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MESSAGE FROM THE EDITORIAL BOARD

USC Upstate is proud to announce the publication of the first volume of the *USC Upstate Undergraduate Research Journal*. This Journal provides a glimpse into a few of the many high quality research activities conducted by the talented faculty at USC Upstate. The Journal is a compilation of outstanding papers from numerous disciplines submitted by undergraduate students who have been involved in faculty-mentored research, scholarly, and creative activities. Undergraduate students involved in faculty-mentored extra-curricular projects enter the work-force with an enhanced skill set, including better problem solving, critical thinking, and team-working skills. Since many students who are educated at USC Upstate stay in the region, support of academic research has a direct and positive impact on the Upstate.

We would like to express our sincere thanks to Stäubli for its generous funding of this first volume of the Journal. We would like to especially thank David Arceneaux, Joe Gemma, and Eves Stäubli. Many thanks also to Susan Hodge for her support in securing this funding. Such support from prominent regional businesses and organizations is greatly appreciated and essential for the advancement of academic research in the Upstate. Stäubli is a mechatronics solution provider with three dedicated divisions: textile machinery, connectors, and robotics. With a workforce of over 3000, the company generates a yearly turnover surpassing 1 billion Swiss francs. Originally founded 1892 as a small workshop in Horgen / Zurich, Stäubli today is an international group with its head office in Pfäffikon, Switzerland. To learn more, please visit www.staubli.com.

We would like to thank all the contributing authors for providing such a rich variety of outstanding research articles on a broad range of exciting topics. We also would like to thank Bridget Kirkland, Graphic Designer in the USC Upstate University Communications Department, for designing the outstanding cover of this volume of the Journal. Thanks also to Les Duggins for taking many of the pictures of the contributing authors. Finally, we would like to take this opportunity to thank Dr. Reginald Avery, former Executive Vice Chancellor of USC Upstate, who initially proposed the creation of this Journal.

If you have any questions or comments about the Journal, or would like to receive a printed copy of the most recent volume of the Journal, please contact Dr. Sebastian van Delden, (864) 503-5292, svandelden@uscupstate.edu. The Journal is also available online, please visit the following website: http://www.uscupstate.edu/ResearchJournal.

Enjoy!
The Editorial Board
THE EDITORIAL BOARD

Dr. Sebastian van Delden
Editor-in-Chief

Dr. van Delden is an Assistant Professor of Computer Science. His research interests include Natural Language Processing, Computer Vision, and Robotics. He has published works in the Language and Computers book series; The Journal of Data and Knowledge Engineering; The International Journal of Artificial Intelligence Tools; the Lecture Notes in Artificial Intelligence book series; and several others.

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Associate Editor

Dr. Carter is a Professor of Spanish. Her research interests include Latin American narrative and film, Afro-Hispanic literature, Latin American female writers, and US Latino/a literature. She has published works in Anuario de Letras; Latin American Literary Review; Caribbean Quarterly; The Rocky Mountain Review; Prismal Cabral; Studies in Afro Hispanic Literature; and several others.

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Dr. Lancaster is a Professor of Business Management. Her research interests include Operations Management and Statistics. She has published works in Interfaces; the European Journal of Operational Research; the Production and Inventory Management Journal; the Socio-Economic Planning Sciences Journal; and several others.

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Associate Editor

Dr. Elnagar is a Professor of Mathematics. His research interests include Optimal Control Theory in Climate Modeling and Economic Applications, and Numerical Solutions of Nonlinear Conservation Laws. He has published works in the following International Journals: Computer Mathematics; Numerical Functional Analysis & Optimization; Computational & Applied Mathematics; Differential Equations & Applications; and several others.
**Alumni Spotlight**

**Dr. Jason Clark** graduated in May 2000 from USC Upstate with a B.S. degree in Biology and also a B.S. degree in Chemistry. Dr. Clark went on to graduate school at the University of Tennessee Knoxville where he graduated with a Ph.D. degree in Chemistry in December of 2005 with a research focus on heterogeneous catalysis. During Dr. Clark’s tenure at UT, he collaborated with scientists at Oak Ridge National Lab in the High Temperature Materials Laboratory and the Chemical Sciences Division using techniques such as electron microscopy and thermogravimetric analysis along with microreactor systems to study structural and reactive properties of nanostructured catalysts. He also spent time at Argonne National Lab at the Intense Pulsed Neutron Source and the Advanced Photon Source using scattering techniques to probe local structure of these materials. Currently, Dr. Clark is a research chemist at Süd-Chemie, Inc in Louisville, Kentucky where his responsibilities include research and development of heterogeneous catalysts to be used in the dehydrogenation of ethylbenzene process for the manufacturing of styrene monomer. Dr. Clark has numerous publications in peer-reviewed research Journals, including Chemistry Today, Chemistry of Materials, The Journal of Organometallic Chemistry, The Journal of Material Chemistry, Chemical Communications, and others. “I would like to thank the entire faculty in the chemistry department at USC Upstate for their dedication and patience. The knowledge I gained at USC Upstate provided the foundation in chemistry necessary to continue in the field. This fundamental knowledge I gained at this university has been invaluable to me in my career in science. I would especially like to thank Dr. Lawrence Moore, Dr. Jack Turner, and Dr. Christopher Bender.”

**William Pressly** graduated in May 2005 from USC Upstate with a B.S. degree in Computer Science. William is currently pursuing a Ph.D. degree in Computer Science at Clemson University where his research is in the area of Applied Algorithms. Along with his Ph. D. advisor Dr. Brian Dean and Dr. Jon Halford, a clinical Neuroscientist and Assistant Professor at MUSC, William is currently studying methods for speeding up algorithms that employ Independent Component Analysis for automatic diagnosis of Epilepsy from EEG scan data. The goal of this work is to improve the estimated 20-30% miss-diagnosis rate of epilepsy. William is also involved in several other research projects including an investigation into an automated bug-finding system that uses Linear Algebra based techniques borrowed from Bioinformatics, and a study of methods for Optimal 1D clustering after using Principle Component Analysis on a dataset. Although early in his publication career, William has already co-authored three articles, and is currently working on three more. “I was especially happy with how accommodating USC Upstate faculty and staff are in regards to working professionals. Being an older student (28 when I started), I had certain needs, especially in regards to scheduling classes with my work schedule, that I thought the university did a great job with. My experience at USC Upstate also lead directly to a job locally at QS/1. I found the Computer Science department to be enthusiastic and supportive, and would especially like to thank Dr. Jerome Lewis, Dr. Dan Cooke, and Dr. Sebastian van Delden for their insight and guidance.”
HONORS STUDENT SPOTLIGHT

Katie Pruiksma is an outstanding Honors Student at USC Upstate majoring in Biology. While at USC Upstate, she has been the Vice President of the Gamma Beta Phi Honor Society, an Honors College and Honors Executive Council member, an Orientation Leader, a Research Assistant on several different projects, and also a Research Intern at the Orthopaedic Research Foundation of the Carolinas. She has volunteered for the Special Olympics, the Greenville Literacy Association, the Piedmont Region III Annual Science Fair, and two schools for special needs children: McCarthy Teszler School and SOAR Academy. Katie plans on continuing on to graduate school at MUSC where she will focus on Occupational Therapy. The Honors Program at USC Upstate provides an enriching educational opportunity for motivated students committed to academic excellence by offering a challenging curriculum of honors courses, exciting seminars, student-faculty conversations, extracurricular activities and other honors opportunities. For more information please contact Dr. Thomas McConnell. (864) 503-5681, tmcconnell@uscupstate.edu, or visit http://www.uscupstate.edu/honors.

GRANT WRITING SPOTLIGHT

Universities benefit tremendously when their faculty members are awarded external grant monies for research or service projects. Applying for grant opportunities is a very time consuming and tedious process and often times goes unrewarded since most opportunities are highly competitive with only a small percentage being funded. Grant monies are often used to support student research assistants and thus can have a very positive impact on a student’s academic experience. We would like to congratulate all USC Upstate faculty members who have recently been funded, and take this opportunity to spotlight someone who has been particularly successful in such endeavors, Dr. York Bradshaw.

Dr. Bradshaw has a long history of acquiring major grants. Before arriving at USC Upstate, he won large awards from the U.S. Department of Education, the U.S. Information Agency, the Ford Foundation, and the Rockefeller Foundation. Two years ago, while at USC Upstate, he wrote a major grant to the U.S. Department of Housing and Urban Development (HUD), to establish a "Community Outreach Partnership Center" (COPC) on campus. In November 2005, USC Upstate was one of only 13 universities in the country to be awarded this grant (along with MIT and some other major universities). The three year award was for $400,000, and various organizations in Spartanburg committed an additional $1.5 million to the numerous projects associated with the grant. The COPC grant has improved health, education, and community development across Spartanburg, and it also has included more than 1,200 USC Upstate students in service-learning projects! In collaboration with the ReGenesis Community Health Center and others, Dr. Bradshaw was also instrumental in recently acquiring a $250,000 “Healthy Living Initiative” grant from the State of South Carolina where $75,000 will be used to directly support a variety of faculty-driven research projects. This money will facilitate the expansion of many outreach activities into the community.
COLLABORATIVE WRITING: AN AUTOETHNOGRAPHIC STUDY OF CO-AUTHORSHIP

Abstract. There is a split in the academy with regard to collaborative writing. The benefits, such as increased productivity, differing points of view, and experience in the world of academic writing and publication for students and junior faculty seem to outweigh the drawbacks insofar as there are any. Some would argue that multi-vocal texts can be problematic because they demand contributors to share ideas and thus authorship, which may be a point of contention for some, particularly when the authors are not among equal professional standing as primary authorship is valuable by the academy with regard to tenure and job interviews. However, during the collaborative composition of "Transgender Nation: Crossing Borders and Queering Space in Transamerica" published in English Language Notes, Dr. Peter Caster and I negotiated several of the dilemmas commonly associated with collaborative writing, some of which were more specific to our particular relationship.

As an undergraduate student and an Assistant Professor, ours was a collaboration which could have been compromised since we did not have the same experience or level of expertise. However, despite doubting the significance of my participation and undervaluing my input, the project solidified my worth as a writer and scholar. The project and my own professional development were better in the end for having collaborated on this article, thereby proving via personal experience and additional research that multi-vocal texts are, in fact, invaluable in both their production and reception.

Keywords: Composition Studies, Collaboration, Co-Authorship, Undergraduate Research

Allison Andrew. Dr. Caster approached me with the idea of co-authoring an article on the film Transamerica. That work introduced me to a whole new level of academia that far surpassed anything I could have learned in a class. However, the thought of working with someone so experienced was daunting at times, but in the end the process helped me make valuable contributions. In writing this article I was able to re-visit the entire process of composing the Transamerica piece. In doing so, I again realized the importance of working with someone and the benefits of co-authorship, but at the same time found that one of the most profound outcomes of this entire project was finding my own voice. I am currently working on my M.A. at Clemson and plan to apply to Ph.D. programs after that. I think that in choosing a career path that will require publication the information on the benefits of collaboration I gained while writing this article will prove invaluable.

Dr. Peter Caster. Dr. Caster is an Assistant Professor of English and has been at USC Upstate since 2005. His research areas include race and gender in U.S. literature and film. He earned a Ph.D. from the University of Texas at Austin and has published articles in several journals and books, including English Language Notes, The Drama Review, Papers of the Bibliographic Society of America, and Technology in the College Classroom. He has also published a book entitled Prisons, Race, and Masculinity in Twentieth-Century U.S. Literature and Film with The Ohio State Press and presented at numerous peer-reviewed international and national conferences. Dr. Caster is originally from California and also has lived in Oregon and Texas. In his spare time he enjoys rock climbing.
I. INTRODUCTION

Writing can be an act of self expression, and even when the genre is academic rather than creative, authors must still choose a topic and a way to approach that topic. This is often based on what they think or feel is important, necessary, or intriguing, but can be complicated when there is more than one author. Collaboration in composition may be beneficial to both authors and the final outcome, but it can raise specific questions of power, authority, ownership, and publication credit. These issues are particularly relevant when the contributors are not at equal stages of their academic careers. Collaboration between students and teachers or junior and senior faculty serves particular purposes for all involved but should be approached carefully so as to guard against the aforementioned complications. When students work closely with their professors, it can be an invaluable experience. As Sandra Stith [1] notes in her own coauthored article, “Collaborative research allows students to learn one-on-one from faculty about research and publication, providing an invaluable supplement to classroom learning”. As an undergraduate having had this experience, I can echo her sentiments. Writing a paper for a class with the intention of receiving a grade and working on an article with the hopes of publication are two very different experiences. However, with increasing expectations of academic publication for graduate students, they are not far apart on a continuum of development of professionalism.

Collaborative scholarship among non-peer groups can be problematic for both students and faculty; as a consequence, Stith’s research shows that “incomplete projects were a problem”. Students should be aware that “when collaborating with faculty, a student is highly vulnerable to exploitation” [1]. However, this should not discourage scholars from collaborating with their students or junior faculty. Geraldine Mcenny and Duane Roen [2] highlight the benefits for writers as well as for the academy in their 1992 article “The Case for Collaborative Scholarship in Rhetoric and Composition.” They express, “coauthoring articles and books with graduate students is an invaluable apprenticeship because it offers relatively painless entry into our field’s discourse community”. They also find that overall the practice “enriches the exchange of ideas within the university while encouraging an openness and a spirit of collegiality”. The openness and collegiality they speak of may account for the absence of personal conflict that occurred during the months of preparation and writing that went into “Transgender Nation: Crossing Borders and Queering Spaces in Transamerica,” since published in English Language Notes 45.2 (2007).

II. BENEFITS OF COLLABORATION

When I first learned of the possibility of writing this article, I was ecstatic. It was not until later that I began to wonder what I could possibly bring to the project that Dr. Caster, with his experience and Ph.D in English, could not. Not having collaborated beyond peer reviewing papers in class or addressing comments from teachers in the margins of my papers, both of which are collaborative acts according to Richard Gebhardt, James Reither, and Douglas Vipond, I was not aware that working with someone else is immensely beneficial for pragmatic reasons alone. Susan Leonardi and Rebecca Pope [3] explain some of the reasons when they inform readers of their own collaborative experience: “One thing that collaboration teaches you is that there is no last word on anything. Someone looking over your shoulder or over your draft is always going to find a better word or cross out your word entirely”.

McNenny and Roen comment on advantages found by others who had done collaborative scholarship. They recalled, “Fatigue never brought the project to a halt. When one was exhausted, the other picked up additional responsibilities”. Similarly, James Reither and Douglas Vipond [4] recollect being able “to accomplish things together that neither could have accomplished alone”. What is most common in the literature regarding collaboration among scholars is not that they need be from equal backgrounds or with equal credentials, but that they be able to work successfully together and remain respectful of one another and their respective ideas.

McNenny and Roen relate collaboration to a marriage. They find, “In a collaborative project, as in marriage, each member needs to respect each other, each needs to be committed to the project, and each needs to carry his or her share of the load”. These qualifications should illustrate the necessity in deciding with whom to work as a significant part of the collaboration process. While it seems obvious, several scholars have commented on coauthorship saying it “gives us the opportunity to work with people we like”. Leonardi and Pope take the relationship one step further noting that “[c]ollaborators are always in some sense lovers
and lovers always in some sense collaborators”. They also point out benefits of collaborative writing as a process because it allows participants to “share it with someone who (unlike most of the people you live, work, and play with) is as invested in the project as you are”. In a similar vein, working with someone you trust is equally important. Perhaps this is why, despite some apprehension on my part, my collaboration with Dr. Caster was so successful. We had a good working relationship and were both committed to the project.

I use the term “successful” here to mean far more than eventual publication of the article. The project was a success for what did not occur just as much as what did. Beginning with the paper’s inception and preliminary planning in November of 2006 to its final iteration and mailed revisions in November 2007, Dr. Caster and I experienced few of the problems commonly associated with collaborative writing. When small conflicts over authorship and manuscript details did arise, they were handled quickly and professionally. I feel these accomplishments were doubly significant insofar as we could have easily had complications, given our existing power dynamic. Though I was no longer Dr. Caster’s student at the time we began formally working on this article, the fact that I was an undergraduate and he a tenure-track professor at the same institution could have proven tricky to navigate. The original plan was for my name to appear first, and in early drafts it did. However, authorship is something that must be handled on an individual and evolving basis with regard to multi-vocal texts.

III. DIVIDING THE WORK AND DISTRIBUTING THE CREDIT

The vexed matter of authorial ownership is a common one in literature pertaining to the subject. Stith notes, “Determining authorship is more complicated than simply considering the quality and quantity of each contributor’s contribution”. Furthermore, agreeing upon what counts as a contribution can be problematic. Our article was originally intended to be jointly conceptualized, researched, but the ultimate execution was originally to be mostly mine. Wordsmithing and other refinements would be completed by Dr. Caster. However, our preliminary decision to order the names in this manner was less a matter of specific contributions to the project and more a pragmatic approach. As stated in “A Single Good Mind: Collaboration, Cooperation and the Writing Self”, “Collaborating authors often list their names in alphabetical order on publications in order to downplay differences of knowledge, power, or academic rank”[5]. Lisa Ede and Andrea Lunsford [6], who regularly work together, came up with more creative ways to work around one author's name appearing first. They found, “By crediting the first author as primary and the second and following authors as secondary, this practice denies the reality of collaboration such as ours”. They also reflect on imaginative solutions to the problem of publication credit: “We have even considered publishing major projects such as this book under coined neologisms, such as Annalisa Edesford of LisaAnn Lunede”. Though they finally chose to alternate the order of their names in different works, this approach is only commonsensical if collaborators work together regularly.

In the end, Dr. Caster and I felt that it was best if we changed our original plans for primary authorship. What began as an equal division of work in the planning stages, an intended fifty-fifty contribution in the brainstorming phase, had shifted somewhat in the execution of the project. I feared after writing a first draft that this number would drop to a much less suitable percentage, but once revisions were made on the second draft per the publisher’s request, I realized that in the end I contributed a much more respectable forty percent. Part of my initial hesitation was due to the narrow-minded view that if the words on the finished page were not mine, then I did not contribute. This, as literature in collaborative composition stresses, is completely inaccurate. Janet Miller [7] addresses this in “Exploring Power and Authority Issues in a Collaborative Research Project.” She writes, “It is important to note that ‘who writes’ is only one aspect of the issue of voice in narrative and autobiographical work”. Contributions cannot be measured in words alone; much of the preliminary stages of our article were, like many multi-vocal texts, verbal during the brainstorming stages. As Bill Karis states of his own findings, “as in many collaborative projects, spoken discourse was the primary medium for interaction among the collaborators, not written discourse”. So, just because certain words and phrases were cut from my original draft, it did not make the finished project Dr. Caster's alone.

Once the paper was in the final stages of revision, a close yet accidental textual analysis of the second draft and my initial one made it clear to me that despite minor changes to streamline our argument and emphasize our key points, much of my ideas had found their way into the article. During the final stages of the composition process, I realized that my earlier fears and concerns of not being able to contribute adequately
to the project were completely unfounded. Dr. Caster and I worked well together and, conveniently, had nearly identical ideals of how the project should look and what the paper should say. Our similarities were made most apparent during the revision process. At this point, we each took the essay and editor's suggested revisions and worked separately. Like all of our work, once we moved passed the initial discussion of the topic, we worked on our own and communicated electronically—an added benefit of doing collaborative scholarship in the information age.

Without consulting each other, we both made changes we felt would make the paper stronger and our argument clearer. Later, in a side by side comparison, we learned that many of our changes were identical and there was an even greater overlap with regard to the identification of sections we felt needed additional attention. Our tendency to re-write the same sections in like fashion illustrates a point made by Yancey and Spooner. They feel, "Collaboration carries with it the expectation of a singular purpose and a seamless integration of the parts, as if the conceptual object were produced by a single good mind". The fact that Dr. Caster and I identified the same portions of the paper and that our corrections in the final draft were nearly indistinguishable from one another made it hard to say for certain which one of us wrote any particular section. This occurs often in collaboration when a "reader is unable to tell from internal clues which chapters or sections were written by which authors". Our paper sounded and flowed as if it had been written by just one author, despite having been sutured in several places. Fortunately, these seams remained invisible.

It may have been our similar visions for the paper, equal devotion to the project, or that the topic was one which we both felt strongly about, but the fact that we brought equal amounts of rigor, enthusiasm, and drive to the endeavor proved to be key in our ability to work so well together. Respondents in one survey suggest that "collaborative research has less to do with ethics and more to do with personal interaction". As Stith's respondents stated, "it was our experience that similar levels of enthusiasm and responsibility far surpass identical levels of education and experience as preparation for successful collaboration". After consulting each other and discussing the changes we each felt the paper required, we made the alterations we agreed on. This stage of the collaborative process actually turned out to be very similar to peer-reviewing assignments in class or responding to a professor's comments prior to submitting a final draft. Both instances bring up the topic of what constitutes a multi-vocal text, as both activities could, when defined broadly, count.

**IV. Fine Line Between Co-Authorship and Plagiarism**

Collaboration can take many forms and its definition remains in flux. For instance, Heather Hirschfeld [8] posits, "Collaboration and collaborative authorship are the terms now used to designate a range of interactions, from the efforts of two writers working closely together to the activities of printers, patrons, and readers in shaping the meaning and significance of a text". This definition may be far broader than need be, as my own experience was a far more conventional form of coauthorship, but nevertheless, it illustrates the different ways in which the practice can apply. Hirschfeld’s point also raises the issue of what else falls in the ever-expanding category of collaboration. She argues that "[s]uch a wide definition of collaboration as any kind of cooperative endeavor behind a literary performance—opens the field or function of the author to a variety of other roles". Firmly situated at the intersection of cooperation and originality is plagiarism and copyright. Those who work together or endorse others, their students for example, to do so must remain cautious of the fragile boundary between collaboration and academic dishonesty.

Yancey and Spooner find that "at the same time composition teachers and scholars are promoting collaboration inside the classroom and out, our academic institutional structures continue to punish it as a dishonorable ‘giving or receiving help’". If the same process occurred during the composition of a term paper that took place between Dr. Caster and myself while working on "Transgender Nation"[9], it would be considered plagiarism. That said, it seems as though collaboration destabilizes the boundaries of original ideas and the ownership of words. To further complicate matters, John Trimbur’s has "presented a convincing argument that writers cannot claim sole ownership of ideas that they record on the page". In effect, all writing is a collaborative act, regardless of the extent to which it is deliberate. He continues to explain “that when we write we have others’ voices running through our minds. We draw on these voices freely when we write—even though we may not have explicit awareness that we are doing so”. Reither and Vipond make a similar declaration, "Both writing and knowing, we claim, are from beginning to end collaborative: they are things we do with others". Using this definition all writing that refers to class lectures or reading is in a sense
collaborative. The most significant difference between collaborative texts and term papers may be the number of authors listed at the top of the page.

However, learning and writing in a collaborative environment could affect the way in which we do them or even our motivations for doing them. That is to say, “we ‘establish knowledge or justify belief collaboratively by challenging each other’s biases and presuppositions’” [10]. By this definition, coauthorship pushes the boundaries of each independent scholar’s ability, likely improving the final project. Karis relies on Burke’s rhetoric to explain the process: “This blend of cooperation and competition, or perhaps more accurately, this competition which leads to cooperation, is the proper role for collaborations to play”. Why then are multi-vocal projects too often denigrated in the academy? Why do they not yet carry equal weight in the realm of scholarly productivity?

Ede and Lunsford have pointed out the degree to which collaboration is undervalued professionally and may not carry the same value as single authored texts with regard to career advancement. They note in “Collaboration and Concepts of Authorship” that “success in the academy depends largely on having one’s work recognized as an individual accomplishment”. This, of course, illustrates a blind spot in the academy, as “The very nature of scholarship sets up a complex dynamic whose richness infers the collaborative process”. Although collaboration is fruitful and inherent to scholarly projects, it is often de-emphasized by some who must focus first on meeting tenure requirements before having the time to devote to helping students or junior faculty. Respondents in Stith’s study echoed this common prioritization: “After my career had become well-established, I was much more generous about granting coauthorship and even senior authorship to those who worked with me or I with them”. Joseph Harris points out that collaborative projects can also be less valued at the professional level, “almost all the routine forms of marking an academic career—CV’s, annual faculty reports, tenure and promotion reviews—militate against [collaboration] by singling out for merit only those moments of individual ‘productivity’”. The academic privilege of independent scholarship prevents many students from having the same first-hand experience that I did. For this reason alone, the distinction should be changed, as working on “Transgender Nation” was one of the most meaningful experiences of my scholarly career thus far, especially in terms of experience and personal growth.

V. CONCLUSIONS

The benefits extended beyond a firmer grasp of the materials used in researching and writing the article to include first-hand knowledge of the publication process. Although it was Dr. Caster who received the original call for proposals, I was able to participate in each stage, providing me with invaluable information and experience—and one McNenny and Roen endorse. They write (together), “Collaboration with graduate students, as with other professionals, is an affirmation of the rich potential of our community in actively constructing a discipline that is multivoiced”. We were able to talk extensively about what we wanted the project to do, share research and drafts via e-mail, and then address the editor’s comments in a timely fashion without ever running into any of the problems that the available literature mentions. Perhaps this proves not that collaborative composition is necessary or the best way in which to do scholarship, but that choosing who you work with is as important, if not more so, than what one works on. I was fortunate enough to have the best of both worlds as Dr. Caster proved to be experienced and collegial, and our topic was one about which I was passionate.

However, the greatest benefit for me was recognizing that what I had to say was important, even when I was saying it with an accomplished academic to the broader audience of journal readers. What in the beginning of the project was anxiety became pride in its completion. I originally feared that I could be little more than an echo, merely repeated what Dr. Caster and others had taught me. However, through this writing process, which I originally felt might stifle my voice, did just the opposite: writing this article allowed me to hear and see myself as a scholar and to build the confidence in both my research-based writing and my sense of self that are so necessary in graduate school.
REFERENCES

PERSONALITY AND SOCIAL DIFFERENCES OF CIGARETTE SMOKING AMONG COLLEGE STUDENTS

Abstract. This study investigated the relationship between risk factors, personality traits, and cigarette smoking in 100 college students. All participants were administered the NEO Five-Factor Inventory personality scale (NEO-FFI) [1], the Balloon Analogue Risk Task (BART) [2], and a Demographics and Social Influences Questionnaire. It was hypothesized that 1) smokers would have higher scores on extraversion, agreeableness, and neuroticism, 2) non-smokers would have higher scores on openness and conscientiousness and 3) smokers would have higher BART scores. Relationships between risky behaviors, social environment, and smoking behavior were also expected. Results indicate differences in personality traits and social influences between college students that smoke versus those that are not smokers.

Keywords: Psychology, Risky Behavior, Social Environment, Smoking

Kara Hames. I performed this experiment as part of my Honor’s Program Thesis. Dr. Parker agreed to be my independent project supervisor. I wanted to research an issue that had puzzled me for years - why would anyone begin smoking, knowing what we know about its detrimental effects? I enjoyed formulating the research topic, and investigating the other research that had been done. I did not realize how much information and various angles had been taken on the subject of college smoking. My research experience helped me learn how to contemplate an issue from many angles and will aid me in teaching future generations as it is my goal to become an elementary school teacher. I volunteer with the local children’s home by taking the children on weekend activities. I also work with Meals-on-wheels where I assist with paperwork and filing.

Dr. Jennifer S. Parker. Dr. Parker is an Associate Professor of Psychology and has been at USC Upstate since 2001. Her research areas include examining the effects of exposure to domestic violence on children and adolescents, and also investigating leadership development and civic skill building with adolescents. She has earned a Ph.D. from Virginia Tech and has published articles in several Journals, including: the North American Journal of Psychology, Adolescence, the Journal of Child and Youth Care Work, Family Therapy, and the International Journal of Neuroscience. Dr. Parker was born in Charlotte, NC but lived the longest in Roanoke, VA. In her spare time, she enjoys exercising and in particular running. "It is gratifying to engage undergraduates in research. As an undergraduate, I had the opportunity to work closely with a professor on research projects. This experience was the catalyst for my passion to engage students in all aspects of research. It was also very influential in my decision to pursue a Ph.D. Investigating issues related to child and adolescent development is my overall research goal."
I. INTRODUCTION

Cigarette smoking is responsible for 440,000 deaths in the United States each year, and over 747,000 youth begin smoking every year, which will likely raise the death rate within this generation [3]. Smoking among college students has recently reached an all-time high of 30.6%, rising over 7% in six years [4]. Of these college smokers, 28% began after the age of 19 [5]. In fact, smoking among college students was one of the only age groups in which smoking increased [4]. Despite these statistics, the use of tobacco among college students has not been adequately addressed. Identifying and understanding motivating factors behind smoking initiation is essential to have effectual prevention.

A tendency toward risky behavior is cited as one of the motivating factors behind smoking initiation [6]. Risk taking tendency can be defined as intentionally taking part in an activity that has certain negative impact on health [4]. Smoking falls under this heading and, therefore, identification of factors influencing willingness to engage in risky behavior is a natural step in determining why some students choose to begin smoking.

Although a variety of sources have been noted as antecedents to both smoking and risk taking, there is not only one factor that predisposes a person to engage in risky behavior [7]. Negative emotional states, motives, personality traits, and situational circumstances can increase the likelihood of risk taking behaviors [8]. There is disagreement over whether or not there are differences in smoking behavior between genders, but differences among ethnicities are consistently observed with Whites having higher rates than African Americans and Hispanics [9]. In a 1999 survey of current smokers in the United States, 36% were White, 16% were African American, 25% were Hispanic, and 23% were of Asian descent [8]. Psychosocial determinants such as peer and parent smoking are significant precursors to initiation of smoking [9]. Of current smokers, 84% stated they began smoking while among friends who smoked [10]. Nearly 70% of current smokers were exposed to tobacco use in the home, compared with 30% of current nonsmokers [3]. In addition to social influences, personality and temperamental characteristics have shown significant influence on smoking initiation [9].

Certain aspects of personality such as risk taking behavior are especially significant in establishing a person’s likelihood of initiating smoking [11]. Identifying personality variables that contribute to risky behaviors has become a mainstream area of research [6]. Methods of determining a subject’s degree of risk behavior predilection have proven difficult and unreliable. The Balloon Analogue Risk Task (BART) is a measure of risk taking propensity that has been consistently correlated with real-world risk taking behaviors [7]. The BART is a reliable index for identifying risk behaviors because it does not rely on self-report measures when many subjects lack the insight to provide accurate self-interpretations. Previous research has shown that smokers score higher on the BART than nonsmokers, providing a useful measure of potential risk behavior tendencies [6].

Risk attitude ranging from risk aversion to risk seeking can be attributed to specific personality traits [12]. Understanding personality influences will likely improve interventions against initiation of smoking [11]. Many variations of personality tests exist that assess a range of 3 to 16 or more dimensions of personality [13]. The Five-Factor Model (FFM) is one of the most widely used and reliable of the personality tests. Using the FFM, personality is organized into a hierarchical model of five broad traits including neuroticism, extraversion, openness, agreeableness, and conscientiousness [11].

Extraversion is one of the most widely known of the five traits and a high score is associated with a person who is sociable, talkative, person-oriented, and active. Low scorers are more reserved, task-oriented, lethargic, and quiet. Neuroticism relates to emotional individuals who tend to worry and have feelings of inadequacy. Low scores in neuroticism reflect persons who are calm, unemotional, secure, and self-satisfied. High scores in openness display curiosity, creativity, broad interests, and one who is untraditional. Individuals with low scores on openness are conventional, inartistic, and have narrow interests. Agreeable persons are soft-hearted, trusting, forgiving, and gullible, whereas those low in agreeableness are cynical, suspicious, and uncooperative. High scores in conscientiousness reflect a person who is self-disciplined, scrupulous, persevering, and reliable. Low scorers tend to be careless, weak-willed, hedonistic, and negligent [14].

Based on past research, smokers were found to have higher levels of extraversion and neuroticism, whereas nonsmokers were higher in conscientiousness and agreeableness [11]. Risk-taking behaviors are related to the level of fundamental personality traits, especially neuroticism [15]. In one study on HIV risk, individuals who were HIV positive obtained lower scores on conscientiousness and higher scores on neuroticism than an HIV negative group [15]. A study by Olson and Suls [16] found individuals high in
openness make more extreme judgments in risky scenarios. In addition, those high in agreeableness value the opinion of others and tend to make socially acceptable judgments. Their willingness to please others and conform to the social norm causes them to make more extreme decisions in risky situations. Conscientious individuals are responsible and cautious, tending to take into account the consequences of situations before making a decision. Having high scores on neuroticism and low scores on conscientiousness are found to predispose certain individuals to risk behaviors [15]. These differences in personality types may indicate a predictive value in determining who is more likely to be a smoker.

The purpose of this study was to evaluate the psychological and social reasons associated with college student smoking. The factors previously associated with initiation of smoking are varied and some contradictory. By looking at correlations between personality type, risk propensity, and social history variables, we attempted to identify valid indicators of individuals more susceptible to smoking in college. We hypothesized that smokers would score higher in extraversion, agreeableness, and neuroticism. Extraversion and neuroticism have been linked to smoking in other studies, whereas agreeableness is related to conforming in social situations [16]. We also expected nonsmokers to score higher in conscientiousness and openness. Conscientiousness has been upheld in previous studies whereas openness is inconclusive [15]. Thirdly, we hypothesized that smokers would score higher on the BART than nonsmokers, based on the findings of Lejuez [6].

II. METHOD

Subjects in this study consisted of 21 males and 79 females. Of these, 57 classified themselves as White, 33 as Black, 4 as Asian or Pacific Islander, 3 as Hispanic, 1 as American Indian or Alaskan Native, and 2 as other. Subjects were asked to specify their age as younger, older, or in the range of 18-25. Of the 100 subjects, 94 were between the ages of 18-25, three were younger, and three were older.

II.1 MATERIALS

The BART [2]. A computer program that measures actual risk behavior by simulating real world situations where risk is advantageous to a point, after which it leads to unfavorable consequences. The subject is required to pump up digital balloons, each with varying explosion points, in hopes of earning the most money in his bank. The BART was installed on a Dell CX 260 computer with a 14-inch monitor at the front of the laboratory. The console was angled to provide seclusion.

The NEO-FFI Form S Test booklet for College Students [1]. It is a shortened form of the NEO-PI R consisting of 60 self-report questions on a Likert scale. The NEO-FFI assesses personality based on the five-factor model, measuring the five major domains of personality while providing college norms for the computation of T scores.

The Demographics and Social Influences Questionnaire. Questions assessing the individual’s demographics, smoking history, family smoking history, perception of peer smoking, and perception of own risk behavior were derived and modified from Ott et al.[17] and the National College Health Risk Behavior Survey Codebook [18].

II.2 PROCEDURE

Subjects were recruited from Introductory Psychology classes by signing up for a time on the recruitment form. Four subjects came to the psychology lab each half hour and were seated at the rear of the room at individual tables. Subjects were given test packets containing consent forms, the NEO-FFI, and the Demographics and Social Influences Questionnaire. Each was assigned a subject number to put on all measures. A brief introduction was made, and subjects read the consent form following a time to ask questions. Consent forms were signed and collected, and subjects received instructions to complete the NEO-FFI. Following the NEO-FFI task, the subjects were taken one at a time to the computer to complete the BART. Remaining subjects completed the Questionnaire while waiting for the computer task.

At the beginning of the BART, students were told they would be presented with 30 balloons to pump up by clicking the button beneath the balloon. Each pump would add hypothetical money to a temporary bank, unseen on the screen. At any point, they could stop pumping up the balloon and click “Collect $$$.” This would
send accumulated money to a permanent bank labeled “Total Score.” Students were told to try to earn as much money as possible. They were also informed that at some point the balloon would explode. If the balloon exploded before they collected $$$, any money earned in the temporary bank would be lost, but the money in the permanent bank would not be affected. The average number of pumps on balloons that did not explode was the measure of risk. Upon completion of the three measures, the test packets were collected and subjects were dismissed.

III. RESULTS

Smoker and nonsmoker mean T score values for the personality domains and the average adjusted pumps on the BART are presented in Table 1. The conscientiousness scale on the NEO-FFI was significantly higher in nonsmokers than in smokers as predicted, t(98) = -2.19, p < .05, d = -.44. No significant differences were found in the other personality traits or in the BART risk score. However, on neuroticism and extraversion the scores did vary in the direction of the hypotheses. Smokers also had higher scores on the BART, as predicted.

Table 1. Personality and Risk Differences between Smokers and Nonsmokers

<table>
<thead>
<tr>
<th>Measure</th>
<th>Smokers (N=14)</th>
<th>Non Smokers (N=86)</th>
<th>Effect Size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Personality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>48.79</td>
<td>13.24</td>
<td>46.56</td>
</tr>
<tr>
<td>Extraversion</td>
<td>52.57</td>
<td>12.54</td>
<td>50.63</td>
</tr>
<tr>
<td>Openness</td>
<td>46.79</td>
<td>11.41</td>
<td>45.55</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>46.21</td>
<td>10.25</td>
<td>50.05</td>
</tr>
<tr>
<td>Conscientious</td>
<td>46.21</td>
<td>10.35</td>
<td>52.56</td>
</tr>
<tr>
<td>Risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BART (avg adj # pumps)</td>
<td>31.03</td>
<td>16.420</td>
<td>30.02</td>
</tr>
</tbody>
</table>

* p < .05  

Although unrelated to the hypotheses, other significant findings between genders and races are shown in Table 2 and Table 3, respectively. A difference was found between genders in the mean score of extraversion with males significantly higher than females, t(98) = 2.396, p < .01, d = .48. Blacks and Whites differed significantly on the BART with Whites having higher scores than Blacks, t(88) = 1.868, p < .001, d = .92.

In the area of social influences, we found that smokers had a higher frequency of smoking parents than did nonsmokers (Table 4). In fact, smokers were higher in every category of social influences including siblings, significant others, and friends. Most significantly, smokers overwhelmingly had more friends who were smokers, supporting the view that friends are a dominant social influence. No differences were found between smokers and nonsmokers in terms of amount of weekly exercise or in perception of body weight.

Table 2. Personality and Risk Differences between Genders

<table>
<thead>
<tr>
<th>Measure</th>
<th>Males (N=21)</th>
<th>Females (N=79)</th>
<th>Effect Size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Personality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>44.76</td>
<td>7.286</td>
<td>47.43</td>
</tr>
<tr>
<td>Extraversion</td>
<td>55.57</td>
<td>11.33</td>
<td>49.66</td>
</tr>
<tr>
<td>Openness</td>
<td>48.05</td>
<td>11.47</td>
<td>45.10</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>51.57</td>
<td>6.40</td>
<td>48.96</td>
</tr>
<tr>
<td>Conscientious</td>
<td>51.62</td>
<td>11.12</td>
<td>51.68</td>
</tr>
<tr>
<td>Risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BART avg adj # pumps</td>
<td>33.41</td>
<td>14.16</td>
<td>29.30</td>
</tr>
</tbody>
</table>

** p < .01
However, there were large differences in levels of risky behavior. Smokers indicated that in the past 30 days 28% had used an illegal drug more than 10 times, and 64% had not used at all. This is compared to 98% of nonsmokers who had not used. When asked how many of the past 30 days they had consumed five or more alcoholic drinks in a row, 14% of smokers indicated 6-9 days, whereas only 1% of nonsmokers reported consumption of alcohol at this same rate. Also, 89% of nonsmokers had not consumed alcohol for the past 30 days, compared to 50% of smokers.

### Table 3. Racial Differences in Personality and Risk

<table>
<thead>
<tr>
<th>Measure</th>
<th>WHITE (N=57)</th>
<th>BLACK (N=33)</th>
<th>Effect Size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Personality</td>
<td>Neuroticism</td>
<td>47.77</td>
<td>9.09</td>
</tr>
<tr>
<td></td>
<td>Extraversion</td>
<td>52.51</td>
<td>10.02</td>
</tr>
<tr>
<td></td>
<td>Openness</td>
<td>45.68</td>
<td>11.80</td>
</tr>
<tr>
<td></td>
<td>Agreeableness</td>
<td>50.77</td>
<td>9.75</td>
</tr>
<tr>
<td></td>
<td>Conscientious</td>
<td>51.07</td>
<td>10.53</td>
</tr>
<tr>
<td>Risk</td>
<td>BART avg adj # pumps</td>
<td>35.39</td>
<td>12.37</td>
</tr>
</tbody>
</table>

***p < .001

Results from the opinion questions indicate 71% of smokers agreed that smoking relieves stress, compared to 7% of nonsmokers. None of the subjects agreed that smoking causes a woman to seem more feminine or sexy, and only one subject, a nonsmoker, agreed that smoking causes a man to seem more macho or manly. One of the interesting findings in this study was that 22% of nonsmokers stated they would lose friends by starting to smoke and 37% were unsure. However, none of the smokers agreed they would lose friends by quitting.

### Table 4. Percentages of Smokers and Nonsmokers Indicating a Smoker in Each Social Category

<table>
<thead>
<tr>
<th>Social Influence Smokers</th>
<th>Parent</th>
<th>Sibling</th>
<th>Significant Other</th>
<th>Friend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoker</td>
<td>43%</td>
<td>42%</td>
<td>36%</td>
<td>86%</td>
</tr>
<tr>
<td>Nonsmoker</td>
<td>31%</td>
<td>20%</td>
<td>14%</td>
<td>36%</td>
</tr>
</tbody>
</table>

Smokers indicated that 8% initiated smoking when they were less than 12 years old, 77% began between ages 13-17, and 15% began between the ages of 18-24. When asked for what reason they began smoking, 57% verified they smoked because their friends did, 21% stated they wanted to look cool, 38% claimed their reason was rebellion, 43% wanted the calming effects, and 38% indicated other reasons. Upon initiation, 38% of the smoker subjects said they thought they would only smoke one time, and 54% said they thought they would smoke less than a year. Only one smoker claimed he thought he would smoke more than five years when he first began.

### IV. Discussion

The findings in this study indicate that there are differences in the personality traits and risk behavior tendencies of those who choose to smoke and those who refrain. It is possible that the relatively small sample of smokers in this study was not sufficient to achieve significant differences in all hypotheses. However, the scores did vary in the direction of the hypotheses. The results are similar to the findings of Terracciano and Costa [11], who found smokers higher in neuroticism and lower in conscientious. Smokers have a higher tendency to push limits and take chances as also indicated by the BART. The CDC [3] stated 84% of smokers began smoking in the presence of friends compared to the findings of this study that 86% of smokers had a close friend who smoked. In addition, findings in this CDC report state that 70% of smokers and 30% of nonsmokers were exposed to smoking in the home which is similar to our findings that 85% of smokers and 51% of nonsmokers have a family member who smoked. More smokers claimed they began smoking because their friends did than any other reason given, indicating a peer pressure influence. They also stated they would not lose friends by quitting. However, when nonsmokers asserted they would lose friends by starting, a form of reverse peer pressure was in operation that inhibited their initiation. This prominent influence made
them less susceptible to begin smoking, an influence that smokers lacked.

Future research should increase the sample size to ensure comparative groups for analysis of differences. A limitation of this study was the small sample of smokers relative to nonsmokers. Strengths include the use of valid and reliable measures of risk behavior and personality that were found consistent in previous studies. In addition, the college population studied is underrepresented in the literature of personality influences on smoking behavior. This study provides a starting point for research in this area, focusing especially on college students.

ACKNOWLEDGEMENTS

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REFERENCES

A Bi-Modal Image Approach to Robot Eye-in-Hand Orientation Recovery

**Abstract.** The United States of America is not the world leader in robotics and automation. The traditional argument in this country against robotic automation (that machines are taking away jobs from human employees) is no longer valid. Integration of robotic technology into a manufacturing plant may result in the loss of a few employees; however, failure to integrate such robotics technology will likely result in the loss of all employees because the work will get outsourced to the more competitive Asian and European markets. Robotics and automation research and innovation is crucial for the future of the United States as a world leader. This paper focuses on a specific area within robotics and automation: using visual input sensors (cameras) to help guide robotic arms, making them more flexible in their automation tasks. We have developed a novel approach to recovering the camera orientation of an eye-in-hand robotic manipulator. The algorithm is completely automated, iteratively performing a sequence of rotations and translations until the camera frame is aligned with the manipulator’s world frame. The approach has been fully implemented and tested with a Stäubli RX60 manipulator and an off-the-shelf Logitech USB camera.

**Keywords:** Robotics, Computer Science, Computer Vision, Manufacturing, Camera Calibration

**Seth Hensley.** We contribute to the field of Robotics and Automaton by developing a novel camera orientation calibration algorithm that automatically recovers camera orientation from bi-modal input images. Robotics research is challenging but also exciting and fulfilling because you get the opportunity to interact with robotic machines throughout the development of new approaches to solving automation problems. I believe my research experience has given me the ability to attack problems from different angles and improved my critical thinking skills. In my spare time, I enjoy reading books on ancient history, and programming topics. I also play the guitar, enjoy fishing and football. My future plans are to pursue a career in Software Development. I also hope to attend graduate school after a few years into my career. I would like thank Dr. Sebastian van Delden for allowing me the opportunity to do this research.

**Dr. Sebastian van Delden.** Dr. van Delden is an Assistant Professor of Computer Science and has been at USC Upstate since Spring 2004. His research areas include Natural Language Processing, Robotics, and Artificial Intelligence, and he works in the USC Upstate Robotics lab which features several top-of-the-line robotic arms and provides an outstanding teaching and research environment. Dr. van Delden earned a Ph.D. from the University of Central Florida and has published articles in several journals, including: Language and Computers; Data and Knowledge Engineering; Artificial Intelligence Tools; Lecture Notes in Artificial Intelligence; and Computing Sciences in Colleges. Dr. van Delden grew up on Saba, a small Dutch island in the Caribbean, and enjoys playing golf in his spare time.
I. INTRODUCTION

Many robotic manipulators (arms) utilize cameras and vision algorithms to accomplish factory automation tasks. These cameras allow for a more flexible work environment by extracting key features and important image regions from the manipulator’s work area, from which position and orientation information of a desired pose can be determined. The vision algorithms used by a visually guided manipulator are usually very environment and problem oriented, that is, they are engineered to solve a very specific problem.

Even though closed-loop visually guided robotics([1]-[6] are a few of the papers in the literature that present good overviews of visually guided robotics research with a focus on closed loop systems, or “visual servoing”) is a popular area of research, many current industrial applications also employ calibrated systems. At Stäubli’s Fast Moving Technology Days event in September 2006, several calibrated visually guided applications were being demonstrated by industry leaders. In one demonstration a vision system determined the location and orientation of a bag of potato chips moving down a conveyor belt, and then instructed the arm on how the bag needed to be picked using a suction cup gripper. In another demonstration, bolts that needed to be picked and placed lay randomly on a surface, possibly occluding each other. The vision algorithms would identify isolated bolts and then use a sequence of surface vibrations to alter the pose of occluded bolts, eventually isolating out single bolts and picking them. Sanz et al. [7] provide an excellent article that describes several other current vision-based object handling industrial applications in use.

This research tackles a traditional problem that calibrated systems face [8-11]: over time the precision of the robot/camera coordinate system calibration degrades due to movement, vibration and other forces. This creates the need for the system to constantly be recalibrated. To address this issue, we have designed and implemented a completely automated recalibration algorithm that recovers the orientation of the camera frame with respect to (w.r.t) the robot world frame. The algorithms are designed for a monocular eye-in-hand system where the robot controller is capable of rotating and translating the tool frame w.r.t. the world frame. Since this method is completely automated, there is no need for a human operator to recalibrate the system. The recalibration procedure could be run periodically and automatically by the system to ensure that precise calibration is maintained.

II. ASSUMPTIONS AND INITIALIZATIONS

- The manipulator must be able to translate and rotate its tool frame \((T)\) w.r.t. its world frame \((W)\). As the location of the tool flange changes in time, the transformation \((\cdot T^\circ)\) between points in \((T)\) and \((W)\) is automatically maintained internally by the robot controller.
- The camera must be mounted to the end effector. The pose of the camera frame \((C)\) is not known w.r.t. \((T)\) or \((W)\).
- There must be a flat surface in the robot work area that has a solid color background and a blob located in the center whose color contrasts greatly with the background, for example, a black blob on a white surface as shown in Figure 1. The blob does not necessarily have to be round.
- A pixel-value threshold that separates blob and background pixels must be determined. This could be manually done, but section II.1 describes an algorithm that automates this initialization process.
- A rough alignment of the \((C)\) w.r.t. \((W)\) must be initially determined. The closest axis \(X_W, Y_W,\) and \(Z_W\) in \((W)\) (within \(45^\circ\) or \(-45^\circ\)) must be mapped to \(X_C, Y_C,\) and \(Z_C\) in \((C)\). For example, \(+X_C\) is within \(45^\circ\) or \(-45^\circ\) to \(-Y_W,\) \(+Y_C\) is within \(45^\circ\) or \(-45^\circ\) to \(-X_W,\) and \(+Z_C\) is within \(45^\circ\) or \(-45^\circ\) to \(-Z_W\). This could be done manually or by an automated algorithm which is not shown here. The correspondence between a robot and world axis is referred to with the MAPPING function later in this paper.
- Finally, communication between the vision software and the controller must be established. Our software was written from

![Figure 1. The initial configuration of the robot and camera w.r.t. the blob on solid background. The orientation of the camera frame is not known w.r.t. the robot's world frame and will be recovered by the algorithms in this paper.](image-url)
scratch in Java and had to communicate with Stäubli’s V+ control language. To accomplish this, we used a TCP/IP communication program that we recently developed for another application [12].

II.1 Bi-MODAL IMAGE THRESHOLDING

The camera must be positioned w.r.t. a solid colored surface so that nothing else is in its field of view (FOV). Initially, the camera must be close enough to the surface so that the blob is imaged large enough (approximately 30-70% of the pixels in the image) to produce a true bi-modal histogram of pixel values which is required for the automated thresholding algorithm to determine a correct threshold. This is a very important step which avoids the need to hard code a threshold and enables the rest of the algorithms to work even if lighting conditions fluctuate over time in the work cell.

The orientation of the camera frame is not known w.r.t. the tool frame and will be recovered by the algorithms in this paper. Figure 2 shows a grayscale input image that was captured by our eye-in-hand manipulator. Even if faint shadows are present in the image, as in this input image, they will not have an impact on the thresholding algorithm.

We implemented the Otsu bimodal thresholding algorithm [13] which selects the threshold based on the minimization of the within-group variance of the two groups of pixels separated by the thresholding operator. By obtaining this threshold we are able to separate the foreground from the background in the image. Let \( \sigma_w^2(t) \) be the variance for the group with values less than or equal to \( t \) and \( \sigma_q^2(t) \) be the variance for the group with values greater than \( t \). Let \( q_1(t) \) be the probability for the group with values less than or equal to \( t \) and \( q_2(t) \) be the probability for the group with values greater than \( t \). Let \( \mu_1(t) \) be the mean for the first group and \( \mu_2(t) \) the mean for the second group. Then the within group variance \( \sigma_w^2 \) is defined by:

\[
\sigma_w^2(t) = q_1(t)\sigma_1^2(t) + q_2(t)\sigma_2^2(t)
\]

where

\[
q_1(t) = \sum_{i=1}^{t} P(i) \quad q_2(t) = \sum_{i=t+1}^{n} P(i)
\]

\[
\mu_1(t) = \frac{\sum_{i=1}^{t} iP(i)}{q_1(t)} \quad \mu_2(t) = \frac{\sum_{i=t+1}^{n} iP(i)}{q_2(t)}
\]

\[
\sigma_1^2(t) = \sum_{i=1}^{t} [i - \mu_1(t)]^2 P(i) / q_1(t) \quad \sigma_2^2(t) = \sum_{i=t+1}^{n} [i - \mu_2(t)]^2 P(i) / q_2(t)
\]

Each potential pixel threshold value (usually in the range [0-255] for a typical grayscale image) is plugged into these formulas and the value that minimizes the within-group variance is chosen as the threshold. These formulas are easily implemented and will be not presented here in algorithmic fashion. Figure 3 shows the histogram created from the input image in Figure 2 and threshold value of 124 that was recovered by the above equations.

The camera must be relatively close to the blob in order to initially determine the threshold, given that a bi-modal histogram was needed. However, after the threshold has been determined, the camera can be moved away from the surface, causing the blob to shrink, and the initial threshold will still be valid. This capability is required for the algorithms in section III.
III. VISION ALGORITHMS

III.1 CENTERING

An algorithm is needed that constantly centers the blob in the image in order to ensure that the blob remains in the camera’s FOV. The algorithm locates the image quadrant where the centroid of the blob is located, and then incrementally translates in the appropriate direction until the blob is centered as shown in Figure 4.

In the centering algorithm, IMG_CENTER refers to the pixel center of the image and BLOB_CENTER refers to the centroid of the blob. X_TRANS and Y_TRANS are small user defined mm distances that the robot should translate in the X_c and Y_c directions, respectively, and the sign indicates the direction along that axis. The mapping function returns the corresponding world axis that its parameter has been mapped to during the initialization step.

```
WHILE (|BLOB_CENTER – IMG_CENTER|>MIN_ERROR) DO
    IF (CENTROID.X > IMG_CENTER.X)
        VALUE = -X_TRANS
    ELSE
        VALUE = +X_TRANS
    END
    SEND(TRANSLATE, MAPPING(X_c), VALUE)
    IF (CENTROID.Y > IMG_CENTER.Y)
        VALUE = -Y_TRANS
    ELSE
        VALUE = +Y_TRANS
    END
    SEND(TRANSLATE, MAPPING(Y_c), VALUE)
END
```

III.2 ORIENTATION RECOVERY

Three separate rotation steps are needed in recovering the orientation of the camera frame w.r.t. the robot frame. The algorithms for each of these steps as well as the robot control algorithms are not shown here due to space limitations.

- **First**, move back and forth along MAPPING(X_c), note the movement of the blob, and then incrementally rotate around MAPPING(Z_c) until the centroid row error is minimized.
  - This aligns X_c to the plane created by MAPPING(X_c) and MAPPING(Z_c) axes.
- **Second**, move back and forth along MAPPING(Z_c) direction, note the movement of the blob, and then incrementally rotate around MAPPING(X_c) until centroid row error is minimized.
  - This aligns Y_c perfectly with MAPPING(Y_c).
- **Third**, move back and forth along MAPPING(Z_c), note the movement of the blob, and then incrementally rotate around MAPPING(Y_c) until centroid column error is minimized.
  - This results in all three camera axes being aligned with their corresponding world axes.

IV. RESULTS

We have implemented and tested the algorithms described in the previous sections on a Stäubli RX60 robotic manipulator which is controlled by the V+ programming language. The vision algorithms were written in Java and use the Java Media Framework (JMF) API to communicate with the camera, an off-the-shelf Logitech USB camera. We chose ten random starting configurations and then executed the algorithms. The algorithms converged for each test case and the unknown angle offsets were always correctly recovered. The rotation algorithms iteratively recovered the unknown angles in a linear fashion, so convergence speed of the algorithm varied linearly depending on the size of the angles.
One of the initial configurations consisted of the following unknown angles which were correctly recovered: \( \text{MAPPING}(Z_C) = -Z_W \) with error angle of 20.5°, \( \text{MAPPING}(Y_C) = -X_W \) with an error angle of 8.5°, and \( \text{MAPPING}(X_C) = -Y_W \) with an error angle of 7.5°. Figure 6 shows the input images from this test case before the algorithms were executed. The upper leftmost portion of the image shows the blob centered and the lower leftmost shows the input image after a translation along \( Z_W \). Notice that the blob moves towards the upper right corner of the image since \( Z_W \) and \( Z_C \) are not aligned. The other two pairs of images show movements along \( Y_W \) and \( X_W \) and the corresponding blob movements are not coincident to any camera axis.

![Figure 6](image6.png)

Figure 6. Test example initial configuration. Movements along world axes do not correspond to movements along camera axes.

Figure 7 shows the same sequence of input images after the algorithms have recovered the unknown angles. Notice now that a translation along \( Z_W \) causes the blob to stay in place while it shrinks. Also, translations along \( Y_W \) and \( X_W \) cause perfect horizontal and vertical blob movements in the input image, as expected.

![Figure 7](image7.png)

Figure 7. Test example for Figure 6 after the algorithms have recovered the unknown angles. Movements along world axes correspond perfectly to movements along camera axes.
V. CONCLUSIONS

A completely automated system that recovers the camera orientation during recalibration of an eye-in-hand manipulator has been presented in this paper. These algorithms could be executed by the manipulator periodically in order to maintain precise calibration over time. In this approach, the algorithms require that a blob is placed on a solid colored background surface in a clear workspace so that no other objects affect the camera’s FOV. This work can eventually be extended to recover not only the orientation but also the translation offsets by implementing a depth extraction algorithm[14].

ACKNOWLEDGEMENTS

We would like to express our sincere thanks to the Stäubli Corporation for making this research possible by generously donating six RX60 manipulators to our institution, and for providing the Stäubli Robotics Studio software package to us which was used to create the 3D figures in this paper. A similar version of this paper has also been published in the 5th IEEE International Workshop on Robotic and Sensors Environments [15].

REFERENCES

**Abstract.** This essay tracks the ways that George Herbert Meade’s influential theory, symbolic interactionism, has been used to describe communication in different arenas of human experience. Meade’s theory explains how people use symbols as a sense making tool. Symbolic Interactionism has been used to explain society, culture, psychology and relationships. The paper tracks some of the important ways that this theory has been used to explain these aspects of human life. Through an understanding of how symbols are deployed we can better reflect on how we assign meaning in order to understand our communication.

**Keywords:** Speech Theory, Human Communication, Cultural Relationships

**Tina Mazzotta.** This paper was written as part of a Theories and Principles of Human Communication class in which we learned about George Herbert Mead’s theory. This theory intrigued me greatly, and Dr. Myers and I found it very interesting to apply this theory to different aspects of communication. I felt that one of the most exciting aspects of this research experience was furthering my knowledge on one specific subject that interested me greatly. This specific research project has helped me become a better writer in the sense of putting information together in a logical and interesting manner. I hope to eventually write or edit for a magazine. In my spare time, I enjoy reading and writing, but also any sort of physical exercise, especially running. I have been involved in recreational softball teams on campus as well. Although it is not a hobby, my job at Piedmont Farm and Garden Supply has sparked my interest in gardening! Even being at my job, I get to do what I enjoy most: meeting new and different people and learning more about the area where I chose to attend college. This has been a great experience! Not only have I learned a lot, but it is great to know that there are professors at this university that recognize hard work and encourage you to present your work to others.

**Dr. W. Benjamin Myers.** Dr. Myers is an Assistant Professor of Speech and has been at USC Upstate since Fall 2007. His research areas include Speech, Ethnography, and Performance Studies. He earned a Ph.D. from Southern Illinois University and has published an article in *Qualitative Inquiry* which explores performing race and sexuality in everyday life. Dr. Myers also presents regularly at the National Communication Association and the Annual *Qualitative Inquiry Congress*. Dr. Myers is originally from Pittsburgh, Pennsylvania, and in his spare time he enjoys spending time with his family, reading and playing poker. “Tina’s work is a very strong literature review that does more than simply list a few places where the theory was mentioned. It explores how Symbolic Interactionism is used to address specific phenomenon. Tina has a very clear grasp on how the theory can speak to other disciplines which is always an important task for someone who works in areas outside of the ‘hard sciences’. This paper provides a clear justification that speech theory extends beyond people talking and addresses some important philosophical issues.”
I. INTRODUCTION

Creating reality, minding, naming and a self fulfilling prophecy are all characteristics in understanding the theory of symbolic interactionism. This interpretive theory allows us to see the world and the symbols we use within it in a whole new light and creates a new understanding of how we perceive objects while we make sense of the people that surround us. This theory is highly debated among scholars due to the ways that interaction is a social act that constantly changes. Scholars that both criticize and commend George Herbert Meade (the founder of symbolic interactionism) have applied the theory to numerous studies and very important subjects. This essay will discuss the works of different scholars and their application of symbolic interactionism in relation to society, psychology and culture as a whole.

Mead’s theory attempts to account for the origins and development of human mind - or intelligence - by locating it within the process of evolution, by showing that the origins of human mind lie in human society[1].

Comparing society and symbolic interactionism is one of the most difficult and potentially argumentative aspects of the theory. The issue of pragmatism deals with a philosophical point of view that truth and meaning are measured by consequence. Many scholars such as Paul Rock acknowledge that symbolic interactionism was created on a foundation of a philosophical tradition of pragmatism, but that many aspects of Mead’s theory tend to break away and disregard actual human activity, especially the labeling aspect of the theory. Rock claims that symbolic interactionism and its followers tend to believe too much in “dualism” and “idealism” [2]. The meaning of dualism lies within the belief that the physical being of a human is separate from their intelligence. Many would disagree, such as John P. Hewitt who claims Mead avoided dualism and mainly focused on the way in which the human mind was developed and the intelligence that is created [1]. Others also tend to feel that symbolic interactionism holds a steady mirror up to society, reflecting its image back to itself. Many would even recognize that symbolic interactionism was created from the a pragmatist follower such as Mead himself. Therefore it is safe to say that “symbolic interactionism is a sociological tradition that traces its linkage to the Pragmatists” [3].

II. MEANING AND SYMBOLS

Mead explains that all objects hold a representative or symbolic value. Images of any completed act are symbolically constructed whether it is in our memory as history or something we perceive to occur in the future [4]. Duncan claims in Symbols and Social Theory that Mead more so than any other creator of pragmatism or social theory did the best job of explaining action as social. The way in which Mead explains this is through the four main stages of an act. These stages include impulse, perception, manipulation and consummation. Through these stages, Duncan states that “the social act originates in, and continues to exist through, communication”. All of these aspects of the social life revolve around our perceptions, actions, religious views and future expectations. For example, Mead thinks of the future as a public act, and because it is public, it is social. The issue of environment and the way in which events and actions occur on earth is a debatable issue as well in considering symbolic interactionism. Duncan explains that in contrast to environmentalists who determine action on the physical environment, Mead explains that the “environment of man in society is not nature, or soma, but the symbolization of these in time”.

In furthering the discussion on acts and how they are mingled within symbolic interaction, it is necessary to look at the meaning behind our actions within society. Hewitt claims in Self and Society that meaning lies within the way we behave. Meanings are not fixed or unchangeable, but are determined by how a person acts toward an object. Hewitt claims that there is a distinguishable difference between social and individual objects. A very important aspect to recognize when applying society to symbols is that people are social objects during interactions, and these objects are constructed when humans perform certain social acts. The next characteristic to understand is that social acts are evaluated by the interaction and interpretation that follows them. Although a lot of our actions are based upon habit, Hewitt argues that in difficult situations in which humans face, we use a greater sense of evaluation and interpreting. “It is in the face of such problematic occurrences that our capacity to designate and interpret is crucial to the success of our actions” [1].
III. EXTENSIONS OF SYMBOLIC INTERACTIONISM

Many believe that symbolic interactionism has lost its important role in human society and others believe that symbolic interactionism never held a strong enough point to be valid in considering human actions within society. Sheldon Stryker published an article in the *Social Psychology Quarterly* on the vitality and growing importance of symbolic interactionism within our society today. Stryker makes the claim that although it may have been proved that symbolic interactionism declined during the 1960’s and 70’s, that there was not enough valid evidence supporting its decline, and for the majority of the time, psychologists and sociologists completely ignored the works of Mead and other interactionists [5]. Some people such as Herbert Blumer, have tried to mend symbolic interactionism into a more functional, as well as experimentally testable theory, and critics have recognized the unnecessary need for this sort of action and the lack of purpose in rendering symbolic interactionism into a different form. Luigo Esposito and John Murphy write, “the experimental complexities that Blumer believed underlie all human group life are often transformed into standardized ‘generic’ concepts simply for the sake of methodological convenience” [9].

To say that one is interested in social psychology tells other social scientists something of one’s professional activities; to assert that one pursues social psychology from the perspective of symbolic interactionism adds another layer of meaning [1].

Another aspect of study in which scholars have applied symbolic interactionism thoroughly, is within the study of psychology. When you look at this theory as a whole, you can apply the topic of psychology easily, due to the important aspects of the human mind and behavior. For example, it was Mead’s discovery (and what we now associate very closely with his theory) that the human mind is too compound to be described only by instinct [1]. Minding is a very important characteristic of symbolic interactionism that links to psychology. John Hewitt explains how our mind and behavior all work upon actions of symbols. Mead makes it clear that through the use of language, we as humans differ from other mammals. People anticipate responses from their own individual acts and through the process of minding, can have control over their own actions. The action of minding is reflected upon a basis of consciousness. Our ability to use our conscious allows us to better understand people and react towards their actions [1]. “Mead created an account of human behavior, mind, and selfhood that became a significant milestone in human self-understanding” [1].

Scholars have also applied symbolic interaction to the identification and relation to psychological insanity. Research has shown that symbolic interactionism, more so than the labeling theory, gives a better understanding of the social aspect of insanity. Rosenberg conducted a study that recognized the defining lines of symbolic interactionism that we take in our societal roles [6]. This is where researchers found that the state of being psychotic does not occur because of an objective trait, but rather because an individual plays a part in role taking which can lead to success or failure. The author of this article claims that symbolic interactionism holds two contributions to the study of insanity: it gathers a meaning and purpose for treatment and proposes available options for therapeutic procedures [6].

While there can be many similarities between social psychology and symbolic interactionism, some may feel that there are definite distinctions between the two that tend to create a boundary that should not be crossed. For example, symbolic interactionism is based upon a plan that humans derive from their surroundings. Social psychology rather tries to eliminate alternatives as to why humans do what they do. In this sense, the study of psychology is so intense with numerous outcomes and ways of explaining human actions, that it does not exactly relate to the overall idea of symbolic interactionism [1]. Some scholars and followers of symbolic interactionism even recognize the ignorance of psychologists in the past for not recognizing the work of symbolic interactionists in their studies and printed works. Stryker writes in the *Social Psychology Quarterly* that some of the “most explicit and perhaps most flattering” works that reflected symbolic interactionism came from the “psychological wing of contemporary social psychology, which not fifteen years ago, disdained paying that attention” [1].

The clearer conception of culture and its relation to conduct that we need can be constructed by examining George Mead’s concepts of *symbol* and *object* [7].
IV. CULTURAL SYMBOLS

The most generalized and abundant association of symbolic interactionism on the study of our everyday lives deals with the topic of culture. So many aspects of our culture intermingle with symbolic interactionism and the way we interpret the world that surrounds us. Although cultural solutions change over time, there always seems to be a repetitive pattern of social action that creates some form of cultural solution. This, George Kubler recognizes as a series and sequence that we follow [3]. Mead declares a difference between the social symbol and the individual symbol. As far as history is concerned in considering symbolic interactionism, the social symbol is shared while the individual meaning is achieved through private thoughts and gestures of other humans. In understanding this aspect of symbolic interaction, Mead says that we can begin to see culture as “received symbols, recipes, and products that actors draw on by way of grappling in emergent meaningful ways with situational problems” [3]. Becker and McCall also discuss religion and its relation to symbolic interactionism in our culture in their book entitled, Symbolic Interactionism and Cultural Studies. They feel that if we treat religious movements as cultural movements, we will begin to give more attention to symbols and rituals within each religion in order to explain what they are and what they stand for [3].

Some people have taken symbolic interactionism and composed an entire work as to how it relates to a certain topic. In this specific case, F. Scott Christopher wrote a book based on symbolic interaction and its relation to premarital sex. Christopher poses the main characteristics of symbolic interactionism and links them to the decisions, actions and behavior involved in premarital sex. He begins to explain that we look at objects and assign meaning to them, but in many cases, certain objects take on special meanings due to when, why and how they were placed in someone's life [8]. This then leads into the interpretation of acts and social roles within society. Christopher states that there is role taking in which people see the other's point of view as well as the role enactment which represents the outcome. Christopher also uses Mead’s example of the generalized other and the perception of self to explain how adolescents may view their peers and evaluate the possibility of a sexual experience with a significant other [8]. “Culture is the world of objects in which human beings live” [7].

Hewitt claims that the cultural world in which we reside is strong because as humans, we act towards the objects within it. We experience culture through the use of its objects that help us reach a certain goal in life. This strongly relates to the human's ability to have motivation. Since culture is filled with objects, we decide as humans, which objects we want to gain and the outcome that will come from the action we take in gaining that object [7]. Once again, Hewitt explains a culture in which we assign meaning to not only visible and tangible objects, but to those of feeling and emotion, in order to experience empathy within our society. One of the most important traits of symbolic interactionism lies within language and meaning. As symbolic interactionism is clearly a theory based upon communication, we need to recognize all of the times and ways in which we use communication in our culture. Communication is the basis of Mead’s symbolic interactionism and without the acknowledgment of “mind, self, and society,” we cannot evaluate this theory accurately. Many theorists have done recent studies to make a stronger connection between language and meaning [3]. Deirdre Boden explains the necessity of language in this theory in a very precise manner: “as thought becomes action through language, that conversation analysis meets symbolic interaction” [3].

V. CONCLUSIONS

Symbolic interactionism has been a highly criticized and vastly discussed theory among scholars and theorists around the United States since its creation. Mead’s interpretation of symbols and the meanings that we apply to them has not only been evaluated based upon its validity and accuracy or worthiness, but more importantly, it has been applied to so many areas of research and study. These areas of research and study have proved Mead's ability to not only hold a strong theory worth discussing, but one worth applying to so many aspects of our everyday lives. In studying symbolic interactionism and its emphasis on the topics of society, psychology and culture within our everyday lives, one can have a greater understanding of Mead's intentions of explaining the way in which humans behave based upon their symbolic interpretation of objects that surround us.
REFERENCES


EXPRESSIVE WRITING AS A COPING MECHANISM FOR ADOLESCENTS EXPOSED TO DOMESTIC VIOLENCE

Keywords: Psychology, Domestic Violence

Abstract. The present study sought to identify characteristics of adolescents exposed to domestic violence (DV) and to develop a group intervention protocol that assesses expressive writing as a coping method for this population. “Positive Points”, a list of personal strengths, also was evaluated, based on the hypothesis that its use would increase cognitive insight and positive word usage. Writing samples were analyzed using Linguistic Inquiry and Word Count (LIWC). All participants demonstrated positive overall emotional change as a result of expressive writing. LIWC analysis revealed a significant difference in groups regarding the use of self words as well as a near-significant decrease in sad words. These findings were promising regarding the combination of expressive writing and Positive Points as an effective coping mechanism for this population.

Gina Stewart. My advisor, Dr. Jan Griffin, provided me with names of psychology faculty members conducting research. I contacted Dr. Jennifer Parker, and after meeting and discussing her work, she agreed to allow me to be a part of this research. In our project, expressive writing, was used in a unique way – with adolescents exposed to domestic violence. Working with Dr. Parker was the best aspect of my research experience. She provided guidance and supervised all aspects of the project, but was completely willing to give me the latitude needed to make the project my work as well as hers. I could not have asked for a better research mentor. My research experience (and undergrad experience in general) has already made an impact on my future. I completed my Masters of Arts in Psychology/Behavioral Neuroscience in December 2007. In my spare time I enjoy playing Celtic music on the mandolin, cooking, and studying the French language and culture.

Dr. Jennifer Parker. Dr. Parker is an Associate Professor of Psychology and has been at USC Upstate since 2001. Her research areas include examining the effects of exposure to domestic violence on children and adolescents, and also investigating leadership development and civic skill building with adolescents. She earned a Ph.D. from Virginia Tech and has published articles in several Journals, including: the North American Journal of Psychology, Adolescence, the Journal of Child and Youth Care Work, Family Therapy, and the International Journal of Neuroscience. Dr. Parker was born in Charlotte, NC but lived the longest in Roanoke, VA.
I. INTRODUCTION

Domestic Violence (DV) is a serious societal problem affecting millions of children in the United States each year. Studies documenting the emotional and behavioral consequences for children exposed to violence in the home reveal proneness toward anxiety, depression, aggression, low self-esteem, as well as conduct or other behavior problems [1-2]. Although past research has identified the needs and risks of youth exposed to DV, there remains a need for an enhanced understanding of the effects of DV, as well as novel approaches to the treatment of the aforementioned conditions associated with DV.

The need for a richer understanding of the effects of DV is perhaps greatest among adolescents, as much of the research on the effects of exposure to DV involves young children. Fewer studies have addressed the impact of DV on adolescent development and behavior, and existing findings yield mixed results ranging from violent aggressive behavior to normal development with no apparent negative effects. For example, Carlson [3] found that males exposed to DV experienced increased suicide ideation, displayed physical aggression toward their mothers, and demonstrated higher rates of running away from home. In contrast, the female sample for this study failed to reveal such behaviors. In 2002, Becker and McCloskey [4] reported that exposure to DV predicted attention problems for girls, but not for boys. In addition to gender differences, familial relationships have also been reported to affect DV outcomes for adolescents. Levendosky et al. [5] reported surprisingly few negative outcomes for adolescents exposed to DV but have a close relationship with another adult family member. Additional studies reveal that although some adolescents display an array of negative behaviors, others (primarily females) take over family responsibilities and attempt to shield siblings from exposure to DV [6].

The American Psychological Association Commission on Violence and Youth recommends expanding data collection on DV and providing interventions for young witnesses of violence to avert the development of violent behaviors. Thus, the goal of this project was to identify characteristics of adolescents exposed to DV and to evaluate a group intervention. The predominant aspect of the group intervention assessed expressive writing as a coping mechanism.

Expressive writing has been shown to improve both mental and physical health in adults [7], and has been utilized successfully with adolescents in an attempt to provide a coping mechanism for general life stressors [8]. Expecting to confirm past findings, the primary focus of these efforts was to determine the benefit of the expressive writing technique as a coping mechanism for adolescents exposed to DV. Individuals experiencing life events that are stigmatized by society have been identified as those most likely to benefit from expressive writing as a coping mechanism [9]. Perhaps these individuals are less likely to disclose personal information in the more traditional outlets (i.e. discussing with a friend, family member, or co-worker) due to the likelihood of negative social implications. Because of the negative self-attitudes of DV victims and the social stigma often associated with DV, we predicted that those exposed to DV would benefit significantly from emotional disclosure via the expressive writing technique. A second hypothesis stated that participants would receive an added benefit by incorporating Positive Points into writing. This list of personal strengths was intended to act as an aid for increasing personal self-esteem by helping participants recognize positive characteristics in themselves, even in the face of personal trauma.

The text-analysis program Linguistic Inquiry and Word Count, LIWC [10], was used to evaluate participants’ writing samples for several word usage categories.

Definition of terms

- Domestic Violence (DV) is defined as physical assault or harsh verbal abuse of the child’s mother or primary caregiver by an intimate male partner.
- Exposure to DV is defined as viewing the abuse, hearing it from another room or seeing evidence of abuse such as bruises or other physical indicators.

Hypotheses

1. Depression and anger scores will be elevated in adolescents exposed to DV.
2. Adolescents exposed to DV will find expressive writing an effective coping strategy.
3. Use of “Positive Points” along with expressive writing exercise will increase cognitive insight and positive word use relative to using expressive writing alone.
4. Scores on measures of self-esteem and relationship skills will increase for all participants following participation in the group intervention sessions.
II. METHOD

Participants - Participants were 15 females, which included 11 Caucasians and 4 African-Americans. Ages ranged from 12 to 17 with a mean age of 14.3. All adolescents had been exposed to DV and were recruited through Spartanburg County Department of Social Services. Six participants were in foster care and nine resided in a group home. The Spartanburg County DSS supervisor signed a detailed consent form for each participant. Control and experimental groups included six and nine participants, respectively.

Procedure - Data were collected in three group sessions conducted between May and October of 2004. The May group of six participants served as the control group and the remaining two groups comprised the experimental group for a total of nine experimental participants.

At the beginning of each group session, participants were informed of the study and questions were answered. Participants signed the assent to participate and were issued code numbers to use on all assessment materials. At the onset of each group, measures of depression, anger, relationship attitudes and self-concept were administered to participants and post measures were completed at each of the final group sessions.

Participants completed four-90 minute group interventions, which began with the “Write On” intervention. The control group utilized the following procedure. Scripted directions for the expressive writing assignment were read by the student researcher at the beginning of each session. Participants were then instructed to complete a brief pre-assessment of their present emotional state with the How’s It Going (HIG) rating form. Upon completion of the HIG rating, participants were asked to write for 15 minutes about a personal traumatic experience related to DV. Immediately following the timed writing assignment, participants were instructed to complete a post-assessment (HIG) of their emotional state. Coded writing samples and post-instrument were collected, and a 10-minute break with refreshments followed.

The experimental group followed the same method as above with the addition of being provided a list of Positive Points, developed by the investigators, to incorporate into their essays. Positive Points was intended as a cognitive tool for increasing personal positive emotion and cognitive insight as a result of recognizing positive characteristics in oneself, even in the face of personal trauma. A similar script, slightly modified to incorporate the use of Positive Points, was read to this group in the manner previously described.

Following the break, activities targeting self-esteem and relationship skills were conducted. Self-esteem materials and positive affirmations were provided for participants to keep.

Materials for Expressive Writing
- Writing paper, pens, pre-post HIG, and writing evaluation forms.

Measures

Analyses - Data from all measures were assigned a subject code and entered into the Statistical Package for Social Sciences (SPSS) for analysis. Anonymous, coded writing samples were entered into text documents and submitted to Dr. James Pennebaker at the University of Texas-Austin for Linguistic Inquiry and Word Count (LIWC) evaluation. LIWC, a computer program employing a word count strategy, searches for over 2000 words or word stems within a given text file. Search words are organized into more than 70 different language dimensions. The following categories were selected for analysis in this study: positive emotive, positive feeling, negative emotive, sad, cognitive insight, anger, and self.

III. RESULTS

Results of pre-post measures of depression as measured by the RADS-2TM are presented in Figure 1. These data show a greater reduction in mean T scores for dysphoric mood, negative affect, negative self-evaluation, somatic complaints, and total depression in the experimental group relative to controls.

Results of pre-post writing HIG evaluations are reported as a percentage change of positive emotion scores. These data reveal an overall positive change in both groups (67% increase in positive emotions).
Results from the LIWC analysis of seven word use categories are presented in Table 1 as mean scores, calculated from individual participant's scores across their writing samples. A one-way ANOVA reveals a significant increase in the number of words related to self in the experimental group \( F(1,13) = 13.46, p < .003 \) relative to controls. This analysis also indicated a near-significant difference in the use of words related to sadness with the experimental group using less sad words than controls \( F(1,13) = 3.27, p < .09 \).

<table>
<thead>
<tr>
<th>LIWC Category</th>
<th>Control Group (N=6)</th>
<th>Experimental Group (N=9)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Positive emotive</td>
<td>2.01</td>
<td>1.62</td>
<td>1.63</td>
</tr>
<tr>
<td>Positive feeling</td>
<td>.93</td>
<td>.97</td>
<td>.86</td>
</tr>
<tr>
<td>Negative emotive</td>
<td>2.67</td>
<td>1.35</td>
<td>2.08</td>
</tr>
<tr>
<td>Anger</td>
<td>.88</td>
<td>.65</td>
<td>1.31</td>
</tr>
<tr>
<td>Sad</td>
<td>.82</td>
<td>.76</td>
<td>.28</td>
</tr>
<tr>
<td>Insight</td>
<td>.92</td>
<td>.49</td>
<td>1.25</td>
</tr>
<tr>
<td>Self</td>
<td>9.11</td>
<td>1.31</td>
<td>13.70</td>
</tr>
</tbody>
</table>

*p < .01

**IV. CONCLUSIONS**

This study employed a group intervention setting in an attempt to assess the effectiveness of the expressive writing technique and the incorporation of positive self-affirming words as a coping mechanism for adolescents exposed to DV.

Adolescents were first evaluated in regard to depression and anger levels through the use of age-appropriate measures. As expected, these participants had elevated levels of anger and depression relative to normative scores for this age group. When re-evaluated (following expressive writing exercises), participants had decreased levels of dysphoric mood, negative affect, negative self-evaluation, somatic complaints and total depression. The experimental group (utilizing Positive Points) experienced an even greater decrease in dysphoric mood, negative self-evaluation, somatic complaints and total depression relative to the control group (see Figure 1). These results, coupled with the increase in overall positive emotion experienced by both groups, provide support for the prediction that expressive writing is an effective coping strategy for adolescents exposed to DV, particularly with the inclusion of Positive Points.
While incorporating Positive Points into the writing did result in decreased depression scores, the prediction that Positive Points would lead to an increase in cognitive insight and positive word usage received only partial support. Although there was a slight increase in cognitive insight, positive word use decreased. While this finding appears to run counter to the argument for the effectiveness of Positive Points in expressive writing, further inspection of the LIWC data offers support for combining Positive Points with the writing paradigm for this population, as well as a possible explanation for a decrease in positive word use. Esterling et al. [11] point out that a reduction in positive word use may actually be an indicator of the benefits of expressive writing. Experiencing a negative life event such as DV could lead to an initial short-term decrease in positive emotion, thus an initial decrease in positive word use. Additionally, there was a significant increase in self words in writing samples from the experimental group, indicative of these participants including more personal emotion in their essays. A near-significant decrease in sad words for the group utilizing Positive Points may also be indicative of the usefulness of this tool. Participant evaluations for the writing intervention indicate that this exercise was helpful in dealing with traumatic issues.

Following the writing intervention and assessment, group activities focused on self-esteem and dating attitudes; however, findings did not reveal significant changes on these two measures. Post-group evaluations regarding overall group effectiveness received positive ratings from participants as well as guardians.

Due to the novel approach of this study (both groups writing about emotional topics), highly significant differences were not likely; however, findings from this initial study are promising and warrant further investigation into the use of Positive Points along with expressive writing. Future research may also wish to increase the number of intervention sessions to assess this aspect of the project.

ACKNOWLEDGEMENTS

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REFERENCES


**Abstract.** The focus of this research is to explore the differences and similarities between Annie Leibovitz’s formal portraits compared to her more informal, snapshot-like portraits in her earlier work. In most cases, people would assume that a portrait is nothing more than a face; however, with Leibovitz, more information is often included in the photograph. Some of her portraits give a bit of insight into the celebrity’s life while others deliberately do not. The formal, or posed, portraits often remind us of a person’s well-known character, while the informal portraits rely on other information, such as environments, to portray the person’s personality or lifestyle. In the same aspect, some of the portraits also reveal a great deal of information about American popular culture and less about the subject, while others reveal more about the subject and less about popular culture. Through employment at *Rolling Stone Magazine* and *Vanity Fair Magazine*, Leibovitz’s career was shaped. She was chosen as the official photographer for the Rolling Stones international tour and also was named the official photographer for the 1996 Summer Olympics in Atlanta, Georgia. She has been hired for several high profile advertising campaigns and book covers. One campaign won her a Clio Award, and at one photo shoot for a book cover she met author Susan Sontag, who became her mentor and partner.

**Keywords:** Art History, Annie Leibovitz, Photography

**Alexis Rogers.** I was enrolled in Dr. Rachel Snow’s 20th Century Art History class where I decided to do a project on Annie Leibovitz. Her work is amazing, and I had never read or heard anything comparing and contrasting her portraits before. I really enjoyed researching the photographs. They really do describe a lot about the subjects and about American popular culture, and of course, they are fun to look at. I am majoring in Graphic Design with a minor in Art History, and hopefully I will be able to minor in Photography as well. Studying her pictures gave me different ideas for portraits, and even though I did not mention all of her work, her journalistic photographs gave me a lot of ideas to reference when I go out to take pictures. I enjoy amateur photography in my spare time.

**Dr. Rachel Snow.** Dr. Snow is an Assistant Professor of Art History and has been at USC Upstate since 2006. Her research area is the History of Photography. She has a Ph.D. from the City University of New York Graduate Center and has published articles in *Afterimage* and *The Journal of American Culture*. She will be speaking at the 34th Annual Association of Art Historians Conference and the American Culture Conference this Spring. Dr. Snow is originally from Salt Lake City, Utah, and lived and worked in New York City for 10 years before coming to USC Upstate. “Alexis’ interpretation of Annie Leibovitz’s photographs offers fresh insight into a photographer whose work has shaped popular culture for decades. Her diligent revisions and persistence in the drafting process has resulted in a creative and thoughtful essay.”
I. INTRODUCTION

Anna-Lou Leibovitz was born on October 2, 1949 in Westbury Connecticut. Her father, Sam, was an Air Force lieutenant, and her mother Marilyn was a modern dance instructor. Initially studying painting in 1967, she enrolled at the San Francisco Art Institute. After her sophomore year she traveled to Japan alongside her mother for the summer. This is where she became interested in photography. Later, after living briefly on an Israeli kibbutz, she returned to the states in 1970 and applied for a position with a new start-up rock magazine called *Rolling Stone* [1]. The twenty-one-year-old began as a staff photographer; her first out-of-town assignment was to photograph John Lennon (1940-1980) [2]. On January 21, 1971, Leibovitz’s photograph of Lennon graced the cover of *Rolling Stone*. Two years later, Leibovitz was promoted to chief photographer where she held the position for ten years. She landed a great opportunity to accompany the Rolling Stones (1962-) on their 1975 international tour [3]. The photographs she took during the tour have been called “some of the most eloquent images ever made of the world of Rock and Roll [4].” Co-founder and publisher of *Rolling Stone Magazine*, Jann Wenner, claims that she has made many of the covers of the magazine collector’s items – most importantly the issue with a photograph of a naked Lennon wrapped around wife and artist Yoko Ono (1933-1980) (Figure 1). They had just released their album *Double Fantasy*. Originally, Leibovitz wanted both of them to pose nude, but Ono refused to remove her pants, so she remained fully clothed. This photograph is profound for several reasons. During the Vietnam War, Lennon and Ono held two, week long “Bed-Ins for Peace” in protest of the war. It is also a very intimate portrait of the two, displaying a great deal of emotion. It is also profound because it was the last professional photograph taken of Lennon, taken just two hours before he was shot to death in front of his home [1].

When she ended her career at *Rolling Stone* in 1983, she took a position at the entertainment magazine *Vanity Fair*. This gave her a chance to photograph a wider variety of subjects – from presidents to teen heartthrobs. In the late eighties she worked with several high profile advertising campaigns. She won a Clio Award in 1987 for her American Express “Membership” campaign that features portraits of celebrity cardholders. In 1996 she was selected to be the official photographer for the Summer Olympics in Atlanta, Georgia [3].

With all of this experience, when she prepares for a photo shoot, she may choose from a variety of styles that she has created over the years. When one thinks of a portrait, one typically thinks of the face and no more. However, Leibovitz often includes more of the body. When asked why, she said [5]:

*I did not know what I was doing when I was younger. It was a natural thing. My lens of choice was a 35mm. It was more environmental. It was more or less the style of lens to be a little pulled away because you can’t come in closer with the 35mm… Coming in tight was boring to me. Just the face… it was a boring kind of photograph to me. It didn’t have enough information… I was young so I was scared of coming in closer… I wanted to be somewhere where things could happen and the subject was just looking back at you. It was too demanding for me to do a picture where someone is look straight at you.*

In an interview with Leibovitz, Anna Beata Bohdziewicz suggests that the subjects of Leibovitz’s photographs are hiding behind the situations that she creates. As stated earlier, some do and some do not. Usually Leibovitz learns about the subjects, and then uses that information to describe the subject through the image. Often she will go to their house before she photographs them to see how they live and what they do in their spare time. In some cases, in the subject’s home is where the photo shoot takes place [5].
II. EXAMPLE FORMAL AND INFORMAL PHOTOGRAPHS

The photo of the Grateful Dead (1972) (Figure 2) is a formal, posed portrait. Every member except Bob Wier has his eyes closed and a smile on his face, as if he were resting peacefully. One year earlier she took an informal photograph of Duane and Gregg Allman (1971) (Figure 3) of the Allman Brothers Band, actually sleeping in a van on the way to their next show. This is a perfect example of how she referenced this informal style and united the informal with the formal to create the portrait of the Grateful Dead.

The Rolling Stones international tour photographs (1975) (Figure 4) are striking because they show the life of a typical rock band in the 1960s. They are informal photographs, not posed, so the viewer gets a sense of what these celebrities do when they are not on stage - practicing in the hotel room, fixing the television, building a train set for their children, and of course, members of the band are seen passed out, probably from partying a bit too hard. This style is appealing because they are photographs that tell a story through a series of still images.

The photograph of Andy Warhol (1928 – 1987) (1976) (Figure 5), who is also a celebrity portraitist, is another example of a formal posed portrait, unlike the Rolling Stones photographs. Warhol is an artist in many mediums, but is seen here with a camera as if he is taking your photo. Under his arm sits some type of recorder, which reflects his work having created a number of films that were later removed from circulation. This portrait is also interesting because he has flipped roles with Leibovitz. Warhol is usually the one photographing subjects, however here he is the subject.

Hunter S. Thompson (1937 – 2005) was an American journalist and author of Fear and Loathing in Las Vegas. He was widely known for writing about his experimentation with psychedelic drugs. If you are familiar with Thompson and his work, the informal Leibovitz photograph (1976) (Figure 6) makes a bit more sense. The slow shutter speed in the photograph helps enhance the environment, causing the fire to blur and the flames to roar from the fireplace. The unsettling work of art above the mantle and the fireplace mildly recreates the type of setting one would think of when his work is mentioned.

Another subject of Leibovitz, Arnold Schwarzenegger (1947 -), is considered among the most important figures in the history of bodybuilding having competed and resided over competitions, owning gyms and fitness magazines and actually writing columns for the magazines Muscle and Fitness and Flex. Like the Rolling Stones photographs, these photographs (1976) (Figure 7) tell a story and show the viewer some behind the scenes of his training and also reflect the muscle madness craze of the seventies and eighties [3]. He is seen weightlifting and relaxing with a fellow body builder. The formal portrait (1976) (Figure 8) is a breathtaking view of a fully sculpted and fully flexed figure, which is the image that he strives to maintain.

The photograph of Bette Midler (1945 -) (1979) (Figure 9) is another example of a formal posed portrait. She is a singer, actress and comedienne. One of her most widely known songs is titled The Rose. Leibovitz places her in a bed of roses, directly referencing the song. This photograph is very similar to a portrait she took of Clint Eastwood (1930 -) (1980) (Figure 10). Eastwood is associated with a “tough guy” image because of the films in which he has acted. In this portrait, he is tied up with rope, standing in a western environment, reflecting his reputation. Leibovitz has claimed that people do not consider Eastwood as a funny personality, but after meeting him it is a different story [5].
III. Conclusions

Leibovitz and her celebrity photographs are an important part of contemporary American popular culture. While the formal portraits tell us more about popular culture and less about the subject, the informal snapshot-like photographs tell us more about the subject's life and less about our culture. In the same aspect, her photographs are in union with both her audience and the subjects.

Acknowledgements

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References


Abstract. The Island of Shattered Dreams (2003) asserts the Ma‘ohi identity in Fenua, an island and part of the Polynesian archipelago. It is the first novel published in Tahiti by a Ma‘ohi woman. It is analyzed from two perspectives: literary and social. The author, Chantal Spitz, an activist, wrote what amounts to a “post-colonial” novel, in an archipelago still under French dependence. She reveals problems plaguing Tahiti, outlines the geographical fiction created by Europeans, and refuses the label of Francophone Writer. Edward Said shows how the economy shapes a dependant condition, by keeping a strong control system, and how names themselves denote cultural imperialism and often deny an identity. Using the Sapir-Whorf hypothesis, we show linguistic determinism shapes the way we think, and linguistic relativity changes the codes inherent to languages, and cultures. The novel relates the story of three generations of a family with a different viewpoint from the European, and the destruction of the colonized culture is evidenced by local history. The placenta burial and “paroles du ventre” are discouraged. Spitz is accused wrongly of reverse racism. She claims equality, not superiority. She wants to restore women's dignity, the Ma‘ohis' freedom, and to defend her people's dream of happiness and of eternity. Characters represent different attitudes toward colonialism. Humanism is seen as the solution. Writing, transgressing the oral tradition, is a necessity for the Ma‘ohi cause. Without witnesses the culture would be lost.

Keywords: Francophone Literature, Post Colonial Literature

Emma Jane Williams. Having lived in Hawaii, gave me the necessary background knowledge of similar problems to the ones we worked on. We analyze the first novel published in Tahiti by a Ma‘ohi woman from both a literary and social perspective. A similar version of this work was accepted to the Annual Cincinnati Conference on Romance Languages. I travelled to this conference where I presented the paper.

Dr. Danielle Raquidel. Dr. Raquidel is a Professor of Spanish and French and has been at USC Upstate since 1989. Her research areas include Francophone and French XXth century literature. She earned a Ph.D. from the University of Cincinnati and has published articles in several Journals, including: Gale World Education Encyclopedia / Gale World Encyclopedia of the Press, Neophilologus in the Netherlands, Nuevo Amanecer Cultural in Nicaragua, BBC Publications in England, ALDEEU Journal in the USA, Letra Negra Editorial in Guatemala, The Edwin Mellen Press USA, The French review USA, Vanguardia Dominical in Colombia, and El Nacional in Venezuela. Dr. Raquidel was born in France, and enjoys writing, reading, pottery, sculpture, drawing, painting, and glasswork in her spare time. “Emma Jane’s work was well above the Undergraduate’s level work. Emma Jane was really a pleasure to work with. She initiated a lot of the research herself. I mostly directed her critical approach, helping her perfect her excellent French.”

Edward Saïd signale l’importance de la notation géographique et parle d’une « hiérarchie de l’espace par laquelle le centre métropolitain, et petit à petit l’économie, deviennent dépendants des systèmes de contrôle territorial d’outremer, d’exploitation économique” [58]-[59]. Elle empêche la notion-même de nation.


Pour comprendre Spitz, il faut définir Ma’ohiïi, le nom de la population originelle des îles de « La Polynésie française » et Fenua, le nom d’origine de ce même archipel, qui suprime la marque de possession française et l’impérialisme qui impose la division européenne des îles du Pacifique Sud (Kareva Mateata-Allain). Tant qu’un Ma’ohi est un Polynésien, il est dominé ! Tant que Fenua est La Polynésie française, la possession coloniale est marquée dans l’âme de ses habitants, sinon dans leur chair !

Les Ma’ohi sont généralement connus comme les Tahitiens, une référence directe à l’île de Tahiti, qui n’est qu’une des îles. L’assertion du nom Ma’ohi, correspond à une prise de pouvoir. Fenua inscrit le pays dans une nouvelle géographie mondiale.

L’hypothèse de Sapir-Whorf, mise en évidence par David Crystal, confirme l’importance de ces définitions. Elle est basée sur deux principes : le déterminisme linguistique, «la langue détermine la façon dont on pense » iv [14]. Les Ma’ohi sont absents et dominés avec l’appellation « Polynésien » la dépendance culturelle est perpétuée. Si le mot Ma’ohi est utilisé, la vision des Ma’ohi libres renaît, la quête d’independence du pays est établie et la cause est avancée. Le deuxième principe de relativité linguistique « déclare que les distinctions encodées dans une langue lui sont propres et ne sont trouvées dans aucune autre » v[14]. Les mots sont intraduisibles. « Polynésie » ne signifie pas « Ma’ohi ». Les deux sont complètement différents. Au début du livre, il y a d’ailleurs, un poème en langue Ma’ohi, sans traduction française. Il signale la logique, inhérente à la relativité linguistique. Dans un entretien avec Nicolas Cartron, Spitz affirme « Il y a des mots et il y a des choses qui n’appartiennent qu’à nous, et il n’y a pas de mots français pour les exprimer » [1].


De même, le mot « francophone » exhibe, selon Chantal Spitz, une forme de dépendance. Elle dit qu’elle est un écrivain Ma’ohi. Elle écrit en français à cause de l’Histoire, pas à cause d’une révérence de cette langue. Elle n’accepte pas la main tendue, que sous-entend la classification « francophone ». Dans son entretien avec Nicolas Cartron, elle la rejette : « la francophonie c’est être redevable à la France de m’avoir donné la langue française » [2]. La classification, dans la francophonie, est une nouvelle forme de domination. Elle avoue, cependant, aimer les écrits des auteurs dits « francophones » car ils appartiennent à la même catégorie qu’elle, celle des colonisés. Dans l’entretien cité, Spitz explique la façon dont elle est vraiment liée aux écrivains « francophones » « Ce qui me lie à ces autres n’est pas la francophonie, mais l’histoire commune » [Cartron 3]. Il devrait exister une classification de littérature Ma ’ohi. Mais Spitz demande : « pourquoi doit-on me définir ? j’écris, c’est tout » [2]. L’hypothèse de Sapir-Whorf reconnaît que les humains ont besoin de classifier, catégoriser leur monde, par les limites des langues, mais que cette catégorisation doit prendre en compte les événements historiques, la colonisation et l’impérialisme.

*L’île des rêves écrasés* suit une famille à travers trois générations. Le livre confirme la pensée de Jonathan Carr-West, qui affirme « l’identité d’un groupe, d’une nation, d’une tribu, ou d’une famille est largement le résultat des histoires que les membres du groupe racontent sur eux-mêmes »vii [84]. Chantal Spitz utilise ces
histoire pour solidifier l'identité Ma’ohi. La situation familiale permet au lecteur de voir l’interaction de ses membres, et les rapports interpersonnels. Elle permet de développer un sens réel du peuple Ma’ohi.

Avec son style très personnel, Spitz réussit dans sa quête d’assertion de l’identité Ma’ohi qu’elle donne à connaître. Avant ce roman, cette identité n’était connue que du point de vue déformant des écrivains français, c’est-à-dire qu’elle était méconnue. Cette histoire marque un tournant historique remarquable. La voix de Chantal Spitz est la première voix Ma’ohi entendue par le monde et cette voix s’élève contre le statut d’une des dernières colonies françaises. Spitz, femme de Fenua, démontre «les similitudes structurelles profondes entre le procédé d’une production textuelle et les procédés de la production d’identité de soi » au niveau global [Carr-West 84].

Fenua est encore dépendante. La colonisation dont les îles ont été victimes, rend les écrits du martiniquais Frantz Fanon parfaitement applicables au mouvement indépendantiste en Fenua. Fanon, un activiste politique, a dédié sa vie à la lutte anti-coloniale et en particulier à la lutte africaine pendant la guerre d’indépendance en Algérie. Il a affirmé que la colonisation ou la domination d’un autre pays utilise le racisme comme arme idéologique : « un pays colonisateur doit être raciste » [cité par Zolberg 124]. Dans l’acte de colonisation, « les colonisateurs doivent détruire le système culturel du colonisé » [124]. C’est ce que confirme l’histoire Ma’ohi. Cependant, si le racisme semble reflété par l’utilisation forcée de la langue française et par l’interdiction des croyances culturelles traditionnelles, il faut nuancer une telle affirmation, car la même politique était aussi appliquée en France, vis-à-vis des Bretons et des Alsaciens, entre autres. Eux aussi étaient obligés de parler français. Plus que d’une forme de racisme, il s’agit donc d’une forme d’obscurantisme, propre à l’époque coloniale. Le problème ne change qu’au moment où cette attitude est perpétuée avec mauvaise foi et en pleine conscience de cause.

Dans L’île des rêves écrasés Spitz utilise une liste de règles, donnée aux Ma’ohi par les missionnaires, pour illustrer le fait que les colonisateurs ont voulu détruire le système culturel. Cette liste imposait le christianisme européen : « Tu te vêtiras sombrement, Tu te baigneras loin des regards concupiscents, Tu tresseras tes cheveux, Tu mangeras toutes les nourritures, Tu oublieras l’ancien ordre établi, Tu croiras en un seul Dieu, Tu te vêtiras le vrai Dieu, Tu détruiras tes idoles, Tu prieras le dimanche, Tu respecteras ces commandements » [25] [26]. L’utilisation du futur de l’indicatif, trace un plan de transformation culturelle. Les verbes prédissent la situation Ma’ohi, dans un rapport futur avec les Européens et les étapes d’une nouvelle base d’existence. Ces règles sont ethnocentriques par nature. Dans le livre, comme dans L’histoire, elles sont une imposition grave sur l’identité Ma’ohi, un lavage de cerveau. La mise en place de ces règles sous-entend que les manières européennes de l’époque sont meilleures et plus respectables que les manières Ma’ohi. Pourtant le fait demeure que les regards concupiscents sont ceux des Français et sont indépendants des femmes ! Le seul Dieu des Français est transformé en vrai Dieu, et nie les traditions religieuses Ma’ohi, rejetées et remplacées d’office. On voit là une infime partie des injustices racistes subies.

Robert Nicole explique à ce propos dans Literature in Tahiti que Spitz a une « préoccupation presque obsessionnelle avec la race » [195]. Il suggère qu’il est possible de considérer L’île des rêves écrasés « comme un manifeste raciste à l’envers » [196]. Nous désapprouvons ce commentaire. Le racisme est différent de la question de races. Chantal Spitz n’entretient jamais dans un jeu politique binaire. Même si la race Ma’ohi a joué le rôle de l’Autre pour les Européens, Spitz ne cherche pas à démontrer une supériorité. Elle accentue un besoin d’égalité réelle et universelle, qui inclue Ma’ohi et Français. Elle entend montrer que les Ma’ohi veulent un avenir assuré mais libre.

Le racisme est profondément lié à l’argent, au pouvoir, à l’autorité et à la domination des autres. Spitz qui lutte pour l’égalité humaine ne peut pas être raciste. Il semble d’ailleurs que le racisme à l’envers soit une utopie: un cri pour la liberté n’est pas raciste! une race n’est pas supérieure à l’autre ! Spitz désire que la culture Ma’ohi soit reconnue globalement au même titre et avec le même statut que les autres cultures.

Dans L’île des rêves écrasés Laura Le Brun représente l’acceptation des Français par les Ma’ohi. Les mêmes gens qui protestent contre la base militaire et la présence française en Fenua, ouvrent leurs cœurs à un des membres de cette force colonisatrice. Laura exemplifie les contradictions qu’engendre la situation : une haine des choses françaises, et un amour pour quelques individus français. S’il est possible de vouloir rejeter l’institution colonisatrice d’un autre peuple, l’humanisme empêche de rejeter personnellement les individus de cette institution. L’amour est aveugle. L’attraction des opposés est toujours possible. Spitz introduit l’idée de l’attraction des blancs pour les Ma’ohi, « ces hommes pâles, au corps différents, à la peau blanche, ont posé leur regard sur nos femmes » [21], et inversement « leurs femmes pâles, délaissées, au corps différent, à la peau blanche ont à leur tour posé leur regard sur nos hommes » [22].
Toofa est le personnage responsable du commencement du métissage biologique. Elle se sent responsable de la souffrance de ses petits-enfants. C'était elle : la femme Ma'ohi, désirée par un homme pâle, Monsieur Charles Williams. C'est au moment où sa fille Emere veut aller à Maeva pour être plus proche de Tematua, que Toofa comprend que les membres de la famille future d'Emere, « dès demain, commenceront à se détourner d'elle, par qui le scandale arrive » [63]. Toofa représente l'absorption, et la valorisation des manières culturelles françaises par certains Ma'ohi. Elle est à l'origine du cycle, qui finit par la transformation culturelle de ses petits-enfants. Symboliquement, elle représente l'origine de la nouvelle culture des « Demis », présente en Fenua, l'attraction entre deux races, et l'acceptation des valeurs françaises par eux.

Chantal Spitz, et Flora Devantine insistent qu'il faut renforcer la tradition orale avec une voix littéraire. Dans l'entretien avec Nicolas Cartron, Spitz déclare qu'il faut écrire, « pour bouger des choses » plus vite [4]. Selon ce mouvement vers l'écriture, il faut écrire pour exister, écrire pour survivre comme peuple. La littérature d'un peuple « est le signe d'une reconquête de pouvoir » [Margeuron 24].

Tetàire est, quant à elle, un personnage presque autobiographique. Sa tâche est d'enrayer ce changement culturel. Elle exemplifie le besoin d'expression collective Ma'ohi. Elle exprime leurs sentiments et leurs impressions. Elle s'alarme de la situation du peuple à l'intérieur de son propre pays à cause de l'attitude impérialiste de la France. Son frère, Terii lui explique : « Tu devrais écrire pour évacuer le bouillonnement qui est en toi. Si tu veux que nous connaissions notre histoire, fais un livre que nous lirons » [161]. A ce point-là de l'histoire, Tétiare réalise que, pour son peuple, elle doit écrire, et exprimer ses sentiments profonds. Cependant, en choisissant d'être infirmière au lieu d'être écrivain « pour l'amour de son père » [191], elle résiste un peu plus longtemps à l'appel d'un changement profond. L'écriture comme moyen d'expression, va contre les traditions orales Ma'ohi, en particulier celles du père Tematua. L'écriture est une valeur française. Cependant, après la mort de Toofa, sa grand-mère paternelle, et celle de son père, n'ayant plus peur de blesser les êtres qui lui étaient chers, elle trouve la liberté et le besoin d'écrire qui « la rendent à son rêve » [191]. Tetàire a des sentiments, qu'elle ne peut déjà plus exprimer dans « la langue du ventre » associée à son père, à cause de son métissage biologique, et l'écriture devient sa nouvelle manière de perpétuer les paroles du ventre que son père, lui, savait exprimer.

« La langue du ventre » dans L'île des rêves écrasés est le mode d'expression le plus valorisé par les Ma'ohi. Elle fait la connexion avec « la mère nourricière » et « la terre nourricière ». C'est la façon de parler avec un respect omniscient, à la terre et au peuple Ma'ohi. A la naissance d'un enfant, son placenta est enterré avec une graine d'arbre. Dans le passé il était vraiment important que l'arbre soit un arbre fruitier. Il est notable qu'aujourd'hui il est beaucoup plus possible que les femmes Ma'ohi plantent des arbres sans fruit [Saura 1]. Comment interpréter ce fait ? peut-on associer ce changement à la perte des véritables paroles du ventre ? du fruit de l'humanité. Comme les racines poussent dans la terre, l'âme de l'enfant croît vers la terre et vers les ancêtres. Le mot Ma'ohi pour le placenta étant pufenua, l'étymologie du mot marque visiblement la connexion entre le placenta et la terre, Fenua.

Pour les Ma'ohi, l'enterrement du placenta, encore pratiqué, est le signe d'une reconquête de pouvoir, l'attraction entre deux races, et l'acceptation des valeurs françaises par eux. La maladispe poétique française, encourageant son abolition sous prétexte de santé publique, nous frappe comme un acte dépourvu de sensibilité, vis-à-vis d'une tradition fondamentale.

Tematua, est le personnage qui s'exprime en « paroles du ventre ». Son nom est, de manière significative, très proche du mot désignant le père « Tematua Tane ». Tematua est le pivot de la famille, de Fenua, et de la tradition ancestrale Ma'ohi. A la naissance de chaque enfant dans le roman, il profère « une parole du ventre » : une sorte d'histoire poétique déclamé à l'enterrement du placenta. Les verbes, utilisés au futur, comme dans les règles des missionnaires, prédissent l'avenir des enfants. Parlée du ventre, en connexion à la Terre sacrée et au peuple Ma'ohi, la phrase finale de chaque « parole » implique le retour constant des enfants à leur terre natale « Puissiez-vous ne jamais oublier, L'héritage de vos Pères » [76]. Par ces « paroles » Tematua sauvegarde l'identité Ma'ohi et perpétue la tradition. Il donne de la force aux enfants. Il exemplifie le fait que la culture Ma'ohi est transmise et perpétuée par la voix du père.

Les paroles pour Terii expriment les sentiments les plus profonds d'un père pour son fils. Mais cette naissance marque une vraie lutte pour équilibrer deux cultures et deux univers. Le résultat de l'amour de Toofa pour l'homme anglais se sent dans la vie de Terii. Tematua a de la compassion en parlant à ce fils, né pour affronter une lutte culturelle certaine, « Fils de deux mondes que tu portes en toi, Ta force et ta fragilité, Fort de deux univers, Fragile de deux héritages » [75]. Terii représente la lutte de la nouvelle race: les Demis. Dans ces paroles de père, Tematua prédit la lutte constante dans la vie de ses enfants, mais plus
particulièrement dans celle de son fils Terii: « Partagés de deux univers, Qu'il vous faudra marier » [76]. Finalement, le placenta, la graine de l'âme de Terii, est planté dans la terre sacrée accompagné de ses paroles. L'union ici fragilise !

Tematua appelle sa deuxième née, Eritapeta, traduction d'Elizabeth, le nom du bateau anglais qui l’a emmené en Europe, associé symboliquement à une femme. Il ne suit pas, dans son cas, la tradition de nommer l’enfant selon l’arbre généalogique. Il est conscient des autres racines de cet enfant. Dans ses paroles, Tematua l’enjoint « Puisse-tu, Eritapeta ma fille, Vivre avec tes frères, Le rêve de notre Terre » [78]. Mais Eritapeta sera la seule, qui en grandissant, ne répondra pas au vœu paternel. Elle a physiquement la peau la plus pâle des trois enfants, elle incarne celle qui se blanchit dans la société européenne. Tematua, plein d’espoir, a voulu que malgré son nom d’origine européenne « aucun malheur ne risque d’arriver à sa petite » [77]. Sa vie sera pourtant une série de malheurs. Tematua s’est-il trompé ? A-t-il mal choisi son nom ? Sa compassion l’a-t-elle trahi ? Enfin, Eritapeta, bateau métaphorique, quitte la Terre sacrée et, solitaire, abandonne le rêve de son peuple.

La troisième née, Tetiare, fidèle à la généalogie familiale, reçoit le nom de son arrière grand-mère paternelle, Elle s’aligne sur le rêve de Tematua, le rêve de Terii, celui des Pères Ma’ohi. Pendant l’enterrement de son placenta, les paroles de Tematua font de l’arrivée de l’âme de Tetiare, un « message d’espérance ». C’est une enfant née « pour préparer demain » (80). Tematua, de manière prémonitoire, se montre plus exigeant dans ses paroles qu’avec Eritapeta, « Puisse-tu, fille de mon corps, Tracer à nouveau avec tes frères Le chemin qui se perd ? » [81]. Tematua place beaucoup plus d’espoir dans cette naissance, sans doute parce qu’elle arrive après le rêve qu’il a eu de sa grand-mère.

D’ailleurs Tetiare répond aux espoirs de son père avec enthousiasme. Elle est armée pour la lutte culturelle contre les institutions françaises. Ce qu’elle attaque le plus, c’est l’institutionnalisation de la liberté. Elle l’attaque dans son poème Ti’amaraa, qui fait allusion au poème éponyme français, de Paul Eluard : La liberté. Mais si cette allusion utilise un symbole très français, c’est pour en critiquer les limites. Tetiare distingue entre la liberté Ma’ohi et la liberté française. Son poème plaide pour la compassion des Français qui ont, eux aussi, connu l’oppression dans leur propre histoire. Ti’amaraa est un véritable cri de fraternité et d’égalité humaine. Tetiare ne demande rien de plus aux Français, que la même liberté qu’ils ont demandée pendant la Deuxième Guerre Mondiale, sous l’occupation allemande. Eluard était un poète et militant pacifiste, comme l’est Tetiare, et comme l’est Spitz dans la vie, et comme écrivain.

NOTES

1. Toutes les citations en français de livres écrits en anglais sont notre traduction.
2. The language has the power to dehumanize and to perpetuate the oppression of people
3. in Ma’ohi « Ohi refers to a sprout which has already taken root, securing itself with a certain autonomy of life, all the while being linked to the mother stem. From a sprout, an ohi, tracing back its roots, one always gets to a trunk. Ma’ohi is the community of all those who claim to be of the same past, culture, and language which constitute the common trunk and which still have the same destiny » [Robert Nicole, cité dans l’article de Kareva Mateata-Allain 17]
4. The language determines the way we think
5. States that the distinctions encoded in one language are not found in any other language
6. we dissect nature along the lines laid down by our native languages
the identity of a group, a nation, a tribe, or a family is thus largely a matter of stories its members tell about themselves

there are deep structural similarities between the process of textual production and the processes by which self-identity is produced

a colonial country must be racist

the colonizers must destroy the cultural system of the colonized

almost obsessive preoccupation with race

as a racist manifesto à l’envers

REFERENCES

SIZE-FREQUENCY DISTRIBUTION OF MOLLUSCS FROM A PLIOCENE FAUNA, FLORENCE, SC

Abstract. Over 350 species of marine life have been recovered from dredging near Florence, SC. This Pliocene fauna (3.6 to 3.8 mya) contained abundant molluscs and rarer sponge, coral, bryozoan, brachiopod, annelid, arthropod, echinoderm and vertebrate material. Seven screens ranging from 12.5 mm down to 0.7 mm were used to segregate a 75.7 liter bulk sample into sets of uniform-sized samples. For the three largest mesh samples, the same species dominated. As screen size decreased, the numbers of individuals and of species present increased. The three largest screen fractions have yielded 200 species. The most abundant genera were Mulinia [surf clams], Chama [jewelbox clams], Cyclocardia [heart clams], and Crepidula [slipper snails]. There are more species of snails, but fewer individual snails. Reworked older fossils include petrified wood and Cretaceous vertebrate material, including shark and fish teeth and vertebra, mososaur teeth, turtle shell fragments, and crocodile teeth and skin plates.

Keywords: Paleobiology, Pliocene, molluscs, assemblage diversity, species richness

Katie Pruiksma.
Originally I got involved in research through Mrs. Campbell who I have known since fall 2005. When I got an Honors Research Assistantship in fall 2007, Dr. and Mrs. Campbell invited me to participate in one of their research projects. Working on this research project gave me the opportunity to visit the actual site of our research. Not all projects have the opportunity to travel to the location of study and in this way our project is unique. My favorite part of research was working closely with two faculty members who are so passionate about their work and their students and subsequently I became passionate about the project and the research process.

Dr. Lyle Campbell and Mrs. Sarah Campbell.
Dr. Campbell is a Professor of Geology and has been at USC Upstate since 1976. Mrs. Campbell is an Instructor of Biology and has been at USC Upstate since 1977. Dr. and Mrs. Campbell combine biology and geology in Paleobiology, the study of past life, with research in Recent beach faunas in order to reconstruct past environments. Their major focus has been molluscan biogeography in the western Atlantic during the Cenozoic although they also are involved in the natural history of the Carolinas. Dr. Campbell has a Ph. D. from USC and Mrs. Campbell has a M.S. from USC. They have published in articles in several Journals, including: the Virginia and South Carolina Geological Surveys, The Nautilus, American Malacological Society, International Bivalve Congress, and Southeastern Geological Society of America. Dr. Campbell is originally from Shenandoah Valley, Virginia, and Mrs. Campbell is from Tidewater, Virginia. In their spare time, the Campbells enjoy natural history, bird watching, herpetology, beach combing, astronomy, chasing down unusual plants or butterflies, oil painting and music.
I. INTRODUCTION

This study was proposed to thoroughly document the 3.6 to 3.8 million year old Pliocene fauna, mainly consisting of bivalves and gastropods, in a sample of sand and shell collected from Eagle Point pond in Darlington County, near Florence, South Carolina (Figure 1). Shells were size sorted, identified, and counted. From this data quantitative tables were generated for ecological analysis. The fossil assemblage was compared with Recent equivalent faunas in order to determine if species richness and community structure were conformable [1-4].

II. METHODS AND MATERIALS

Seven size screens, ranging from 12.5 mm to 0.7 mm, were used to sift through the material and to create several sub-samples of each screen size. Each set of uniform sized material was then divided into equal volume samples. Three samples were generated from the largest three screens, referred to as Large, Medium, and Small. The Large sample consisted of nine sub-samples, the Medium sample consisted of eight sub-samples, and the Small sample consisted of five sub-samples. These samples were identified [5-14] and sorted to species, and the number of individuals of each species was counted. Clams and snails were analyzed separately within each size fraction. Bray-Curtis similarity indices were calculated for the presence-absence data. Quantitative data were used to calculate rarefaction curves and rank-order graphs for ecological comparisons [15].

III. DISCUSSION

The dredged sediment was size sorted to determine how the species were distributed through different size ranges. Many organisms release numerous offspring in order to produce enough that will survive and reach reproductive maturity. Abiotic and biotic hazards, such as predation, reduce the survival rate of these numerous offspring. Therefore, for a given species, the number of specimens should decrease as the size of the organism increases [16]. This predicts an inverse relationship between specimen numbers and increasing mesh size. A fixed amount of nutrients can feed many smaller or fewer larger organisms, and primary consumers are expected in greater abundance [16]. Also the marine habitat can be subdivided into an increasing diversity of microhabitats suitable for mollusks less than 2.5 cm in size. Therefore the molluscan assemblage was predicted to have few large, long-lived individuals and an abundance of smaller individuals. Filter-feeding clams were expected to outnumber the carnivorous snails, and to provide much of their diet. Additionally, typically fragile juveniles were expected to be disproportionately lost from the preserved assemblage [2], [17].

As the screen mesh size decreased, the number of species present and the number of specimens per species increased. After the species were identified, rarefaction graphs were constructed to determine if the bivalve and gastropod faunas had been effectively sampled in each mesh size. Bray-Curtis similarity indices were calculated to compare the percent of similar organisms shared between different samples. Bray-Curtis
similarity indices compared the nine Large sub-samples, the eight Medium sub-samples, the five Small sub-samples, and the Large, Medium, and Small samples as three composite units.

Rarefaction curves graph the increase in the number of species as the number of individuals increases. The cumulative number of species continues to rise as samples are added until it eventually approaches the total number of species in the population and the graph plateaus. After this level of sampling has been achieved, additional samples will only slowly increase the species richness by adding rare species. Rarefaction graphs for clams (Figure 2) and snails (Figure 3) followed a similar pattern. Each increased quickly and then slowly leveled. This pattern is not anticipated to change as additional samples are added.

Figure 2. Rarefaction curve for bivalves in the 9 sub-samples caught in the Large mesh screen.

Figure 3. Rarefaction curve for gastropods in the 9 sub-samples caught in the Large mesh screen.
Table 1. Bray-Curtis similarity indices for bivalves in the nine sub-samples from the Large mesh sieve.

<table>
<thead>
<tr>
<th>Sample</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<tbody>
<tr>
<td>1</td>
<td>0.756757</td>
<td>0.705882</td>
<td>0.724638</td>
<td>0.712329</td>
<td>0.724638</td>
<td>0.757576</td>
<td>0.6875</td>
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<tr>
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<td>0.6875</td>
<td>0.742857</td>
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<td>3</td>
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<td>0.666667</td>
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<td>0.742857</td>
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<tr>
<td>7</td>
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<td></td>
<td></td>
<td></td>
<td>0.428571</td>
<td>0.677419</td>
<td></td>
<td></td>
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<td>0.733333</td>
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</tbody>
</table>

Table 2. Bray-Curtis similarity indices for gastropods in the nine sub-samples from the Large mesh sieve.

<table>
<thead>
<tr>
<th>Sample</th>
<th>1</th>
<th>2</th>
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<td>0.466667</td>
<td>0.380952</td>
<td>0.413793</td>
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<td>0.571429</td>
<td>0.516129</td>
<td>0.424242</td>
<td>0.545455</td>
<td>0.333333</td>
<td>0.5625</td>
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<tr>
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<td>0.333333</td>
<td>0.5</td>
<td>0.428571</td>
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<td>0.545455</td>
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Table 3. Bray-Curtis similarity indices for bivalves in the eight sub-samples from the Medium mesh sieve.

<table>
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<tr>
<th>Sample</th>
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<th>2</th>
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<tr>
<td>2</td>
<td>0.752688</td>
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<td>0.826087</td>
<td>0.818182</td>
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<td>0.808989</td>
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<tr>
<td>3</td>
<td>0.817204</td>
<td>0.811881</td>
<td>0.845361</td>
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<td>0.77551</td>
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<td>4</td>
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</table>

Table 4. Bray-Curtis similarity indices for gastropods in the eight sub-samples from the Medium mesh sieve.

<table>
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<tr>
<th>Sample</th>
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<th>2</th>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
<td>0.474576</td>
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<td>0.42623</td>
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<tr>
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<td>0.538462</td>
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</table>
In the nine Large sub-samples, the percent similarity ranged from 75-85% (Table 1) with an average percent similarity of 81% for the clams and a range of 40-58% (Table 2) with an average percent similarity of 48% for the snails.

The percent similarity range for the clams in the eight Medium samples is 43-80% with an average similarity of 72%. For the snails, the range was 24-65% with an average similarity of 46%. An unusually low number of individuals produced the low (24) percentage.

The percent similarity range for the clams in the five Small sub-samples is 76-88% (Table 5) with an average similarity of 83%. For the snails, the percent similarity range was 42-61% (Table 6) and the average similarity was 53%. This data did not record either an increase or a decrease in the uniformity of sub-samples as mesh size increased.

A Bray-Curtis similarity index was computed between the Large, Medium, and Small samples as composite samples to determine the degree of similarity between screen sizes. The percent similarity range for clams between the three samples was 73-85% with an average similarity of 79%. For the snails, the range was 53-68% and the average similarity was 58%.

The data for the clams are consistent with the clam data of the Large samples. However, in this comparison between Large, Medium, and Small samples the data for the snails are much higher as a whole than in any of the sub-samples of the Large, the Medium, or the Small.

Along the x-axis in Figure 4, the numbers indicate the screen sizes used. One indicates the Large samples, 2 indicates the Medium samples, 3 indicates the Small samples, and 4 indicates the comparison between the three samples as a whole. This graph shows the decrease in average similarity between the Large and the Medium samples but an increase in average similarity between the Medium and Small samples. This implies that there is no direct relationship between decreasing screen size and the average percent similarity.
Further screen sizes will need to be analyzed in order to determine if there is a relationship between screen size and percent similarity between samples.

![Average Percent Similarity of Large, Medium, and Small Samples and Between L, M, and S Samples as a Whole](image)

**Figure 4.** Bray-Curtis similarity indices graphed between the three sized samples, with the bivalves as series 1 and the gastropods as series 2.

## IV. CONCLUSIONS

Exceptional diversity was documented in the species richness [3] with 200 species from the three coarsest mesh sieves. In future work, this exceptional diversity will be compared with data from the four smaller fraction samples.

Community structure patterns, as shown by rarefaction curves and rank-order plots, are conformable with those of Recent diverse faunas [15]. These three largest mesh samples have yielded a higher ratio of adult to juvenile specimens than was expected. This may reflect high survivorship rates, or selective shell destruction of the more fragile juvenile shells [1].

The question of when have you sampled enough of the population in order to make statements about the composition of the assemblage and have confidence in statistical analysis of the fauna was addressed by similarity indices. Bray-Curtis values indicate that for this fauna a sample size of 500 to 600 clam specimens is sufficient to document 80% of the total bivalve fauna. Also rarefaction curves for the large mesh data set leveled, with almost 90% of clam species documented from this fauna present in this sample, representing 1400 specimens. Therefore, this volume of sampling is sufficient to capture over 90% of the clam diversity present in the assemblage. Although individual clam specimens outnumber snails by approximately a 7 to 1 ratio, snails reflect a greater diversity in species. Therefore, larger samples are necessary in order to effectively sample the diversity of snails.

## ACKNOWLEDGMENTS

We would like thank the USC Upstate Honors Program for partially funding this research, and we would also like to thank Tommy and Evelyn Dabbs for hosting our field work.
REFERENCES


**Abstract.** Interracial and inter-gendered linkages define the main character of the classic autobiographical novel entitled *Down These Mean Streets* written by Piri Thomas, a U.S. Latino writer of Puerto Rican background. This paper examines the intersection of race and gender in Thomas’ novel through the exploration of Piri’s relationships with female characters: mother, girlfriends, casual female acquaintances, and various racial and ethnic groups. By means of racialized and genderized discourse and material experiences, the author reveals Piri’s machista and sexist perspective on women which eventually leads to his neglect of their feelings, needs and worth as human beings. Piri’s self worth is often measured and determined by how miserable he makes the lives of various female characters in the text. Piri Thomas’ novel underscores the undermining force of machismo and sexism, both of which emphasize female submission and silence. Central to this study is Marta Sánchez’s Chicana feminist theory of “La Malinche,” which she has applied not only to Piri Thomas’ *Down These Mean Streets* but to two other ethnic minority writers, namely Claude Brown and Oscar Zeta Acosta. During Piri’s moments of rage and resentment provoked by tangible experiences of racism and classism, he experiences an inner uprising that leads to rebellion, self-determination and acceptance. This research on *Down These Mean Streets* served as the catalyst for a reflection on the problems of racism and sexism that continue to characterize those “mean streets” that have become, we would argue, “meaner” in recent years.

**Keywords:** Piri Thomas, Race and Gender, Literature

**Johanna Jackson.** I like the study of literature and literary theory and Dr. Carter has helped me pursue this interest through this undergraduate research project. Our project is unique in that it examines race and gender issues in a controversial and fairly recent novel. My favorite part of the research experience was reading and learning about the different criticisms and theories that apply to the novel we used.

**Dr. June Carter.** Dr. Carter is a Professor of Spanish and has been at USC Upstate since 1995. Her research areas include Latin American literature, Afro-Hispanic literature, and U.S. Latino literature. She earned a Ph.D. from the University of Washington and has published articles in: Anuario de Letras; Latin American Literary Review; Caribbean Quarterly; The Rocky Mountain Review; Prismal Cabral; Studies in Afro Hispanic Literature; and several others. She has also coedited a book entitled *Jose Agustin: Onda and Beyond* and presented papers at numerous local, national and international conferences. Dr. Carter is originally from Mobile, Alabama but lived most of her life in Washington State, New Mexico, and Texas. In her spare time, Dr. Carter enjoys aerobic walking and visiting university libraries, especially the rare books section. “I have thoroughly enjoyed this mentoring experience with a student who is very conscientious and excited about Hispanic literature. I appreciate the university’s efforts in providing such opportunities for research to students and faculty.”
I. INTRODUCTION

Piri Thomas saturates his novel, Down These Mean Streets (1967) [1], with stereotypes of class, race, and gender, all of which intersect to emphasize the disturbing injustices perpetrated upon the poor, the racial minority and women. Piri, the novel’s protagonist, challenges and often attempts to dismiss the underpinnings of racial stereotypes in the U.S., despite the fact that he himself appropriates them and uses them against others. Much of Piri’s young adulthood is spent struggling to find his identity and a respectable place in the home, El Barrio, and the homeland. Piri’s transition from adolescence to adulthood involves racialized and gendered experiences of victimization that lead to feelings of rage and anger against his father (home); his neighborhood (El Barrio) and his homeland (New York/U.S.A.). Piri, a dark-skinned Puerto Rican uses drugs, engages in street fights, physically and verbally abuses women, and eventually commits armed robbery as a form of resistance against racial injustices and marginalization.

Marta Sánchez’s compelling study of race and gender in Claude Brown’s Manchild in the Promised Land (1965); Piri Thomas’ Down These Mean Streets (1967) and Oscar Zeta Acosta’s The Autobiography of a Brown Buffalo (1972) provides the framework for this research project. In one of Sánchez’s earlier essays, “La Malinche at the Intersection: Race and Gender in Down These Mean Streets,” [2] she states “The Malinche trope exposes the negotiations of racial and gendered discourses in Down These Mean Street” (page 124). She argues that this metaphorical symbol of Mexican culture, is both a positive and negative representation of the Mexican woman: “the cultural bridge”, “translator” and the “traitor”, and “whore” (page 118). According to Sánchez the Malinche trope can be translocated “across cultures onto the Puerto Rican novel Down These Mean Street to lay bare the arbitrariness of the racial binary and to make manifest the way gender and sexuality mediate intercultural zones of race and ethnicity...” (page 118).

II. RACE AND THE PROVERBIAL “ONE DROP”

Two key questions guide this study. First, how have Piri’s notions of identity been challenged in the text? We address this issue by proposing that the author, Piri Thomas, subverts by means of his main character, Piri, the socially-constructed and all-too-limiting black / white racial categories present in U.S. society in the 1960s, the time of the novel’s first publication. We have adopted the Black Feminist Statement on race, gender and class which offers a sound theoretical tool to understand how “race, class, and gender are not independent variables that can be tacked onto each other or separated at will...” Instead, “they are concrete social relations, [that] ... are enmeshed in each other” [3]. Second, how does Piri’s treatment of women define him as a Puerto Rican male?

Through Piri, the product of a mixed-race marriage, the author constructs and represents Puerto Rican identity as a hybrid culture of “collective identities.” The novel insists on the performative aspects of a person’s sense of who he is. Discursive practices mediate material experiences in the text. For example, when Piri refers to himself as “Puerto Rican moyeto,” which means “Puerto Rican Negro” to Gerald when they are discussing racial backgrounds, he is identifying himself according to the classification of race to which he belongs. In Piri’s case, it is both Puerto Rican and black. Brew then asks Gerald, “...what kinda Negro is yuh?”. Gerald refers to his “genealogical tracer” and explains that he is “...really only one-eighth colored”. Gerald explains to Piri and Brew the history of his racially mixed background saying that he, in fact, feels “...sort of Spanish-ish...”. This dialogue that takes place shows how the novel demonstrates that it is the performative aspect of a character that gives him a sense of who he is.

Thomas’ novel questions the dominant image of the Puerto Rican as a “harmonious integration” of three cultures. Such a multicultural perspective, we would argue, glosses over inner conflicts and encourages the myth of racial harmony based on mestizaje. A close look and analysis of both the hegemonic discourse and material experiences of Piri, reveals the underestimation and repudiation of the African element in his Puerto Rican cultural identity. The novel demonstrates how many Puerto Ricans have made Indians out of blacks. For example, Piri’s brother responds to the question about their father’s race saying, “Poppa’s the same as you...Indian”. Piri responds saying, “What kinda Indian...Caribe? Or maybe Borinquén? Say, José, didn’t you know the Negro made the scene in Puerto Rico way back? And when the Spanish spics ran outta Indian
coolies, they brought them big blacks from you know where. Poppa’s got moyeto blood. I got it. Sis got it. James got it”. Instead of identifying Piri and their father as being related to African Americans, José says that they are “Indian” which, according to him and society is better than being the same color as African Americans. Piri attempts to identify that they, he and his family members, are in fact the same racially as African Americans only the color is present in Piri and his father, and not in the rest of his family. Also in Piri’s case, African Americans are treated differently as is apparent when as a child Piri is asked in which hospital he was born. He responds that he was born in Harlem Hospital and the white child replies, “Harlem Hospital? I knew he was a nigger… That’s the hospital where all them black bastards get born at”. This conversation with the lighter skinned individuals in his neighborhood exemplifies that Piri was stereotyped as an African American.

In an effort to gain visibility and respect, Piri’s father downplays markers—skin color and hair texture—that alienate him and devalue him as a human being. He decides to speak Spanish and to speak it with a heavy accent, thereby attempting to downplay his African heritage and overplay his Spanish heritage. Piri’s father appropriates an identity that is more acceptable in social, public and political arenas, while Piri ends up choosing “blackness as a dwelling space” [4]. As Rodríguez de Laguna reminds us, *Down These Mean Streets*, “undermines the widely accepted myth of one single, happy, color-blind Puerto Rican cultural family”[4].

Numerous studies have dealt with the “racialized differentiation among Puerto Ricans within their own communities” [5-8]. Piri, the protagonist, is victimized by those in his own home, a place where a child should feel secure and receive support and unconditional love. Ironically his father, who himself has experienced racial discrimination, differentiates Piri from his siblings who are of a lighter skin tone: “Like it’s not the same for me. How come when we all play with you, I can’t really enjoy it like the rest? How when we all get hit for doing something wrong, I feel it the hardest? Maybe ‘cause I’m the biggest, huh? Or maybe it’s ‘cause I’m the darkest in this family...” Color, therefore, sets Piri apart from others in his family and such differentiation clearly bothers him. Thomas further underlines this familial racial differentiation in chapter 15 titled “Brothers Under the Skin.” Here, Piri attempts to enlighten his brother José of their mixed-race background: “Yeah—an’like I’m saying, sure there’s stone white Puerto Ricans, like from pure Spanish way back—but it ain’t us. Poppa’s a Negro...”. José denies their mixed-race standing and retorts: “I’m not black, no matter what you say, Piri”... “You’re crazy, stone loco. We’re Puerto Ricans, and that’s different from being moyetos... We’re Puerto Ricans, an’ we’re white”.

Thomas’ treatment of miscegenation or the proverbial “one drop” rule underlines the complexity of the race issue in Puerto Rico and the mainland, and forces the reader to question the very essence of racialized American society. The father and brother want to be accepted and recognized as white, so they will do whatever is necessary to ensure that their difference is not one marked by color, but rather by language, which somehow makes them better:

“I ain’t got one colored friend,” he added, “at least not one American Negro friend. Only dark ones I got are Puerto Ricans or Cubans. I’m not a stupid man. I saw the look of white people on me when I was a young man, when I walked into a place where a dark skin wasn’t supposed to be. I noticed how a cold rejection turned into an indifferent acceptance when they heard my exaggerated accent. I can remember the time when I made my accent heavier, to make me more of a Puerto Rican the most Puerto Rican there ever was. I wanted a value on me, son”.

### III. The Intersection of Race and Gender

It is in chapter 17 that Thomas intersects the issues of race and gender when Brew and his girlfriend, Alayce, verbalize the male-female binary. Alayce states:

“ I said what I felt, honey. It’s hard to be just plain black.”

“Yuh think Ah doan’ know that? Ah’m a black man, gur-ell.”

“It’s harder bein’ a black woman,” Alayce replied. Her voice was soft, like she knew her man was getting mad but she couldn’t stop, or she didn’t want to[p.159].

Here Alayce makes it clear that being black is one thing, but being a black woman even worse. Piri’s father intersects the two in a conversation with Piri when talking about entering a New York nightclub where blacks were not welcomed. He detested the fact that he was considered a Negro. According to Sánchez, Piri’s father...
“displaces his anxieties about being racialized and contains them in a sexual simile: “God, I felt like a puta every time. A damn nothing”. Hence the social hierarchy for Thomas, places women and blacks on the same level, both have been inferiorized and subordinated by a racialized (white) and genderized (male) agent. Thomas’ novel challenges the system through his careful intersection of racial and gendered themes, symbols and discourse. His text invites our denunciation of racial and gendered discrimination. We would argue that he attempts to lay bare the mechanisms of patriarchal society that rob racial, ethnic, and gendered minorities. Interestingly enough, however, Piri, of mixed race is both subject and object of the patriarchy he wishes to dismantle. What Thomas the writer has shown us is that patriarchy survives or depends on the circumscription of women - particularly of their sexuality - for its very existence.

Throughout the novel there are numerous examples of Piri’s verbal abuse of women. His use of vulgar and degrading language to refer to women - “a nice piece of ass…”, “pussy” - only gives him a sense of power and serves to redirect his own personal struggle against the racism he suffers at home, in the Barrio, and the homeland. Sánchez writes “Piri compensates for the racialized and feminized abjection of black men in the United States by making the abjection of women the guarantor of his ethnic and masculine difference”. Even Alayce, the most assertive of the female characters in the text, succumbs to Brew’s fits of rage and anger; she too suppresses her thoughts and allows Brew to silence her voice.

For critics such as Sánchez, Down These Mean Streets “faithfully represents the sexual politics of its time, namely the cornerstone idea of masculinist thinking and discourse: male = active and female = passive” [2]. Important women in Piri’s life such as Dulcien and Trina, accept their passive role. In addition, his beloved mother represents the dutiful, care giving woman who endures her husband’s infidelity and emotional neglect.

IV. CONCLUSIONS

It is evident throughout the text that Piri mistreats women in his life because of his own feelings of inadequacy and inferiority brought about by the devastating, terrible treatment he encounters in the home; in El Barrio; in the homeland due to his skin color and mixed-race background. The novel Down These Mean Streets is an examination of the sociopolitical codes and mores in U.S. society in the 1960s. What is really important about the novel is its exposure of the way in which the patriarchal authoritarianism of the male characters, especially Piri, is bound up with the control and confinement of women. Thomas uses stereotypes about gender and race in the novel to demonstrate the destructive power of these stereotypes. The men of Down These Mean Streets transfer their frustration with issues of race onto women.

In the Afterword of the thirtieth-anniversary edition of the novel, Thomas addresses the unchanging status of the Barrio and the street life in Spanish Harlem. He challenges the reader to think about the future of all children of today who are growing up in worse situations than when he wrote the novel in the 1960s. Felicia Lee, a reporter for the New York Times notes that, “AIDS haunts East Harlem” [9]. She states that nearly 1 in 35 adults have AIDS in El Barrio according to the New York City Health Department. Not only are the people of El Barrio dealing with an advancing AIDS epidemic, but half of families containing children under five years of age live below the poverty line and one out of every five residents uses drugs [9]. Whereas the Barrio of yesterday suffered from influenza, TB, and malnutrition, the Barrio of today suffers from yet another epidemic known as AIDS and gang violence. Researcher Carey M. Noland states in a study published in 2006 that Puerto Rican women are at higher risk for the heterosexual transmission of HIV because of their culture and gender which stifles communication about safe sex [10]. Whereas the depraved conditions in the Barrio, sadly enough, describe a city whose “streets” have literally and figuratively gotten “meaner.” Thomas’ Down These Mean Streets succeeds in instigating its readers to become public voices and activists in communities such as Spanish Harlem where problems of race and gender continue to intersect.
REFERENCES

Cultivating Citizens through Community Outreach: Engendering Civic Awareness in a University Youth Program

Abstract. A Youth Leadership Institute Project was conducted at USC Upstate to promote essential skills deemed necessary for future civic engagement and political identity. The program and curriculum followed a framework that suggests that underlying civic skills are necessary to foster civic engagement among youth. Building on this theory, this study illustrates that civic engagement requires a developmental and educational process. Adolescence is a primary time for identity exploration and formation, which makes this stage an optimal time to engender civic awareness. A diverse group of 49 youth ranging in age from 14 to 17 participated. Results from the project demonstrate that when evaluating the significance and success of youth civic engagement programs, an account must be made for both the developmental and cognitive capacities developed within. In pursuing projects such as ours on university campuses and beyond, psychologists and political scientists should work together to measure their outcomes in terms of these variables.

Keywords: Civic Engagement, Adolescence, Identity, University Programs

Kerrie-Ann Wilkins. I have been involved with faculty-mentored research since my junior year and prior to that Dr. Parker and I had already established a good relationship, as a result, I signed up for an independent study with her. The data for our research was gathered during a week-long residential camp that was held on the USC Upstate campus. Our paper looked at civic engagement among adolescents and activities that can be used to foster such engagement in adulthood. My favorite part of the experience was working with the youth during the camp. I am currently in the process of applying to graduate schools where I hope to pursue a doctoral degree in Counseling Psychology.

Dr. Jennifer Parker. Dr. Parker is an Associate Professor of Psychology and has been at USC Upstate since 2001. Her research areas include examining the effects of exposure to domestic violence on children and adolescents, and also investigating leadership development and civic skill building with adolescents. She has earned a Ph.D. from Virginia Tech and has published articles in several Journals.

Dr. Timothy Dale. Dr. Dale is an Assistant Professor of Political Science and has been at USC Upstate since 2006. His research areas include Democratic theory, education and democracy, civic engagement. He has earned a Ph.D. from the University of Notre Dame and has presented at the American Political Science Association and the Midwest Political Science Association.
I. INTRODUCTION

The decline of civic engagement is well documented by political scientists. Research explaining this decline is usually motivated by an interest in determining how civic life can be revitalized. If democratic society requires an engaged citizenry, and civic engagement is on the decline, then as advocates of democracy we are committed to finding ways to renew civic involvement. Our next step as scholars has thus involved pursuing research and avenues for civic re-engagement. This problem and project seems most important among youth, who are classically and increasingly disengaged, but who will shape the landscape of future civic life. In fact, as traditional civic bonds are eroded, youth will either need to acquire and cultivate new bonds, or we risk an even greater decline in civic engagement among this demographic.

Though civic engagement is in decline [1], several avenues can be pursued to address this decline. One significant avenue regards civic engagement among youth, since it has been shown that engendering civic roots in adolescent years strongly correlates to citizenship in adulthood [2]. This can be accomplished in several ways, including actively involving youth in community affairs [3-4], organized activities in schools [5], and in volunteer programs that emphasize a collectivist way of achieving goals [6]. Flanagan [3] argues that an ‘appreciation for polity’ develops in adolescents as they participate in these organizations and activities. In addition, these activities help to foster a sense of belonging and an awareness of being part of a community. Thus, civic activities help adolescents develop elements of a civic identity that will expand civic engagement into the future. Programs that engage youth in the community not only contribute to a thriving community but also to the development of that young person [7]. We presuppose this research, and understand that organized youth activities exploring social problems within the broader community facilitate the development of a broader social understanding and provide a rich context for development of political identity. These activities promote a greater understanding of the self in a world context leading to the formation of values that include a greater responsibility to society, and to the development of essential skills necessary for civic engagement.

Prior research in youth development has focused more on risky behavior of youth and costs of these risks to the individual and to society. In recent years some social theorists have begun to view youth as community assets and focus on youth engagement in the community. This approach focuses on development of skills that aid in identifying, analyzing and acting on issues relevant to youth. In this model, adults do not necessarily assume the lead in youth activities; rather they mentor and facilitate opportunities for youth to lead [8].

Given the research indicating a decline in civic engagement, and evidence that this decline can be addressed, we believe that an additional responsibility of scholars, and the wider academic community, is to pursue initiatives to revitalize civic engagement among youth. Universities are uniquely equipped with resources that can promote engagement in communities. If applied correctly, initiatives utilizing these resources will allow us to apply and test civic engagement research, and better understand the civic skills and knowledge to increase the propensity of youth to be civically engaged.

Following the model proposed by social theorists, this youth leadership project provides a university setting where youth can identify relevant issues in their community and the world, and apply critical analysis to problem solving. This method is expected to foster development of essential skills needed for future civic engagement and political identity.

II. DEVELOPMENTAL CHARACTERISTICS NEEDED FOR CIVIC ENGAGEMENT

From a developmental perspective, adolescence is an optimal time to learn skills that facilitate civic engagement. At this stage in the lifespan, youth are actively engaged in the process of identity exploration and formulating a cohesive identity, which involves a deeper understanding of self, social relationships and society, and deciding which values held by society, will be accepted as one’s own [9].

Developmental psychologists in recent decades have moved from a focus on individual growth to an emphasis on the contextual influences on development [10]. Thus civic involvement becomes an important context for consolidating an identity that includes political/civic development. The inclusion of civic engagement in youth programs incorporates greater social responsibility and political values into the identity process and contributes to positive social relationships [3].
Several characteristics of development underlie the formation of skills necessary for civic engagement. One of these characteristics is a level of identity formation that includes a connection to society. Hansen et al. [11] investigated the types of developmental experiences related to five categories of youth activities. These authors utilized the Youth Experiences Survey (YES) [12] to assess the impact of youth activities. They found higher rates of learning experiences reported in youth activities when compared to time in school or time spent hanging out with friends. Youth participating in these activities reported high rates of personal development in the area of identity exploration, identity reflection, leadership and linkage to community when compared to youth involvement in academic activities, sports, or performance and fine arts.

Another characteristic according to Flanagan [13] that directly correlates to civic engagement is trust. Flanagan defines trust as “the belief that others are fair, that they will not take advantage of us, although they could.” Trust is the product of having a sense of security in infancy. This feeling is then nurtured by our environments and caregivers and evolves into individuals having a trustworthy disposition. Erickson [9] deemed this trait as fundamental to the development of a healthy individual. Accordingly, Putnam [14] describes trust and civic engagement as a “virtuous cycle,” that is, each emphasizes the other. He further states that, involvement in volunteering is carried out by those who trust others and this participation increases trustworthiness. Flanagan [13] also found that adolescents who were engaged in their community had higher levels of trust than their disengaged cohorts. She concludes by stating that fostering social trust is a source of civic hope and engagement.

According to Larson [15] initiative is a necessary characteristic for positive developmental experiences such as leadership and civic engagement. He analyzed positive youth development across several contexts and focused on the development of initiative, which requires intrinsic motivation, concerted engagement in the environment, and effort directed toward a goal. Larson [15] reports that structured voluntary youth activities provide a more fertile context for the development of initiative when compared to school experience and social experience with friends. Therefore, structured youth activities may be especially suited for the development of civic engagement.

III. SKILLS ACQUIRED FROM YOUTH ACTIVITIES

Political scientists and psychologists have identified key roots of civic engagement among youth, and the skills required to facilitate and sustain this engagement. One such study by Youniss and McLellian [16] proposes that involvement in civic organizations will have a two-fold impact on adolescents. To begin with, it familiarizes youth to the organizational practices needed for adult civic engagement and this involvement now aids in civic engagement being integrated into their identity. In adhering to the policies of their organizations, adolescents are introduced to one of the principal skills needed for civic engagement in adulthood. Kirlin [6] states that involvement in organizations results in the development of necessary civic skills that include working in groups, organizing others to accomplish tasks, communicating and working out differences. Service brings about awareness that society is the result of human actions, whether political or moral. In addition, it dispels the idea that adolescents are too young to cause a change. To ensure that adolescents engage in civic skill building activities, Kirlin [6] suggests that minor modifications need to be made to programs. Instead of telling them of society’s problems and ways to fix them, facilitate students in identifying these problems and allowing them to come up with solutions to alleviate them. Kirlin [6] states that by these minor restructurings, youth acquire such skills as: “voicing one’s opinion, expressing interest, and reaching consensus about an action.”

IV. DESCRIPTION OF PROGRAM, ACTIVITIES, CIVIC SKILLS, AND CIVIC KNOWLEDGE

The Youth Leadership program and curriculum followed the framework in [7], which suggests that underlying civic skills are necessary to foster civic engagement among youth. We find that these developmental skills are cultivated even more successfully when practiced in the context of civic activities that include the transmission of civic knowledge. For example, awareness of community problems, knowledge of the avenues for addressing these problems, and appreciation of the efficacy of specific solutions all essentially contribute to the increased likelihood that youth will become civically engaged. Building on this
theory, our case study illustrates that civic engagement requires a developmental and educational process. Scholars and university communities can offer productive contributions to this process through programs such as the project presented in this paper.

The Youth Leadership Summer Institute 2007 was a weeklong residential workshop carried out at the University of South Carolina Upstate. A Housing and Urban Development Community Outreach Partnership Center Grant funded the project, which was designed to engage disadvantaged youth from Spartanburg’s Southside into the community and provide an opportunity structure for leadership development. Prior research indicates that disadvantaged youth have fewer opportunities for community involvement. This may be due to a lack of resources in disadvantaged communities to develop and sustain programs. Furthermore, the families of these youth are less likely to model civic involvement [8]. This pattern is demonstrated in adulthood with less civic engagement in disadvantaged groups.

A total of 49 participants (25 males, 24 females) were selected from 6 different high schools in Spartanburg County. The ages ranged from 14-17 with a mean age of 15.9. Of the 49 students selected 26 were African American, 17 Caucasian American, 2 Asians, 2 South Africans (1 black and 1 white) and 1 other. Recruitment and inclusion of underserved youth from the Southside of Spartanburg was a priority goal of the program. Approximately half of the participants that were selected met the geographic criteria.

Overarching program goals were enhancing the identity process through increasing social understanding from local and global perspectives and teaching civic skills necessary for engagement. Another primary goal was to empower the youth to see themselves as agents of change. One of activities generated awareness and discussion of local and global problems that impact the present and future of the youth. By devising solutions that could be implemented now, the notion that they were too young to make a difference was dispelled. The youth were divided into groups at the inception of the program that reflected a wide range of diverse backgrounds. They carried out most of the activities in these groups; this was designed to promote teamwork and collective identity formation.

According to Flanagan [13] meaningful connections to others assist with the formation of a collective identity which in turn leads to lifelong civic participation. To that end trust and team building activities were the focus in the early part of the week along with an interactive workshop on leadership and values. This was then followed up with activities that brought about awareness of issues in the local community as well as in the global community. One planned activity was a visit to an impoverished area of Spartanburg, where many had not previously traveled. This tour was led by a local politician who has spent his career researching the illegal disposing of waste and chemicals that took place in this community and the resulting health problems experienced by the residents. Another activity was a poverty simulation, where participants experienced food allocations relative to a worldview. Additionally, the youth engaged in an interactive videoconference with students from Pretoria Girls High School in South Africa, discussing similarities and differences in problems faced and solutions to mitigate them.

Table 1 is an expansion of Harre’s framework [7]. In addition to civic skills and underlying skills presented in the framework, we feel that more can be gained by engaging in community-organized activities. Along with civic skills and underlying civic skills, adolescents develop capacities that are vital components in engendering civic engagement in adulthood. As a result, we added two other columns, and cited examples of how our program aided in gaining this civic development. Such examples are, awareness about diversity, and enhanced critical thinking. By gaining this development, civic engagement can now be incorporated into their identities and partaking in these activities will lessen the decline of civic engagement. Researchers [3, 6] have observed that youth who participate in their adolescent years are more likely to become civically engaged in adulthood. We also believe that the acquisition of civic knowledge can further be divided into developmental and cognitive aspects. The knowledge one gains can help in the development of the youth, such as learning teamwork and enhancing critical skills as well as further the cognitive maturation by increasing their understanding of politics and developing leadership skills.

V. CONCLUSIONS

The Youth Leadership Institute Program was a demonstration of the application of the research on youth civic engagement. Many researchers have argued that adolescents need an environment that will foster the growth of civic skills to engender citizenry in adulthood. In addition to achieving this, our literature divides the civic development gained into the developmental and cognitive requirements for cultivating civic
engagement. We believe that a distinction between the two is needed as the acquisition of any civic skill impacts one’s development and cognition in separate ways. With this differentiation, program organizers will be able to gear their activities to facilitate the engendering of specific civic skills. We hope this work will provide a model for future applications of other university initiatives and programs that strive to cultivate civic engagement, and also offer an avenue for future research, including the efficacy of such programs, follow-up research, tracking, and identifying successful and unsuccessful community outreach and youth civic engagement activities.

The interdisciplinary approach of recent civic engagement research should continue to be instructive. Our project and results show that when evaluating the significance and success of youth civic engagement programs, an account must be made for both the developmental and cognitive capacities developed within. In particular, we find that the activities and capacities that develop common bonds deserve the most attention. Projects such as ours are pursued on university campuses and beyond; psychologists and political scientists should work together to measure their outcomes in terms of these variables. As our measures become better defined, and our samples become larger, we should expand our understanding of ways to improve civic engagement among youth.

ACKNOWLEDGEMENTS

This project is funded through a Housing and Urban Development Community Outreach Partnership Center Grant and the USC Upstate Center for Undergraduate Research.

REFERENCES

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TABLE 1: Developing the Capabilities in Youth
The Center for Undergraduate Research and Scholarship is currently supporting several other projects that involve undergraduate research assistants.

An Intelligent Decision Support Model for Predicting Type-2 Diabetes Clinical Charge Profiles
Michael Blackmon and Dr. Wei Zhong

This research utilizes national databases to develop a decision support model for predicting clinical charge profiles, including hospital charges and length of stay, for patients diagnosed with Type-2 Diabetes. In addition to effectively predicting clinical charge profiles, the decision support model will provide relevant clinical knowledge for clinicians and health policy experts to identify, evaluate, and subsequently predict the predominant variables that affect clinical charge profiles.

Renaissance Southern Italy
Christopher Kowalczyk and Dr. Catherince Canino

This research focuses on the history of Southern Italy and its influence on English Renaissance dramaturgy. Although Naples and Sicily were important centers of commerce and culture during the Renaissance period, their literature and historiography have not been extensively studied. Furthermore, their influence on English drama of the time period has never been examined, although they are the sites of several important Renaissance plays, such as Shakespeare’s Tempest, Much Ado About Nothing, and The Winter’s Tale.

Femme is a Verb
Erica Horne and Dr. Lisa Johnson

This work will focus on the transfeminist voice of Serano in dialogue with femme articulations of empowered femininity in order to lift “femme” out of the conversational impasse (or whipping station) in feminism around the issue of whether femininity can ever be expressed as powerful. In refusing the terms of this conversation, we seek to trans/form femme lesbian feminism into a more flexible form. The current postmodern moment calls for more complex gender theory than has previously been developed in femme and/or feminist theory. By using a feminist lens, a new contribution can be made to the field of femme gender theory that is appropriate to the cultural landscape.

The Effects of Exposure to Domestic Violence on Children
Kerri-Ann Wilkins and Dr. Jennifer Parker

Domestic Violence affects the lives of millions of children every year in the United States. Numerous research studies have documented serious effects on children exposed to violence in the home. Among those problems experienced by these children are anxiety, depression, aggression, low self-esteem and conduct or other behavior problems. Living in a home with domestic violence also puts the child at significant risk for physical and sexual abuse. Studies report rates of co-occurrence between 30 and 60%. Although a significant body of research exists on these negative effects on children, many of the studies were conducted with children and their mother's residing in women’s shelters and less is known about the exposure and effects on children residing outside of shelters. Additionally, little is reported on race, gender, coping style and frequency and severity of exposure. The purpose of the proposed research is to identify short-term characteristics of children exposed to domestic violence who do not reside in shelters.
Assessing the Use of Artificial Structure in a Fragmented Landscape: Herpetofauna as a Case Study
Lauren Horton and Dr. Melissa Pilgrim

As habitat fragmentation increases due to urbanization and/or agriculture, the likelihood of remaining habitat patches being able to support viable animal populations decreases. A drift fence has been built on USC Upstate property which will be able to address: 1) what is the species richness in the study area, 2) what is the biodiversity of the study area, 3) how does season impact our estimates of species richness and biodiversity, and 4) are certain groups (e.g. snakes vs. turtles) using the site as a hibernaculum or rookery.

Masculinity Studies: Grant Writing, Conference Paper, and Scholarly Article
Rachel McAllister and Dr. Peter Caster

Studies of African-American history rightly have emphasized the importance of race in national history, but more work remains to be done, particularly in interdisciplinary and collaborative efforts. First, cultural studies approaches often emphasize a present only traced to the Civil Rights Era, which remains disconnected from the history of slavery. Second, African-American historiography until the 1980s largely ignored differences of gender, and subsequent emphasis on the experience of black women developed without as significant an emphasis on specifically masculine African-American identities. Some recent studies focus on gender difference within race, and our collaborative research will add to this work in the humanities with an edited collection, website, and conference on the topic of Black Masculinity in U.S. History and Literature, 1730-1945.

Minority Businesses: A Pilot Study in Needs Assessment
Denisha Miller and Dr. Rita McMillian

This pilot project will examine African American businesses and lead to a series of focus groups that will eventually encompass all the regions of South Carolina to assess the business and non-business needs of minority business owners.

A New Student Movement: Engaging Student Leaders in the First-Year Reading Experience
Anthony DeClue and Dr. Celena Kusch

This project will use the scholarship of teaching and learning about student leadership in order to research best practices in applying this scholarship to the first-year experience, to produce a student-led conference based on these principles as part of the Preface First-Year Reading Program, and finally to assess and report the effectiveness of this model in a conference paper to be presented at a national or regional conference.

Visual Resource Collection Development
Heather Shockey and Dr. Rachel Snow

Visual resources collections exist in diverse administrative structures including but not limited to academic institutions, research collections, museums, historical societies, archives, public libraries, governmental agencies, and corporations. The creation, development, and management of these collections that traditionally consisted of slides and photographs now involves the acquisition, cataloging, and maintenance of a wide range of visual materials in many different formats.