or had not, in the past year, engaged in the following behaviors: Sports with the possibility of some injury (2 items; e.g., "I participated in an individual sport with some risk such as rock or mountain climbing, kayaking, surfing, boogie- or snowboarding, water- or snow-skiing"), reckless driving (3 items; e.g., "I drove 15 mph over the speed limit"), work and school procrastination (5 items; e.g., "I failed to turn in an assignment"), risky sexual behavior (4 items; e.g., "I had sex without protection against sexually transmitted diseases"), and excessive drinking including other substance use (6 items; e.g., "I mixed drugs and alcohol"). Questions were anchored by the numbers 0 (Never), 1 (Once), 2 (A Couple of Times), 3 (Sometimes), 4 (Frequently), and 5 (Often).

Sensation Seeking Scale V. (Zuckerman, Eysenck, & Wilson, 1976) This 20-item measure yields four subscales scales: adventurousness, experience Seeking, disinhibition, boredom susceptibility. This study used only the disinhibition subscale.

Sims Behavior Checklist. Frequency counts of all possible behaviors measured in the bar simulation were summed into two main categories "risky" behavior (i.e., flirt, aggression, erotic, and influences fights) and "relating" behavior (i.e., appreciate, entertain, talk, ask and play). Behaviors indicating self-involvement (i.e., stargazing or doing yoga) were omitted from the analyses.

2.3 Procedure

Participants played a custom version of the Sims video game (The Sims 2 Deluxe). Each participant played a "sim" that was designed to coincide with their gender and race. Participants were assigned to either a rich or a risk environment. The rich environment included a hot tube, pool man and gardener, and a Ferrari. The risk environment is a one bedroom apartment with approximately seven people in an unsafe neighborhood. First the participant was given a tour of their simulated house to acquaint them with their surroundings. After being given a tour, the participant was directed to drive downtown to a site (i.e., The Lulu Lounge), chosen for its numerous amounts of activities. Participants were instructed to behave just as they would if they were in a real bar for ten minutes. When the participants chose an activity it was then recorded. After the participants played The Sims, they filled out the real-life riskiness and sensation seeking questionnaire.

3. Results

First, by three one way ANOVAs, we compared men and women on real-life risky behavior, risky behavior in simulation, and relating behavior in simulation. We found significant differences for real life risky behavior, $F=6.68, df=1, p=.01$, and for simulated risky behavior, $F=5.32, df=1, p=.02$. In self-reported riskiness, men ($M=10.1, SD=3.21$) were higher than women ($M=8.52, SD=2.94$). Men were also higher in simulated riskiness ($M=3.65, SD=2.51$) than women ($M=2.27, SD=2.53$). No differences were seen for simulated relating behaviors.

Second, we conducted two multiple hierarchical regression analyses to investigate whether real life riskiness, disinhibition and gender determined risky behavior in the computer simulated game. One hierarchical regression was conducted on risky behavior of participants assigned to the rich environment and one on risky behavior of people assigned to the risk environment. As may be seen in Table 1, we did not support our hypothesis that people are riskier after being in the poor environment. Instead, there was a trend toward significance for participants in the rich condition to engage in higher levels of simulated riskiness if they were also high on disinhibition and low in real life risky behavior.

4. Conclusion

Unlike our previous results, we found that men reported higher real life risky behavior, indicating that our previous study was low in power. Similar to our previous study we found that men reported higher disinhibition, as compared to woman.

For our primary hypothesis, we did not confirm our anticipation that participants put in a risk environment would show more risky behavior than those placed in the rich environment. Instead,
we found a trend toward significance that participants who were put in the rich environment performed more risky activities in simulation. Another interesting finding from this regression analysis was that participants who were both primed with the rich environment and also riskier in the bar situation were both high in disinhibition and low in real-life riskiness. Thus, these people showed, via their Sim, that they had an interest in performing disinhibited acts, but also reported that they did not engage in reckless driving, risky sex, substance abuse, and school and work procrastination. It is likely that these participants felt freer to engage in their predispositions in a simulated situation than they may have in real life. It may also be the case that some participants did not feel comfortable revealing risky activities or they may avoid real life risk because of the consequences that follow.

The reason that the individuals in the rich environment showed more disinhibited acts may be that those participants experienced more positive emotion. The amenities that they were encouraged to experience as their own in the simulation may have made the participants happy. When individuals are in a positive mood, they are least likely to be thoughtful about details and the behavior that they are engaging in, whereas the risk environment deficits may have induced a negative mood in the participants, making them more aware of their surroundings and their own behavior.

Our results have certain limitations. First, our subject pool was limited and the sample is not a representation of all men and women. Second, the difference in gaming ability by the participants in our study may have affected their ability to equally explore and do things in the game, leading to differences not due to gender and personality.

In summary, we have demonstrated that computer simulations do bring out naturalistic behavior. The reasons for this may be that the computer simulation provides the participant with an outlet to explore their inner desires.

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Fatty Acids Enhance the Perceived Taste Intensity of Non-Nutritive Sweeteners, Saccharin & Sucralose, in Male and Female Rats

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Abstract – Non-nutritive sweeteners are becoming increasingly popular as an alternative to sugar or other caloric sweeteners. Previous research by Loney et al. (2011) demonstrated that rats either prefer or avoid non-nutritive sweeteners at high concentrations. The present study set out to extend the findings of Loney et al. by adding a fatty acid to different concentrations of non-nutritive sweeteners. Our previous research demonstrated that rats could detect the presence of the fatty acids, linoleic and oleic acid, at micromolar concentrations. It is suggested that fatty acids intensify the perception of taste. Therefore, we propose that rats that are avoiders of sucralose will avoid sucralose at lower concentrations when linoleic acid is present and preferers will consume more sucralose at lower concentrations when linoleic acid is present. We also set out to determine that preference or avoidance of sucralose extended to saccharin, another non-nutritive sweetener. Short-term behavioral taste testing supported our hypothesis that the addition of linoleic acid would intensify the avoiding and preferring behavior of the specific groups of rats (avoiders or preferers). The results suggest, for the first time, that the presence of linoleic acid intensifies bimodal preferences of sucralose but that effect does not generalize to saccharin.

Keywords — taste, behavior, sweeteners, dietary fat

1. Introduction

As non-nutritive sweeteners have become more popular, so has the research into the correlation between sweeteners and obesity. Certain artificial sweeteners are reported to be sweet at low concentrations and increasingly bitter at higher concentrations (Loney et al., 2011). This change in perception from sweet to bitter may be produced by certain receptors, which vary in density on the tongue of different individuals. Recently, it has been argued that fat is a modulator of gustatory sensations, either working at a molecular or receptor level to affect other gustatory sensations (Pittman, 2010). Previous research from this laboratory using a conditioned taste aversion paradigm, demonstrated that rats formed a conditioned taste aversions to linoleic and oleic acids, which demonstrated an ability in rats to detect fatty acids at micromolar concentrations (Pittman et al., 2008). The ability for rats to detect the presence of fatty acids is also evident through preference testing with fatty acids, specifically linoleic and oleic acids, added to other tastants (Anderson et al., 2006). The presence of fatty acids may intensify the perceived taste causing pleasant and unpleasant tastes to taste stronger by increasing the perceived intensity of the other tastants present in the oral cavity (Pittman et al., 2008). It has been shown that the addition of fatty acids to sweet solutions increases the amount of licking by rats (Anderson et al., 2006) because of purported modulatory effects of fatty acids on other tastants.

The present study is modeled after research conducted by Loney et al (2011), which demonstrated a sexual dimorphism in rats that are either prefers or avoiders of the non-nutritive sweetener sucralose at high concentrations. First, we aim to replicate and extend the findings of preferring and avoiding behavior to saccharin. We also aim to examine the effects of adding a fatty acid, linoleate (a sodium salt base of linoleic acid), to varying concentrations of non-nutritive sweeteners.

2. Procedure

2.1 Experiment 1

All rats were exposed to increasing concentrations of the sucralose using 2-bottle preference tests to determine the sucralose-prefering and sucralose-avoiding behavior in rats. One bottle of sucralose and one bottle of water were placed on the home cage of each rat for a 23-hour period and consumption was measured to determine preference. The same procedure was used with increasing concentrations of saccharin to determine if preferring and avoiding behavior extended to saccharin.

2.2 Experiment 2

During a water-restriction motivational state (1hr...
daily water access), licking behavior was assessed during brief-access testing using 30s stimulus trials in the MS-160 Davis Rig. Increasing concentrations of sucralose were tested with and without the addition of 200 µM linoleate. Water was also tested with and without the addition of 200 µM linoleate. The same procedure was used to measure saccharin intake.

### 2.3 Experiment 3

Licking was assessed for increasing concentrations of sucralose and saccharin with and without 200 µM linoleate in a water-replete motivational state in the same manner as described above.

### 3. Results

#### 3.1 Experiment 1

There was a significant main effect of concentration and of group for sucralose, indicating the preference scores for preferers and avoiders differed. There was a significant main effect of concentration for saccharin. However, there was no main effect of group for saccharin meaning that rats uniformly avoided saccharin at higher concentrations. For saccharin, there was a significant main effect of concentration and tastant. The main effect of concentration indicates that rats uniformly licked less at higher concentrations of saccharin than they licked to similar concentrations of sucralose. A significant main effect of concentration and tastant was present for sucrose. As expected, rats consumed more of the sucrose concentration when the sucrose concentration was higher.

#### 3.2 Experiment 2

In the water-deplete condition, there was a main effect of linoleic acid on licking for sucralose. The addition of linoleic acid increased licking of sucralose for sucralose-prefering rats and decreased licking of sucralose for sucralose-avoiding rats. There was also a main effect of concentration. There was also significant main effect of linoleic acid and a significant main effect of concentration on licking behavior of saccharin. The addition of linoleic acid caused rats to begin avoiding saccharin at lower concentrations.

#### 3.3 Experiment 3

During the water-replete condition, there was a main effect of linoleic acid on licking behavior of sucralose. This indicates that the presence of linoleic acid changed licking behavior of sucralose. In fact, licking response increased at higher concentrations of sucralose with the addition of linoleic acid. There was also a significant interaction between linoleic acid and group demonstrating that prefers and avoiders showed different patterns of licking behavior in response to the presence of linoleic acid across different concentrations.

For saccharin, during water-replete condition, there was a significant main effect of linoleic acid and a significant main effect of concentration. The significant main effect of linoleic acid indicates that rats licking behavior changed in response to the presence of linoleic acid. The main effect of concentration indicates that licking behavior changed across concentrations.

### Conclusions

Using increasing concentrations of sucralose, we were able to determine avoiding and preferring behaviors of rats in response to higher concentrations of sucralose. Similar to Loney et al (2011), we were able to separate rats in to groups of sucralose-avoiding rats and sucralose-prefering rats. Sucralose avoiding and preferring behavior did not extend to saccharin. This may be indicative of different transduction mechanisms for saccharin compared to sucralose. At high concentrations, sucralose was avoided by some of the rats, but not by others. We suppose this is because at high concentrations, sucralose has a more bitter taste, but only to some rats, perhaps indicating multiple transduction mechanisms on taste receptor cells. Preference scores for saccharin decreased uniformly at fairly low concentrations, indicating that saccharin activates receptors for bitter taste similarly in all rats.

The addition of linoleic acid theoretically enhanced depolarization of taste receptor cells, thus intensifying the perception of tastes. As evidence of this, sucralose became aversive to sucralose-avoiding rats at lower concentrations in the presence of linoleic acid while sucralose became more appetitive to sucralose-prefering rats at lower concentrations when linoleic acid was added. A main effect of linoleic acid was also evident for licking behavior to saccharin, as well. In the presence of linoleic acid, saccharin became aversive to all rats at lower concentrations than when saccharin was presented alone.

This supports the conclusions from the first two experiments that saccharin has aversive properties to both sucralose-prefering and sucralose-avoiding rats and that adding linoleic acid intensified the aversive nature of saccharin.
However, it appears that sucralose may act through a different mechanism to produce its aversive properties. Findings from the present study may be extended to other tastants that exhibit bimodal acceptance and avoidance behaviors. A large portion of the literature conducted on tastant preference has studied sodium salt and a similar study could be conducted using low and high concentrations of sodium and linoleic acid. It is possible to create sodium avoiding and sodium preferring rats by providing rats with a high sodium or low sodium diets, respectively changing their need to consume sodium. By adding linoleic acid to increasing concentrations of sodium, it would be possible to test if linoleic acid can cause shifts in the bimodal preferences for sodium as seen in sucralose in this study.

References


America's Obsession with Cosmetic Surgery

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Abstract — The following paper describes America's obsession with physical beauty. "Beauty" in America has been standardized to an impossible level for the general population. Now, Americans find it even more essential to reach for assistance from cosmetic surgeons. 

Keywords — Cosmetic surgery, beauty culture, homogeneity

1. Introduction

Flipping through a current American magazine, it seems hard to believe that America was once known as a veritable melting pot. The faces and bodies of models do not differ much from page to page in magazines. On the pages today there appears to be a recurrent, uniform look. This look has become the standard for appearance in society. It is no longer a gift of beauty, but simply what is considered to be the “normal look.” Therefore, both women and men all over America are going to drastic measures just to look normal, not beautiful. These “drastic measures” include extreme dieting, using supplements with foreign additives, exercising, and cosmetic surgery. According to Berry (2007), one survey reports that “over half (60 percent) of women in the United States and over one-third (35 percent) of men indicate that they would have cosmetic surgery if it were ‘safe, free, and undetectable’” (p. 72). However, the obvious possible complications of cosmetic surgery are not enough to stop people from undergoing it. People wish to undergo cosmetic surgery in order to defy aging, genetics, and ethnicity. Americans enforce this new standard of appearance by saying “yes” to surgical operation.

2. Different is a Deformity

If insecurity is not enough to persuade someone to have plastic surgery, perhaps the thought of having a deformity is. At one point, genetics and unfortunate luck were enough to account for having a colossal nose or small breasts. Now, as Berry states, having small breasts is a “newly recognized disability” called micromastia and is a “problem in need of spherical alteration” (p. 74). If it is considered to be on the same level as any other deformity (e.s. six fingers), a small-breasted woman may be even more eager to be fixed. The act of stamping human differences with medical terminology is causing certain “genetic flaws” to be swiftly countered by cosmetic surgery.

3. New Standards

Beauty was once a rare treasure. Now, if one is not beautiful she is not “normal.” Society is normalizing what once was considered beautiful as the new standard of how one is expected to look. This is especially true for women. While men are more likely to want to appear young for job security, women “compare themselves with unreachable beautiful fashion models” ( ). Rarely do advertisements become published before undergoing a series of photoshop enhancements. The models seen in magazines probably do not appear the same in reality as they do in print. If a woman hopes to reach the beauty she sees on the pages of a magazine, she will likely fail, even with surgical alterations. Because an above average appearance is now considered the standard, more and more women are likely to feel badly about their so-called ordinary appearances. Yet, those who undergo cosmetic surgery confidently believe that they “are simply making do within a culture that they believe judges and rewards them for their looks” (Gimlin, 2001, p. 109).

Not surprisingly, the beauty standard will likely change again. In an ever-demanding society, “beauty is now as disposable and short-lived as our electronic gadgetry” (Blum). It is not uncommon that a person who undergoes surgery for a certain look will find another part of his or her physique to change.

4. The Ethnic Challenge and Pathologizing Aging

In America, youth and productivity are emphasized. Americans do not typically feel okay about growing old. Instead, many will go to great lengths to prevent themselves from appearing to age. Men especially feel the need to appear young to maintain their place in the working world. In fact, according to Gettlmen (2010) “two-thirds of plastic surgeons have had patients ask for surgery to ‘remain competitive in the workplace’” (para. 14). One woman, regarding her cosmetic surgery experiences, stated several reasons for wanting the
surgery: drooping upper eyelids, puffiness under the eyes, skin of throat becoming loose— all typical side effects of growing older. She explained that as she began to age, “all of a sudden, the need for [cosmetic surgery] was there” (Gimlin 88). The media does not help either. Celebrities seem to be getting younger and younger and their fresh faces are being held as the new standard of beauty by fans. Aging is inevitable for all, yet some people will go to great lengths to defy the process.

5. The Ugly Truth

Cosmetic surgery is available to almost everyone in America and those who desire it are willing to make great sacrifices in order to get it. Because cosmetic surgery has become so casual, it is easy to forget that it represents major surgery. Like with any major surgery, it is not risk-free. Cosmetic surgery not only poses the risk for physical mishaps but can also contribute to psychological issues. The associated physical risks include pain, numbness, bruising, discoloration, and symastia. In more severe cases, patients can face fat embolisms, blood clots, fluid depletion, and even death. Still, every year more than ten million Americans decide that an improved appearance is worth the risk. Cosmetic surgery, defined Berry as “elective, non-medical, [and] unnecessary” (p. 71).

It illustrates the tremendous strides individuals will take to attain beauty that would typically be considered unreachable. It is most suitable that a cosmetic surgeon greatest fear would be that patient ends up looking worse post-surgery. That fear is typically met by unsatisfied patients, most likely due to unrealistic expectations. A few mistakes may cause doctors to “leav[e] patients dissatisfied and distressed, having failed to achieve any positive outcome” (Bradbury, 2009, p. 15). Dissatisfaction can lead to a worsening in the patient’s self-esteem or psychological health. Many of the patients who decide to have cosmetic surgery already have poor body image. Bradbury (2009) reported that one study found “10% of cosmetic surgery patients reported a mental health history as opposed to 4% of non-cosmetic surgery patients” (para. 2). Body dimorphic disorder, eating disorders, obsessive compulsive disorder, and muscular dysmorphia are all disorders commonly associated with cosmetic surgery. Nowak (2006) states that patients with body dimorphic disorder “obsess about barely noticeable or nonexistent flaws in their physical appearance” (Short-Term Satisfication, para. 8). Unfortunately, the fate of many of these patients is not an improved sense of self. Even more so, Nowak (2006) continues to say the surgery is “rarely beneficial and it often makes symptoms worse” (Short-Term Satisfication, para. 9).

Besides patients possibly jeopardizing their health, they also may encounter other problems, even before the surgery. Despite its increased accessibility, its cost is still out of the range of many Americans. For most Americans, health insurance plans do not cover cosmetic surgery. One patient explained that she had to increase her hours “to work ‘one day job, one night job, occasionally a third job’ to afford the surgery” (Gimlin, 2001, p. 89). She rarely enjoyed any leisure time, but thought it was all worth it if it meant having enough money for a face lift. Most patients see surgery as an investment, because looking better could mean a better job, a potential spouse, or an improved quality of life. Sadly, however, only 50% of patients are one-time patients, meaning the first time did not satisfy as they had hoped. Patients who undergo several surgeries will anticipate a more perfected look following future procedures. At the same time, they spend thousands of dollars.

6. Conclusion

What may seem harmless to many has become an epidemic all over America. Cosmetic surgeries are at an all-time high and are expected to stay on the rise. According to Heyes (2007), by continuing to say “yes” to cosmetic surgery, the people of America are only enforcing “homogeneity and conformity” of the American population (p. 71). Television shows like “Nip-and-Tuck” and “Bridoplasty” tell the American people that it is appropriate to have surgical alterations in order to look like someone else, especially if it results in personal happiness. What the American people need to know, nonetheless, is that cosmetic surgery does not promise happiness or improved body image. The standard of beauty will continue to evolve as Americans seek out unattainable beauty through every channel thinkable.

References


War on Drugs and Its Effects on Global Health Inequality
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Abstract — This paper examines whether the War on Drugs is associated with negative health outcomes in poor countries. Previous research has focused on the negative effects of drug trafficking and drug use but there is a dearth of information on the effects of the war on drugs or its implication for global health disparity. This paper is based on a systematic review of published articles and conference abstracts that have examined the global war on drugs in Colombia, Afghanistan, and Mexico. The findings from this study show that the war on drugs is associated with negative global health outcomes. These negative outcomes include psychological trauma, malnutrition — resulting mainly from the depletion of food sources - death, and a host of illnesses such as gastrointestinal problems, among others. Since the global war on drugs in being fought mainly in poor countries, this creates a health disparity between the wealthy and poor nations. The finding of this study suggests a need to re-examine the global drug policy and to re-evaluate current methods and objectives.

Keywords — Global War on Drugs, Health Inequalities, International Drug Policy

1. Introduction

The criminalization and prohibition of drugs globally started in 1948 when the United Nations, formerly the League of Nations, adopted the fight against illegal drugs as one of its top priorities. Drug prohibition eventually formulated into what we know as the “War on Drugs.” The War on Drugs has been fought in the U.S. and abroad for decades, but the literal term was initially coined by President Richard Nixon in 1971, when he created the Drug Enforcement Administration (DEA) of 1973 to announce “an all-out global war on the drug menace” (Suddath 2009).

In order to understand the nature of the War on Drugs it is important to first review the history of the ties between drug trafficking and U.S. foreign policy as implemented through covert operations (Chien, Connors, and Fox 2000). The problem of drug abuse derived from the flow of drugs internationally and called for many nations to prohibit drugs just as the U.S. had prohibited alcohol in 1920. During Nixon’s era, he claimed that drug abuse was “public enemy number one in the United States.” At this time in the history of this policy, the funds invested were mostly used for drug treatment or harm reduction. Harm reduction is the initiation and promotion of education, interventions and other strategies used to help reduce negative consequences of drug use. Very little funds were used towards law enforcement.

The War on Drugs stemmed from the problems of drug abuse and drug addiction that plagued the U.S. but was adopted by several other nations as well. The United Nations had adopted the “Single Convention on Narcotic Drugs” in 1961, which initially internationalized the global war on drugs (INCB 1995). The principal objectives of the Convention was to limit the possession, use, trade, distribution, import, export, manufacture and production of drugs exclusively to medical and scientific purposes and to address drug trafficking through international cooperation to deter and discourage drug traffickers (INCB 1995). During the 1970’s in the U.S., drug abuse had increased significantly and there were some major health issues in question. At the time there was a genuine alarm that mass drug use would have some serious health consequences (Klein 2009). This is the rationale given to justify the antinarcotic campaign that came to me known as the “War on Drugs.” The basic premise underlying this policy was that if the supply of drugs was destroyed or at least drastically reduced, the demand by the public would automatically decrease and the drug problem would go away (Franco 2011). The drug problem led well on into the 80’s.

From the mid 1980’s, the war on drugs increasingly played a key role in U.S. foreign policy decisions as the Reagan and Bush administrations pushed a drug agenda on the global community (Sudbury 2002). For instance, it was under the Reagan administration that the U.N. initiated and adopted the United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances in 1988 (Stewart 1990). It was this convention that completely internationalized the War on Drugs. The main drugs targeted were heroin, cocaine, marijuana, and amphetamine. The U.N. estimated that some 200 million people (or 4.8% of the World’s population aged 15-64) used illegal drugs annually with 25 million (or 0.6%) being classified as “problem users” (Shah 2008).

Many studies have focused on the negative consequences of drugs and the negative health
outcomes that result from drug use and international drug trade. Critics of drug prohibition argue that it violates civil liberties, imprisons many nonviolent offenders, and worsens health problems like the AIDS epidemic (Levine 2003). Others have also considered the war on drugs as a “war on people” (Ruppert, 2000) who are seen as the “collateral damage.”

In 1971, when Richard Nixon started the War on Drugs, the annual federal budget allocation was 110 million dollars a year for enforcement. However, by 2000 the budget allocation had increased to 17 billion dollars a year. The irony is that, in spite of increased focus and spending on the war on drugs, the number of illegal drugs in the U.S. has increased, rather than decrease. In addition, these drugs have become cheaper and more readily available. There is also the potential for negative effects of the war on drugs on the people, especially those in the poor and less developed countries where the war is being fought. Billions and billions of dollars are funneled into this policy every year and is now costing the U.S. over $100 billion per year (Becker 2008).

Most studies mainly focus on the U.S. and its war against drugs at home, including the massive amounts of taxpayer dollars funneled into it. Very few studies have examined any negative outcomes of the war on drugs on poor countries where the war is mainly fought. The main purpose of our study is to examine whether the War on Drugs is associated with negative health outcomes in poor countries.

2. Findings

To examine the effects of the global drug policy, we chose to focus on the three countries of Mexico, Colombia, and Afghanistan. These three are among the leading 10 countries in international drug trade. The purpose of the war on drugs in these countries is to stop the cultivation of drugs being trafficked to countries such as the United States and also because of what is seen as the connection between the drug trade and threat to the U.S. national security – usually framed in terms of support for international terrorism. These three poor countries were the largest suppliers and exporters of heroin, cocaine, and marijuana.

3. Mexico

The war on drugs in Mexico begun in earnest in 2006. However, there is very little success that Mexico can show for the effort in the war on drugs. Whether measured by increased public safety, reduced supply of illegal drugs on the U.S. market, or the dismantling of drug trafficking organizations, the war on drugs does not seem to have had much success. Instead, reports from Mexico show that since the onset of the war on drugs, there has been a record 37,000 drug-war related homicides so far and thousands of complaints of human rights abuses by police and armed forces. Arrests or killings of drug cartel leaders by government forces have set off violent turf wars, with no discernible effect on illicit flows. The murder of politicians, threats to civilians and disruption of daily life have furthered the downward spiral.

The Merida Initiative, or Plan Mexico as it is called, is the U.S. sponsored war on drugs being waged by the Mexican government and throughout Central America. This war has turned Mexico onto a war zone with over 40,000 Mexicans citizens being killed in firefights between government troops and gang members. The carnage from this war includes human rights violations, torture, the killing of journalists and increasing unemployment as hundreds of thousands of jobs have been destroyed and the economy disrupted (Franco 2011).

4. Colombia

Ninety-percent of the world’s coca leaves are grown in the Andean regions of Peru and Bolivia. For years these regions supplied cocaine manufacturing cartels in Colombia, from which the finished product made its way to the U.S. (Chien, Connors, and Fox 2000).

Even though the war against drugs in Colombia begun in the mid-1970s, this war intensified in the mid-1980s, culminating in what was referred to as “Plan Colombia”, under Andres Pastrana Arango in 1999. Plan Colombia involved massive infusion of U.S. financial aid, mainly in terms of military aid to fight drug-trafficking, and rebels who benefitted from and protected the illegal drug trade.

In the wake of the war on drugs in Colombia, negative health outcomes surfaced. Aerial spraying of defoliants was used as the primary coca production control method. However, the spraying has killed basic food crops such as yucca, avocados, maize, and plantains of nearby subsistence farmers (Messina and Delamater 2006). Additionally, many family members and hired coca pickers were present on the farms when the spraying occurred. As a result, many of them sprayed with these chemicals suffered from various gastrointestinal problems. Children also suffered psychological trauma from the militaristic nature of the fumigation operation (Leech 2008).
5. Afghanistan

In the 80’s Afghanistan was the largest exporter of heroin in the world, responsible for more than half of the heroin in Europe and the United States (Chien, Connors, and Fox 2000).

Findings showed that although the poppy fields have been eradicated in Afghanistan by aerial spraying or fumigation, the production has still increased. As the surface area covered by poppy fields has increased, the opium industry as a whole has also grown considerably over the last decade. 60% of Afghanistan’s drug production – both morphine and heroine – is now processed directly in laboratories in the main provinces that grow opium poppy (Johnson, 2009). In Afghanistan the farmers were displaced and lost their livelihood due to the aerial spraying and eradicating of the poppy fields, which also held some of their basic crops. Certain remedies such as “a negative pledge” were proposed in 2005. The negative pledge consisted of a commitment by farmers to refrain from drug cultivation, as a condition for the receipt of loans, grants, and other development assistance. If eradication efforts did not materialize, other monies from donor states, NGOs, and other multilateral agencies would be rescinded (Costa 2008). These results would only lead to more global inequality and negative health outcomes. Crop eradication and substitution only wreak havoc among already impoverished farmers (Nadelmann 2007).

“However, it is not yet possible to detect whether current trends (reduced production in a number of provinces since 2007) will continue in the future, as various factors affect opium production: agro-ecological factors (climate, irrigation), socio-economic factors (food security and poverty, access to loans, to land and to agricultural services, economic dependence on poppy cultivation), political and security-related factors, as well as factors linked to production, processing, and marketing opium (know-how, wheat/poppy terms of trade, poppy production in other countries, access to chemical precursors, proximity to laboratories and trafficking networks)” (UNODC 1994-2009). Furthermore, Afghanistan produces opium faster than the world consumes it, so there are large stockpiles of opium in the country.

6. Discussion

The War on Drugs is causing direct and indirect impacts on the poor countries who cultivate these plants which produce illegal drugs. The global War on Drugs, both abroad and at home, is consistently serving the interests of the United States, not the public health and safety (Chien, Connors, and Fox 2000). This war on drugs that is being fought in poor countries and places such as Colombia, Mexico, and Afghanistan is very crippling to their quality of life. Governments and civil societies in the third world are often “undermined, sometimes destroyed” by the violence and corruption that goes with the War on Drugs. This is probably the most important way in which policies of rich countries foster corruption and violence (Shah 2008). Afghanistan, Colombia, and Mexico all suffered from poverty before the War on Drugs began. Afghanistan was and still is one of the poorest countries in the world (IMF, 2011). This supports the hypothesis that the War on Drugs is associated with negative health outcomes in poor countries.

Those in poverty in these developing poor nations are forced to cultivate the crops used to make illegal drugs as a means of income and survival. This is very familiar in nations like Afghanistan and other parts of Asia. For example, among poor farming families in Myanmar, the cultivation of opium “pays for what most people in developed countries take for granted” (Singer 2008). In so many words, opium is the staple of the livelihood. Myanmar and other nations like it also suffered the loss of their livelihood to the War on Drugs. In most of the countries, this loss has been sustained in terms of depletion of food supply, lack of access to drug treatment, increased unemployment, unexplained deaths of citizens, and incarceration. In these countries, funds that could be used to develop infrastructure and provide needed social services are utilized in combating the drug production and trade. In the midst of this battle, the poor suffer a lower quality of life than they had before because their source of income has been destroyed, and thus creating fewer resources for them to get medical assistance and other services. For example, the forced eradication including aerial spraying wipes out both illegal and legal crops alike and can be hazardous to both people and local environments (Nadelmann 2007). Could have provided actual evidence of the negative consequences mentioned here.

In a study by Harry Levine (2003), he noticed a growing opposition toward the war on drugs due to its lack of success and the negative outcomes and disparities it creates. Many Americans complain about how their tax dollars are being wasted on fighting this war and that it has the wrong approach. Yet the supply of drugs is still abundant in the U.S. despite the frequent seizing of drugs from numerous nations and drug syndicates. Levine (2003) stated that in many countries,
increasing numbers of people like doctors, lawyers, judges, police, journalists, scientists, public health officials, teachers, religious leaders, social workers, drug users and drug addicts now openly criticize the more extreme, punitive, and criminalized forms of drug prohibition. These critics, from across the political spectrum, have pointed out that punitive drug policies are expensive, ineffective at reducing drug use, take scarce resources away from other health and policing activities, and are often racially and ethnically discriminatory. This only results in a vicious cycle of ongoing poverty and hunger.

So, even if eradication efforts associated with prohibition are unsuccessful, they still impose losses on the farmers who cultivate coca or poppies. Since these farmers do not have access or means to insurance, economic losses for “eradicated” farmers can be catastrophic (Keefer et al. 2011). So, what options do developing countries have? Clearly, they cannot unilaterally relax their stance against narcotic drug cultivation and trafficking because of the threat of international sanctions. They can still raise the issues for public and international debate. They can emphasize the unintended negative consequences of the war on drugs.

7. Conclusions

This paper has identified some negative health outcomes associated with the War on Drugs. This is particularly troubling when, on the other hand, the objectives of the war on drugs (illegal drug eradication) are not being met. The war on drugs disadvantages the poor countries at the expense of the rich countries whose interests are being served by the global war on drugs. While the rich countries are protecting their national security interest, the poor countries have to contend with negative health outcomes. As such, an unintended consequence of the war on drugs is increased global and health inequality. Compared to the wealthy nations that support and fund this war, the poor countries are left with very little means of wealth and resources because they have to allocate much of their financial and manpower resources to fighting this “war”.

As in the case of Afghanistan and Colombia, aerial spraying and fumigating of crops leads to illness, poverty, and hunger from the destruction of human aliment as discussed in the results. There were also some major respiratory complications experienced by the people of the countries that suffered this plight.

While the War on Drugs aims to reduce the supply and cultivation of drugs, the militarization and criminalization of drug use associated with this policy only leads to the negative results that have been examined in this paper. Many people’s lives in Afghanistan, Colombia, and Mexico are being put at stake for the sake of these rich countries self-interest. The policy in itself is ineffective and expensive and takes resources from the sectors of government such as education and health policing activities. Given these outcomes, there is a case for the reevaluation of the global antinarcotic policy.


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A Bayesian Hierarchical Model for Correlated Microarray Datasets

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Abstract – Assessment of reproducibility between two independent expression datasets may help in deciding whether to use an original expression data or one updated with additional samples, for differential gene expression analysis. This can be accomplished through modeling a parameter that measures association between the genes, for instance, the gene-specific correlation coefficient. We propose a three-level Bayesian hierarchical model for the gene-specific correlation coefficient between two independent microarray datasets on melanoma that accounts for within-gene variability. A comparison with the standard approach indicates that the Bayesian approach performs better and hence is more preferable for differential gene expression analysis.

Keywords — Bayesian hierarchical model; cell-line; differential gene expression; microarray data.

1. Introduction

Microarray experiments, using either cDNA or oligonucleotide microarrays, enable the study of expression of thousands of genes at the same time. These experiments are characterized by small samples, \( n \), and many genes, \( p \). Bayesian methodology has been extensively used in microarray analysis, due to its ability to borrow strength from all the genes in estimating parameters in each sample and to handle large amounts of missing data inherent in microarray studies quite easily (Ibrahim et al., 2002; Scharpf et al., 2009). Most of the Bayesian methodology work in this area has dwelt on meta-analysis, with a focus on combining gene expression measures across studies or combining descriptive measures like \( p \)-values, probabilities or ranks, or the effect size of individual studies, in order to increases the sample size and thus the power to detect differentially expressed genes across studies. In most studies, including the ones above, the parameter of interest in gene expression analysis is the overall mean expression value for all the genes. However, the gene expression profiles would sometimes be correlated within a study (Parmigiani et al., 2004) and or across studies. Thus, it is prudent to model the correlation coefficient when assessing reproducibility in such cases.

2. Methods

2.1 Bayesian hierarchical model

Hierarchical models are often developed within the Bayesian framework and typically have three levels: the data, prior and hyper-prior levels, in that order. To describe the set-up of the Bayesian hierarchical model (BHM), let the vector of parameters, \( \theta \), be defined as \( \theta = (\theta_1, \theta_2) \), where \( \theta_1 \) are the parameters at the data level and \( \theta_2 \) are the priors for those parameters. Then the posterior distribution of \( \theta \) given the data, \( y \), is expressed as

\[
\pi(\theta | y) \propto \pi(y | \theta_2) \pi(\theta_1 | \theta_2) \pi(\theta_2).
\]

Here \( \pi(y | \theta_2) \) defines the likelihood function, \( \pi(\theta_1 | \theta_2) \) the distribution of the priors, and \( \pi(\theta_2) \) are the hyper-prior distributions.

When applied to gene expression data, the likelihood function and the prior distributions are based on the multivariate normal distribution (MVN), while the hyper-priors follow the inverse Wishart distribution or the Dirichlet process (DP). We assumed the hyper-priors to be inverse Wishart. Modeling of the parameters is designed to borrow strength across the genes and flexibly capture gene-specific variation.

2.2 Computational development

Inference for BHMs was done by sampling, which is usually complicated by the fact that the full conditional distributions for the parameters does not exist in closed form. Thus, we developed the Gibbs sampling algorithm to sample \( \theta \), following Liu (1994) and Chen, Shao and Ibrahim (2000). As discussed in Chen, Ibrahim and Chi (2008), we developed the empirical Bayes methodology to specify data-based guide values for the hyperparameters.
2.3 Analysis of the microarray

Both datasets A and B (including primary data on the cell-lines) were obtained from the UNC Microarray Database (http://genome.unc.edu). A preliminary descriptive analysis was performed on the datasets. There were over 3500 replicated probes for dataset A and over 4000 for dataset B, with dataset B having more probes per gene (probeset size) than dataset A (figures not shown). This partly motivated the consideration of replicates in subsequent analyses. Gene-specific (Pearson) correlations were also obtained using the collapsed data.

We implemented the Gibbs sampling algorithm to fit the Bayesian naïve model to the data on sample mean expression values (collapsed data) and the BHM, to the full data (uncollapsed data). In all the posterior computations, we generated 50,000 Gibbs iterations after a burn-in of 1,000 for each model to compute all the posterior estimates, including posterior means and standard deviations.

2.4 Empirical results

The density histograms (figures not shown) for sample correlations and posterior correlations based on the collapsed data were found to be almost the same, with a correlation coefficient 0.9999. Scatter plots of sample correlations versus posterior estimates from the full data and posterior estimates from the collapsed data versus posterior estimates from the full data (figures not shown) were slightly different, with correlation coefficients of 0.8980 and 0.8989, respectively. Sample correlations or posterior estimates of gene-specific correlations from the collapsed data were larger in magnitude than the posterior estimates from the full data (results not shown), for about 77% of the 11,271 overlapping genes. Thus, the use of collapsed data over-estimates correlation between datasets A and B. However, the posterior standard deviations (SDs) of gene-specific correlations from the full data were larger than the posterior SDs from the collapsed data (results not shown), implying that mean cDNA expression values had smaller variability than the original cDNA expression values.

3. Conclusions

We concluded, based on the empirical results above, that the mean cDNA expression values led to over-estimation of gene-specific correlation and under-estimation of the variability of gene-specific correlations. BHM allowed us to borrow strength across genes in estimating variability. Therefore, the BHM approach is preferable for differential gene expression analysis. Future work would focus on using the original dataset A to elicit an informative prior for the new dataset B. Besides the BHM, a mixture model for the covariance or correlation matrices could be explored.

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References


You Are What You Eat

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Abstract – Americans have adopted unhealthy eating patterns that infringe onto the nutritional guidelines for school lunches. Lack of nutrition is a quickly growing contemporary American issue that is causing this country to suffer from the inside out. Fast food businesses prosper within American society, as there is always a demand for inexpensive, convenient food. However, when choosing these meal options, Americans are causing themselves harm and are relatively unaware of the real dangers of eating poorly. Americans choose unhealthy options, not only in the movie theatre and gas station, but also in the home and in schools. Over one-third of American adolescents are either overweight or obese. As everyone has heard before – you are what you eat.

Since its beginnings, the fast food industry has thrived within American culture. With fast food establishments and vending machines loitering around every corner, it comes as no surprise that over 50% of my 43 survey respondents claimed to eat fast food 3-4 times a week, with only 12% neglecting to eat fast food at all. Furthermore, the kinds of meals served in school cafeterias are usually very unhealthy as well. Americans have developed harmful eating habits, likely due to a lack of nutritional awareness. According to my survey, only about 15% of respondents stated that they always check the nutritional information when available.

Americans value convenience and instant gratification. One can easily take a glance around and see multiple Americans playing on their cell phones in an attempt to pass time. With worlds of fun at their fingertips, Americans are simply sucked into the environments in their phones. If an American has to wait in line for a few minutes, the phone will likely be in immediate use. Americans have grown impatient, and it is no wonder that they have come to rely on fast, but unhealthy food to literally grab and go, with over 50% of my respondents claiming that they eat fast food because it is both convenient and fast. However, only about 34% of my respondents said they eat fast food because they enjoy the taste (1). With value meals and dollar menus, fast food is sometimes the only affordable choice. More than half of my survey respondents claimed to eat fast food because of the low cost.

Despite fast food being so convenient and inexpensive, there is no secret as to how bad it is for the human body. According to my research, some Americans are simply unconcerned with their health, with one of my respondents explaining, “Why work for a day that may never come?” (1). This American love of fast food may correspond to the impatience that goes along with the desire of instant gratification (i.e.: diet pills, surgical procedures, etc.). While fast food is quite convenient, other foods are just as quick and much healthier, so why do Americans choose unhealthy options? A mere 29% of my respondents said that they are aware of the foods they eat, and try to get healthy servings of fruits, vegetables, grains, etc. (1). Nutrition is simply not a priority for contemporary Americans, since our leaders are similarly unconcerned. About 83% of my respondents said that they either did not take a nutrition class, or they simply forgot the nutritional guidelines they were taught (1).

Despite the United States Department of Agriculture’s (USDA) efforts in modifying the current nutritional guidelines for school lunches, Congress passed a bill in 2011 that prevents these changes from being made. Among other alterations, the USDA recommended lower sodium and saturated fat consumption, as well as a new orange/red vegetable subgroup (3). Sadly, the USDA’s attempts seem to be in vain. In a 2007 USDA audit, it was discovered that “essentially no schools offered lunches that met the sodium benchmark; average sodium levels in school lunches were about twice the benchmark level.” However, “other studies have found Americans of all ages consume much more sodium than is recommended” (6). Thanks to Congress, the school lunch’s standard fruit and vegetable requirement remains at a combined ½-1 cup daily, rather than the recommended combined total of six cups per day (5). The small portion of vegetables and/or fruit is frequently replaced altogether by some high-sodium tomato paste, reminiscent of Reagan’s 1981 “Ketchup is a vegetable” controversy.

Starting in 2010, a teacher known only as Mrs. Q began an online blog in which she meticulously recorded her school’s lunch menu. She, as a teacher, ate the school’s lunch every day, took
pictures of the food, and read the nutritional information when available. Her school served unhealthy variations of fresh fruit like frozen juice bars which give school-age children far too much sugar to concentrate in their later classes. These juice bars are similar to fruit drinks, in the sense that the FDA considers a fruit drink to have any amount of fruit juice, with just 44% of “fruit drinks” containing any amount of real juice. Fruit drinks often have more calories and sugar than their soda counterparts (4). “Two-thirds of high school students drink either soda, sports drinks, or other sugar-sweetened beverages one or more times a day” (4).

Mrs. Q’s school also served a lot of corn, possibly in an attempt to pass it off as a vegetable, when corn is, in fact, a grain. Her school also provided very unhealthy pizzas that appealed greatly to the students, but contained high amounts of saturated fat, sodium, and starch. Mrs. Q reveals that a lot of students at her school usually only eat one or two items from their school lunch, so these children are not even eating all of their unhealthy meals. Mrs. Q would watch countless unfinished meals be thrown into the trash before the kids hurried to their next classes (2). Only 3 out of 10 high school students report eating vegetables every day. School lunches in other countries concentrate on grains, multiple servings of fresh fruits and vegetables, and often serve protein sources like fish instead of red meat. The meals are more colorful than the American counterparts, prompting kids to visually enjoy their food. American lunches feature crispy, fried, brown and yellow foods that are not as visually appealing, nor as healthy (5).

Unhealthy eating habits are posing a large threat to American society. Rather than eating healthy, nutritious foods, Americans are drawn to fast food and junk. School-aged children are subjected to poor excuses for fresh fruits and vegetables as well as other unhealthy meal options, when they desperately need vitamins and nutrients to grow healthily. Unhealthy options are everywhere, not just in schools. Years ago, gas stations only sold gas. Now, they are ridden with sugary, fattening junk foods that the public is inclined to buy. Now the same scene is repeated in movie theatres and unfortunately in the home as well. Children live by what they learn and pass that knowledge onto the next generation. As everyone has heard before – you are what you eat.

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Control Mechanisms and Electronic Medical Record Compliance in a Combat Environment: An Empirical Investigation

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Abstract — Electronic medical records (EMR) are central to the treatment of patients in a combat environment. Yet despite their benefits and legislation mandating their use, EMRs are not widely diffused in the U.S. military. Factors such as armed conflict, layers of bureaucracy, and varying rotation schedules contribute to the complexity and difficulty of EMR implementation in a combat environment. This study examines barriers to EMR compliance in the U.S. military. Using a unique data set collected over a 105-week period in Iraq, we investigate the implementation and effect of monitoring and sanctions on EMR compliance in combat support hospitals. Our results show that monitoring and sanctions are positively related to the rate of EMR completion, yet they have no effect on the rate of EMRs started. Our findings have implications for research and policy on EMR compliance and implementation.

Keywords — health IT, systems implementation, electronic medical records, public policy, organizational change

1. Introduction

Since the end of 2001, over 70,000 United States (U.S.) military casualties have been evacuated from Iraq and Afghanistan because of injuries or illness (Bilmes, 2008). In the first stage of the evacuation process, patients are moved from the point of injury to the nearest point of treatment (e.g., combat support hospital). If additional medical care is deemed necessary, patients are evacuated to an appropriate destination (e.g., an Air Force staging facility, then to Germany, then to the U.S.). Although many patients are treated and continue military service, others are eventually transitioned to the Veterans Affairs system for long-term care.

As a patient moves through the evacuation process, key medical information is collected by healthcare providers and recorded on paper and/or electronically. After each provider-patient encounter, healthcare providers add information to a complete medical record for that patient’s specific injury or illness. When records management systems work, this information moves with the patient. This information flow is important because treatment depends on providers having access to a patient’s up-to-date medical history. Hence, medical records — and the information systems that support their use — play a central role in the treatment of patients in a military combat and post-combat context.

In addition to their critical role in patient care during the evacuation process, medical records are necessary for long-term care and policy decisions. For veterans, paper medical records can be problematic. For example, all medical records for soldiers deployed in the 1990-91 Gulf War were in paper form, and after a few years, many records were unable to be retrieved (Medicine, 1996). During that time, numerous soldiers, sailors, airmen, and marines came home to a series of what appeared to be non-related medical problems. Many were evaluated and diagnosed with both psychological and physical disorders (Ismail et al., 1999). Because records were lost, soldiers could not document that their conditions deteriorated over time. As a result, it was exceedingly difficult to identify any trends leading to the onset of post-war psychological or physical conditions, which has made attending to Gulf War veterans’ health problems more onerous.

Implementing an electronic health record (EHR) system is one way to address information management issues surrounding patient care during evacuation and over the patient’s lifetime. An EHR system is a collection of electronic medical records (EMR). As such, an EHR system is designed to allow patient treatment documentation (in the form of an EMR) to follow a wounded service member throughout the entire evacuation and recovery process. If an EHR system were used, medical staff could add pertinent information and securely transmit the data to a location where other medical staff could then
access and add to the treatment record of the wounded in real time. This information would be added to other records of treatments throughout the soldiers’ career. Thus, over the long term, widespread use of an EHR system would provide the military with an opportunity to collect and maintain information spanning an individual’s initial entry into military service, any pre-deployment screening, through deployment and to the end of his/her career. After the end of the service members’ career, the Department of Veterans Affairs could access the EHR in order to ensure accuracy in data and best care for veterans. Hence, an EHR would provide both short-term benefits (patient treatment during the evacuation process) and long-term benefits. In light of these benefits, the U.S. Congress passed legislation in 1997 that mandates that EHRs are used to document the complete health records for armed service members.

An effective EHR system rests on the quantity and quality of the EMRs within it. Yet despite their touted benefits (Jha et al., 2009), technological advances, and legislation mandating their use, EMRs are not widely diffused in the military. Real-time patient data is still primarily moved in paper form with the wounded soldier. Although electronic data may be collected at the point of injury, medical personnel often continue to use paper records that can be less accurate, secure, and complete than their electronic counterparts. Military medicine poses a number of complex challenges to EMR diffusion (Galvin, 2005). Medics continue to carry a paper field medical card, which is a quick and simple way to document immediate medical care. Also, the point of injury may not be safe, making it an inopportune time to start a computer, pass through multiple password-protected screens, and initiate a new electronic record while also attending to an injury. In other words, EMRs may not be initiated because healthcare providers are more concerned about treating the patient than they are with creating documentation. Consequently, an EMR may not be initiated until patients arrive at a combat support hospital.

Another barrier to EMR diffusion lies in the layers of bureaucracy responsible for EMR implementation. These layers involve numerous parties who may not necessarily have aligned goals related to EMR implementation and use. For example, while a Medical Command desires that combat support hospitals comply with EMR policies, medical providers face competing demands on their time. These demands may cause providers to promote certain goals (e.g., patient treatment) over others (e.g., EMR compliance).

Also, the deployment rotation schedule of wartime medical personnel further complicates EMR implementation. A Medical Command changes on a pre-defined rotation schedule. With each change, new commanding officer’s leadership styles lead to continuous changes in operational rules and procedures. Rotation schedules at lower level hospitals also introduce challenges. For example, between October, 2005, and November, 2007, there were a total of eight U.S. military hospitals in Iraq and Kuwait. The units responsible for providing leadership, administrative, and clinical personnel for each of these hospitals experienced a 100% turnover of military personnel every 4 to 15 months, while clinicians rotated through combat zones with even greater frequency (some as few as 90 days).

Against this backdrop of armed conflict, bureaucracy, competing hospital missions, turnover in leadership, and uneven clinician rotation, it is not surprising that EMR implementation is exceedingly difficult in a military combat context. To understand how to mitigate these challenges, we conducted a longitudinal examination of EMR policy compliance. Our primary research question is, Are there control mechanisms that lead to EMR policy compliance? Using 105 weeks of data, we investigate the extent to which control mechanisms influence medical providers’ adherence to EMR policy in a military combat zone.

2. Study Context

The U.S. Military Health System (MHS) incorporates all aspects of health services for the Department of Defense. The MHS maintains medical systems and ultimately produces a lifelong EHR for patients. The MHS EHR contains information about an individual’s longitudinal health status and health care and is made up of the different EMRs a patient has had over his/her lifetime. Within the MHS, an EMR is the legal record created in hospitals and ambulatory environments (Garet & Davis, 2006). An EMR includes electronic versions of inpatient/outpatient treatment records, health records, dental records, civilian employee medical records, x-ray films, and consultation service case files. The EMR used by hospitals to document inpatient medical or dental care is initiated on admission and completed prior to evacuation. All healthcare providers can enter certain information into the deployed EMR based upon their duties and responsibilities. It is the clinician, however, who is responsible for signing a completed EMR.
Medical Command (MEDCOM) is responsible for developing and implementing policies that encourage hospitals to use EMR systems. Within a combat zone, all combat support hospitals report to a single MEDCOM. Changes in EMR completion and start rates are directly related to compliance with MEDCOM’s overall EMR policy. We operationalize EMR policy compliance in two ways: the total number of inpatient EMRs per U.S. service member (1) completed and (2) started in a one-week period. We examine the extent to which two MEDCOM-initiated control mechanisms – monitoring and sanctions – affect hospitals’ EMR policy compliance. In addition, we further categorize the records as routine and non-routine. Some level of accidental injuries, such as car accidents, occur both in and out of the deployed environment; the same is also true in the case of diseases, such as heart disease. Hence, we place these into a single category named “routine.” Some injuries are not routine, such as those inflicted by bombings and shootings. Hence, we place these into a single category named “non-routine.” To summarize, we use six measures of EMR compliance: all EMRs completed, routine EMRs completed, non-routine EMRs completed, all EMRs started, routine EMRs started, and non-routine EMRs started.

Our study period spans 105 weeks: October 30, 2005, to November 3, 2007. In 2006, MEDCOM implemented a monitoring mechanism in the form of a daily medical situation report. This report was introduced to capture all inpatient and outpatient information, which is then compiled and sent from each hospital to MEDCOM via secure email. Hospitals were mandated to report information such as number of beds available, number of certain types of admitted patients, and any other key problems or concerns. This form of monitoring should reduce the level of information asymmetry between MEDCOM and combat support hospitals about units’ activities and lead to greater compliance with EMR policies. For example, MEDCOM may notice that the number of beds available at a hospital has been steadily increasing over a two-week span. This implies that the hospital is releasing more patients than it is admitting. It then follows that the hospital should also be completing more electronic medical records. Since the daily report informs MEDCOM about what the hospitals are actually doing, the report will likely curb clinician’s shirking, e.g., not starting or completing medical records, because MEDCOM can better assess individual hospital clinicians’ workload. Therefore, MEDCOM’s increasing monitoring in the form of added reports could increase the number of completed and started EMRs.

MEDCOM also instituted the threat of sanctions to encourage EMR policy compliance. In the first quarter of 2006, the MEDCOM in charge of Army hospitals in Iraq sent an order to the hospitals. This order stated that the MEDCOM would now certify all hospitals as ready to redeploy. In other words, hospital staff were not permitted to redeploy without express permission to do so from MEDCOM. Although the physical facilities did not move, all hospital personnel turn over within 12 to 15 months. Prior to certifying a hospital could redeploy, MEDCOM required that it prove that all electronic outpatient and inpatient records were closed. Limiting a hospital’s ability to redeploy and return to their home base was thought to create personal incentives and social pressure on clinicians to complete EMRs in a timely manner. In the following section, we describe how we tested the extent to which these two control mechanisms – monitoring and sanctions – influence EMR compliance.

3. Research Method

Military doctrine describes three levels of medical care in a combat zone: level 1) emergency medical care, level 2) initial resuscitative care, and level 3) resuscitative care. We focus our study on inpatient medical records at level-three Army hospitals. Level 1 and 2 facilities (e.g., smaller clinics) may lack the ability to input inpatient information into the EMR system. Also, focusing on hospitals within the Army allows us to control for extraneous effects tied to context (e.g., branch of service) and allows us to investigate a clear line of reporting between MEDCOM and the hospitals.

In addition, we took into account deployment criteria in order to examine deployed EMRs and how they integrate into the larger EHR. The U.S. Central Command sphere of control includes Iraq, Afghanistan, and other areas of operation. To control for the range of medical units under U.S. Central Command, we limit our inquiry to one military operation with a large number of coalition forces within Iraq, a well-defined area. In addition, to limit the effect of regional violence on our analysis, we aggregated data for all Army hospitals in Iraq.

3.1 Measurement of Variables

EMR compliance is measured as the number of records per week divided by the total number of U.S. service members deployed in support of Operation Iraqi Freedom. EMR compliance is
coded in two ways: as the total number of U.S. service member records 1) completed and 2) started within a one-week period. Monitoring is measured as the introduction of a daily medical situation report for all inpatient and outpatient information, which is then compiled and electronically transmitted from each agent hospital to the principal. This variable is coded in the following manner: 0=prior to introduction of monitoring policy and 1=after the monitoring policy. Since hospital personnel were not allowed to redeploy until all open electronic medical records were closed, we measure threat of sanctions as the time span during which a hospital was in transition. Hospital transition periods begin when one Army hospital is within the four-week period prior to completing a 100% turnover of personnel to another incoming hospital. The period ends when the next transition occurs. This variable is coded as follows: 0=period not transitioning and 1=transition period.

We include several control variables. The first control variables are the number of non-U.S. Military inpatient records 1) completed and 2) started in a one-week period. This category includes all non-U.S. coalition forces, Iraqi military and police forces, contractors, U.S. and foreign civilians, and others unknown by healthcare providers when the records were started. We also controlled for Total U.S. Forces in Iraq, defined as the total number of service members deployed in support of OIF during any specific month. This variable serves as a proxy for the competition for demand on resources that may mitigate clinicians’ ability to start and complete records. The last variable is the number of U.S. service member casualties in Iraq per week. This variable serves two purposes: it acts as a proxy for the U.S. military operational tempo in Iraq, and it corrects for regional variation in workload.

3.2 Analysis and Results

Multiple statistical tools were used to analyze the data including graphing each dependent variable over time with intervention analysis, analysis of variance (ANOVA), standard least squares regressions, and two-tailed t-tests. Table 1 contains descriptive statistics and correlations for all variables in our study. Two independent variables were examined in this study: Introduction of the Monitoring Policy and Threat of Sanctions. The monitoring policy was introduced in week 55. Our period of analysis captured two, five-week hospital transition times during which sanctioning may have occurred: 1) weeks 40-44 and 2) from weeks 49-53.

ANOVA established the existence of at least one significant regression factor in each model. We used this analysis to assess the impact of exogenous intervention on the time series. The analysis employed in this study, then, not only examined the form of the graph but also the statistical significance of changes in slope after the interventions. Table 2 details the results of our analyses.

Results show that monitoring (p < 0.01) and threat of sanctions (p < 0.001) are both significantly related to number of records completed. More specifically, increased monitoring significantly impacts non-routine completions (p < 0.01), while threat of sanctions impacts routine as well as non-routine categories. Regarding control variables and records completed, non-U.S. military records completed (p < 0.01) and started (p < 0.01) were both significantly related to number of records completed, but only within the routine categories. However, the number of non-U.S. military casualties started actually decreased the overall number of total completions, within the routine category. Our model explains 40% of the variance in inpatient EMRs completed.

Results also show that introducing a monitoring policy had a significant effect on number of records started. However, this change was both abrupt as well as temporary. Threat of sanctions is not significantly related to number of records started. However, the control variable U.S. casualties reported (p < 0.05) is significantly related to number of records started. Our model explains 17% of the variance in inpatient EMRs started.

4. Discussion

This study examined what factors impact EMR policy compliance in a military combat zone. Specifically, we investigated the effects of two mechanisms – monitoring and sanctions – on EMR compliance, operationalized as the number of inpatient EMRs 1) completed and 2) started. We then further categorized the records into routine and non-routine cases. Our results show strong support for the role of monitoring and sanctions in number of EMRs completed; however, we find that monitoring and sanctions have much less effect on the number of EMRs started. Our findings contribute to our understanding of drivers of EMR compliance in a military combat zone and may also yield insight into additional urgent care contexts.
4.1 Role of Monitoring

We found that the implementation of a mandatory reporting mechanism influenced clinicians' behavior. By collecting information such as admission rates, patient updates, and number of available beds from hospitals on a daily basis, MEDCOM was better able to monitor the use of hospital resources and clinicians' workload. By doing so, MEDCOM was able to tease out how many medical records should be started and completed in a reporting period. By reducing information asymmetry between MEDCOM and the hospitals, mandatory reporting of unit level data led to increased EMR policy compliance on the part of clinicians. We believe that mandatory reporting could have increased awareness that it was monitoring clinician activities, thereby prompting medical providers to pay more attention to entering data into EMRs. Other forms of monitoring, such as physically placing individuals in hospitals to monitor medical provider behavior toward EMR compliance or designing triggers that alert MEDCOM when EMR start/completion rates fall below certain levels, could also lead to EMR compliance. However, because they have not been implemented in the field, these mechanisms fall outside our study's scope and should be viewed as opportunities for future research on EMR compliance.

Our separation of EMR compliance variables into routine (disease/non-battle) injuries and non-routine (battle) injuries provides further insight. Monitoring had a significant effect on non-routine record compliance (number of records completed and started) and no effect on routine record compliance. In future research, it would be interesting to conduct field-based interviews to probe the sources of the differences between routine and non-routine EMR. For example, given that battle injuries require more urgent care, and may have more lasting implications for service members, our finding could imply that monitoring induces a longer term perspective to clinicians' work - even as they sought to address short term issues such as staunching the flow of blood from a wound. However, absent urgent conditions, clinicians seemed to disregard EMR completion as being important. To better understand why clinicians use EMR in urgent care contexts, research needs to explore drivers of how the context for service (e.g., timing of injury, type of injury) shapes their decisions to initiate and complete records.

Our findings suggest that organizations can craft policies (e.g., use monitoring or sanctions) that encourage compliance with EMR systems. While supervisors often use economic incentives to influence subordinate behavior (Baker, Jensen, & Murphy, 1988), our analysis shows that non-financial incentives influence clinician behavior. Although the military does offer limited bonuses for certain medical specialties, no incentives are offered for the use of EMR. Although managers in a non-military context lack similar leverage (e.g., they do not control clinicians' deployment to combat), they could possibly use non-financial incentives, such as vacation time, project assignments, and office assignments, to influence subordinates’ interaction with EMR and other health care systems. By offering incentives that align clinicians and hospital administrators' goals, health care organizations may more effectively generate EHRs that ensure quality care for patients throughout their lives.

While our results show that monitoring is effective in increasing EMR completion rates, policy makers should be aware that monitoring may incur costs. In our study, hospital staff prepared and submitted the monitoring report on a daily basis. Although such report generation may be partly automated through IT, the hospital staff must dedicate time and resources to generate these reports. Such costs may create an additional burden that could, in turn, reduce resources allocated toward treatment of patients and EMR compliance. Future research should investigate the implications of these second-order effects and additional monitoring mechanisms in military and civilian medical institutions.

4.2 Role of Sanctions

Our results suggest that the threat of sanctions increased clinicians’ compliance with EMR policies. As hospital transition periods approached, the number of EMRs completed spiked in an upward direction. While this finding is not surprising (medical personnel likely wanted to return home), it does suggest that sanctions are an effective tool for aligning clinicians’ goals with MEDCOM’s goals. Although the military has a unique capacity to impose sanctions (e.g., service members cannot simply walk off the job, especially when deployed in a combat environment), quality of data entry and retention of clinicians are as important to the military health system as they are to civilian health systems. If the military were to impose onerous or impractical reporting standards, it would likely encourage the input of low-quality data and lead to long-term losses of valuable, skilled clinicians. Such outcomes are possible, because the threat of not returning home may be perceived as a psychological contract.
breach and a negative affective response among clinicians (Pate, Martin, & McGoldrick, 2003). Thus, future research is needed as to whether sanctioning mechanisms affect the quality of data entry into the EHR system as well as their implications for longer term outcomes such as retention of clinicians.

The threat of sanctions had no effect on the number of EMRs started. Contrary to our prediction, EMR start rates did not decline near hospital transition times. This shows that clinicians continued to start EMRs despite the possibility of not being able to redeploy if those EMRs were not completed. Although speculative, we suspect this could be due to the value system of medical professionals. Because clinicians are most interested in the long-term well-being of their patients, they may have continued to start records without consideration of their implications for leaving the field. In light of this observation, we believe future research should more deeply probe the interplay between clinicians' value systems and their use of EMR systems.

The threat of sanctions had a significant effect on both routine and non-routine records completed, yet they had no effect on routine and non-routine records started. These results are consistent with our overall results, where sanctions positively impacted EMR completion rates and had no impact on EMR start rates. Hence, it appears that sanctions affect EMR compliance in a consistent manner, whether dealing with routine or non-routine situations. Because we suspect that EMRs are most accurate if data is entered promptly, future research needs to investigate how to design EHR systems which encourage healthcare providers to start EMRs at the first point of contact with a patient. Given the fact that many combat injuries are sustained during non-routine (battle) situations in remote environments, such systems may include the use of mobile electronic devices. While mobile devices offer several advantages over non-mobile devices, technology requirements for the Army are more rigorous than those for the commercial market (MC4, 2012). Moreover, given the persistence of paper records in combat environments, such devices would need to be designed with an eye on having ease of use and accessibility comparable to paper records. Thus, research that investigates how to design usable mobile electronic devices for healthcare-related tasks in a combat environment would provide valuable implications for decision and policy makers.

Although our results show that sanctions are effective in increasing EMR completion rates, we encourage policy makers to use sanctions judiciously. Like monitoring, sanctions may result in unintended adverse consequences (e.g., clinician resistance, turnover, low-quality data) (Ford, Ford, & D'Amelio, 2008). When managing medical providers, policy makers should consider sanctions only when a desired behavior is central to patient care. Completion is worth sanctioning as it affects records that make it to the EHR system and because too many open records slow down inpatient record servers and make day-to-day operations more difficult. Future research should look at the efficacy of different types of sanctions as well as their intended (and unintended) consequences.

5. Conclusion

Based on a longitudinal study of EMR policy compliance in a combat environment, we found support for our model of EMR compliance. Our results demonstrate that monitoring and sanctions both increase the rate at which EMRs are completed, which in turn increases the likelihood that continuity in the delivery of care is improved throughout the evacuation process and, ultimately, the patient’s lifetime. The military’s EHR system allows patient treatment documentation to follow a patient throughout the entire evacuation and recovery process. However, this EHR system is built on the quantity and quality of EMRs within it. Thus, an EHR system is only effective if EMRs are started and closed in a timely manner. If a patient is evacuated from, say, Iraq to Germany for treatment, the patient’s EMR from his treatment in Iraq should be available to the medical providers in Germany. Yet this information may not be available if the Iraq EMR is not closed out by the time the patient arrives in Germany. Absent a complete EMR, medical providers in Germany basically have to “start over” with the patient in terms of diagnosis and treatment. Through judicious use of monitoring and sanctions, our research suggests that policymakers can increase the likelihood of completed EMRs as patients move through healthcare system completion and start rates.

Acknowledgements

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References


Table 1. Descriptive Statistics and Variable Correlations

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<th>Mean</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<td>1. Records Completed</td>
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<td>27.71</td>
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<td>0.26</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Monitoring Policy</td>
<td>-</td>
<td>-</td>
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<td>0.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Threat of Sanctions</td>
<td>-</td>
<td>-</td>
<td>0.43</td>
<td>0.17</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5. Non-U.S. Mil. Completed</td>
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<td>6.91</td>
<td>0.28</td>
<td>0.35</td>
<td>0.14</td>
<td></td>
<td></td>
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<tr>
<td>6. Non-U.S. Mil. Started</td>
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<td>6.86</td>
<td>0.23</td>
<td>0.33</td>
<td>0.03</td>
<td>0.77</td>
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<td>7. U.S. Casualties Reported</td>
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<td>0.28</td>
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<td>8. U.S. Soldiers Deployed*</td>
<td>5.16</td>
<td>4.11</td>
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<td>-0.03</td>
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*Converted to logarithmic value to facilitate analysis and interpretation

Mil. = Military

Table 2. Results of Regression Analyses

<table>
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<tr>
<th>Variable</th>
<th>All Records Completed</th>
<th>Routine Records Completed</th>
<th>Non-Routine Records Completed</th>
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<tbody>
<tr>
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<td>0.14</td>
<td>0.45***</td>
</tr>
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<td>0.50***</td>
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<td>-0.24**</td>
<td>0.23**</td>
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<tr>
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<td>0.17</td>
<td>0.05</td>
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<td>F</td>
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<tr>
<td>R²</td>
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<td>0.40</td>
<td>0.05</td>
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<table>
<thead>
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<th>Routine Records Started</th>
<th>Non-Routine Records Started</th>
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<td>0.15</td>
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<td>0.03</td>
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<tr>
<td>Non-U.S. Mil. Started</td>
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<tr>
<td>U.S. Casualties Reported</td>
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<td>-0.11</td>
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<td>U.S. Soldiers Deployed</td>
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<td>0.08</td>
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<tr>
<td>R²</td>
<td>0.15</td>
<td>0.02</td>
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Source. Data collected and analyzed by the authors

Notes. Standardized coefficients are reported.

Mil. = Military

* p < 0.05; ** p < 0.01; *** p < 0.001
Psychoanalysis of First-Generation College Students

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Abstract — In order to discover the psychological motives and emotional journey associated with first-generation college students, 32 interviews were obtained. Of the 32 interviewed, 5 were Caucasian, 6 Hispanic, 18 African American, and 3 identified as "other". The findings were conclusive in that most students struggled with feelings of shame and self-pity in order to ascertain feelings of pride and accomplishment. Names in this essay are fictional in order to protect the individuals.

Keywords — psychoanalysis, first-generation college students.

1. Introduction

In an era of illiteracy and high unemployment rates, a college education is no longer a luxury, but a necessity. It is imperative for students to obtain education to make educated decisions in political circles and come out of economic turmoil. With this taken into consideration, it is curious how students coming from uneducated backgrounds manage to achieve success in college, but more importantly, why. Research indicates that students whose parents did not attend college are far more likely to suffer impediments throughout their college experience than their non-first generation counterparts. For instance, in the fall 2011 class, 776 students completed the Free Application for Federal Student Aid (FAFSA) for Spartanburg Methodist College (www.smcsc.edu). SMC’s website indicated that for those who come from one-parent households, 81.3% of those students’ parent did not attend college. It further showed that 352 (or 46.3 %) students answered that neither parents attended college. This makes for almost half of the students of SMC for the fall semester of 2011. Due to the high number of first-generation college students, this research focuses on the psychological aspects pertaining to the plight of first-generation college students, specifically emphasizing the emotions coupled with the college experience; both before and after. Feelings of shame, insecurity, struggle, pride, and honor have been examined.

2. Motivation and the Family

One must wonder what leads a student whose parents did not pursue a higher education to do so himself/herself. This research indicates that initial family support was sparse. Only 9 of the 32 interviewed remember familial support and encouragement to attend college. These students felt strong pressure to succeed in life, unlike their parents and family members before them. Majority of those interviewed (23 of 32 or 72%) felt alienated from their families because of the cost brought about by their decision to go to college. Most of the interviewees come from low income families who require additional labor from family members to maintain a less-than-mediocre lifestyle. Pressure from family members was not to attend college but to begin manual labor, typically in a family-owned business. David Garcia, 27 year old, attended Clemson University against the wishes of his father. His father demanded that he run the family laundry service. David, along with other students, primarily felt a need to achieve more. Growing up in low class families, 28 of the thirty-two interviewed felt desire to care for their families. The best way they knew how was to get an education and make money. This seemed to be the common response to the question “why did you attend college?” This is true for Charlotte Morley, current student of Spartanburg Methodist College. When asked, “Why did you attend college?” she shrugged and stated “because I wanted a better life for myself, financially speaking.” However, four of those interviewed did not feel a need to care for their family; one of these was another current student of Spartanburg Methodist College, Casey Strep. She states, “I didn’t like the way my mom turned out . . . [and as for] my dad, I can see that he wishes he had better and I don’t want to be that way.” Her motivation was not to take care of her family, but rather to distance herself from them. These students recall embarrassing moments that also drove their decision to attend college. Feelings of shame from living in poverty were a common emotion, as were self-pity, and insecurity. A small percent of those interviewed recall their parents’ inability to assist with homework assignments which was a motivating factor to the decision to go to college. Because of their parents’ incompetence in education, students felt compelled to work harder than their non-first-generation counterparts.

3. Psychological Struggle in School

First-generation college students typically felt the need to work harder than the rest due to their lack
of support from home and insecurities about their background. These students reminisce on feelings of rejection and unhappiness because they did not have the same support as the rest of the students at their college. Sarah Dewey, 28, remembers attending awards ceremonies and watching other students with their families. “Their parents were so proud of them, but I didn’t have that. My mom was busy working and my dad was, I don’t know.” Other students had families who funded their education or were excited and supportive of their endeavors. They had families who helped them cope with the disillusionment of a bad grade or a disciplinary incident. First-generation college students, however, generally felt alienation and discontentment from their families; the same feelings that fueled the need to work harder. An overwhelming 30 of the 32 interviewed (94%) also felt that they had to overcome insecurities due to their background, lack of academic preparation, and poor foundation. Nineteen of those interviewed felt that they were not as intelligent as the others because their parents did not attend college. Three (3) knew they were college materials but felt incompetent and not as good as their classmates. These students felt that more was dependent upon their achievements. Each person interviewed remembers feelings of envy and jealousy towards their friends whose parents would send them money for food and clothing. One woman interviewed, who graduated from North Greenville University in 2009, recalls her friend’s mother sending money for food and clothes every week. “I felt poor. I remember looking at all the food in her room and her nice clothes and new TV and I felt jealous. I felt jealous a lot in college” she said with a laugh. Many of those interviewed who finished college remember how difficult their college years were, but do not regret them. They address that alienation from their family was difficult but generally worth it. Some completed college which made their families proud, but others did not because of the obstacles and difficulties they had to face while attending college. Scott Clark remembers how difficult it was to try to succeed part time in school while coming home to a father that repeatedly told him he would amount to nothing but a dishwasher. As Scott stated, “After someone tells you you’re crap for so long, you kind of start to believe it. And I did!” He quit college after one semester and continued to work at the same restaurant as his father.

4. Absolution and Achievement

Of those interviewed, 22 or 69% have graduated from college. For those who graduated, many recollect the day vividly. They recall feelings of vindication, accomplishment, and completion. Jeremy Carlson recalls feeling free from the burdens of his family’s mistakes: “It was like me graduating made up for what wrongs they made. Like I did it, and now everything was okay. My parents did right by me.” Most were overwhelmed with so much pride that tears overcame them. Many did not chase higher educational pursuits, such as a master’s or doctoral degree, but do regret not doing so. Unfortunately, the 6 who did not graduate college recollect feelings of regret and self-pity. Many wish they could have had persevered so that they would not be in identical predicament as their parents were. Many have aspirations to return to a community college for a degree, just to experience the vindication and accomplishment like those who did graduate. The 4 interviewed who are currently attending college are excited to graduate and be vindicated. As Alex had ecstatically stated, “Are you kidding me? Of course I can’t wait! I am going to be so proud of myself. It’s hard, but I am going to do it.”

5. Conclusions

Research indicates that first-generation college students suffer more psychological and even social obstacles throughout the college experience than their non-first-generational counterparts. Although many were beleaguered and were potential victims of self-fulfilling prophecies, these students pushed themselves relentlessly with the purest form of intrinsic motivation to accomplish a goal that would change their lives forever. They overcame feelings of alienation, insecurities, self-pity, and shame and replaced it with the feelings of pride, honor, and vindication.

Acknowledgements

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References

Accuracy through Exposure: Understanding Acquaintanceship

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Abstract — We examined the process of the acquaintanceship effect in a controlled laboratory setting. One hundred and fifty-three USC Upstate students were asked to make personality judgments of relative strangers. Students were asked to make a total of three assessments of the same target, one following each trial. In each trial participants were given additional personality relevant information in the form of a) individuating facts about the target b) target’s core values or c) silent video of the target in an interview setting. Consistent with previous research, we found that as the overall quantity of information increased as did overall accuracy. We also examined not only how the overall quantity effected accuracy in judgment but examined how the information type (quality) effected accuracy. Here we found that the individuating facts held a distinct advantage over core values in judging many of the Big Five personality traits. The silent video, as information type, also proved to be most helpful in accuracy of Extraversion. The process of the acquaintanceship effect and its relationship to personality assessment accuracy are discussed.

Keywords — Personality, Information Quality, Information Quantity, Acquaintanceship Effect, Person Perception

1. Introduction

It is broadly understood, both within and apart from the formal study of personality perception, that we know more about those close to us than we do about relative strangers. That is to say, we can more accurately predict the behaviors, thoughts, and emotions of friends and family, for example, over those we are less familiar with. Research has shown strong support for the acquaintanceship effect (Funder, 1995) by providing evidence that members of long-standing groups (Norman & Goldberg, 1966), marriages (Watson, Hubbard, & Wiese, 2000), and friendship groups (Funder & Colvin, 1988) more accurately judge personality than do relative strangers. Even previously unacquainted groups become more accurate over time as exposure increases (Paulhus & Bruce, 1992). Less is known, however, about the exact process of acquaintanceship. To what extent is the rise in judgment accuracy due to the increase in quantity of information acquired or to variations in information quality—a piece of information’s relevance to personality? Borkenau and Liebler (1992) investigated how the increase in information quantity effects judgment accuracy by varying the levels of target exposure and found that even slight increases in exposure lead to increases in accuracy. Understanding that information quantity and quality are difficult to independently examine, Letzring, Wells, and Funder (2006) attempted to control for varying levels of quantity and quality and found that both individually impacted accuracy.

When addressing unanswered questions related to the acquaintanceship effect, it is not only important to understand the nature of the information received but also the process in which we receive it. Beer and Brooks (2011) proposed that there are two primary ways in which we receive relevant personality information: direct communication and behavioral observation. Direct communication involves the revealing of personality relevant information by either the target or a knowledgeable informant. Here the information is stated in conversation and is void of either supporting or undermining behavioral evidence. Behavioral observation represents the direct exposure to behaviors that contain relevant personality related information. These behaviors are usually seen across a variety of situations and over time. Behavioral observation can also be, and often is void of direct claims made by the target about his or her own personality.

Since we get to know others over time, the judgments we make are continually shaped as we are presented with new personality relevant information. We are forced to either make novel judgments about someone we know or to assimilate the new information into what we already believe about the individual. The importance of this evolving process may seem to be elementary, but it has been directly ignored in previous research. Past studies (Norman & Goldberg, 1966, Watson et al., 2000, Funder & Colvin, 1988, Paulhus & Bruce, 1992, Borkenau and Liebler, 1992, Letzring et al., 2006, Beer and Brooks, 2011) have all been similar in design, in that all comparisons of accuracy have been made between-subjects. This means that those making
judgments at one level of exposure were not the same ones making judgments at another level. In cases of a small sample size (Borkenau & Liebler, 1992) this can be problematic because it becomes impossible to tell if the exposure levels are presenting varying levels of information or if the judges in another level simply vary in ability to judge personality accurately. For most studies the benefits of random sampling, which accompany larger sample sizes, will eliminate this concern. The remaining concern is that of ecological validity. This is why the current study looks to more closely approximate the way we naturally develop judgments of those around us. Judgments, in the real world, are made over time and by gathering and synthesizing information over time and across situations.

In the current study comparisons of accuracy were within-subject in nature. This means accuracy is examined over time as judges gained more information about a single target. Participants were sequentially presented, in random order, with three unique types of information (individuating facts, core values, non-verbal information). They were presented with the first type of information and asked to assess the personality of the target. This was repeated twice more with the remaining two types of information. We expected that there would be a direct positive relationship between accuracy and the sheer quantity of information received. We, therefore, expected to see a rise in accuracy as information increased. Accuracy would be higher after the second type of information was received and higher yet again, when the third type was seen by the participant. We also expected that the variance in information type would affect accuracy. Here we expected to see increases in accuracy follow non-verbal information regardless of the order in which it was presented.

2. Method

Participants were 153 USC Upstate students. Participants were recruited through the university’s sign-up system and were given introductory level Psychology course credit in exchange for their participation. Participants were first asked to complete a self-report version of the Big Five Inventory (BFI; John & Srivastava, 1994). They were then positioned in front of a computer monitor and briefly shown a picture of the target individual and asked “Do you know this person?” If the participant responded “no” then they were instructed on how to proceed. If their response was “yes” then a new target was selected to ensure that the participant had no prior knowledge of the target individual. Participants were then presented with either a list of the target’s individuating facts or core values, or they were shown a silent video of the target in an interview setting. After given the first type of information, the participant was asked to complete a peer-report version of the BFI for the target. Upon completion, the participant was presented with the second type of information and again asked to complete a BFI for the target individual. This process was repeated once more for the remaining information type.

3. Conclusions

Accuracy was operationalized as the agreement correlation between the participant’s peer-report BFI for the target and the target’s previously obtained self-report BFI. Significant accuracy correlations were present only when individuating facts were presented as the first type of information. The benefits of facts, as an information type, can also be seen in previous research. Beer and Brooks (2011) found that accuracy was higher when participants were presented with individuating facts over personal values. The facts-first condition also yielded the highest accuracy in neuroticism, extraversion, and openness across any condition. When the facts were presented second or third, the accuracy for all traits declines. It seems as if participants were not making effective use new information. Funder’s Realistic Accuracy Model (RAM; Funder, 1995) may help to explain this lack of proper utilization. Relevant cues to the target’s personality were available in the individuating facts, presented either second or third, but they were not properly utilized. Previous information seems to have interfered with the participants’ ability to use new information effectively. This pattern has been previously invisible due to the between-subjects design of past research.

After the presentation of facts, regardless of order, the highest accuracy in neuroticism was seen in all three conditions. This is in contrast to Beer and Brooks (2011) findings that showed significant accuracy, in neuroticism, when values were presented but not in the facts condition. Since for the current study, facts and values were presented in written form and not given as in direct communication, this may speak to the nature of each information type. Facts seem to be more effective as information when obtained apart from direct communication. There does, however, seem to be something especially important about values being presented in direct communication from the target. It may be the more personal nature of values over facts that helps create this difference. As expected, nonverbal cues derived
from the silent video yielded the highest accuracy in extraversion in all three order conditions. The highest accuracy was seen directly after the video, regardless of its order in the condition (video shown first, second, or last). The nonverbal information also seems to be driving the accuracy in openness but this relationship not as clear as that between nonverbal and extraversion.

The benefit of a within-subjects approach is most visible in the effects of the individuating facts on accuracy in the current study. Although it may be true that overall accuracy grows in time, it is also possible that time, and with the acquisition of more information, we may actually muddy our more previously accurate judgments. Future research should continue to track accuracy throughout the process of acquaintanceship. This may help to expose a clearer picture of the relationship between accuracy and acquaintanceship, which may not be as linear as originally proposed. Further understanding of the process may also help to explain not only how information quantity plays a role in accurate personality assessment but how information types and means of receiving them assist in assessment. There are also limitations with the current study in terms of the overall quantity of information. We chose only to expose a small amount of information to the participant in order to track acquaintanceship at the micro level. It is also important for future research to expand on this model in order to closer approximate the natural way in which we learn about others. A study that tracks acquaintanceship over the course of days, weeks, or months could be helpful in doing so.

**Table 1.** Accuracy Correlations between Stranger (Participant) and Target/Informant BFI

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F= Facts, V=Values, Nv=Nonverbal (video)
N=Neuroticism, E=Extraversion, O=Openness, A=Agreeableness, C=Conscientiousness

**References**


Motivation – The Drive of a College Student

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Abstract — Researchers have long contemplated the notion of motivation, seeking to disclose the underlying principles that prompt people into action. It seems that people can be motivated either intrinsically or externally, but each form comes with distinct repercussions. Intrinsic motivation, which involves acting upon the individual’s self-interest, produces the most effective results. People enjoy pursuing and accomplishing activities they actually enjoy; and the tendency is that tasks for which people are unable to develop an appreciation will likely not get completed. This theory finds specific application in the college setting, as students must daily embrace assignments in their pursuit of success. A survey conducted among college students found that the greatest motivation for studying relates to the concept of self-fulfillment. The challenge that arises is how can one instill in students an abiding intrinsic motivation to embrace the system of learning with a willingness to develop their inner being. To really experience the truest form of motivation, the desire must come from within the student. This work uses the research of three psychologists to verify the thought process behind these aspects of motivation for the college student.

Keywords — motivation, intrinsic, extrinsic, autonomy, engage

1. Introduction

The concept of motivation is fairly easily perceived by most. Yet, at the same time, few people really comprehend the immense way it affects every aspect of daily life. Everybody has a reason for absolutely everything they do, whether they truly realize it or not. The numerous facets of motivation are quite intriguing. Contemplate the simple thought of “motivation.” How can one actually be able to motivate another person, or how does a person even motivate himself? It is no longer a modest topic easily explained but rather one deserving research.

Then, perhaps, this idea of motivation could be applied to the specific discipline of learning. Taking it even further, the substantial implications of motivation that might drive a student, especially one in college, are particularly captivating. Precisely speaking, what exactly would it take to cause a degree-bound student to passionately pursue success in the academic realm. Research has indicated that people are most motivated when involved in something they personally enjoy. The concept of autonomy is present. The person finds satisfaction and pleasure in the activity itself because it promotes self-interest; there are no outside pressures factoring in his decision. The reality though is that most often these external pressures do maintain an incredible impact on student motivation, especially in college. The goal is to determine what it takes to provide college students with the intrinsic motivation to perform well during this crucial time in their lives. This is the precise theory that will be examined in this article.

2. Intrinsic versus Extrinsic Motivation

Before the specific applications of motivation can be examined, an explanation of the kinds of motivation must first be considered. The two prominent categories of motivation are intrinsic and extrinsic, and the difference between the two is substantial. People can either feel free and volitional, or controlled and subjugated, even if the mode of control is not apparent or intentional. Because extrinsic motivations easily fall into this category, they represent an imminent danger. On the other hand, intrinsic motivations relate directly to self-interest. Motivation researcher and psychologist Edward Deci (1996) has stated, “There is an aspect of intrinsic motivation that sets it quite apart from extrinsic control. . . . It has to do with life itself: It is vitality, dedication, transcendence” (p. 45). There is something about personal enjoyment and satisfaction that is powerfully motivating, and the effect of extrinsic rewards has no comparable quality. The drive to accomplish a task has to do with the person’s perspective of the intended results. If he sees his role as simply a “performer,” then his satisfaction will be based solely on whether he is able to meet the expected standards or provide an acceptable rating. The emphasis portrayed by intrinsic motivation, however, is that the person will engage in an activity wholeheartedly simply because he is attracted to the enterprise. It offers him interest. Deci (1996) has concurred that “the experience of intrinsic motivation is its own justification. . . . [True intrinsic motivational experiences] need
yield nothing more to be fully justified” (p. 46). Those are the fundamental discrepancies. What is still to be determined, however, is the place of each in the classroom atmosphere.

2.1 When it is bad

Extrinsic motivations, though they often strive to increase efficiency, can potentially inflict more damage than lasting results. When a person is focused predominately on the consequences of his endeavor, he may easily lose focus on his original intentions. Extrinsic motivations tend to be not-so-innocent distractions. Rather than fully appreciate the experience of the activity (even when the person recognizes its significance), the person can now only relate to the task with that one goal in mind. He seeks the immediate gratification that has now been placed in the reward. Deci (1996) warned against this complication: “Extrinsic control all too often gets people focused only on the outcomes, and that leads to shortcuts that may be unsavory, or just sad. As such, they are a far cry from the uplifting experiences that intrinsic motivation can bring” (p. 45). The handicap is easily recognized. The value of learning placed in the activity itself is essentially sacrificed.

Pressure is an incredible hindrance often applied by the administration of extrinsic motivators. It naturally presents itself in the form of a superior’s expectations, social standards, personal apprehensions, or pre-established goals. All have the ability to cause severe worry and stress on a person in the midst of his endeavor. This pressure to perform a certain way or achieve an expected outcome exerts a dynamic sense of control over the person, whether consciously or unconsciously. He is distracted by these new intentions and is in danger of losing the innate self-interest once found in the task. In fact, Deci (1996) identified the effects of this self-degradation, “any occurrence that undermines people’s feelings of autonomy—that leaves them feeling controlled—should decrease their intrinsic motivation and very likely have other negative consequences” (p. 31). The very real existence of pressure can adversely affect the development of personal motivation.

2.2 When it is good

Extrinsic motivation is not to be entirely condemned however. Through proper, careful application it can be a means to positive results, though the opportunities for this to occur are limited. The key is the use of integration, which involves focused explanation and implication of the intended meaning of a reward when it is used to format behavior. When an individual does not fully comprehend the function of a reward, it is easy for him to cease performing the task when the reward is discontinued. Deci (1996) reasoned that, “For extrinsic motivation to work as a motivator, there must be clarity about what behaviors are expected, and what outcomes will result from those instrumental behaviors” (p. 63). When the purpose of an extrinsic motivation is clearly established, it can have a positive influence.

The other component of this application is the use of instrumentalities. Instrumentality, which involves the specific explanation of the function the motivator serves, goes hand-in-hand with integration; they are part of the same process. Without these features, motivation is handicapped. As Deci (1996) has recognized, “Motivation requires that people see a relationship between their behavior and desired outcome, and instrumentalities are the linkages that allow people to see these behavior-outcome relationships” (p. 59). Deci noted that desired outcomes can come about as a result of an array of things, whether intrinsically or extrinsically motivated; but without the belief that some kind of outcome will result from the behavior, people will not be motivated. The individual must come to realize that the reward is meant to encourage his enjoyment of the activity. When the extrinsic reward is viewed as simply something to be had, the full affect is not achieved. Deci (1996) concluded that, “The linkage between behavior and extrinsic rewards is an integral part of the system . . . . Control, which involves using instrumentalities to pressure people to behave in particular ways, is one form of motivation, and extrinsic-reward contingencies are what allow control to work moderately successfully as a strategy for motivating productivity” (p. 59). The applications of extrinsic motivations are restricted, but they can be beneficial. However, because the effectiveness of extrinsic motivators is slight in comparison to intrinsic motivators, its use is customarily avoided.

3. True Motivation of College Students

College students, like most people, find their motivation for success in an assortment of different things. Both intrinsic and extrinsic motivations are present in society. On the college platform, there are prevalent opportunities for the manifestation of extrinsic controllers. A survey conducted among twenty-five college students asked the multiple-choice question “What motivates you to study the most?” The survey question and results are posted in the figures below.
Interestingly the majority of students responded that their primary motivation to work hard in college is “self-fulfillment,” which implies intrinsic motivation. This certainly would be the preferred case, assuming it were a reality. However, the majority of the other answer options in the list refer instead to extrinsically focused motivations. The question is: How are these extrinsic motivations potentially harmful and controlling?

3.1 The affect of expectations

Though there is essentially nothing wrong with these other answers, how they are viewed as motivators and the value of importance with which they are labeled must be analyzed. Deci (1996) addressed this point, noting the existence of “common everyday instances in which people have internalized rigid controls from society and respond compliantly to those forces within them. Such behaviors lack the qualities of freedom and flexibility that characterize autonomy and authenticity” (p. 5). The mere presence of a system of rules impresses upon people that they must be followed. This alone is a control. People embrace an attitude of compliance to avoid undesirable consequences. In the classroom setting, for example, the course requirements exist under the domain of a syllabus, an extension of the professor’s expectations. The assumption of the student becomes that to succeed in the course one must abide by these expectations. This thought process begins to infringe on the self-interests of the student, who desires to satisfy a feeling of accomplishment in his pursuit to enjoy the learning process. It must be understood here that the existence of a set of governing rules is not necessarily the problem, but rather that one’s perception of them must be unconstricting.

An outline of rules or goals for a course is not strictly maleficent either. It is true that people often rate themselves and their performance according to a “check-off list” of assignments. Completion of what is expected may generate a positive personal appraisal, or the lack thereof may cause an equal negative effect. Renowned basketball player Michael Jordan (1994) acknowledged “there were all kinds of expectations during my junior year. What I tried to do was come out and live up to these expectations. I was trying to live up to everyone else’s expectations for me instead of following my own road.” Jordan found himself looking for shortcuts instead of pursuing his goals the way he already knew would bring satisfaction (p. 17). In contrast, however, a goal-setting attitude can be a strong motivation as well. Establishing lofty goals offers the individual something to look forward to accomplishing, and he finds pleasure in pursuing a status of achievement. But the positive aspect of this mindset is portrayed on a personal level. Upon completion of a goal, the person feels accomplished as an individual and senses growth and learning. This process implies the essence of a better person, complimenting the person’s self-interest. Jordan (1994) identified with this experience as well: “I guess I approached it with the end in mind. I knew exactly where I wanted to go, and I focused on getting there. As I reached those goals, they built on one another. I gained a little confidence every time I came through” (p. 3-4). The motivation was certainly there; it was both positive and intrinsic. Consequently, one’s perception of these factors must be carefully addressed. The burden of complying with the pressure of making good grades, preserving scholarships, or maintaining eligibility can be great; this is certainly not intrinsic. It all relates back to perspective.
3.2 Social influence

The presence of social pressures is a substantial factor in college motivation, and the powerful influence it represents can be intimidating. Certainly peer pressure, to consider one area, is prevalent in college, but is it also a form of extrinsic motivation? College students especially, amidst their desire to discover themselves through new experiences, are prone to the influence of other people. The ideas of respect, status, and opinion—all play a part in the motivation arena. In their desire to be accepted, newcomers tend to gravitate to becoming people-pleasers. Psychologist Abraham Maslow has asserted that people become more creative and willing to pursue what they want and how they feel when they begin to let go of how they think others perceive them and embrace their own self-acceptance (p. 140-141). What must be considered is whether the people around us actually motivate us to be successful. It has been a common axiom that people should surround themselves with positive people. Surely this principle applies to numerous areas of life, but its application to the college system is imperative. Motivation to pursue one’s own goals would be difficult when one’s peers are encouraging him to back down instead. This pressure is not always conscious or evident, but its reality forces its importance into perspective. It must be noted, and it must be addressed.

The other prominent influence present in the life of college students is the role played by the parents. Parents have the ability to be an incredibly devastating constraint in a college student’s pursuit. The pressure may exist on the student to continue a reputation of success, positively reflect the family’s name, or maybe pursue a field of interest never personally satisfied by a parent. Parents may inflict this behavior on their students emotionally, mentally, or financially. Deci, who examined the story of a family that clearly relates the explicit use of financial control by the parents to achieve their own expected outcomes for their son’s college career, has confirmed this issue: “Although these parents had been giving their son a remarkable (and expensive) opportunity to study at an excellent university, it was also true that implicit in their giving was a control. These parents saw money not as a family resource to be shared, but rather as something that could be used to shape their son as they desired. And it is likely that their intentions were somehow communicated, even if only subtly” (p. 37). The result here is disheartening. The student’s autonomic desires were completely ignored, and the extrinsic control demanded domination over his motivation. Deci (1996) further explained that a person’s true intentions for offering rewards are often subtly displayed in his articulation upon presentation of the reward, and made the observation even clearer by recognizing that “thoughtful reflection often reveals that in fact the adults really are using the reward to pressure the children, even though what they are pressuring the children to do might be in the children’s best interest” (p. 41). Deci (1996) made the point that autonomy is a crucial part of personal motivation in that it “allows people to experience themselves as themselves” (p. 70). People are motivated to do things they passionately desire to do. It relates to personal feeling and commitment. One cannot be expected to exhibit the same effort and pursuit for something someone else desires for them.

4. Improving Motivation in College

The final point concerns bringing about change in the classroom. It is understood that the most effective results will be produced by a person eagerly involved in a task. Yet the philosophy is still being developed concerning how to intentionally instill that motivation in a person, specifically a college student. Researchers have concluded that the autonomy-supportive system of learning provides the best results. A student who feels as if his decisions and desires are truly his own will be intrinsically motivated to accomplish whatever he commits himself to because it positively relates to his own self-interest. Unfortunately, this realization is not always emphasized in the classroom.

4.1 Student support

Teachers who are ardent in their desire for students to learn will strive to make learning personally interesting for students. The way they perform their job shows they have the goals of the students in mind. Because they want student success and realize the students need intrinsic motivation to actively engage this pursuit, the teachers will be sure to consider the personal interests of the students as they teach. It will reflect in their teaching techniques and in the time spent on specific sections of material. Professors realize that not every topic of discussion will seem appealing and recognize that students may be unwilling to do assignments they do not enjoy. Yet, according to Deci (1996), when the potential value of the subject is identified and the reasoning is explained, then the student can more likely find a way to relate to the material (p. 101). When professors approach teaching with this in mind,
they encourage intrinsic motivation in the classroom.

Personal choice has also been proven a major factor in establishing intrinsic motivation. Of course, professors have to lay down the guidelines for the way the course will be taught, but including opportunities for students to have autonomy and choice whenever possible will be extremely supportive. This could include choosing topics for presentation, the process for completing a task, or possibly the order of progression in completing assignments. Deci (1996) recognized the importance of choice, “The main thing about meaningful choice is that it engenders willingness. It encourages people to fully endorse what they are doing; it pulls them into the activity and allows them to feel a greater sense of volition . . . When you provide people choice, it leaves them feeling as if you are responsive to them as individuals” (p. 34). That is the point of utmost importance for this stage. When students feel their own interests are at the center, they will likely be more supportive of the teacher and therefore more willing to engage in the learning process. For the teacher, this can be manifested by deliberately abstaining from using controlling language in the classroom and implying a sense of choice instead of requirement concerning assignments (Deci, 1996, p. 43).

A primary way for teachers to draw intrinsic motivation from students is to focus on engagement. When a student is engaged, he is fervently involved in the activity. It has his full attention and he is able to extract the most from its intended purpose. As social psychologist David Goslin (2003) has stated, “engagement is a necessary condition for learning. Engagement in learning requires effort on the part of the learner. Increasing the amount of time students are engaged in learning, as well as the amount of effort they are prepared to devote to learning, therefore, are the keys to increasing academic achievement” (p. 163). When the teacher recognizes the purpose of this concept and intentionally implements it in the classroom, the student will also be able to identify valid reasons for completing the exercise. Teachers need to carefully analyze the methods they choose to present their material in the classroom with the goal of increasing intrinsic motivation. Goslin has asserted that “more attention should be devoted to the problem of making what happens in our schools more intrinsically rewarding and therefore engaging to students. The complexity of the process of generating and sustaining student engagement in most learning tasks suggests that much more should be done to help teachers select and use proven instructional tools and techniques that will engage more students” (p. 170). This principle needs application beyond just the 1-to-31 teacher-student ratio represented in the classroom. The entire system of learning should focus on implementing engagement at every level.

4.2 Student internalization

In addition, the feeling of competence plays a significant role in a student’s willingness to explore learning, especially in a classroom atmosphere. College provides opportunities for self-expression, but without the confidence to embrace those opportunities, students will miss out on the chance to develop their autonomic selves. When a student feels worthy and valued, he will be intrinsically motivated and confident to pursue his goals. As Deci (1996) reasoned, “Whether behavior is instrumental for extrinsic outcomes such as bonuses and promotions, or for intrinsic outcomes such as enjoyment of the task and feelings of personal accomplishment, people must feel sufficiently competent at the instrumental activities to achieve their desired outcomes. . . . With intrinsic outcomes, the issue of competency is more integrally intertwined with the enjoyment of the activity itself” (p. 64). When students find something they enjoy, they will likely make the personal choice to spend time engaging that activity to get better at it. They may be intrinsically motivated to increase their competence in that area and emphasize it as an area of expertise, building self-confidence. Deci (1996) summarized this point by saying:

People need to feel competent and autonomous for intrinsic motivation to be maintained and, I now argue, for development to proceed naturally. . . . when it comes to competence and autonomy, it’s really the person’s own perceptions that matter. To be intrinsically motivated people need to perceive themselves as competent and autonomous; they need to feel that they are effective and self-determining. (p. 86)

Individuals regard themselves as competent when they are able to meet self-set goals; the higher the challenge, the greater the intrinsic reward (Deci, 1996, p. 66). Teachers also play a role in encouraging competence. When professors commend accomplished work, the student feels capable and effective and is more likely to approach the same task again (Deci, 1996, p. 67). It now relates to his own self-interest.

The intention of learning also affects a student’s intrinsic motivation. Tests and grades
often appear to the student as approval ratings. An unexpected result can be degrading to one’s drive to work hard. However, when the reason for studying has a different purpose, the idea of embracing the work just for the sake of doing it has a directly positive effect on the student’s motivation and therefore his learning. An experiment by Deci (1996) on this theory showed:

We expected that learning in order to be tested would feel very controlling to the students, whereas learning to put the information to active use would feel like an exciting challenge. . . . the students who learned in order to put the material to active use displayed considerably greater conceptual understanding of the material than did the students who learned in order to be tested. (p. 47)

He added that those professors who use the intimidation of a test grade as their primary motivation to get the students moving actually suppress the student’s intrinsic motivation to master the material (Deci, 1996, p. 48). Deci has realized that the truest form of learning for the individual will occur only when the motivation comes from the inside; nobody else can provide that. As he has recounted from his research, “self-motivation, rather than external motivation, is at the heart of creativity, responsibility, healthy behavior, and lasting change” (Deci, 1996, p. 9). The implication here is that the installation of intrinsic motivation in a student will affect his learning process long into the future. That is why the idea of autonomy is so crucial. Professors should seek not to motivate their college students, but to find ways to help them motivate themselves. As the professor is presenting information to his subjects, they should in turn relay that information in a way that satisfies the student’s innate desire to truly comprehend what is learned.

5. Conclusions

Motivation has the potential to be an extremely powerful force when applied to learning. The purpose behind the development of intrinsic motivation is to instill an everlasting drive inside a student to always pursue his personal development in a field of knowledge as it relates to his self-interest. Autonomy offers access to this ability in a way no person or form of extrinsic motivation ever could. The desire and appreciation for learning has to come from within. Benjamin Franklin once stated, “Tell me and I forget. Show me and I remember. Involve me and I learn.” Franklin’s whole thought centers around the word involve. The role of a teacher is to actively engage students in the process of learning in a way that instills in them a desire and motivation to grow. Deci has summarized by saying:

For the type of engagement that promotes optimal problem solving and performance, people need to be intrinsically motivated. That, as we have seen, begins with instrumentalities—with people understanding how to achieve desired outcomes—and with people feeling competent at the instrumental activities. Then, it is facilitated by interpersonal contexts that support people’s autonomy. With these important ingredients, people will be likely to set their own goals, develop their own standards, monitor their own progress, and attain goals that benefit not only themselves, but also the groups and organizations to which they belong. (p. 73)

For the professor, it is a matter of perspective. To effectively relate concepts to students, teachers must be able to adjust their point of view and present the material in a way that satisfies the student’s innate desire to truly comprehend what is being taught.

Acknowledgements

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References


Truman V. MacArthur: 
Interpreting Public Opinion Polls Before & After April 1951

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Abstract — This paper will examine the removal of General Douglas MacArthur from his command over the United States Armed Forces on April 11, 1951. In 1951 this removal by President Harry Truman was such a controversial issue that the constitutionality over the President’s decision to remove MacArthur was challenged. This research focuses on public approval on this issue. Through examining public opinion poll data, historians can draw logical interpretations on the mindset of the general public. The hope that this research will provide a deeper appreciation for the use of public opinion data in interpreting events of the past.

Keywords — Truman, MacArthur, Polling, 1951

1. Introduction

In April of 1951 General Douglas MacArthur became the first five-star General to be dismissed by his Commander and Chief, President Harry S. Truman. MacArthur was charged with insubordination and was given the choice to either relinquish his command or face severe repercussions. MacArthur willingly chose to close out his military career in relative peace. Based on the public opinion polls, taken after MacArthur resigned, on public approval for both President Truman and General Douglas MacArthur, the data shows some inconsistencies. Through exploring patterns in the demographics based on the use of multiple polling data sources before and after the incident, this research has led to an insightful interpretation. The purpose of this research is to prove that the 1951 shift in the polls can be attributed to a negative reactionary response by the general public aimed against the Truman administration. Truman had already dropped significantly from the majority of public and party favor. The polling data suggests that the disdain for Harry Truman in 1951 was not at the same consistent rate of decline as the rise in polls for MacArthur. The public saw the removal of Douglas MacArthur as just another failure by the administration. This conclusion logically explains why Truman only dropped slightly in the polls instead of losing greater public support. This conclusion also explains why MacArthur seemed to grow more popular in April of 1951 and then slowly returned to his normal public approval ratings later that year.

2. Polling Data

On April 19, 1951 MacArthur stood before Congress and gave his farewell address, closing with the statement, “...I now close my military career and just fade away, an old soldier who tried to do his duty as God gave him the light to see that duty” (U.S. Congress). However, as history has shown that MacArthur was not unable to just fade out from the public mindset. Following MacArthur’s removal from power and according to polling data, his general popularity continued to grow. When President Truman “fired” Douglas MacArthur in 1951 Gallup, Roper, and other polling data sources confirmed that public opinion for the President dropped marginally from an averaged twenty seven percent to an averaged twenty five percent from April 16th to April 21st, 1951. During this time period Douglas MacArthur’s public approval almost doubled. The graph below shows the approval rating for President Harry Truman. One can see from the graph that in April of 1951 the red line stays relatively consistent showing how little Truman’s approval changed after MacArthur was relieved from his military career.

3. Conclusion

The 1951 shift in the polls can best be attributed to a negative response by the general public aimed against the Truman administration. Truman had already dropped significantly from the majority of public and party favor. The polling data suggests that the disdain for Harry Truman in 1951 was not at the same consistent rate of decline as the rise in polls for MacArthur. The public saw the removal of Douglas MacArthur as just another failure by the administration. This conclusion logically explains why Truman only dropped slightly in the polls instead of losing greater public support. This conclusion also explains why MacArthur seemed to grow more popular in April of 1951 and then slowly returned to his normal public approval ratings later that year.

The accreditation given by modern scholars to General Douglas MacArthur regarding the number of his supporters is often miscalculated. The polling data suggests that the disdain for Harry Truman in 1951 was not at the same opposite level as the supporting data for MacArthur. The hope for this research is that the conclusions shown will contribute to the way historians view public opinion as a factor when making the correlation between President Harry Truman and General Douglas MacArthur.
Acknowledgements

A special thanks to Dr. Jeff Cook, Associate Professor of History at North Greenville University for his guidance and for serving as faculty mentor for this project.

References


Fulton Jr., L. (1951, April 26). *Telegraph-Express* “Mac’s Firing Sets off Anti-Truman Barrage”


Figure 1. President Harry Truman’s Public Opinion Poll (Gallup Polling Data)
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1962
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1973
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1987
The Michelin Center is built on the main campus.

1996
Dr. Keith Miller becomes president, succeeding Dr. Thomas E. Barton, who served for more than four decades.

2008
Greenville Tech branches out with two new campuses.

TODAY
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Abstract — Coal mines and railroads were central to the upper Monongahela Valley's industrial transformation, and none more so than the Aretas Brooks Fleming and Clarence Watson-led Fairmont Coal Company. Between 1895-1907 Fleming and company gradually became one of America’s largest coal producers. Their success was a direct result of perseverance, the ability to adapt to market fluctuations, a dependable labor force, and adoption of new technology. In spite of their growth, Fleming and his fellow operators failed to recognize the full implication of mine mechanization. Machinery introduced new dangers to the mine and the miner, and these hazards had to be addressed by an active ownership. Unfortunately, while the operation was modern by most standards, the Monongah coal mines continued to function according to 19th-century mining practices. This was a mistake, but it took the deaths of 361 men and boys to drive the point home.

Keywords — Coal Mine Disasters, progressive movement, United States Bureau of Mines

1. Introduction

One of Fairmont Coal Company’s most modern operations was located in Monongah, West Virginia. In fact, Monongah’s interconnecting mines, No. 6 and 8, were considered the jewels of the Fairmont field, safe and “up to date in every way.” The two mines spanned several hundred acres, and by best estimate the company possessed over one hundred acres for development. By 1907, these operations led the state in machine-mined coal, producing 433,285 long tons with the aid of fourteen cutting machines. Governor Aretas Brooks Fleming and his associates were so proud of the Monongah operations that visiting dignitaries often concluded tours of the Fairmont coal field at the Monongah plants. Moreover, company was convinced that the Monongah operations were among the safest mines in West Virginia. Monongah Superintendent A. J. Ruckman responded to a young woman’s query about the safety of No. 8, opining that “some mines might be dangerous, but this one was as safe as her parlor at home.” In spite of Ruckman’s optimism and the company’s pride, in the blink of an eye the Monongah operation was transformed from a showplace into the worst coal mine disaster in American History.

Fleming and his fellow operators failed to recognize the full implication of mine mechanization. Machinery introduced new dangers to the mine and the miner, and these hazards had to be addressed by an active ownership. Unfortunately, it took the December 6, 1907 Monongah mine disaster and the deaths of 361 men and boys to drive the point home.

As if the Monongah disaster and the wave of mine explosions that swept the nation were not sufficiently perplexing, coal operators encountered another challenging problem during the first decade of the twentieth century: the relationship of their conservatism to the changing political culture. Conservatives were beleaguered, and frequently repelled, by the country’s movement away from free markets, laissez-faire, self reliance, and limited government toward the world of the centralized state. Conservatives had traditionally looked to Alexander Hamilton, Thomas Jefferson, and Andrew Jackson for strength, but now rather than resist some embraced reform. After the Monongah explosion, Aretas Brooks Fleming adapted to the modern industrial society, by organizing a powerful group of coal operators, mine inspectors, and scientific experts to push for the establishment of the Bureau of Mines in 1910. His support for the bureau though, was not so much a break from the past as an extension of the limited government doctrine.

3. Conclusions

Very little capital was invested in the early coal ventures so the operators thought mine safety was the exclusive responsibility of the individual miner. However, as Fleming opened larger operations and installed modern cutting machines in these collieries, it was no longer feasible to gamble on mine safety by allowing the miner to assume responsibility for his individual safety as well as the safety of his fellow workers. The operator needed to be more proactive and work to keep his mines safe and productive.

In Fleming’s scheme of things, with production high and costs low, the profits would take care of
themselves. This disaster killed productive workers, interrupted production, and destroyed machinery. The Monongah disaster, therefore, marked the end of an era in the American coal history in dramatic fashion, an era marked by constructive achievements, but blemished by the terrible month of December 1907.

Fleming’s response was to take the initiative by becoming one of the first bituminous coal operators to view safety as a reform movement that made economic sense. He led the charge for the establishment of the United States Bureau of Mines in 1910, an agency that could provide tax supported scientific knowledge to the coal operators but not regulate the coal mines. Fleming, the coal operator turned reformer, served as a link between the operator of the past and the bituminous producers who led the “Safety First” campaign in the 1920s.

Historian William Graebner is certainly correct in writing that Fleming and the coal operators provided tangible support to the establishment of the Bureau of Mines. Fleming played the Pied Piper that led the coal operators along the safe path while outflanking the more dangerous state legislation. Fleming’s acceptance and support of the new agency was by no means a new direction, but rather an evolution of the limited government approach. Fleming permitted the federal government to establish the rules of law that maintained the market economy and high protective duties on coal. This new agency was no different, providing scientific research to Fleming and the coal operators while its narrow aim did not interfere with the fundamentals of conservatism and private property.

References


Criminology Central

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Abstract — The fields of criminology and criminal justice offer numerous opportunities for individuals to contribute to a safer society. A few keystrokes on a computer can bring up vast amounts of information on these topics. An individual interested in pursuing a career in criminal justice, looking for community outreach programs, or exploring the creative side of criminology might find navigating through all the available information to be a daunting task. The Criminology Central website was created to provide interested individuals with an easy-to-use resource for basic information on educational requirements for a career in criminal justice and an overview of career possibilities. This website also provides a list of resources available to the concerned citizen who would like to participate in community outreach programs. For those interested in the background of criminology, Criminology Central provides information on the major events in criminological history. Finally, for individuals with an artistic interest in criminology and criminal justice, this website explores the way literature, film, and television have been influenced by criminals and the people who work to protect society from them.

Keywords — Criminology, Literature, Web Design, Education, Community Outreach

1. Introduction

Crime has long been a fascination of society. Both behavior and motivation of the criminal have sparked interest in studying and preventing crime. Criminology is a branch of sociology that studies crime and criminals, whereas criminal justice encompasses the various careers designed to prevent and prosecute crime. The history of criminology and criminal justice displays the evolution of career opportunities. Choosing a career in criminal justice begins with the appropriate education. Opportunities also exist for concerned citizens through community outreach. Art reflects the fascination with the criminal world.

2. History

Since the beginning of time there has been crime and people trying to rid the world of crime. However, not until medieval times did the state begin to organize the efforts to solve and prevent crime. The efforts begun in medieval times are still evolving today. The history of criminology is as deep and richly layered as the history of crime itself.

3. Careers

Criminal Justice is a broad subject that includes many possible fields of expertise from which to build a career. Careers can fall into the public or private sectors. Possible public sector careers include, but are not limited to: Law Enforcement, Corrections, Crime Lab Technician, Medical Examiner, and Law. Possible private sector careers include, but are not limited to: Private Investigator, Process Server, Fugitive Recovery, and Security Services. The level of education required for each of these fields ranges from a High School Diploma to a Graduate Degree.

4. Education

The career path in criminal justice begins with an education, either institutional or experiential. Institutional education can start with the Associate Degree designed to help the graduate attain an entry level job in the field of criminal justice. Students who continue criminal justice education at a four-year institution may qualify for higher pay upon entry and greater chances for advancement. Some fields of criminal justice require graduate degrees. Education for experiential criminal justice careers is obtained through on-the-job training. This particular path leads to work in the private sector.

5. Community Outreach

For those who want to help prevent crime, but do not wish to make criminal justice their career, there are community programs to join. A variety of outreach programs, including neighborhood watch and mentoring, contribute to keeping crime rates down. These organizations are a resource for citizens who want to be proactive in reducing crime in their community.
6. Art

Literature has been inspired by criminology and criminal justice. Before there was C.S.I., fictional creations Dick Tracy and Nancy Drew were plying their trade. Writers created novels, graphic novels, films, and television shows that explore the underbelly of the civilized world. The nefarious world of fictional criminals is populated by characters ranging from the evil genius to the bloodthirsty serial killer. Chasing the nefarious criminals are intrepid sleuths ranging from the buff youngster to the nosy geezer.

7. Conclusions

An interest in criminology and criminal justice can take many forms. The Criminology Central website is the place where people can go to explore that interest through portals into history, careers, education, community outreach, and art. Whether as an outreach or as a career, each and every person can participate in the awareness and prevention of crime.

Acknowledgements

The Criminology Central project is a result of the collaboration and efforts of numerous faculty, students, community members, and organizations that have worked together to make the project a reality. The students of the Honors Program at Greenville Technical College who are involved in the Criminology Central project would like to extend a most gracious thanks to Professor Ruth Morris of the English department and Dr. Frank Provenzano, director of the Greenville Tech Honors Program, for their support and guidance. We would also like to thank Professor James McDonald of the Criminal Justice department at Greenville Tech, Tony Proietta, president of Anthony Proietta & Associates Investigations, and Officer Courtney Palmer of the Greenville Crime Prevention Services for their assistance.

References

Government Spending and Corruption

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Abstract — This paper investigates whether public corruption distorts the composition of government spending. Using data for the United States, I find that corruption increases the share of spending devoted to capital projects.

Keywords — Corruption, Government Spending

1. Introduction

A number of studies on the effects of corruption suggest that corrupt public officials will tend to allocate a larger share of the budget to expenditure categories that provide them with the best opportunities to extract rents (Shleifer and Vishny 1993, Mauro 1998). For example, corrupt officials may favor projects that are ineffective and wasteful in return for the chance to collect bribes, favor the purchase of complex technology equipment because its value is difficult to discern, or favor capital intensive projects that involve the awarding of large government contracts. These actions can adversely affect economic development. This paper investigates whether corruption has an impact on the composition of government spending in the United States.

2. Data

To measure the composition of government expenditures, I use data from the Annual Survey of State and Local Government Finances published by the U.S. Census Bureau. This survey contains detailed annual state-level expenditures classified by character and object. The character and object classification captures the nature of government spending within two broad categories: direct expenditures and intergovernmental expenditures. The direct expenditures category is further divided into a number of subcategories: current operations, capital outlays, assistance and subsidies, interest on debt, and insurance benefits. The variables of interest for the empirical analysis are the specific expenditure categories as a percentage of total expenditures. My sample covers the years 1986 to 2008 for the 50 states. Panels (a) and (b) of Figure 1 show the expenditure shares averaged by state and over time. Most of the average character and object expenditure shares experience only slight changes over time, but there are significant differences across states. To measure corruption, I use data on corruption convictions obtained from the Department of Justice’s “Report to Congress on the Activities and Operations of the Public Integrity Section.” These data consist of the number of federal, state, and local public officials convicted for corrupt acts in federal court. The most corrupt states based on average convictions per capita are North Dakota, Mississippi, and Louisiana, and the least corrupt states are Oregon, New Hampshire, and Utah.

I include several control variables in my regressions to account for the differences in the demographic and economic conditions across states and to minimize omitted variables bias. My
controls are the log of real GDP per capita, the log of population, and the log of total government expenditures per capita. I also include regional dummies for South, Midwest, and West (Northeast is omitted) in all regressions. Since there is little time-series variation in the expenditure shares, I base my analysis on the average number of convictions over the period 1986-2008. Table 1 reports summary statistics for the dataset.

3. Empirical Strategy and Results

My empirical strategy is to estimate an OLS regression specification that takes the form:

\[ Y_{g,i} = \alpha_g + \beta_\text{Corruption}_i + \gamma_\text{Controls}_i + \varepsilon_{g,i}, \]

where \( Y \) is the average expenditure share for each character and object category examined (i.e., current operations, capital outlays, assistance and subsidies, and insurance benefits), \( \text{Corruption} \) is the average number of corruption convictions per 100,000 residents, \( \text{Controls} \) is a vector of control variables, \( \varepsilon \) is an error term, \( g \) ranges from one to four and represents the spending category, and \( i \) represents the state.

Table 2 summarizes the impact of corruption on budgetary character and object categories. The regression results indicate that corruption has a positive impact on the share of spending devoted to capital projects, but no impact on the shares of spending devoted to current operations, assistance & subsidies, and insurance benefits. Specifically, the coefficient estimate on corruption is significant at the 1 percent level, and indicates that a one standard deviation increase in the average corruption convictions per 100,000 residents (a value of 0.165) is associated with a 0.7 percentage point increase in the share of capital outlays.

As for the controls, the log of population variable is significant at the 1 percent level in models (1), (2), and (4). It is negatively correlated with the share of spending for current operations and capital projects and positively correlated with the share of spending for insurance benefits. The log of GDP per capita variable is significant at the 1 percent level in model (2) and positively correlated with the share of spending on capital outlays. The log of expenditure per capita variable is significant at the 1 percent level in model (2) and negatively correlated with the share of capital outlays. Finally, the regional dummy variables are significant in model (2) and suggest that the South, West, and Midwest regions of the U.S. allocate a larger share of spending to capital outlays than the Northeast region.

4. Conclusions

This paper uses linear regression methods to examine the relation between corruption and the composition of government spending in the United States. The results show that states with higher corruption levels devote a larger share of spending to capital outlays. From a policy perspective, this relation suggests that it would be desirable to reduce the share of expenditures for budgetary categories that are most prone to corruption.

References


### Table 1. Summary Statistics (1986-2008 average for the 50 states)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Operations Share of Total Exp.</td>
<td>0.504</td>
<td>0.057</td>
<td>0.390</td>
<td>0.677</td>
</tr>
<tr>
<td>Capital Outlays Share of Total Exp.</td>
<td>0.082</td>
<td>0.019</td>
<td>0.036</td>
<td>0.136</td>
</tr>
<tr>
<td>Assistance and Subsidies Share of Total Exp.</td>
<td>0.026</td>
<td>0.009</td>
<td>0.008</td>
<td>0.044</td>
</tr>
<tr>
<td>Insurance Benefits Share of Total Exp.</td>
<td>0.097</td>
<td>0.029</td>
<td>0.038</td>
<td>0.186</td>
</tr>
<tr>
<td>DOJ PIN Convictions per 100,000 residents</td>
<td>0.330</td>
<td>0.165</td>
<td>0.089</td>
<td>0.728</td>
</tr>
<tr>
<td>Ln(Population (000s))</td>
<td>8.114</td>
<td>1.017</td>
<td>6.186</td>
<td>10.387</td>
</tr>
<tr>
<td>Ln(Real GDP per capita)</td>
<td>10.585</td>
<td>0.170</td>
<td>10.249</td>
<td>11.033</td>
</tr>
<tr>
<td>Ln(Real Total Expenditures per capita)</td>
<td>15.082</td>
<td>0.294</td>
<td>14.656</td>
<td>16.540</td>
</tr>
<tr>
<td>South Region</td>
<td>0.300</td>
<td>0.463</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>West Region</td>
<td>0.280</td>
<td>0.454</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Midwest Region</td>
<td>0.220</td>
<td>0.418</td>
<td>0.000</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Notes: Expenditure and demographic data are from the U.S. Census Bureau. Corruption convictions data are from the U.S. Department of Justice. GDP data are from the Bureau of Economic Analysis.

### Table 2. Corruption and Government Spending by Character and Object, OLS Estimation

<table>
<thead>
<tr>
<th></th>
<th>Dependent Variable</th>
<th>Current Operations</th>
<th>Capital Outlays</th>
<th>Assistance &amp; Subsidies</th>
<th>Insurance Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIN Conv. per 100,000 residents</td>
<td>0.049</td>
<td>0.042***</td>
<td>-0.010</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>Ln(Population)</td>
<td>-0.036***</td>
<td>-0.013***</td>
<td>0.001</td>
<td>0.014***</td>
<td></td>
</tr>
<tr>
<td>Ln(GDP/cap)</td>
<td>0.028</td>
<td>0.047***</td>
<td>-0.010</td>
<td>-0.025</td>
<td></td>
</tr>
<tr>
<td>Ln(Total Expenditures/cap)</td>
<td>-0.045</td>
<td>-0.033***</td>
<td>0.005</td>
<td>0.030</td>
<td></td>
</tr>
<tr>
<td>South Region</td>
<td>-0.005</td>
<td>0.015**</td>
<td>-0.004</td>
<td>-0.013</td>
<td></td>
</tr>
<tr>
<td>West Region</td>
<td>-0.047**</td>
<td>0.019***</td>
<td>-0.010**</td>
<td>0.010</td>
<td></td>
</tr>
<tr>
<td>Midwest Region</td>
<td>-0.041***</td>
<td>0.011*</td>
<td>-0.003</td>
<td>-0.007</td>
<td></td>
</tr>
</tbody>
</table>

| $R^2$                    | 0.44               | 0.57               | 0.18           | 0.27                  |

Notes: *, **, and *** represent significance at the 10, 5, and 1 percent levels, respectively. Robust standard errors are reported in parentheses. PIN Conv. per 100,000 residents is the number of corruption convictions reported by the Public Integrity Section of the Department of Justice per 100,000 residents. Regressions include a constant. Data are averaged over 1986 to 2008 (N=50).
The Bildungsroman and the Big Screen: How Modern Film Adaptations of *Pride and Prejudice* Depict the Coming-of-Age of Elizabeth Bennet

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Abstract — The female bildungsroman, also known as the bildungsromane, is known as a sub-genre of novel where the principal focus of the novel is the education of the protagonist. Literary critic M.H. Abrams defines the bildungsroman as, "the development of the protagonist's mind and character, as [s]he passes from childhood through varied experiences...into maturity and the recognition of [her] identity and role in the world". The character of Elizabeth Bennet from Jane Austen's celebrated novel *Pride and Prejudice* is one such bildungsroman heroine. The reader is given insight into her psychological development as she matures over the course of the novel. She begins the novel as a clever, but somewhat immature character. While she initially revels in her powers of discernment, she later learns that she has allowed prejudice and her own pride to blind herself to reality. Her education and maturity are the principal foci of the novel and the principle foci of film adaptations of the novel, as well. In order to illustrate this continuing emphasis on development, this paper discusses relevant passages from the novel *Pride and Prejudice* by Jane Austen. The paper also analyzes how three modern film adaptations deal with the maturation of Elizabeth Bennet-- focusing on the ways they recognize the power of Austen's coming-of-age narrative and its importance to the plot, independent of the courtship of Darcy and Elizabeth. The three modern adaptations analyzed within are as follows: *Pride & Prejudice* (2005) directed by Joe Wright, *Bride & Prejudice* (2004) directed by Gurinder Chadha, and *Bridget Jones's Diary* (2001) directed by Sharon Maguire.

Keywords — Pride and Prejudice, Jane Austen, Film Adaptations, Bildungsroman

1. Introduction

Since the publication of Jane Austen's *Pride and Prejudice* (1813) the novel has been consistently praised by readers and critics alike. As illustrated in popular culture, there is a strong call to keep reviving the novel through adaptations: there are films, television mini-series, graphic novels, and re-imaginings galore of Austen's classic. But why the passion for the novel? It would be a gross oversimplification to claim it is solely the romance between Elizabeth and Mr. Darcy that sparks this interest, although many modern adaptations tend to market their product in this way. The constant foundation of this lauded romance, however, is the emergence of Elizabeth Bennet from an immature and judgmental protagonist to a mature and astute young woman, secure of her place in the world. This educational journey, or bildungsroman, is at the very core of Austen's narrative. The romance between Elizabeth and Mr. Darcy would not be as powerful without acknowledging the intellectual growth and maturity that it necessitates. Elizabeth finds the path to her adult identity by questioning her own assumptions, and in the process, undergoes a philosophical paradigm shift that teaches her that first impressions are often inaccurate and based on internal bias. The reader, who is privy to Elizabeth's psychological development during the course of the novel, learns this lesson as well. According to critic Esther Kleinbord Labovitz, some important thematic elements of the bildungsroman genre are that, "it describe[s] the process of development and education of a single protagonist...leaving him [sic] at the threshold of maturity... Throughout the course of the novel the inner life of the protagonist and his [sic] self-realization become and important element along with the unfolding of the whole person" (3-4). The "unfolding" of Elizabeth Bennet is important to modern film adaptations of the novel as well, including *Pride & Prejudice* (2005) directed by Joe Wright, *Bride & Prejudice* (2004) directed by Gurinder Chadha, and *Bridget Jones's Diary* (2001) directed by Sharon Maguire. Under the guise of romance, all three of these film adaptations explore the education of Elizabeth Bennet and invite the audience to share in the experience.

2. The Journey of Elizabeth Bennet

Elizabeth Bennet overcomes many obstacles on her journey to adulthood. The most profound obstacle she overcomes, however, is her own prejudices driven by her initial inability to perceive with clarity of the people around her. Her prejudice too often blinds her to many salient facts. In the novel...
and the films, Elizabeth is the focal character. The novel centers itself, excepting few brief narrative interludes, almost exclusively on Elizabeth and her observations. The movies do this as well: Bridget Jones's Diary is interspersed by voiceover narration from Bridget, the modern English equivalent to Elizabeth Bennet, who struggles with adulthood and uncertainty in her own judgments and perceptions. In this updated version of Jane Austen's novel, Bridget is a single woman in her thirties - an age at which contemporary viewers are more likely to relate with her urgent need to find a place in the world. As with most incarnations of the tale, the audience is invited to relate to the world from Elizabeth's (counterparts) point of view. Her uncertainty is understood and her misjudgments and prejudices are empathized with by the audience because they can easily identify what led her to make these mistakes.

The way the audience is invited to relate to Elizabeth in the film adaptations is often a deliberate process. Joe Wright's Pride & Prejudice, for example, begins almost immediately with Elizabeth walking through the fields reading. A close-up as the camera tracks Elizabeth's face, which becomes an over-the-shoulder shot, inviting the audience to read the same book she enjoys. In the next shot the camera side-tracks her journey back to the manor house where the over-the-shoulder shot is once again employed to make us look through the window, just as she does, and share in her amusement at her parents discussion. In fact, the engagement the audience feels with Elizabeth's point-of-view is so complete that they cannot help but see things from her perspective.

When discussing Joe Wright's Pride & Prejudice reviewer Stephanie Zacharek from Salon comments on this preoccupation with Elizabeth's perspective and writes, "when we first see Macfadyen's Darcy, our feelings mirror Lizzy's, as they should... We wonder, as she does, what on earth makes him think he's so hot?". This deliberate disengagement from Mr. Darcy seems like an odd choice considering that he is the male romantic lead, but the audience is not meant to view him in such a way yet-- their sympathies are with the soon to be slighted Elizabeth. In Bridget Jones's Diary, the voice-over of the eponymous character, as mentioned earlier, makes her embarrassments and self-doubt keenly felt by the audience. In the same way that the novel adheres to the psychological development of Elizabeth Bennet, the film adaptations tend to do the same.

Of the movie adaptations analyzed in this paper, it is Bride & Prejudice which is least successful, initially, in making the audience empathize with Lalita Bakshi, the modern-day Indian equivalent of Elizabeth Bennet. The western audience, indeed, is much more likely to identify with the disorientation of William Darcy as he navigates the unfamiliar setting of Amritsar, India. The scene where Lalita and Will are introduced illustrates this shift in audience sympathy. The audience recognizes his discomfort and embarrassment during the dance and introduction where he, unused to the Indian garb he is wearing, makes a hasty exit to prevent losing his pants in public. Any slight Lalita feels from his odd behavior, however, is understated. Her abrupt offense to him upon next meeting seems harsher than warranted. The viewer immediately realizes that the conclusion she has jumped to is not accurate at all -- in most film adaptations the viewer, like reader of Austen's novel, only makes this discovery as Elizabeth does. Perhaps, however, this diffusion of emotional investment rather than having the audience focus solely on Lalita is no bad thing. In his article, "Twelve Fallacies in Contemporary Adaptation Theory" critic Thomas M. Leitch discusses the misconception that novels are better than films at portraying more complex characters and states, "Jane Austen's novels, for example, though exceptionally precise in revealing the thought's of each of their fictional heroines, limit themselves to exactly one heroine per novel, cinematic adaptations of her work typically narrow the gap between the intimacy viewers feel with other characters" (159). In this way, Bride & Prejudice may be seen as a correction of Austen's novel. Perhaps a better 'truth universally acknowledged' in the film adaptations of Pride and Prejudice is that growth must occur on both sides before a happy ending can take place.

Part of Elizabeth's growth, in the novel as well as in the film adaptations, involves her learning that her own partiality often keeps her from making accurate judgments. She is more likely to trust her first impression implicitly, and it is only during the course of the tale that Elizabeth learns to doubt herself enough to reassess her own judgments. When discussing why the novel centers around the uncertainty of Elizabeth's thoughts, critic Susan C. Greenfield states: "The narrative advantage of uncertainty is that it creates the need for thought. Or, to put it oppositely, those who are certain they know things may have little cause to think about them" (339). Elizabeth's uncertainty lends itself to greater growth of character and understanding of the world around her. Such as with the novel, the film adaptations also invite the audience to experience the uncertainty of the journey alongside our heroine. In Bridget Jones's Diary, in a scene that parallels Mr. Darcy's first proposal in the novel, Mark Darcy lists various
negative traits Bridget possesses, but concludes his speech with the admission: "I like you very much--just as you are". The audience can understand Bridget's confusion in the aftermath where she has to re-classify all her perceptions of Darcy following his confession. Upon her next meeting with Mark Darcy when she blurts out with dazed confusion, "you like me just the way I am," the audience knows that Bridget has been contemplating his words to her often. Joe Wright's Pride and Prejudice depicts the confusion of Elizabeth Bennet following Darcy's first proposal by a lovely continuous shot where Elizabeth looks into a mirror as they rest of the world goes out of focus around her. Day gradually turns to night, depicting the passage of time, but she remains fixed to the spot gazing closely at her own reflection -- clearly questioning herself and everything she "knows" about the world. Even at the appearance of Mr. Darcy she does not move from the spot. The camera does move from a close up of the letter Darcy leaves to explain his conduct regarding the separating Jane and Bingley and his accused mistreatment of Wickham, to a pan back to Elizabeth and an extreme close-up her face as Mr. Darcy speaks to her. She only startles from her reverie at the departure of Mr. Darcy. The shock and uncertainty that Elizabeth Bennet conveys in this scene is breathtaking. This uncertainty is a necessary component to the narrative of Elizabeth Bennet and her counterparts because it is what urges them to rethink the accuracy of their perceptions.

Once Elizabeth understands the subjectivity of her own judgment she is able to behave in a more adult manner. She loses some of the more self-indulgent wit she possesses, but gains the ability to consider how her lively wit and decided opinions can affect others. In the novel Elizabeth comforts Mr. Darcy about their previous failings, advising him to," think only of the past as its remembrance gives you pleasure" (248). Elizabeth, in using these words, shows a great maturity of growth that was not present to her character previously. In the scene in question, Elizabeth is comforting Mr. Darcy who is distraught over his previous failings of character and treatment of Elizabeth. She uses this "philosophy" to try to assuage his guilt and help him move past self-recriminations. This is a far cry from the earlier Elizabeth who took great pleasure in using what Greenfield referred to as her understanding of, "the virtue of language's misdirection" to make Mr. Darcy and his words, "become ridiculous" after she is slighted by him at a ball at Netherfield (343). Elizabeth, who previously used her skill with language to make the subject ridiculous and find humor in the absurdities of their speech, is now using her talents as a means of comfort and forgiveness. The movie adaptations also illustrate the necessity of the heroine learning to make amends. In Pride & Prejudice the character Lalita shows this growing maturity to her friend Chandra (Charlotte Lucas) after her marriage to the somewhat absurd Mr. Kohli (Mr. Collins). She comforts her clearly vulnerable friend by telling her, "Chandra, I'm truly happy for you. I... I think I was a bit too quick to judge him". This simple but meaningful apology shows that Lalita has gained some understanding of how her outspoken judgments have hurt the feelings of others. Another apology occurs in Bridget Jones's Diary. After learning that she was mistaken in blaming Mark Darcy for the rift between himself and Daniel Cleaver (Wickham), she courageously approaches him and explains her mistake, touching on some of his faults (in the manner of his previously mentioned speech to her), but concludes by stating that, "But you're a nice man and I like you. So if you wanted to pop by sometime...that might be nice. More than nice." These apologies illustrate the subtle but important character growth that has occurred for our heroines.

Stylistically speaking, the film adaptations of Pride and Prejudice forgo some measure of fidelity in order to meet certain conventions of the romance genre. Critical response to these movies has been varied. Critic Christine Geraghty states that, "the specter of romance haunts critics of Austen adaptations. Romance is seen as the opposite of Austen's ironic, witty, and complex accounts of the human heart... literary critics protest at the way in which more recent adaptations are... "shaped by powerful generic conventions of romance" (34). The romance inherent in these film adaptations, however, does not preclude the intellectual growth and increasing maturity of the protagonist. Critics Pamela Butler and Jigna Desai, for example, trace the roots of modern genre of chick-lit novels to Austen and observe this path is, "parallel to, and part of the trajectory, of the female bildungsroman" (5). Romance and the bildungsroman, then, are not two polarized concepts, but necessarily intertwined in literary history. Critics who dismiss film adaptations because of the romantic repackaging miss the point. There may be a greater focus on the modern conception of romance in the film adaptations, but the core bildungsroman narrative of growing up and finding a place in the world are present in all three adaptations. The romantic repackaging merely garners the films a broader audience. In the case of Joe Wright's Pride & Prejudice the saccharine ending may make some
fans of the novel grind their teeth, but the modern "happy" ending tacked onto the conclusion of the film doesn't diminish the journey it took to get there. Likewise, *Bride & Prejudice* and *Bridget Jones's Diary* each are clear examples of film adaptations that update the source material to bring new viewers into the world of Austen. The journey of Elizabeth Bennet is still meaningful to the modern reader and film audience.

3. Conclusion

The modernization of Pride and Prejudice does not lessen the impact of the core narrative. In fact, the need to rewrite Austen's narrative time and again is indicative of its strength and importance in the cultural lexicon. In the article, "On the Origin of Adaptations: Rethinking Fidelity Discourse and 'Success' -- Biologically," critics Gary R. Bortolotti and Linda Hutcheon discuss this phenomenon of rewriting narratives and how this process closely resembles the biological process of species changing and mutating in order to survive the passage of time. Hutcheon and Bortolotti state, "Diversity equates with success because it reduces the probability of chance or other events causing the demise of the narrative" (451). In this way the updating of the plot and insertion of modern movie elements, such as romance, can only help the ultimate goal of the film adaptations: to acknowledge the importance of Elizabeth Bennet's journey into adulthood and allow modern audiences to appreciate the *bildungsroman* narrative and its continued impact on the way we human beings tell stories -- whichever medium we chose to tell them in.

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References


The Un-filmable Film: Discourse on the Un-success of Stanley Kubrick’s 1962 Film Adaptation of Nabokov’s Lolita

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Abstract — In a society obsessed with beauty, age, and popular culture, we are well acquainted with the general outline of Vladimir Nabokov’s best-selling 1955 novel Lolita: the sexualized, yet innocent female child desired by the older, pedophilic father figure seeking to return to his childhood through the girl. The novel and its filmed iterations chart his ultimate failure and the emergence of the girl’s repressed but inherent sexuality through her progressively promiscuous behavior, challenging topics leavened with humor, irony, and a critique of popular culture. This image of the sexual female emerged in nineteenth-century Victorian society as an “aesthetic vehicle for the artistic expression of men’s internal desires” and has remained in contemporary cultures to be seen as a model of victimization (Power). Much feminist critical discourse on the novel maintains that the ongoing popularity of Lolita is largely due to the patriarchal ideological construction of Nabokov’s “nymphet” as the “ultimate manifestation of the Madonna/whore syndrome as a dichotomous figure that reveals society’s desire to trouble and displace women’s sexuality under the pretext of metaphor” (Lemaster). As is illustrated by close examination of various pre-texts by the author, the troublesome and controversial publication and reception, two film adaptations and the controversy surrounding production and distribution, as well as a screenplay also produced by the author, adaptation has played a major role in ensuring Lolita’s place in Hollywood as an “unfilmable” film.

Keywords — Vladimir Nabokov, Stanley Kubrick, Lolita, Film Adaptation.

1. Introduction

In a society obsessed with beauty, age, and popular culture, we are well acquainted with the general outline of Vladimir Nabokov’s best-selling 1955 novel Lolita: the sexualized, yet “innocent” female child pursued by an older, pedophilic father figure in a humorous critique of American pop culture. The confession of Humbert Humbert, an older European male professor in America, who, in his ‘nympholepsy,’ falls in love with 12 year old Doloros Haze, Lolita is first and foremost, a travel narrative. It is on the road that the seemingly innocuous Lolita first performs fellatio on her adoptive stepfather; thereby initiating the sexual transgression he has long dreamed of. However, their relationship quickly sours and after a vain attempt to cure the tension at Beardsley College, they retire to the road again, where Humbert quickly realizes that someone has been following them. Humbert’s ever escalating possessiveness provokes Lolita into leaving him for the famous playwright Clare Quilty. Four years later, after receiving a letter asking for money, Humbert finds Lolita married and pregnant and though his advances are refused, he realizes he still loves her. After finding and killing Quilty, Humbert is arrested and incarcerated, and dies in prison after confessing his crimes in a posthumously published book. That book is Lolita. As is illustrated by examination of pre-texts by the author, the novel’s publication and reception, two film adaptations and the controversy surrounding production and distribution, as well as a screenplay written by Nabokov himself, adaptation has played a major role in ensuring Lolita’s place in Hollywood as an “unfilmable” film.

2. The Creation of Lolita

Completed by the author in 1954, the first traces of Lolita emerged in Nabokov’s 1924 short story entitled, “The Potato Elf,” in which pedophilia, adultery, and revenge were emphasized and in his 1926 short story, “A Nursery Tale” with the depiction of “a tall elderly man in evening clothes with a little girl walking beside – a child of fourteen or so in a low-cut black party dress” (Corliss, 1994, p. 56). Nabokov revived this image thirteen years later with his novella The Enchanter and again in 1945 with his first American novel, Bend Sinister, wherein the protagonist Adam Krug, a director ancestor of Lolita’s Humbert Humbert, “dreamt that he was surreptitiously enjoying Mariette while she sat, wincing a little, in his lap during the rehearsal of a play in which she was supposed to be his daughter” (1948, p. 148). The greatest inspiration to Nabokov’s masterpiece however, came in 1948 when he was given a copy of Havelock Ellis’s 1926 Etudes de Psychologie Sexuelle, from which Nabokov gleaned the structure of the confession, the protagonist’s literal imprisonment, and finally a much more
metaphorical imprisonment, that of their first experience with sexuality (Cornwell, 1999, p. 13). Having started writing Lolita in 1947, the work was completed by 1954, at which point Nabokov attempted to publish the novel in America. After being refused by five American publishing companies, the author sought a European publisher and in 1955, Nabokov accepted an offer made by Olympia Press, a company that had secured its reputation by publishing in English a number of avant-garde writers in the 1950s such as William S. Burroughs and Samuel Beckett, as well as unapologetically crude and vulgar pornography. Critical reception was overwhelmingly controversial and resulted in the book being banned from the major European presses until 1958 when France lifted the ban. Harris-Kubrick Pictures bought the rights to the film and Putnam finally brought Lolita to the United States – only to become “the first book since Gone with the Wind to sell 100,00 copies in its first three weeks” (Cornwell, 1999, p.15).

It is precisely this duplicitous nature that made the production, distribution, and reception of the film adaptations of Lolita so problematic and controversial. When Harris-Kubrick Pictures attained the film rights to Lolita and James B. Harris (Kubrick’s producing partner) suggested to the author that he write the script as well, Nabokov accepted the $150,000 plus 15% of the producers’ profit for the novel but denied their request. Several months later however, after a script written by novelist Calder Willingham was turned down by Stanley Kubrick, Nabokov was again asked to write the screenplay and this time he accepted the offer. Later, the author is reported to have said that he knew, “infinite fidelity may be an author’s ideal but can prove a producer’s ruin...All I could do in the present case was to grant words primacy over action, thus limiting as much as possible the intrusion of management and cast”. After reading his hefty submission, which, if filmed, would have run over four hours, Harris and Kubrick told the author that it was “the best screenplay ever written in Hollywood,” although later on Harris argued that it was unfilmable, claiming “You couldn’t make it. You couldn’t lift it” (Corliss, 1994, p. 18).

3. Censoring Lolita

By definition, a film adaptation is not and can never be the source text – even the screenplay written by Nabokov himself fails to meet the apex of literary achievement that the novel does. Kubrick said, “If it can be written or thought, it can be filmed,” but after eighty-eight days of shooting in England, six months of waiting to find a distributor, and finally premiering in 1962 with an “X” rating and a British Censor label saying, “This is to Certify that “Lolita” has been Passed for Exhibition when no child under 16 is present,” even Kubrick considered the film to have ultimately been a failure (Corliss, 1994, p. 19). In a 1972 interview with Newsweek, the director claims that “had [he] realized how severe the limitations were going to be, [he] probably wouldn’t have made the film, (Corliss, 1994, p. 12). However, by “limitations,” Kubrick is referring not only to the problems encountered in transforming the novel from literal to visual, changing voice, tone, and perspective, and seeking to gain the audience’s sympathy for “a man who liked little girls,” but to the strict standards set in place by censorship agencies.

In the 150 minute running time of Lolita, only eight kisses appear on-screen, the novel’s whispers of sexual intimations reduced to just that - whispers. Lolita, played by fifteen-year-old Sue Lyon, is two years older than she is described as in the book, but Kubrick modified the character of Humbert Humbert far more and to a far greater effect. Casting against type, Kubrick chose James Mason for the role, softening the fury that appears in the second half of the novel, and more importantly, completely eradicating all qualities which made him appear “monstrous”. This is where book and film diverge and ultimately is the driving force behind the growing perception that Lolita is un-filmable. Instead of Nabokov’s portrayal of a Humbert as an abusive and monstrous pedophile who only comes to recognize love in hindsight, Kubrick’s Humbert is the “Everyman” – transforming the story into a “love story,” relatable to any individual who has ever loved the wrong person wrongly. What is so great about Nabokov’s Lolita is the conclusive revelation that Humbert is the monstrous man, the sexual villain that he has always described himself as. Kubrick’s Humbert is the dreamy older lover who, when rejected by the object of his affections, becomes a sad, pathetic creature, a cuckold doubling as a doomed dad.

4. No Longer Nabokov’s Lolita

Because every one of his films has been adapted from a novel or a short story, Kubrick is referred to as an auteur of adaptation. In his highly influential book, Film Adaptation and its Discontents: From Gone with the Wind to The Passion of the Christ, Thomas Leitch (2007) specifically discusses Kubrick’s approach to Lolita, implying that the director’s relations with Nabokov were not entirely honest. Not wanting to be held responsible for
depicting the highly indecent acts asserted in the novel, Kubrick shifted the blame to Nabokov, who had already dealt with the shock of literary critics and readers, by using his signature as a scapegoat – thereby allowing Kubrick to change the novel as he saw fit without needing Nabokov’s consent (p. 242). In the final version of the film, Kubrick uses none of the four hundred-page screenplay that Nabokov submitted and only approximately twenty percent comes from the second, slightly leaner revision (Watts, 2001, p. 300). Though vastly different from all of his other films, both before and after, *Lolita* remains true to Kubrick’s style in several ways – through narration by an off-screen omniscient voice, the protagonist, or title cards, cascading camera movements, long master shots often with a tracking camera, etc. Moreover, Kubrick’s world is entirely masculine and male figures in positions of power frequently dominate and abuse persons of a lesser status. This remains true in *Lolita* and can be seen in Kubrick’s manipulation of the ending: he saves the girl’s life – she dies in the book – but deprives her of the poetic immortality that Nabokov lent her.

**References**

“Well, if it isn’t the ‘wrong’ Alice”: Adapting Adolescent Identity and Space

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Abstract — Although much has been written on the subject of Lewis Carroll’s Wonderland and the little girl, Alice, that visits there, new theories and adaptations are available to join the various discourses including: children’s literature, the adolescent female body, media portrayals of femininity and film adaptation. In order to move forward in the discussion it is necessary to look at the source texts, Lewis Carroll’s Alice’s Adventures in Wonderland and Through the Looking Glass and What Alice Found There, as well as popular and current film adaptations, Disney’s Alice in Wonderland (1951) and Tim Burton’s Alice in Wonderland (2010). After viewing Alice in the 19th, 20th, and 21st centuries, it is possible to trace some differences in representations of female adolescence through popular culture. These differences are often seen in the language Alice uses and is used against her, as well as the physical manifestations of her on screen. The language of repression is used to render invisible the burgeoning femininity that Alice is experiencing in Alice in Wonderland and Through the Looking Glass. This language is carried over to the film medium and extends through Disney’s New Victorian version and Burton’s new media version, despite cultural and historical shifts. The repressive language and visuals represents anxieties about children’s roles and the sexualizing of female adolescents. Much has been written about the Carroll texts as well as the 1951 animated film so they have well established places in the discussion of female bodies and fear of sexualized adolescents. The new media film of Tim Burton’s oeuvre can add a dimension to the discourse from a 21st century perspective.

Keywords — Film, Adaptation, Gender

1. Introduction

Lewis Carroll’s Alice’s Adventures in Wonderland (1865) and Through the Looking Glass and What Alice Found There (1871) are mid-Victorian children’s stories following the story of Alice as she enters a world of chaos that clashes with her upbringing designed to transform her from a child to a proper woman. There has been much debate about the repressive nature of the Alice narratives as a direct reaction to the fears of femininity in adolescent girls. There are two notable adaptations, one by Walt Disney, the 1951 animation Alice in Wonderland and the 2010 Tim Burton creation, also produced by Disney, of the same title. The popularity and relevance of these adaptations are due to the cultural and historical pervasiveness of the Disney brand. While some critics, like Nina Auerbach, tout Carroll’s Alice as a hero who overcomes her repressive state by achieving adulthood and waking up from her fantasy, Carina Garland suggests that Carroll in fact paradoxically revered and suppressed Alice through her adventures. Later, Disney minimized Alice’s questions about her status as a growing female by highlighting her desire to get home, while Burton diverted problems related to Alice’s adolescence by portraying her as a nineteen-year-old woman. The fear of confronting Alice’s personal identity and burgeoning adolescence may have changed form over time but the relative visual consistency of Alice is unwritten by her evolving relationships to her shifted spaces of home and Wonderland, dynamics themselves shaped by the concerns of the changing auteurs that made and remade her.

One issue with film adaptation is that as there is already an original work in place and as it would be nearly impossible to fit the entirety of a text into a feature length film, the challenge for the filmmaker is to effectively convey the literature while relying on visual elements to keep the essence of the story within a limited time frame. The importance of the narrative cannot be lost, though Alice evolves differently in each version as the plot unfolds. In Carroll’s attempts to repress Alice’s sexuality, power is granted through language as Alice defers to her grandfather’s memory, there is a gap between the period’s self-projection and an original work in place and as it would be nearly impossible to fit the entirety of a text into a feature length film, the challenge for the filmmaker is to effectively convey the literature while relying on visual elements to keep the essence of the story within a limited time frame. The importance of the narrative cannot be lost, though Alice evolves differently in each version as the plot unfolds. In Carroll’s attempts to repress Alice’s sexuality, power is granted through language as Alice defers to those she perceives as wiser and older than herself. However, it is the changing cultural landscapes of the adaptations of Alice that should be examined beyond a simple study in fidelity.

Carroll’s Alice takes place during the Victorian era, an age of formality rife with the possibilities of innovation. Maureen Moran describes this period as, “Like the double exposure encapsulated in my grandfather’s memory, there is a gap between the period’s self-projection as confident, accomplished and ‘proper,’ and its untidy reality marked by insecurity and doubt arising from vast social and intellectual change” (4). This description of the Victorian era may implicitly characterize the story...
itself. However, Carroll’s Victorian elements in *Alice’s Adventures in Wonderland* and *Through the Looking Glass and What Alice Found There* are mainly found in references and character allusions, hidden in word problems and plot twists. *Alice* is the story of a young girl who becomes bored with her lessons and finds herself following a White Rabbit until she falls down the rabbit hole and winds up in a peculiar land. Carroll applies an emphasis on the Victorian era expectations, especially when it comes to the behavior of children and girls. Although the story is about Alice stepping outside the Victorian reality, certain elements, like the commanding nature of the various drink and cake labels that order Alice to consume them, refers to the behavioral aspects that are rigidly dictated in this age as seen in the framing of the story, and encouraging a particularly obedient behavior in Alice as she does in fact eat or drink anything that is given to her in Wonderland.

This obedience backfires as she grows and shrinks in size, causing her to question her own existence, by relating size to a sense of self. In these moments, Carroll demonstrates a frustration at female adolescence due to its very nature being based on change from youth to adulthood. When Alice talks with the Caterpillar in Chapter Five, she expresses her ontological distress when asked who she is by replying, “I know who I was when I got up this morning, but I think I must have been changed several times since then.” (Ch 5) However, when the Caterpillar asks Alice what she would like to be, she answers with an ambiguous “I’m not particular as to size, only one doesn’t like changing so often, you know.” She cannot be exactly as before, as she has been changed emotionally and mentally due to her time in Wonderland, but she is beginning to fade, which is why her petals are opening unfidily, but Alice changes the subject because it’s an uncomfortable concept for her. This implies that Alice is losing her youth and is entering adolescence by blossoming somewhat haphazardly. Many of the elements in the sequel follow the same form as in Wonderland, but in a harsher way, with a more pointed ridicule of Alice and her attempts to learn about herself in the Looking Glass Land. However, like Wonderland, Alice wakes up in her own safe world, with no clear indication if she really gained any knowledge from the Looking Glass world.

Disney’s *Alice in Wonderland* is “Americanized,” however; the 1950s have similarities to the Victorian era, particularly in the later Victorian period. Late Victorian was a stage of transition in with a society about to embrace modernity and Linda Hutcheon notes that *Alice in Wonderland* illustrates this process of moving towards change in which orthodox convictions were already challenged. As the 1950s was a period of international reconstruction and recovery from War, the development of Disney’s *Alice in Wonderland* is seen as a historical development of a Victorian narrative in a decade also marked by important transitions of power and modernity. Thus, Alice’s space is shifted into a new era.

In Carroll’s sequel, *Through the Looking Glass and What Alice Found There*, Alice once again finds herself in a foreign world full of wordplay and strange rules that she is compelled to follow. After crawling through a mirror into a world that is more than just a mirror-image, the shifted space forces Alice to confront a seemingly impossible task of understanding the nonsensical poem of the Jabberwocky. In doing so, Alice must confront her own discomfort when the world around her challenges her prior knowledge and identity. Then, making her way outside, Alice finds a garden of talking flowers. The flowers immediately begin to criticize Alice for being stupid and having “petals” that don’t curl properly. A Rose informs Alice that she is beginning to fade, which is why her petals are opening unfidily, but Alice changes the subject because it’s an uncomfortable concept for her. This implies that Alice is losing her youth and is entering adolescence by blossoming somewhat haphazardly. Many of the elements in the sequel follow the same form as in Wonderland, but in a harsher way, with a more pointed ridicule of Alice and her attempts to learn about herself in the Looking Glass Land. However, like Wonderland, Alice wakes up in her own safe world, with no clear indication if she really gained any knowledge from the Looking Glass world.
visit to the flower garden. However, in Disney’s version the flowers first regale Alice with a song before peppering her with questions about her identity. After the fully blossomed flowers determine that Alice is a weed, she is chased out of the garden before she can take root and begin to blossom. In this case, the fear of Alice’s impending adolescence does not come from Alice herself, but from the adult flowers expressing anxiety because Alice cannot articulate her ontological status due to the changes she has undergone.

Another difference in Disney’s version is Alice’s desire to get home. Joel Chaston observed that Disney “Ozified” Alice, making her a weaker character despite her displays of strongheadedness as she tries to find order in Wonderland. Because Alice’s space is dominated by the Disney franchise, she is stripped of her agency in favor of convention. By making Alice reflect the sentiments of Dorothy, who stated that “there’s no place like home,” the Disney version also encouraged Alice to appreciate the safety of “home,” desiring the implied innocence that is found there, instead of using her adventure in Wonderland as an instrument to find her own identity and learn about herself as a growing adolescent.

While Carroll’s and Disney’s version showed an Alice who is about seven years old, Burton chooses to physically mature Alice. Although Alice is now nineteen, Burton does not shift Alice’s story space. By developing Alice’s Victorian world he gives her family background, and a well-rounded characterization. This is not only consistent with Burton’s vision, but gives Alice a history that makes her adventure driven by nature. Throughout the film, Alice seems removed from her Victorian surroundings as she is easily distracted. Despite her obvious sexual maturity, Alice’s demeanor is less evolved, as though her previous desire to get home prevented her emotional growth. Alice’s own story creates a contrast to her Underland adventure where chaos seems to be the order. Burton thus reverts back to a strong framing of the story that was critical to Carroll’s work in showing the juxtaposition of order and chaos. Burton’s vision was not just founded on his ability to create a very distinctive visual world, but in manipulating his characters to convey pointed cultural commentary. Although Alice wants to “wake up from her dream” and go home like the 1951 Alice, Burton integrates a parallel mission for her which gives her adventure purpose. He also uses elements from both of Carroll’s texts, including the Jabberwocky that Alice is destined to fight.

There are, though, many differences to Burton’s version as it is considered a sequel. Once again, Alice’s space is shifted into a new era, necessitating the bodily shift in Alice herself. For example, after Alice falls into the rabbit hole, her dress ends up in tatters and she is dressed provocatively throughout most of the film, at times losing her trademark blue dress for a red mini-dress. However, it is not until she figuratively grasps the phallus, or in this case a sword, and faces the Jabberwocky that Alice sheds her air of apprehensiveness, becoming a heroine. Thus, Burton exposes her sexuality and made her a more adult Alice. Burton capitalized on this newfound female confidence by making Alice assert her independence at the end of the film; the agency she could not maintain at the end of the 1951 Disney version, by refusing a marriage proposal in an attempt to show that she is fully in control of her identity, although given her defeat of the Jabberwocky, it is a conventional and expected outcome. It is necessary that Alice is older in the Burton film, giving her sexual agency so that, as Casey McKittrick notes, “her bodily maturity may be a source of justification for a desiring male viewer” (6). In this case, the male viewer is represented by the Mad Hatter as he is flabbergasted that this sexually appealing woman could possibly be the girlish Alice he remembers from years ago. Thus, despite Alice’s sexual maturity, femininity and desire are only comforting to address given Alice’s increased age, and there is little in this adaptation confronting her adolescence as Burton simply bypasses it and puts her squarely in view of a desiring gaze.

The main difference between the two Alice films can be seen in the relevance of the story with time; the relevance of the story with the current socio-cultural dynamics; and in viewing Alice’s sexuality. Disney created a Disney film, resisting fidelity and ignoring Alice’s internal struggles with identity in favor of a desire for home and economic appeal, while Burton created a visually fantastic film that aged Alice to gain sexual agency. However, the adaptations are less evolutionary in their approach to female adolescence and more in how that anxiety about her sexuality is portrayed: repressed, avoided, and circumnavigated to make it less threatening.

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Abstract — In the competitive religious marketplace of nineteenth-century America, Landmark Baptists emerged making claims to be the true church of Jesus. They traced their churches through history, finding evidence of Baptist churches throughout the ages. This theory of church succession, as it came to be called, became a vital component of the Landmark Baptist argument for superiority in the Christian community.

Keywords — Ben Bogard, Christian History, Church Succession, Landmark Baptists

1. Introduction

As religious movements emerge, they almost immediately begin to interpret their place in history. In Christian history, each major branch of Christianity makes the case that its form of Christianity is the purest and most faithful incarnation of the Jesus movement. Roman Catholic historians have long asserted that their church emerged from the leadership of Peter, who was first among all of Jesus’ disciples. As the successor of Peter, the pope holds a special authority that allows him to lead the church in the ways of Jesus. Orthodox Christian historians have a different view. Orthodox Christians maintain that their practice of Christianity is a continuation of the earliest Christian traditions as set forth in the seven ecumenical councils. These councils, held between 325 and 787, established orthodox teaching and represent the purest form of Christianity. Protestant Christian historians have yet another interpretation. From the Protestant perspective, by the sixteenth century Christianity had strayed far from the ideals of Jesus and was in desperate need of reform. Protestant reformers set about to return to the New Testament ideal of Christian community and belief. These reformers believed that they were re-establishing a pure form of Christianity. Each branch of Christianity appeals to Christian tradition or claims a connection to early Christianity or the Bible to justify its beliefs and practices.

This desire to prove a connection to the purest form of Christianity was especially strong among nineteenth-century American Christians. By 1800 America had become a vibrant religious marketplace. With no established church, and therefore no guarantee of financial support, Christian denominations found themselves competing for members. In this competition, denominations laid claim to true Christianity. Alexander Campbell, founder of the Churches of Christ, argued that his church was a restoration of the New Testament church. Joseph Smith claimed that his Mormon movement represented a rediscovery of the true Christianity that had been revealed by the resurrected Christ and practiced in North America in centuries past. Christian fundamentalists maintained that only they held to the fundamentals of the Christian faith, which were clearly articulated in the New Testament. Landmark Baptists joined this larger debate with their own claims to superiority, claims based largely on their interpretation of Christian history. This new Baptist movement, which emerged in the mid-nineteenth century, appealed to history to prove that Landmark Baptist churches were the only true churches in existence.

2. Landmark Baptists and the Theory of Church Succession

Landmark Baptists first appeared on the American religious landscape in 1851 with the adoption of the Cotton Grove Resolutions, a brief statement of their core beliefs. Among these core beliefs was the theory of Baptist Church Succession. Landmark Baptists believe that Baptists can trace their lineage through local Baptist churches all the way back to the church founded by Jesus during his personal ministry on earth. This theory allowed Landmark Baptists to claim that they were the only true church of Christ since only they could trace themselves back to Christ through an unbroken succession of churches. The importance placed upon the succession of Baptist churches caused Landmark Baptist leaders to misconstrue the historical record to prove their theory to be true.

The idea of church succession did not emerge in Baptist thought until the nineteenth century. Seventeenth and eighteenth-century Baptists believed that their churches were the spiritual successors of the apostolic church (i.e., Baptist churches were the closest in doctrine and practice to the New Testament church). Nineteenth-
century Baptist historians often mistakenly read earlier Baptist historians’ “occasional uncritical allusions to certain dissenting sects as Baptists” (Patterson, 1960, pp. 24) and concluded that dissenting sects throughout Christian history were in fact Baptists. This misreading of earlier histories led some nineteenth-century Baptist historians to find Baptists in history where none existed. The most prominent of these historians was G.H. Orchard, an English Baptist minister who published A Concise History of Foreign Baptists in 1838. Orchard’s history was published in America by James Robinson Graves, the founder of the Landmark Baptist movement, and quickly became the leading authority on Baptist history among Landmark Baptists.

2.1 Motivations

Landmark Baptist leaders disseminated this view of Baptist history, which fed into their narrative of superiority as the only true Christian denomination. In an era in America where Baptists, Methodists, and Presbyterians were competing for members on the frontier, the ability to trace the Baptists back to the church founded by Jesus proved to be a powerful tool in proselytizing from other denominations. Methodists and Presbyterians did not make a big issue of origins as a part of their apologetic. Landmark Baptists, however, saw the issue of origins as essential to their identity. Baptist successionism allowed Landmark Baptists to claim superiority over “new” denominations such as the Methodists and Presbyterians. The rise of the Churches of Christ on the frontier also caused consternation for Baptist successionists. In order to combat the Churches of Christ claim that they were restoring the apostolic model, Landmark Baptists worked to prove that the apostolic church did not need restoring since it had existed continuously from the days of Jesus to the present era (Patterson, 1960, pp. 69-71).

Another motivation lay in the desire of Baptists to prove they were not members of an inferior class in America. During the nineteenth century, Baptists in America were often from the working class, and often were poorer than members of other denominations. This relative lack of wealth created an inferiority complex that drove many Landmark Baptists to look for other ways to prove their worth. One means of dealing with this lower socio-economic status was to assert the supremacy of their religious beliefs. In other words, Baptist successionists sought to demonstrate that the “last” had become “first” in the kingdom of God. By tracing their ecclesiastical heritage back to Jesus, successionists proved their spiritual wealth, even if their church members had fewer material possessions than members of other denominations (Patterson, 1960, pp. 66-69). While their social standing might be lacking, many Baptists boasted that their standing in the Christian world was second to none. A twentieth-century Landmark Baptist even claimed, falsely, that George Washington was a Baptist, and chided, “Those who feel too great and important to stand with the Baptists should ask themselves if they are greater than Washington” (Bogard, n.d.c, p. 15).

2.2 Ben Bogard and the theory of church succession

Ben Bogard was the preeminent Landmark Baptist of the early twentieth century. He rose to prominence in Arkansas as a pastor, newspaper editor, denominational organizer, and public debater. Bogard often attacked other Christian denominations, authoring such books as False Doctrines Answered, or Modern Heresies Exposed and Four Reasons Why I am a Baptist. In these works, he condemned other denominations for their doctrinal differences with Baptists, but also appealed to church succession to “prove” the superiority of the Baptist way. For Bogard, though, church succession was not simply a means of establishing Baptist supremacy in a crowded religious marketplace. Bogard believed that tracing the church back to Jesus was vital for the survival of true Christian doctrine. According to Bogard, “If it can be shown that Baptist churches have existed in all ages since Christ, it will confirm our faith in the Lord’s words. If, on the other hand, it can be shown that no church institution in existence has come down uncorrupted through the centuries, it will be enough to make infidels of us all; for if the Lord’s promise [that the church he founded would continue throughout history] has failed, if His Word be proved false, what confidence could we place in Him as our Saviour?” (Bogard, 1908, p. 21).

Bogard’s concept of church succession was based in his interpretation of the controversial passage in Matthew 16:18. Here, the Gospel of Matthew records Jesus saying, “And I tell you, you are Peter, and on this rock I will build my church, and the gates of Hades will not prevail against it” (NRSV). Roman Catholic Christians have used this passage as evidence that Jesus chose Peter to be the leader of the church. Landmark Baptists, however, interpret this passage as a general statement about the perpetuity of the church founded by Jesus. Landmark Baptists begin with the presupposition that the church established by
Jesus was a local congregation and that in this biblical passage Jesus promised the church’s continuity throughout history. In addition to this passage, Landmark Baptists also leaned heavily upon Jesus’ final words in the Gospel of Matthew: “And remember, I am with you always, to the end of the age” (Mt. 28:20, NRSV), once again demonstrating that Jesus promised that the particular congregation he founded would exist forever.

Having settled, in their minds at least, that Jesus intended the local congregation he founded to exist in perpetuity, the next question for Landmark Baptists was the nature of the congregation founded by Jesus. Bogard taught that Jesus had clearly established a Missionary Baptist Church. Bogard knew that Jesus was a Baptist because John baptized him in the same manner that Baptists baptize (by immersion) and he was baptized by a Baptist preacher. While others might dispute whether John was actually a Baptist, Bogard contended that the Bible would not lie, and since John is called “the Baptist” in the gospels, then he must have been a Baptist preacher. Jesus was also a missionary, Bogard argued, because he called people to become his followers like modern missionaries do. Therefore, Jesus was a Missionary Baptist preacher. The church that Jesus established was naturally a Missionary Baptist Church as well. Bogard concluded, “The church Jesus founded was authorized to Baptize, hence a Baptist Church. He sent that church out to do mission work, hence it was a Missionary church, hence a Missionary Baptist Church” (Bogard, 1946).

Having established that Jesus established a Missionary Baptist Church, Bogard then turned his attention to tracing this church through history, largely following the earlier historical work of G.H. Orchard. Like Orchard, Bogard acknowledged that the church now known as Baptist had not always been known by that name. Bogard did assert, however, that there is an unbroken line of churches that have maintained the doctrines of true Baptists throughout history. This assumption, that the beliefs and practices of modern Baptists have been present in all ages of church history, led Bogard to find similarities between Baptists and historical groups where none existed. This presupposition drove Bogard’s theory of church succession, and led him to engage in uncritical historical practices. Like earlier proponents of this theory, Bogard quoted uncritically from secondary sources and ignored some beliefs of earlier groups that were decidedly non-Baptist. But for Bogard, none of these critiques was especially troublesome. Bogard believed that he was providing the only true accounting of history. For him, quoting various secondary sources was sufficient to prove his point. He had never been trained in proper historical techniques, and, not surprisingly, failed to meet the standards of historical criticism in his tracing of Baptist churches through the ages.

Bogard had a very simple explanation for how Baptist churches of his day could trace their heritage back to the church founded by Jesus. According to Bogard, “The Jerusalem church begat the Antioch church, and the Antioch church sent Paul and Barnabas as missionaries and thus begat other churches of the same faith and order. A church is perpetuated like a family is. The original family may all be dead, but their descendants are living, and so on to the end of time” (Bogard, 1915). Baptist churches of the modern era were these descendants of the Jerusalem church. These churches had not always been the dominant churches, however. The rise of the Roman Catholic Church forced the true churches of Christ into hiding in order to survive. It is to those groups seen as heretical by the Catholic Church that Bogard looked to trace the lineage of Baptists.

Bogard assumed that anyone killed for their beliefs throughout Christian history held to the doctrine and polity of Baptists. Although he provided little, if any, evidence of their beliefs, Bogard believed that Baptists could trace their heritage through the blood of the martyrs. As examples of early Baptist martyrs, Bogard cited Christians killed in Lyons during a second-century persecution along with the famous martyr Perpetua (Bogard, 1908, pp. 30–31). Bogard provided no proof that these martyrs were indeed “Baptist,” but simply assumed that they must have held apostolic beliefs since they were killed for their faith. Essentially, Bogard believed that since the earliest Christians were Baptist, then any early Christian martyr must have been a Baptist.

Bogard claimed that in the fourth century the true (i.e., Baptist) church began to be persecuted by the newly formed Roman Catholic Church, which he considered an apostasy. During this period, the Baptists were soon outnumbered by the apostates, forcing the Baptists to go into hiding until the Reformation. Since Baptists were largely hidden from history following the conversion of Constantine to Christianity, Bogard looked to groups persecuted by the Catholic Church to find the Baptists during this era. According to Bogard, the Donatists – a North African schismatic group known for their hardline stance in dealing with Christians who renounced their faith during times of persecution – were really Baptists. In the eighth century, Bogard claimed that the Baptists were called the Paulicians, a dualistic Byzantine sect.
whose belief that all matter was evil led them to deny Christ’s humanity. In the twelfth century, Bogard traced Baptists through the followers of Peter de Bruys and Arnold of Brescia. Beginning with the thirteenth century, Bogard found Baptists in the form of the Waldensians and later in the fourteenth century followers of John Wycliffe and Jan Hus (Bogard, 1908, pp. 32-35; Bogard, n.d.4, p. 22).

With the advent of the Protestant Reformation, Bogard claimed, Baptists could once again come out into the open. But, Baptists were not Protestants. Bogard explained, “Protestants are those who came out of Catholicism, such as the Episcopalians, Lutherans, Presbyterians, and those who came out of these Protestant denominations, such as Methodists and others be called correctly Protestants. Baptists are not Protestants because they were never in Catholicism” (Bogard, 1949). Baptist churches were the only true churches because only Baptists could trace their existence in unbroken succession back to the church founded by Jesus.

3. Conclusions

This theory of church succession was a crucial part of Landmark Baptist self-identity. Since Landmark Baptists could trace themselves back to the first church, only Landmark Baptists could claim to be members of a valid church. Armed with historical proof, Landmark Baptists argued that modern-day Christians should affiliate only with the true church of Christ. These ideas of church succession were widely disseminated in popular pamphlets such as J.M. Carroll’s The Trail of Blood, which traced Baptists in history through the blood of the martyrs. In public debates, Landmark Baptists often appealed to this church succession as proof of their superiority over other Christian denominations.

This belief in church succession also influenced other Landmark Baptist beliefs. Landmark Baptists refuse to accept the baptism of any other denomination as valid. This disavowal of “alien immersion,” baptism performed by ministers from non-Baptist denominations, is based in the belief that only a church that is descended from the Church in Jerusalem has the authority to baptize. Similarly, Landmark Baptists practice closed communion, limiting participation in the Lord’s Supper to members of a local congregation. Non-members, including those who held membership in other Landmark Baptist churches, could not receive communion. Perhaps most telling is the refusal of Landmark Baptist to refer to other Christian groups as “churches” or “denominations.” Instead, Landmark Baptist pejoratively referred to these groups as “religious societies.” The only organizations worthy of the title “church” were those congregations that were descendants of Jesus’ church, i.e. Landmark Baptist churches. Above all, Landmark Baptists appealed to the theory of church succession as evidence that the Landmark Baptist community was the only place to find pure Christian faith and practice, a faith and practice that had been handed down through the centuries within the Baptist family.

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The Soul as Mirror or Window?: Models of Spiritual Transformation in the Christian Contemplative Tradition

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Abstract — Several metaphors are used in the Christian Contemplative Tradition to describe spiritual transformation of practitioners. The Cloud of Unknowing uses the metaphor of the soul as mirror that passively reflects the attributes of God upon achieving the goal of transforming union. Thomas Merton uses the metaphor of the soul as a window through which God's attributes shine through each individual. While either metaphor can be useful, each is embedded in a specific set of assumptions about the nature of spiritual transformation. It will be argued that the soul as window is more compatible with modern psychological theories of human potential.

Keywords — Contemplative Studies, Spirituality, Christian Mysticism

1. Introduction

The primary goal of the Christian Contemplative tradition is the spiritual transformation of practitioners. Through various practices of meditation and prayer, natural self-centeredness is slowly turned to greater values such as compassion, humility and love. Several metaphors have been employed to explain the process of transformation. In medieval spiritual manuals such as The Cloud of Unknowing, the primary metaphor used is that of the soul as a mirror. The soul beholds God’s attributes and passively reflects them like a mirror. In this model several assumptions are made about the nature of transformation which reflects the spirituality of the medieval period. Thomas Merton, a Cistercian monk writing in the twentieth century, proposed a different metaphor, the soul as window. Individual personalities with their unique talents and characteristics act as a window through which God’s attributes shine into the world. Merton’s metaphor of the soul as window is more compatible with modern psychological theories of human potential than the medieval spirituality of the soul as mirror.

2. The Soul as Mirror or Window?

2.1 The Soul as Mirror

The Cloud of Unknowing, a spiritual manual written in the fourteenth century CE, is one of the primary documents of the Christian Contemplative tradition. The Cloud of Unknowing offers practical advice regarding the methods and experience of meditation. The Cloud suggests the metaphor of the soul as a mirror that passively reflects God’s attributes. The metaphor of the soul as a mirror rests upon several assumptions regarding the nature of spiritual transformation. First, it reflects the medieval mystical goal of the Beatific Vision, where the soul passively beholds God in an intellectual vision. The Beatific Vision refers to the believer’s soul that “sees” God directly in the afterlife. This is in contrast to earthly life where we perceive God indirectly through faith or understanding.

Plato’s philosophy lies behind the idea of a Beatific Vision. In the Allegory of the Cave, Plato describes complete knowledge as the mind directly perceiving the Ideal Forms, the heavenly patterns from which all earthly things are copied, without the aid of our physical senses. In either case, the soul is passively beholding the Ideal Forms or attributes of God in direct intellectual apprehension.

A second assumption behind the soul as mirror metaphor is that the goal to which all practitioners are striving is static. Each practitioner passes through a fixed number of stages before reaching the final goal of transforming union with God. Bernard of Clairvaux (1090-1153) describes four stages of a practitioner must pass through before attaining union with God. Teresa of Avila (1515-1582) argues for seven stages one’s soul must pass through. Whatever the number, the ultimate goal is a deep silence and peace where the practitioner is constantly and consciously aware of God’s presence.

A third assumption behind the soul as mirror, though not as apparent, is the Ladder of Perfection. Medieval society had a ranking of various classes. Most people were common workers and peasants...
whose daily life did not allow the time required for contemplation. Only those fortunate few who have the time, such as monks, nuns, and bishops, can reach true holiness. Prayer, study of the scripture and other methods require a lifestyle completely devoted to such practices. Most people were simply excluded from the possibility of attaining spiritual transformation.

2.2 The Soul as Window

Thomas Merton (1915-1968) was a Cistercian monk who wrote widely on Contemplative prayer. Merton proposed the metaphor of the soul acting as a window through which God’s attributes shine into the world. The metaphor can be refined, using a stained-glass window as the primary image. As a stained-glass window has many designs and colors, each individual has a unique personality and talents. As each person spiritually matures in the practice of contemplation, God’s attributes shine through them into the world in a unique way. The soul as a stained-glass window rests upon several assumptions about spiritual transformation.

First, there is no fixed number of stages a practitioner must first pass before attaining transforming union with God. Merton describes the ongoing process of spiritual transformation as a spiral staircase, alternating between the chaos of purging old behavior patterns followed by peaceful plateaus of integrating new insights into one’s self-understanding. While stages of spiritual growth might be useful, there is the danger of becoming legalistic and requiring all people to follow one road to attaining union with God.

Second, since there is no static goal to which all practitioners are striving, more variation is possible in what transforming union would look like. Each practitioner has a unique personality and cluster of abilities. As stained-glass windows have a variety of possible designs, the ways in which God’s attributes might shine through the soul will also vary from person to person. Each individual has responsibility for discovering their particular abilities and then developing them in conjunction the practice of contemplation.

Third, with spiritual transformation being open ended, individuals will develop their specific gifts more deeply over time. Instead of one fixed goal towards which all believers are striving, as with the medieval Beatific Vision, each person gradually becomes more compassionate, forgiving or patient, always progressing but never completing the process.

2.3 The Soul as Mirror and Theories of Human Potential

While both metaphors of the soul as a mirror and window offer insights, the soul as window appears more serviceable in light of modern understandings of psychology and human potential. For example, Jungian psychology and Transactional Analysis, two twentieth century theories of human potential, can work well with Merton’s metaphor of the souls as window.

2.4 The Soul as Mirror and Jungian Psychology

Founded by psychologist Carl Jung (1875-1961), Jungian psychology proposes there are four poles in human personality- Intuition, Thinking, Feeling and Sensing. Most people develop two of these while suppressing the other two. A major goal of Jungian psychology is achieving a balance of all four poles, a process called Individuation. Jung believed that full individuation would not be achieved until late in adult life.

If Merton’s metaphor of the soul as window is used, this would be more adaptive to the process of Individuation than the metaphor of the soul as mirror. Instead of striving for the fixed, passive ideal of the Beatific Vision in the afterlife, a practitioner’s spiritual growth becomes a process unfolding in the course of earthly human life. Merton and other Contemplative mystics talk of the false self, the collection of unconscious and conflicting emotional programs each human carries with them from childhood into adult life. Inaccurate self-image, emotional insecurity, unbalanced emotions are some of the ways the false-self shows up. A major goal of Contemplative prayer and meditation is the unraveling the false self. Similarly, Jungian Individuation involves coming to terms with unconscious programming that blocks integrating the four poles of human personality. Merton’s metaphor of the soul as window, and the continuing spiral stair case of spiritual growth would fit well with the ongoing process of Jungian Individuation.

2.5 The Soul as Mirror and Transactional Analysis

Founded by psychologist Eric Berne (1910-1970), Transactional Analysis is loosely based in Freudian psychoanalysis. Berne postulated there are three levels of the human personality- Parent, Adult, Child. As we grow from childhood to adulthood, each of us receives a Life Script, a series of messages that structure our ego consciousness in the Parent, Adult and Child. The messages might
be positive, such as ‘You are a good athlete,’” or negative, such as “Don’t trust anyone.” Life Scripts are mostly unconscious, but are experienced as background chatter in our minds. A major goal of Transactional Analysis is to map out and correct dysfunctional Life Scripts.

The Contemplative Tradition’s focus on unraveling the false self is a powerful parallel to dismantling unhealthy Life Scripts. Both approaches involve bringing to awareness unconscious and unhealthy emotional programming that interferes with our self-awareness and relationships with others. The model of the soul as window and the spiral staircase of spiritual growth seem better suited to using insights supplied by Transactional Analysis than a static medieval model of the soul as mirror striving for an otherworldly Beatific Vision.

3. Conclusions

While the metaphors of the soul as mirror and window are useful, Thomas Merton’s model is more adaptive to modern theories of human potential. The soul as mirror allows more room for individual variations in spiritual growth and human development. Merton’s model also acknowledges the role of the individual in cooperating in the process of spiritual transformation, more so than the soul as mirror model. Finally, the soul as window focuses more on what can be accomplished in earthly human development on our way to whatever may await us in an afterlife.

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Looking Back: Life in a Single Parent Home

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Abstract – The following paper ventures to describe and explain issues that a child from a single-parent home encounters. The intention of the research is to learn more about the experiences of a child from a single-parent home from the child's perspective.

Keywords – Single-Parent Homes, College Students, Family, Divorce, and Marriage.

1. Introduction

Society regularly discusses the struggles of children from single-parent homes. According to the 2010 American Census, 27% of children grow up in single-parent homes (Cook & Blachman, 2011). Therefore, it is not difficult to observe how a child from a single-parent home may fair in society. A child coming from a single-parent home faces difficulties that a child coming from an intact family may never have to consider. Popenoe has found that children who grow up in homes with only one parent “have a risk factor of two to three times various problems befalling them as they become teenagers and young adults” than children coming from homes with two parents (as cited in Wisconsin Family Impact Seminars, 1993, para. 2). Many of these various problems children face stem from two crucial issues: a lack of parental support and financial run-ins.

With all of these factors working against them, many children of single-parent homes do grow up and go on to attend college. The following information has been collected through simple descriptive research methods, primarily interviews. Twenty college students, ages 18-22, make up the participants for the interview. All twenty participants were raised in single-parent homes. The purpose of the research was to allow the participants to reflect on their personal experiences, as the son or daughter of a single-parent. Prior to initiating the interviews, three hypotheses were made:

1. Students who grew up in single-parent homes will have faced money struggles.
2. Students who grew up in single-parent homes will claim to have a strong sense of independence.
3. Students who grew up in single-parent homes will have a negative view on marriage.

From the interviews general conclusions were made about the participants' experiences dealing with financial struggles, their views on marriage, and their declarations of independence. The quotations within the paper are from the interviews.

2. Financial Woes

All twenty of the participants talked about their families dealing with problems associated with finances. One participant, when referring to the greatest struggle for her family, plainly said it was “money- we never seemed to have it.” It is well-known that single-parents are often on the lower spectrum of income. Simple math can prove that a family with only one income will likely not have access to the same resources as a family with two sources of incomes. In many of the participants' cases, the child support never came from the parent without custody. Therefore, it was even more crucial that the parent with sole custody have a high paying job or maintain regular work. This heavy responsibility created so much stress on the single-parent. It also led to the parent being scarcely home. Still in many cases, even when a parent worked nonstop, the family still struggled to pay the bills and remain fed. For fear of living in the same predicament as her struggling mother, one participant stated that “at a young age” she realized it was crucial for her to learn how to manage her money. For the single-parent, having enough money is a constant battle. As described by one participant, she has witnessed her mother “struggling to pay bills on time or even at all” for eighteen years.

3. Self-Learned

One of the questions asked in the interview was whether there was “anything you had to learn on your own?” With a resounding reply, all but two participants said “yes.” A few commented on how it was necessary to learn how to take care of oneself because there was often an absence of any
supervision. Because it is difficult to support a family off of only one income, the single-parent would often be “at work, working as much as possible to get any extra hours possible.” Therefore the basic day-to-day chores a parent would typically do, like cooking and yard work, was often taken on by the students themselves.

Transitioning into college was not easy either. According to Wisconsin (1993), single parents tend to be “less involved in their children’s school activities and have lower educational goals for their children” due to a lack of free time (Loss of Parental Support and Supervision, para. 1). The main priority of most parents is to be sure their child is well-fed, so when that becomes an all-consuming task, school and related activities tend to be put on the back burner. So when a student does go to college, the single-parent often lacks the knowledge of how to support his or her child. One participant stated that she felt she had to “learn the whole college thing” on her own. Yet, the hardest part for most of the participants was leaving their parents alone. One participant opted to attend a technical school in order to stay at home so that his mother would not have to live by herself. The participants recognized that their parents depended on them. Unlike a two-parent family, where the mother and father can depend on each other, the single-parent tends to depend on his or her children for help. The participants expressed this dilemma in different ways. A few participants stated that they worked throughout high school so that they could help their parents buy food and pay the bills. Another took on all the “motherly” jobs, like cleaning and cooking, after her mother passed away. One participant called herself the “mini mom,” because her mother was either working or “tired from working.” One participant, never knowing his father, claimed he “had to learn 95% of the things you need to know about being a man.”

4. Current Views on Marriage

Despite the turmoil that accompanies divorce, the students agreed that marriage itself is an admirable thing. However, marriage should “be taken seriously and not lightly” and there should be a strong sense of loyalty. All students seemed to have an understanding of the commitment that marriage requires. People must go into a relationship slowly and be sure they “know who their significant other truly is” before getting married. Furthermore, most believed that rarely divorce is for the best. It is in the family’s best interest that “a couple do all that they can to keep it together before they completely give up.” The students were confident that marriage for them would be different from their parents’ marriages. At least half stated they look forward to married life. With enthusiasm, one declared marriage was “one of the greatest gifts” allotted from God, and another believes marriage is “a blessing.” The participants’ outlooks on marriage appears to be more hopeful than the widespread belief that children growing up in single parent homes are more likely to have failed marriages (Macionis, 2008).

5. Conclusions

After reviewing the research findings, two out of three of the hypotheses were found to be correct. The participants all expressed that finances were a challenge in the household. During the interviews, money was the issue most commonly referred to by the participants. The second hypothesis, concerning the participants’ levels of independence also proved to be true. Each interviewee could list several things he or she had to learn alone. Most, however, reflected that it was not a complete drawback because it helped years later when independence was an advantage, i.e. the college years. The third hypothesis, which suggested that the participants would have a negative view on marriage, was completely countered. Instead, the participants seemed to have an understanding of the importance of marriage and the type of commitment it requires. Many participants claim to look forward to marriage, but plan not to rush into it.

In conclusion, the college students expressed strong views on what it is like to grow up in a single-parent home. They did not hold back while telling their experiences, they were honest and appeared to possess the desire to give a first-hand account. It was as if they believed that by being honest, they were clearing up any misunderstandings about the life of a child from a single-parent home. From this research, one can develop a better understanding of what the lives of children living with single-parents is like.

Acknowledgements

I give many thanks to the students who were willing to share their experiences. It is not always easy to look hard into the past. I appreciate their desire to help the general public have a better understanding of the lives of children growing up in single-parent homes.

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Alternate Powers: Reimagining Victorian Gender Roles through Ghost Stories

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Abstract — Supernatural fiction of the Victorian era gave female authors the opportunity to subversively explore changing gender roles. This paper examines the imagination of an alternative structuring of society in Elizabeth Gaskell’s short supernatural story “The Poor Clare.” The story sets the patriarchal structures of the church, the law, and ancestry in opposition to the alternate logics of a matrilineal line of power. Witchcraft is presented an alternate to the church, giving women access to an unsanctioned and uncontrollable power.

Keywords — Victorian, gender, patriarchy, women, ghost story

1. Introduction

Although the Victorian era is commonly thought to be a rather staid period of history—when skirt circumferences were as wide as societal views were narrow—it was actually an extraordinarily turbulent time. The Industrial Revolution reorganized the landscape, scientific discoveries reframed centuries of belief, and accepted gender roles were drastically reimagined. Female authors explored the changing ideas about gender in their work, subversively critiquing assumptions about authority, power, and sexuality. In her introduction to Victorian Ghost Stories by Eminent Women Writers, Jennifer Uglow (1989) described the ways in which authors utilized the opportunity presented by imaginative fiction: “The popular origins of ghost stories, their alliance to oral tradition, gave educated women one way of criticizing and undermining the structures which constrained their lives” (p. xi).

2. Alternate Powers

Elizabeth Gaskell’s “The Poor Clare” was published in the 1856 Christmas edition of Charles Dickens’ journal Household Words. The story begins with an old servant-woman mourning the death of her favorite dog, which has shot by a bad-tempered hunter. Bridget, the old woman, curses him, saying "You shall live to see the creature you love best, and who alone loves you—ay, a human creature, but as innocent and fond as my poor, dead darling—you shall see this creature, for whom death would be too happy, become a terror and a loathing to all, for this blood’s sake.” The hunter’s favorite is his daughter, Lucy. The curse creates a second Lucy, identical to the first in face and form but different in expression and action. The actions of the second Lucy cause her father to cast out both the innocent daughter and her doppelganger.

While the conclusion of the text ultimately works to destroy the radically changed structuring of society that has been created by the old woman’s power, the text nonetheless insists upon the supreme authority of that power.

As old Bridget Fitzgerald curses the hunter for the death of a dog, she articulates an alternate form of justice. In the world of the hunter, shooting a defenseless pet is shameful and perhaps dishonorable, but no more than that. Bridget, however, insists upon an alternate conception of morality. She requires the life of a living person as payment for the death of her pet. While the hunter judges the dog by its intrinsic worth, which is minimal, Bridget insists upon an alternate scale: she measures the dog by its relative value to her and condemns the hunter to lose something similarly valuable. She insists upon the equality of their losses: in equating the loss of her beloved companion to the loss of his beloved companion, she asserts her equality to the hunter and assumes her right to act as his judge and punisher.

Bridget Fitzgerald is as superfluous as her dead dog in the privileged masculine world of the hunter. She is old, and since the family she served has died, is no longer useful. She is foreign. She is poor. She is an unattached woman in a patriarchal society. But Bridget has access to an alternate and unexplained power. Although Bridget is devoutly religious, the power she wields is something different—something more—than religious power. The text repeatedly suggests that Bridget is a witch: she is called “the old witch at Coldholme”; the unnamed narrator recalls “the strange New England cases,” referring to the Salem witch trials, when describing the power she wields. The narrative shrinks from absolutely attributing the power of witchcraft to her—likely because of her ultimate reclamation into the patriarchal structure.
of the church—but her power remains unattributed and unexplained.

Father Bernard, a priest who hears her confession in Antwerp and in England, attributes Bridget’s alternate power to evil: “I learnt enough of Bridget’s character to be convinced that I had to do with no common woman; one powerful for good as for evil”. Father Bernard’s condemnation of her power is as biased as it is uninformed—the power she wields is seen as dangerous only because it operates independently of the institution he represents.

The alternate form of power that Bridget utilizes creates an alternate Lucy. Bridget’s granddaughter is the true subject of the curse that Bridget casts on the hunter. The curse transforms Lucy from the pampered and adored daughter of an important and powerful man into a wanderer and an outcast. Gaskell describes the narrator’s discovery of the alternate Lucy in vivid terms:

Just at that instant, standing as I was opposite to her in the full and perfect morning light, I saw behind her another figure—a ghastly resemblance, complete in likeness, so far as form and feature and minutest touch of dress could go, but with a loathsome demon soul looking out of the gray eyes, that were in turns mocking and voluptuous. My heart stood still within me; every hair rose up erect; my flesh crept with horror. I could not see the grave and tender Lucy—my eyes were fascinated by the creature beyond. I know not why, but I put out my hand to clutch it; I grasped nothing but empty air, and my whole blood curdled to ice. For a moment I could not see; then my sight came back, and I saw Lucy standing before me, alone, deathly pale, and, I could have fancied, almost, shrunk in size.

Bridget’s curse creates a double Lucy, one not governed by the societal dictates that demand the blushing and shy demeanor of the original Lucy. She is identical to the first, apart from the “mocking and voluptuous” eyes which terrify and repel the male narrator of the story. He loves the original Lucy, who has “grey, trusting eyes” and a shy, retiring manner; he is horrified by the other Lucy.

In describing the double Lucy’s eyes as mocking and voluptuous, the narrator indicates that Lucy is drastically removed from the ideal Victorian woman—rather than occupying the position of hearth-saint, supportive and pure, this Lucy challenges the narrator’s assumptions about femininity and, by extension, his framework of masculinity. As her eyes are mocking, she critiques his masculinity; as her eyes are voluptuous, she insists that she has sexual desires of her own. In reframing herself as a desiring and critiquing entity, she ignores the limits placed on by her gender. Helena Michie (1999) describes the Victorian conception of the structure of gender:

While, for example, medieval and early-Renaissance cultures organized men and women along a vertical axis according to their distance from God, the Victorians organized gender difference horizontally, where men and women were seen, not as part of a continuum, but as polar opposites where everything that was defined as not masculine was by definition feminine, and vice versa. (409)

As the second Lucy drastically expands the definition of what a woman can be, the narrator’s idea of himself is implicitly contracted. He reacts to this change with revulsion and an instant attempt to reassert himself. After the second Lucy disappears, he describes the original Lucy as “pale... [and] almost shrunk in size” Subsequent appearances of the second Lucy provoke escalating feelings of violence and fear in the male narrator.

The double Lucy’s existence and actions are shocking to the narrator and to her father. The first revelation of the second Lucy is at her father’s home, when the original Lucy is accused of destroying the tulip bulbs her father had brought back from Holland. When she vehemently denies the action, he reiterates, saying he had seen “delighting in such wanton mischief—dancing over the tender plants in the flower-beds, all set with the famous Dutch bulbs he had brought from Holland?” In her exploration of tropes of motherhood and mothering through Bronte’s Wuthering Heights and Burnett’s The Secret Garden, Anne Krugovoy Silver (1999) explained the connection between the Victorian ideal woman and gardening.

[The] garden/motherhood analogy would have been familiar to her Victorian readers because gardens, as part of women’s private domestic sphere, were conceptualized as female spaces in nineteenth-century England. Consequently, the activity of gardening was considered a suitable outlet for women’s intellectual and imaginative capabilities. The author of The Young Lady’s Book [an instructional deportment guide published in 1876], for
instance, recommends gardening and botany to young women because “there is something peculiarly adapted to feminine tenderness in the care of flowers”. The association between gardening and femininity was prevalent enough in the vocabulary of the day for John Ruskin to title his tract on woman’s place in society “Of Queens’ Gardens” and to urge women to look beyond their little fenced-in gardens and “rose-covered wall” to the larger garden of England” (195).

The alternate Lucy dramatically illustrates that she is looking beyond the fenced-in gardens—as she destroys what she is supposed to be cherishing, she places herself outside the assumed construction of her gender and thus outside the protective framework of her class.

The alternate Lucy is overtly aligned with the serving classes: one of her father’s initial accusations is that she was unduly familiar with his grooms and had been seen laughing and talking with them in the stable yard; after her expulsion from her father’s house in disgrace, her old nurse is the only person who remains with her. As Lucy’s grandmother, Bridget, is of the serving class and her mother, Mary, was a maid before meeting Lucy’s father, the actions of the alternate Lucy actually serve to remove the privileged daughter from the patriarchal home and reinsert her into the working-class world of the mother.

As the alternate Lucy is shown to be associated with the working class, her sexuality is immediately more apparent than in the original Lucy. Her sexuality, though, instead of operating as a weapon with which she can be threatened and constrained—as is typical—operates as a tool which she can utilize. The appearance of the second Lucy, menacing and with a violent look, saves Lucy from a threatened beating from her father. The condemning narrator is terrified by the voluptuous eyes of the alternate Lucy, and as the two become mingled in his thoughts, of the original Lucy. As the text subversively links Lucy’s increased power to the revelation of an alternate version of Lucy, one not subject to the Victorian construction of proper femininity, it suggests the restrictive construction of gender is at fault, not the “evil double” Lucy.

Bridget utilizes this alternate logic of justice to judge the hunter’s actions, one not constrained by patriarchal structures. She creates an alternate framework of gender in utilizing her unexplained power to create a second Lucy. This alternate Lucy is then reinstated into the matriarchal line, becoming as powerful and as feared as her grandmother Bridget.

3. Conclusions

Despite the consistent efforts of the three patriarchal structures of society at work in the story—the rationality of the law, represented by the unnamed narrator/lawyer, the conventions of the church, and the requirements of the father—Bridget herself is the only one powerful enough to create or destroy this alternate definition of gender. Within the story, Bridget pities the original Lucy, who continues to view the alternate Lucy as a threat, and works to lift the curse. But in suggesting that women could access increased personal autonomy by utilizing their presumed tie to the spiritual realm, the story insists upon a reimagination of the presumed limits of the gender.

References


Jane Austen and the Housing Crisis

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Abstract — In the past five years, an explosion of "Austenmania" in literature and film has recreated Jane Austen for a modern audience. Laura Viera Rigler’s Confessions of a Jane Austen Addict (2008) and Dan Zeff’s film Lost in Austen (2008) throw female characters loosely resembling Austen and her heroines into romantic plots with Darcy-like figures. On the surface, many of these texts appear to fulfill simplistic heterosexual narratives and rags-to-riches fantasies, but they suggest a more complex correspondence between sexual desire and economic volatility, a relationship that clearly intrigued Austen. In Austen’s most enduring love story in Pride and Prejudice, Elizabeth Bennett only realizes that she has made a mistake in refusing Darcy’s proposal of marriage when she first sees the magnificence of Pemberley and all that she has lost financially in refusing Darcy’s proposal: “at that moment she felt that to be mistress of Pemberley might be something!” (245). Passages like these that express anxiety about homes and homelessness have special meaning considering Austen’s personal domestic instability and the worldwide housing crisis that coincides with these twenty-first century revisions of Austen’s themes. Instead of upholding compulsory heterosexuality and female longing for a traditional Darcy-esque masculinity that is authoritative, powerful, and antagonizing, both Austen and the modern revisions ultimately emphasize women’s desire for economic security and a home of one’s own.

Keywords — Jane Austen, Economics, Marriage, Housing Crisis

1. Introduction

The twenty-first century resurgence in all-things-Austen fueled by Becoming Jane (2003), The Jane Austen Book Club (2004), Pride and Prejudice (2004), and Pride and Prejudice and Zombies (2009) parallels a revival of the Regency Romance. Of course, Regency Romance as a genre is nothing new, and, as Deidre Lynch, Suzanne Pucci, and others have explained, neither is the Janeite’s fanaticism with Austen. But a large portion of recent Austenmania—evident in Laurie Brown’s Hundreds of Years to Reform a Rake (2007), Alexandra Potter’s Me and Mr. Darcy (2007), Laura Viera Rigler’s Confessions of a Jane Austen Addict (2008), Gwyn Cready’s Seducing Mr. Darcy (2008), and Dan Zeff’s film Lost in Austen (2008)—expresses a distinct interest in combining the magic of science fiction with the plot and manners of the sentimental novel, and I want to consider why this narrative of a twenty-first century woman whisked back to the early nineteenth century to fall in love with a Darcy-like character resonates so much with readers today. Why time travel? Why Darcy?

Nostalgia seems too easy an answer. Brandy Foster recently argues that “[n]ostalgia seems to be an inadequate impetus for the explosion in Austen-related fiction” and theorizes that the widespread “pimping” of Austen says as much about us as it does her. Lynch concurs, “The orientation toward the past…should not therefore be condemned as testimony to our nostalgia…rather, it evidences our desire to reactivate the past in ways that empower us to revise the future” (Introduction 6). Foster and Lynch direct scholars to identify what concerns about today—or concerns for the future—push us into the past. Thinking about the latest Austen craze and the current housing crisis—largely created by a combination of romantic rags-to-riches fantasies of homebuyers and rakish, predatory practices by lenders—I feel compelled to consider the correspondence between sexual desire and economic volatility, a relationship that clearly intrigued Austen. Even in Austen’s most enduring love story, Elizabeth Bennett only realizes that she had made a mistake in refusing Darcy’s proposal of marriage when she first saw the magnificence of Pemberley and all that she had lost financially in refusing Darcy’s proposal: “at that moment she felt that to be mistress of Pemberley might be something!” (245).

Passages like these that express anxiety about homes and homelessness have special meaning considering Austen’s personal domestic instability and the worldwide housing crisis of the early twenty-first century. Instead of exemplifying compulsory heterosexuality and female longing for a traditional Darcy-esque masculinity that is authoritative, powerful, and antagonizing, these texts ultimately reveal desire for economic security and a home of one’s own.
2. Jane Austen and Home

Such desire is not without its own problems. Most Regency women, and men too, were not home owners. As Edward Said notably charges, interwoven systems of primogeniture, classism, and imperialism propped up the estates of Netherfield, Mansfield, and Pemberley, insuring that the happy endings of Elizabeth Bennet, Marianne Dashwood, and Emma Woodhouse would not be for everyone (80–97). Because of the law of coverture, married women seldom owned property. Estates that women brought with them into marriage became their husbands’ property to manage as they wished, and not until the Married Women’s Property Act of 1882 could wives possess and control their own separate property. Austen herself never enjoyed being mistress of her own home, though her brother’s generosity eventually afforded a degree of stability when he allowed her, her mother, and her sister Cassandra to live in his cottage at Chawdon. Austen’s novels are plagued with anxiety over homelessness: the Dashwoods are evicted from their home at Norland, the Bennets live under the threat of losing Longbourn to Mr. Collins, Fanny Price’s home is so wretched that she doesn’t want to return, Anne Elliot’s family must rent Kelly Lynch Hall and live in cheaper housing, and Jane Fairfax almost stoops to living as a governess in someone else’s home before her timely marriage to Frank Churchill. Even in the twenty-first century, the dream of being “Lost in Austen” is denied to many. In Zeff’s Lost in Austen, when Amanda Price urges her roommate Piranha to visit nineteenth-century England for ten minutes, Piranha promptly declines: “Amanda, I’m black.” Lynch admits, “[i]n certain contexts, to some observers, Austen loving looks symptomatic of a bad case of cultural cringe: the activity of a not-yet-decolonized mind” (Introduction 13).

Nevertheless, Austen remains associated with home. In her essay “At Home with Jane Austen,” Lynch details the complex manipulation of Austen by writers like Rudyard Kipling during the interwar period so that Austen assumed a mythic association with the very concept of home. Not only was Chawton marketed as the quaint ideal of English rural life, but Chawton and Austen herself were also annexed as valuable real estate in the construction of a modern English identity. In Kipling’s 1924 story “The Janeites,” Austen’s novels remind British WWI soldiers of what they are fighting for in the trenches; they are Janeites because they believe Austen embodies the comforts and stability of their homes (Lynch, “At Home” 169–70).

Readers of romance novels might appear to be different than Kipling’s soldiers, and indeed, in some ways, they are. Twenty-five years ago, Janice Radway explored the gender and class characteristics of romance readers, “middle-class women are book readers because they have both the necessary money and the time. They have the time, certainly, because, until recently, social custom kept them out of the full-time paid labor force and in the home where their primary duties involved the care and nurture of the family and, in particular, children” (45). Although Radway acknowledges that not all romance readers fit into this category, she suggests that, in 1984, the majority of them did (45). Twenty-first century readers of Austen spinoffs and fan fiction remain predominantly women, but their social roles have changed dramatically. Few middle-class women can afford to stay at home and “care and nurture” the family without outside employment. Moreover, many current readers, like the heroines in the romances, are, like Austen, single, smart, and—most importantly—struggling to survive financially. What unites modern Austen fan fiction readers and Kipling’s soldiers is the similar sense of siege to an idealized domestic fantasy. Darcy and the broader sentimental marriage plot are means to a bigger end: financial security embodied in home ownership.

Jody Shenn of Bloomberg news reports that nearly half of American homeowners with mortgages will be “underwater” by 2011. And R. M. Schneiderman details for The New York Times the psychological fallout of the housing crisis and quotes a managing director at Barclays bank, “Many of our clients and colleagues have not moved past the crisis psychologically,” he said. “We are experiencing a financial version of post-traumatic stress disorder.” The psychological stress of foreclosure, of being “upside down” in a mortgage, and of possible homelessness is disproportionately in the latest crisis. Even before the international housing crisis, economists documented a significant gender gap in homeownership. According to a 2004 study, women were less likely to own homes than men, those who did own homes owned ones of less value, and women had less equity in their homes than men (Sedo and Kossoudji). This inequity has only been exacerbated over the last few years. Women who own homes, who rent homes, and who aspire to own homes have suffered anxiety as the result of dramatic upheavals in the real estate market. Women who twenty-five years ago would
have already been drawn to Regency romance today have added interest in the not-so-fringe benefits of the sentimental marriage plot.

3. Conclusions

In the recent literature of Austenmania, as in Austen’s day, goals of home and husband become slippery, confused, and interchangeable in rapid fire postmodern, postfeminist exchanges. In Rigler’s Confessions, the main character Courtney Stone/Jane Mansfield, a self-described “working class girl from Los Angeles by way of Long Island [who] definitely does not have a fancy British accent,” is keenly aware of her reenactment of Elizabeth Bennet’s thoughts and desires: “As we round a curve in the road, Mrs. Mansfield nudges me and raises an eyebrow, and a monumental house is revealed. It’s Pemberley, for God’s sake” (119). Courtney/Jane acknowledges how closely her fantasies of being mistress of an estate are tied to her desire for Darcy, and the novels reveal some latent feminist guilt in the prostitution of self for financial reward. When Courtney/Jane finds herself enjoying the Regency’s low expectations for women’s intelligence, she self-deprecatingly admits, “And yes, I’m aware that said self-assurance is purchased with ignorance and sexism. I am a sell out. I might as well be one of those complacent veiled women from The Handmaid’s Tale” (58). And, when she is experiencing an “off again” moment with her Darcy figure, Edgeworth, she expresses clear frustration with the sexual double standard and subordination of women in early nineteenth-century England: “How could I have romanticized this world? A world where a woman’s place, substandard as it is, hangs by a thread. Where a man, even a man like Edgeworth, would be...turned off by the thought of my rendezvous with James” (222). But, by the end of the novel, Courtney/Jane is fully assumed into her nostalgic nineteenth-century identity. Lost in a kiss with Edgeworth, Courtney/Jane describes “there is no thought, no struggle, no doubt. Only surrender and an eternal laugh of unfettered joy. And in that moment I am home” (294). Man and home blur just as Courtney has fused her identity with Jane’s.

As fantasy, this homecoming indulges multiple desires. Courtney/Jane gets Edgeworth, she gets the mansion, through marriage she gets permission to be a sexual creature, and thus her conflicting identities are united. Edgeworth proposes, “I want to marry you...On your terms, Jane. With all the freedom you want” (283). She no longer has to wonder if she is Courtney or if she is Jane, since she has replaced both identities with the new appellation Mrs. Charles Edgeworth. Although Mrs. Edgeworth seemingly has addressed much of her postfeminist guilt, her conclusion to her story complicates more than it resolves. She explains, quoting liberally from Austen, I cannot clearly state how any of this came to be, not the stories of the woman, not the love I have for my husband. Perhaps, as my favorite heroine in my favorite novel said, It has been coming on so gradually, that I hardly know where it began. I certainly owe no thanks for my present happiness to my mother, whose mercenary intentions nearly worked against my seeing Charles’s true worth, at least at first. But who knows? Perhaps if I were to be absolutely honest with myself, I would say, I believe I must date it from my first seeing his beautiful grounds at Pemberley. How I laugh every time I read those words. (287)

Reading Mrs. Edgeworth’s laughter is difficult at best. Is this the Cixousian laughter of a woman who has found a way to transcend the masculine paradigm? Or is this the cynical laughter of a Regency Fanny Hill who knows she has negotiated the sexual economy to her advantage?

Ironically, a home of one’s own was as likely in 2007-2009 to be the cause of economic instability rather than stability. Millions of Americans found themselves stuck in homes they need not need with mortgages they could not afford. Austen does not oversimplify homes in her novels. Pemberley is a myth, just as Darcy and Mr. Knightly, and Austen speaks with tongue in cheek when she says, “IT is a truth universally acknowledged, that a single man in possession of a good fortune must be in want of a wife.” But perhaps readers and viewers of Regency romances do not want irony, or history, or feminism. I do not believe that they really even want Darcy. These texts rely on a willing suspension of belief of our understanding of what is true and what is myth as they give their audience what they really want: a home and financial security once believed to accompany it.

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References


Abstract — Wuthering Heights by Emily Brontë is a novel that, despite being the focus of abundant critical feminist analysis, largely ignores the character of Isabella Linton. Academics have been appallingly neglectful and even disdainful of furthering the discourse about the character of Isabella Linton. In 1851 the Eclectic Review called her, “one of the most silly and credulous girls that fancy ever painted,” and this perception of her is still the prevailing attitude towards her character, despite this review being written a hundred and sixty years ago. There are a few critics who have been willing to acknowledge her role as a foil to Catherine Earnshaw, but only in a dismissive way that serves to emphasize her inferiority to Catherine. Isabella and Catherine do parallel each other notable ways over the course of the novel, but these associations serve to paint Isabella, not Catherine, in a more positive light. In this paper, therefore, the manifest inferiority of Isabella is questioned, and careful analysis delves into the ways in which she is more worthy to be called a heroine. Emphasized are the ways that she does, indeed, act as a foil to Catherine Earnshaw, but not to illustrate Catherine’s superiority. Her increasing maturity serves to parallel the decline of Catherine who, arrested in her development to adulthood, withers under the control of the male patriarchy. It is Isabella, driven by dire circumstances that cause her to become disillusioned with the control of the male system, who gains the maturity that Catherine lacks and, in a daring escape, flees the two symbolic institutions of the male patriarchy: the repressive state apparatus as embodied by Wuthering Heights, and the ideological state apparatus embodied by Thrushcross Grange.

Keywords — Emily Brontë, Wuthering Heights, Victorian, Feminist Criticism, Patriarchy

1. Introduction

The relationship between Isabella and Catherine is markedly more complex than most critics acknowledge. Critic Judith Pike, who writes a stunning defense of Isabella Linton’s character, laments the fact that Isabella is often misrepresented in academia as merely, "a foil to Catherine and an instrument of revenge for Heathcliff" (352). Essential Literary Terms describes a foil as, "a character who contrasts with the protagonist in ways that bring out certain of his or her moral, emotional, or intellectual qualities" (131). By this definition one could argue that Isabella is a foil to Catherine; however, instead of highlighting Catherine's positive character traits, Isabella emphasizes the ways that Catherine languishes in arrested development, falls short of achieving character growth and never becomes an admirable heroine. In contrast, Isabella is representative of daring feminist rebellion: an abused wife who flees from her husband, during her pregnancy, in the early nineteenth-century: a time so dominated by patriarchal control that the law would have been on the side of her abuser. Had Heathcliff chosen to follow her she would likely have been subjected to disgrace and public censor for her act, and she would have been returned directly to his control or even have been denied contact with her child. It is ironic that is commonly Catherine who is lauded for her daring and bravery when the bravest act of the novel is, undoubtedly, the escape of Isabella.

2. Similarities

Part of what makes Isabella such a good foil to Catherine, capable of bringing Catherine’s failings into the light, is that their lives seem to mirror each other’s to a profound degree. Indeed, for all that readers and critics seek to emphasize the differences between Isabella and Catherine, they are portrayed to be strikingly similar. Both Isabella and Catherine grow up in male dominated spheres of influence: the houses of Thrushcross Grange and Wuthering Heights. Both houses represent different aspects of the patriarchy. To borrow apt terminology from Althusserian Marxism, the two houses are, respectively, examples of patriarchal ideology (Thrushcross Grange) and repressive patriarchy (Wuthering Heights). Catherine who grows up at Wuthering Heights, is motherless and is described in her girlhood as a, "wild, wicked slip" (Brontë 51). She grows up with a reproachful father and resentful brother and is openly rebellious. After her father’s death her brother Hindley gains control over the house and becomes a tyrant.

Catherine soon searches for a way out of her brother’s household and comes to believe that marrying Edgar Linton will bring freedom from
tyrannical male control. She explains to Nelly Dean her motives for marrying him are because, "he is handsome, and young, and cheerful, and rich, and loves [her]" (Brontë 95). Catherine wrongly assumes that Edgar will be pliant to her whims. She desires Edgar Linton and Thrushcross Grange because it is seemingly a seat of empowerment for her, everything that Wuthering Heights is not. This hope, however, soon proves itself to be false. Catherine finds that behaving properly is too difficult a task for her to maintain. Accustomed to fighting against the forces of overt and harsh male control, she finds that she is ineffectual in dealing with the seemingly polite but icy ideology that is so entrenched in Edgar Linton and Thrushcross Grange. Her attempts at rebellion are patronizingly humored at best and ignored at worst. In fact, it is her inability to deal with this form of "civilized" patriarchy that leads to her death. She refuses to eat, but her rebellion goes unnoticed by Edgar, its intended target. This hunger strike results in her falling into delirium and derangement of the mind that weakens her. Critic Abbie Cory states that Cathy dies, "because she is unable to exist in a world which will not allow her to live according to her rebellious impulses" (21). Joseph Carroll, too, notes that, "Catherine is torn apart by the irresolvable conflict between her childhood fixation and her adult marital relation" (253). Catherine even states that during the worst of her delirium, "the whole last seven years of my life grew a blank! I did not recall that they had been at all. I was a child" (Brontë 153). She retains this childlike state until her death, two hours after giving birth, and even beyond.

Isabella, on the other hand, is raised at Thrushcross Grange. The house is a bastion of patriarchal ideology and she, though described as spoiled and sheltered, was taught by her parents the societal standards regarding proper behavior and dictates she must obey at all cost. Isabella, however, is like Cathy in that she longs to escape her own upbringing for something she perceives is superior. Her girlish infatuation with Heathcliff is quite understandable: he seems to offer freedom, excitement, and passion: everything that she longs for after spending her life under the restrictive roof of Thrushcross Grange. Carroll describes the house of Thrushcross Grange as, "a pleasant, sheltered valley and inhabited by the Lintons, who are civilized and cultivated but also weak and soft" (243). Conversely, Carroll describes Wuthering Heights as, "rough and bleak, exposed to violent winds, and inhabited by the Earnshaws, who are harsh and crude but also strong and passionate" (243). Despite these superficial differences, both houses prove to be rather ruthless in upholding male dominion. After the death of their parents, the rule of Thrushcross Grange falls to Edgar who soon proves his capabilities of being spiteful when crossed, even to his own sister. When Isabella elopes with Heathcliff, he declares that she is, "only my sister in name: not because I disown her, but because she has disowned me" (Brontë 163). His claims that he is not angry at her are disingenuous when he who refuses to speak to her or acknowledge her despite knowing she married someone he knows as a violent, "villain" who nurses a desire for revenging himself on Edgar (181). He knows that she has made a bad choice, one she must soon regret, but still will not offer her any solace, or even seek any measure of securing her safety because of his anger at her disobedience. Edgar Linton’s disdainful manner of shunning what does not meet his expectations has already done irreparable damage to his wife, and now he is inflicting the same punishment on his sister.

After their ill-conceived marriages, both Isabella and Catherine are imprisoned in unfamiliar patriarchal jails. Catherine’s may be a gilded cage, but Isabella’s is shockingly violent and merciless. The letter she writes to Nelly Dean recounts her experience in the house of Wuthering Heights and puts forth some very illuminating queries: "How did you contrive to preserve the common sympathies of human nature when you resided here?" and "Is Mr. Heathcliff a man? If so, is he mad? And, if not, is he a devil?" (167). After recounting a welcome to the house that would be terrifying, even to someone who has not been sheltered and privileged throughout her life, Isabella confesses that her new husband is, "ingenious and unresting in seeking to gain my abhorrence! I sometimes wonder at him with an intensity that deadens my fear; yet, I assure you, a tiger or a venomous serpent could not rouse terror in me equal to that which he wakens" (178). She also has no one she can turn to for help, her brother has abandoned her completely for her disobedience, and Heathcliff assures Nelly Dean that, despite his hatred of Isabella, he intends to, "keep strictly within the limits of the law. I have avoided, up to this period, giving her the slightest right to claim a separation" (186). It should be noted that even if she were to show signs of overt physical abuse against her person, the law would not be much help to her. He is well within his rights to imprison her within the house, as he has done, on the claim that her degradation of appearance reflects poorly on himself. He also has the right, as her husband, to claim unlimited access of her body, whether or not she wishes it. She manages to escape from Wuthering Heights, early in pregnancy, and since there is absolutely no
indication that she would have been a willing participant in sex, the text implies marital rape. Nevertheless, she flees Wuthering Heights entirely and escapes into London, in an attempt to protect her child from his father and the merciless corrupting effect of the household.

3. Differences

The two responses to impending motherhood are quite dissimilar between Catherine and Isabella. Isabella flees, while pregnant, and raises her child as a single mother. In this sense, she has entirely left the oppression of the two houses and has completely embraced adulthood: taking the role of the mother, and the father both upon herself. Catherine, however, is unable to achieve any semblance of adulthood. Following her illness Edgar is described as, "lavish[ing] on her the kindest of caresses" and "try[ing] to cheer her by the fondest words," as one might a child (165). Edgar's affection for her has been restored through her new dependence and childlike submission to him. Catherine even dies a mere two hours after giving birth-- symbolically denied the opportunity to take on adult responsibility (202). Isabella is, effectively, written out of the book after fleeing to London, but this is not a slight to her character. It symbolizes that she is beyond the reach of the dual patriarchal influence of ideology and repressive force. She maintains this freedom until her death roughly twelve years later.

Catherine, however, suffers an arrested development so complete that even in death she cannot escape it. She is fought over, like the object of a macabre tug-of-war between the two forces of the patriarchy. Heathcliff uses physical means to ensure his possession of her after death. He removes the hair of Edgar Linton from the locket and replaces it with his own (Brontë 207). Even more disturbingly, he later has her casket dug up and opened. He gets the sexton to remove a wall of the patriarchy's casket and gets him to promise to do the same to his and bury him alongside of her (354). Rather than escape the two oppressions, the ghost of Catherine remains wandering and, as evidenced by Lockwood, seen as, "a child's face looking through the window" and begging, "Let me in!" (30). No rational reader would argue that Catherine, not Isabella, has the better fate. She is doomed forever to be a "waif" and will be eternally bound to Heathcliff and the patriarchy(30). Isabella, however, gains autonomy over her own life, and one would assume that she, upon her death, rests in peace.

4. Conclusion

The significant mistake that critics and readers alike make when evaluating the characters of Catherine Earnshaw and Isabella Linton in Emily Brontë's Wuthering Heights, is to pay too much attention to their beginnings and not enough attention to their ends. Catherine is a character lauded for her spirit and strength of will, and Isabella is a character reviled for her weakness and foolishness. These interpretations fail to acknowledge, however, that in response to the oppression of the patriarchy, Catherine purposely decayed and sought to recapture her childhood, whereas Isabella grew up and found the strength to escape. As Nelly Dean famously pronounced, "well, we must be ourselves in the long run" (112). During the long run, the course of the plot, both revealed their true natures: Isabella showed the strength of will to flee an abusive relationship and escape the confines of the patriarchy as completely as possible and Catherine, who exists as a mere echo of her potential, finds herself willingly tied to Heathcliff and the two houses of her oppression—eternally.

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