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Jessica Lebovits Bard College

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Jessica Lebovits Bard College

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"I is an Other": An Exploration of the Development of Childhood and Adolescent Self-Concept

Senior Project submitted to The Division of Languages and Literature and The Division of Social Studies

> by Jessica Lebovits

Annandale-on-Hudson, New York May 2012

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Lastly, I would like to thank my dear friends. Thank you for listening to me and loving me.

For my family: mom, dad, and little j I could not have done this without you. I love you. What is necessary, after all, is only this: solitude, vast inner solitude. To walk inside yourself and meet no one for hours – that is what you must be able to attain. To be solitary as you were when you were a child, when the grownups walked around involved with matters that seemed large and important because *they* looked so busy and because you didn't understand a thing about what they were doing.

And when you realize that their activities are shabby, that their vocations are petrified and no longer connected with life, why not then continue to look upon it all as a child would, as if you were looking at something unfamiliar, out of the depths of your own world, from the vastness of your solitude, which is itself work and status and vocation? Why should you want to give up a child's not-understanding in exchange for defensiveness and scorn, since not-understanding is, after all, a way of being alone, whereas defensiveness and scorn are a participation in precisely what, by these means, you want to separate yourself from.

Think, dear Sir, of the world that you carry inside you, and call this thinking whenever you want to: a remembering of your own childhood or a yearning toward a future of your own – only be attentive to what is arising within you, and place that above everything you perceive around you. What is happening in your innermost self is worthy of your entire love; somehow you must find a way to work at it, and not lose too much time or too much courage in clarifying your attitude towards people.

... and children are still the way you were as a child, sad and happy in just the same way – and if you think of your childhood, you once again live among them, among the solitary children, and the grownups are nothing, and their dignity has no value.

-- Rainer Maria Rilke, Letters to a Young Poet

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### Introduction

*Je est un autre*. So wrote the 17-year-old French poet Arthur Rimbaud on May 13, 1871 in a letter addressed to his professor, Georges Izambard, The famous quotation has been translated in various ways -- "I is another", "I is someone else", "I is an Other" – and while the elusiveness and untranslatability of Rimbaud's dictum is perhaps part of its appeal, all iterations attempt to embody the same idea: the nebulous yet integral relationship between 'the Self' and 'the Other'. Perhaps the adage must be somewhat indeterminate in order to describe the simultaneous universality and specificity that comprises the experience of the Self in society – as social beings, we all inevitably encounter the influence of the Other, yet how that impact manifests itself varies from person to person.

As the intentional vagueness of Rimbaud's syntax points out, not only do the Self and the Other simultaneous shape one another, but they are not mutually exclusive; one is always both 'the Self' and 'the Other', and one cannot define oneself without taking into account the Other. For example, if at a party I walk into a crowd of strangers who are all acquainted with one another, to them, I am suddenly the Other. They do not know me, I am not like them; I do not know them, they are not like me, and thus to me, *they* are the Other. I cannot help but compare myself to them as they cannot help but judge me, evaluate me as 'with them' or 'against them'. I must decide if I would like to join them; do they bore me? Amuse me? Offend me? By examining and assessing them, the Other, I am calling into question my own character too: the Self. Do *I* enjoy spending time with people who are like the strangers before me? Do their cold eyes and whispers deter me from introducing myself? Does their raucous laugher excite me? Annoy me? What do my thoughts and what does my next move say about me, about who *I* am?

Though in most social settings one may not be consciously aware of the shifting dynamic between Self and Other in such step-by-step detail, the reality of existing as a social being in a social world is that the Self and the Other are never separate. Though the exchange in my example took place instantaneously, wordlessly, the confrontation of Self and Other intensifies when language is involved, as linguistic expression is our primary means of communication once we are more than a few months old. One of the first questions we are asked when we are young is, "what is your name?" and even as we age most conversations begin with a comparable inquiry. Similarly, if we think we hear an address in a crowded room we ask, "Are you talking to me?" As Judith Butler writes in the introduction to her book Excitable Speech: A Politics of the Performative, "to be addressed is not merely to be recognized for what one already is, but to have the very term conferred by which the recognition of existence becomes possible. One comes to 'exist' by virtue of this fundamental dependency on the address of the Other'' (Butler, 1997). In other words, Butler approaches the anthropomorphized version of the philosophical thought experiment, 'if a tree falls in a forest and no one is around to hear it, does it make a sound?'; If a person is born but no one is around to acknowledge him, what kind of life does he lead? On what does he base his identity?

"Language sustains the body not by bringing it into being or feeding it in a literal way," Butler continues. "Rather, it is by being interpellated within the terms of language that a certain social existence of the body first becomes possible. To understand this, one must imagine an impossible scene, that of a body that has not yet been given social

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definition, a body that is, strictly speaking, not accessible to us, that nevertheless becomes accessible on the occasion of an address, a call, an interpellation that does not 'discover' this body, but constitutes it fundamentally." We are social beings who rely on others to help shape us, and we are linguistic beings who rely on language to convey our thoughts, feelings, and ideas. Therefore it logically follows that we rely on the language of others to recognize us and give us a place, either literally -- "here's a seat!" -- or metaphorically -- "what is your name?"

Butler coins this dependence on the confluence of language and the Other as 'linguistic vulnerability'. Language can welcome as well as exclude: "could language injure us if we were not, in some sense, linguistic beings, beings who require language in order to be? Is our vulnerability to language a consequence of our being constituted within its terms?" (Butler, 1997) It is precisely the latter part of this question that interests me and has incited the following project: are we so affected by language -- the words we choose to speak, the words that are spoken to us, the words that we hear around us -- that we form ourselves *within* it, *through* it, *around* it, as opposed to apart from it? Rather than growing up, forming our identities, and choosing to speak the words that fit our sense of selves best, I argue that we cannot separate our development from words, and that we are, in fact, "formed in language" (Butler, 1997).

This 'hypothesis' can be explicated in a variety of ways, and explorers in the past have employed philosophy, anthropology, and psychology, among other approaches, in an attempt to identify the power of language and its effect on our consciousness. Two years ago, *The New York Times* published an article entitled, "Does Your Language Shape How you Think?" which concluded that "when we learn our mother tongue, we do

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after all acquire certain habits of thought that shape our experience in significant and often surprising ways" (Deutscher, 2010). In 1956, anthropologist Benjamin Lee Whorf asserted that "language is the factor that limits free plasticity and rigidifies channels of development in [an] autocratic way" (Whorf, 1956) -- namely, if a language does not have a word for a certain concept, idea, tense, then the native speakers of that language are unable to conceive of said concept. Though his extremist view soon proved to be false (despite the following his alluring notion of the absolute power of language garnered), The Times drew on a range of sources that show that language does in fact help structure our minds, and by extension, our perceived realities. As linguist Roman Jakobson said, "Languages differ essentially in what they *must* convey and not in what they *may* convey."" Deutscher continues, "if different languages influence our minds in different ways, this is not because of what our language *allows* us to think but rather because of what it habitually *obliges* us to think about". To use the article's example, in English I can tell you that I saw a friend last night, yet in a gendered language such as Spanish or French, I would have to also tell you if my friend was male (mi amigo) or female (mi amiga).

Both German and Spanish are gendered languages, yet many words that are feminine in German are masculine in Spanish, and vice versa. In a study done by Toshi Konishi (1993), German speakers and Spanish speakers were asked to grade objects on various characteristics, and not surprisingly, whether an object was 'masculine' or 'feminine' mediated what type of associations the participant had with that object. For example, "a German bridge is feminine (*die Brücke*)…but *el puente* is masculine in Spanish... Spanish speakers deemed bridges...to have more 'manly properties' like strength, but Germans tended to think of them as more slender or elegant" (Deutscher, 2010). Similarly, Deutscher describes the language of *Guugi Yimithirr*, an aboriginal tongue spoken in Australia. Nearly every other language uses 'egocentric coordinates', directional cues that are defined in relation to the body, such as 'in front', 'behind', 'to the left', etc. However, the speakers of Guugi Yimithirr use solely cardinal directions, such as 'north', 'south', 'northeast', etc. "In order to speak a language like Guugi Yimithirr, you need to know where the cardinal directions are at each and every moment of your waking life ... This habit of constant awareness to the geographic direction is inculcated almost from infancy: studies have shown that children in such societies start using geographic directions as early as age 2 and fully master the system by 7 or 8. With such an early and intense drilling, the habit soon becomes second nature, effortless and unconscious" (Deutscher, 2010).

If such a skill as sustained awareness of north, south, east, and west can be 'taught' or passed down through language, what other influences on our consciousness are implicit in the words we use? How do the words we hear and subsequently choose to use affect the way we see our world? And more specifically, how do they influence the way we see ourselves? How do we, as social, linguistic beings form our identity in relation to our particular linguistic culture, and does that position -- and thus our concept of our identity -- change throughout our lifetime? In the following project, I aspire to explore these questions, focusing on the development of childhood and adolescent selfconcept, as mediated through language and the Other. By specifically investigating the space of childhood, I hope to begin my multidisciplinary study at its 'source'; namely at the one of the earliest moments when individuals are old enough to start to think reflexively and engage metacognition, as well as when they are verbal enough to begin to express that self-concept. "There is a thing that happens with children," writes M.R. Montgomery in his memoir, "if no one is watching them, nothing is really happening to them. It is not some philosophical conundrum like the one about the tree falling in the forest and no one hearing it: that is a puzzler for college freshman. No. If you are very small, you actually understand that there is no point in jumping into the swimming pool unless they see you do it. The child crying, 'Watch me, watch me,' is not begging for attention; he is pleading for existence itself" (Montgomery, 1989).

In "*I is an Other*": *An Exploration of the Development of Childhood and Adolescent Self-Concept*, I employ two different approaches in investigation -- empirical psychological research and creative literary representation. The project is divided into two main chapters, which work together to highlight the strengths of each mode of understanding; in endeavoring to write a multidisciplinary project, I intend to render as extensive and exhaustive a view of this topic as possible. Chapter 1 approaches childhood and adolescent self-concept from a psychological background, and Chapter 2 from a literary one; each chapter is broken down into multiple subheadings that further organize and clarify the ideas set forth in each.

Chapter 1 contains an original empirical study, in which I asked children in 2<sup>nd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> grade from Rhinebeck, NY to respond to a written prompt that read, "What do you think is your best personality quality? What is a quality that you'd like to change? Explain your responses. Give two examples from your life – one for each answer – in which you demonstrated each quality." The handwritten responses were then collected, typed, and analyzed with two measures: Pennebaker et al.'s Linguistic Inquiry

and Word Count (2007) computer program, as well as a conceptually derived coding system. The specifics for the experiment (Abstract, Method, Participants, Materials for Data Collection, Measures for Data Analysis, Procedure) are included in the chapter, as are Results, Discussion, Limitations, and Future Directions. Both the Results and Discussion sections are organized by differences due to age as well as differences due to gender. Lastly, in the Future Directions segment I suggest applications for my research, positing the potential therapeutic and educational benefits for self-reflective writing.

The 2<sup>nd</sup> chapter approaches the development of childhood and adolescent selfconcept through an analysis of two modernist novels, *The Waves* by Virginia Woolf, and *A Portrait of the Artist as a Young Man* by James Joyce. In this section I strive to not only further investigate the aspects of identity formation touched upon in the previous chapter, but also to explore new ideas on child development put forth by Woolf and Joyce. I explain the value of Modernist literature and its contribution to my particular area of interest, specifically in the Modernists' focus on cognition and subjectivity, and go on to craft my argument about the trajectory of childhood identity formation. In addition, I endeavor to strengthen the literary authors' representations of childhood with current psychological research, integrating the two approaches in Chapter 2 as I do with the project as a whole.

By incorporating empirical research and artistic representation, I hope to engage multiple modes of transmitting knowledge, addressing both concrete, 'factual' knowledge through empirical psychology studies and 'emotional', abstract knowledge through an explication of literary novels. The linchpin, however, is language, and how what we say, and what others say to us, affects the way we view the world around us, and the way we

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view ourselves. Do *we* choose the words we use to express aspects of ourselves that are inherent in our being, or do the *words* we use shape that which we believe to be intrinsic? "We might be tempted to think that attributing agency to language is not quite right, that only subjects do things with language, and that agency has its origins in the subject" says Butler. "But is the agency of language the same as the agency of the subject? Is there a way to distinguish between the two? [Author Toni] Morrison not only offers agency as a figure for language, but language as a figure for agency, one whose 'reality' is incontestable. She writes: 'we die. That may be the meaning of life. But we *do* language. That may be the measure of our lives.'" (Butler, 1997)

## **Chapter 1: Empirical Research**

#### Abstract

In this study I aim to obtain information about self-concept in children and adolescents, tracking the development of and approach to identity formation as mediated through linguistic and social developmental. By delivering the same timed written prompt to students in 2<sup>nd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> grade, I investigate linguistic differences across age and gender, specifically language indicative of social awareness and emotional self-regulation. The prompt reads, "What do you think is your best personality quality? What is a quality that you'd like to change? Explain your responses. Give two examples from your life – one for each answer – in which you demonstrated each quality." The research also explores language as a route to understanding emotions, social relationships, perspective taking skills, and awareness of the other.

The current study is mainly an exploration, meaning that while there are hypotheses about the outcome, the intent of what follows is not to necessarily to 'prove' or 'disprove', but rather to learn about childhood and adolescent self-representation. However, the overarching hypothesis is that there will be traceable changes in participants' language use as they age; more specifically, there will be differences between the girls' responses and the boys' responses regardless of age, consistent with earlier findings (i.e. Newman, Groom, Handelman & Pennebaker, 2008). I also hypothesize certain similarities for each age group regardless of gender (i.e. Pennebaker & Stone, 2003).

#### Method

#### **Participants**

152 participants (76 female, 76 male) from grades 2, 5, 8 and 11, aged 84 months (7 years 0 months) - 217 months (18 years 1 month) (M = 166.59 months) participated in the study. 12 participants (7 female, 5 male) were in 2<sup>nd</sup> grade, 17 participants (7 female, 10 male) were in 5<sup>th</sup> grade, 72 participants (36 female, 36 male) were in 8<sup>th</sup> grade, and 51 participants (26 female, 25 male) were in 11<sup>th</sup> grade. (Appendix A, Figure 1) All participants were students in the public school system in Rhinebeck, NY, selected by classroom by the principals of their school; 2<sup>nd</sup> and 5<sup>th</sup> graders attended Chancellor Livingston Elementary School, 8<sup>th</sup> graders attended Bulkeley Middle School, and 11<sup>th</sup> graders attended Rhinebeck High School. (See Appendices B and C for examples of letters sent to the principals and teachers of the schools). All students were given permission to participate by a parent/guardian through a traditional active consent system (Appendix D) and were not compensated for their participation nor penalized for a lack of participation. Parents/guardians were alerted of the study in advance by a brief explanatory letter sent home with their child, as well as an email from the principal. Parents/guardians subsequently returned the permission slip in order to allow or excuse their child from participating. All responses were anonymous and each child identified only by month and year of birth, gender, and grade, information that the participant wrote him or herself.

#### **Materials for Data Collection**

The materials for the study included the typed up writing prompt (Appendix E), blank lined paper which was handed out to participants, a writing utensil which the participant provided him or herself, staplers to secure responses to the written prompt, and a clock or watch to keep track of response time.

#### **Measures for Data Analysis**

#### Linguistic Inquiry and Word Count: Previous Research

#### **Function Words and Content Words**

The average person has about 50,000 English words in his or her vocabulary (Gall, 2009). Function words -- such as pronouns, prepositions, articles, conjunctions, and auxiliary verbs -- make up roughly 55% of all the words we speak (Tausczik & Pennebaker, 2010), despite the fact that there are only about 500 of them in the English language. Research has shown that these function words -- also called style words -reflect how people are communicating, whereas content words -- nouns, verbs, and many adjectives and adverbs -- convey what they are saying. An analysis of function words can detect status, honesty, and emotional and biological states, and are thought overall to be more closely linked to measures of individuals' social and psychological environments than content words. "Indeed, the ability to use style words requires basic social skills," writes Tausczikl & Pennebaker (2010). "Consider the sentence, 'I will meet you here later.' Although grammatically correct, the sentence has no real meaning unless the reader knows who 'I' and 'you' refer to. Where is 'here' and what is meant by 'later'? These are all referents that are shared by two people in a particular conversation taking place at a particular time. To say this implies that the speaker knows that the listener shares the same knowledge of these style words".

#### Pronouns

Rude, Gortner and Pennebaker (2004) discovered that people who are experiencing physical or emotional pain tend to have their attention focused on themselves, and therefore they tend to use more first-person singular pronouns. Stirman & Pennebaker (2001) compared the published words of suicidal poets with matched nonsuicidal poets, and found that the suicidal poets used more first-person singular pronouns and more death-related words. Similarly, when people sit in front of a mirror and complete a questionnaire, they use more words such as "I" and "me" -- first-person singular pronouns -- than those who complete the same questionnaire when a mirror is not present (Davis & Brock, 1975). In studies in which status was a factor, such as the pre-established hierarchy of an army or a flight crew, more frequent use of first-person plural ("we") was a good indicator of higher status, with those in charge feeling they had the right to speak for everyone, whereas more frequent use of first-person singular pronouns was a good predictor of lower status (Kacewicz, Pennebaker, David, Jeon & Graesser, 2009).

#### Age, Gender, and Personality Type

Contrary to popular geriatric stereotypes, Pennebaker and Stone (2003) found that as adults move from middle to old age, they become less self-focused, refer more to the moment, and do not decline in verbal complexity. The researchers examined the writing of participants of varying ages, as well as the text of published authors from the span of their writing career. They found that first-person singular pronouns decreased with time (hence the conclusion that older people are less self-focused), whereas insight words, future tense verbs, and exclusive words increased, in both sets of observed populations. Pennebaker, Mayne & Francis (1997) showed that the use of causal words (such as "because", "effect", "hence") and insight words ("think", "know", "consider") in describing a past event can suggest the active process of reappraisal, which was correlated with great health improvements. In a study by Boals and Klein (2005), participants who described a painful relationship breakup used more cognitive mechanisms -- specifically causal words -- in talking about the breakup and post-breakup, compared with the breakup itself.

Gender stereotypes however, may hold true in the research -- both in everyday life and in many studies (i.e. Dennison, 1999, Tannen, 1990), women and men tend to not only use 'different' language, but also to recognize gender-specific language when listening to recordings of speakers with unspecified genders. Using the Linguistic Inquiry and Word Count program, Newman, Groom, Handelman & Pennebaker (2008) added to this research, and found that women use more social words and references to others, while men use more complex language: Newman et al. operationalized complex language as large words, articles, and prepositions, while references to others were defined by social words and pronouns. However, Mehl, Gosling & Pennebaker (2006) found that both male and female extraverts had a higher word count and fewer large words than male and female introverts. Pennebaker and King (1999) also concluded that the writing of extraverts less frequently used complex language than the writing of introverts, while extraverts more frequently used social words and positive emotion words. In their study, complex language was operationalized as use of articles, exclusive words, causal words, and negations.

#### Linguistic Inquiry and Word Count: How it Works

Once the raw written data was collected, it was entered into James W. Pennebaker, Roger J. Booth, and Martha E. Francis' language processing computer program, the Linguistic Inquiry and Word Count (LIWC). When LIWC was first developed, "the goal was to devise an efficient system that could tap both psychological processes and the content of what people were talking or writing about" (Tausczikl & Pennebaker, 2010). The software, published in 2007, analyzes inputted text on a wordby-word basis and calculates the percentage of words in the text that fall in to each of the language categories; the program automatically recognizes up to 82 different language dimensions (such as total pronouns, cognitive processes, achievement, and relativity), but also allows for new categories to be created by the user. See Appendix F for the complete list of categories, along with example words.

In order to better understand the process by which LIWC analyzes text, I present the following example, as taken from Tausczikl and Pennebaker (2010). Their example uses the opening line of the novel *Paul Clifford* (1842) by Edward Bulwer-Lytton: "It was a dark and stormy night"

The program would first look at the word "it" and then see if "it" was in the dictionary. It is and is coded as a function word, a pronoun, and, more specifically, an impersonal pronoun. All three of these LIWC categories would then be incremented. Next, the word "was" would be checked and would be found to be associated with the categories of verbs, auxiliary verbs, and past tense verbs. After going through all the words in the novel, LIWC would calculate the percentage of each LIWC category. So, for example, we might discover that 2.34% of all the words in a given book were impersonal pronouns and 3.33% were auxiliary verbs. The LIWC output, then, lists all LIWC categories and the rates that each category was used in the given text.

Unlike other data analysis processes, initial LIWC output is in the form of percentages (as in what percent of the entire analyzed text falls under that particular

category) and can be read and easily understood before any specific formulaic computations, though the numbers can be used in more complex analyses after the initial output returns. For the purposes of the current study, the output was analyzed with t-tests and correlations. The program analyzes text and outputs percentages for each category: see Appendix G for an example of output from an analysis of the first two pages of Virginia Woolf's novel *The Waves*.

#### Linguistic Inquiry and Word Count: How it was created

In creating LIWC Pennebaker et al. built on previous research, such as McClelland's 1976 Thematic Apperception Tests (TAT). This assessment found that the stories people told in response to drawings of other people could provide important clues to their needs for affiliation, power and achievement. In 1978, Phillip Stone adapted McClelland's experiment and created the General Inquirer, a very basic computer program that relied on author-developed algorithms and could distinguish mental disorders and personality dimensions from entered text. In 1981 Walter Weintraub began hand counting people's words in texts -- such as political speeches and medical interviews -- and noticed that first-person singular pronouns (such as "I", "me", "my") were reliably linked to people's levels of depression (Weintraub, 1981, 1989). A few years later, Pennebaker and Beall (1986) began collecting writing samples in which participants were asked to write about emotional upheavals in their lives; judges were asked to read the essays and evaluate them along previously established dimensions. Pennebaker and Beall found that even after rigorous training, the judges did not agree on various ratings, perhaps because of the emotional and personal nature of the writing samples. In addition, having judges rate written data was slow and expensive. Thus arose the impetus for the creation of LIWC, "a more efficient evaluation method" (Tausczikl & Pennebaker, 2010)

In the 1990s, Pennebaker and his colleagues began creating a massive dictionary from which their new program could analyze inputted text. They collected text files from several dozen studies, totaling more than 100 million English words. After compiling such a massive corpus, the team appointed a group of judges to rate the potential dictionary words. The initial judging took place between 1992 -1994, and word lists were created from those judged words: a word remained in a category (such as "emotion" or "first-person plural pronoun") if 2 of 3 judges agreed it should be included; a word was removed by the same 2/3 majority, and it was added to an entirely new category if 2/3believed it should be, though categories are not mutually exclusive. This entire processes was then repeated a final time by a separate group of three judges, and the dictionary was revised in 1997, and again in 2007. When the dictionary was complete, the final percentages of judges' agreement ranged from 93%-100% agreement. The dictionary is composed of almost 4,500 words and word stems: an example of a word stem is "hungr", which will code in the LIWC dictionary as "hungry", "hungrier", or "hungriest, etc. Each word or word stem fits in to one or more word categories: for example "cried", which is part of the sadness category, negative emotion, overall affect, verb, and past tense verb.

#### **Conceptually Derived Coding System**

#### Limitations of LIWC and the Necessity for a Supplementary Measure

In order to ensure the most comprehensive picture of the data, I analyzed the participants' responses with two measures: Pennebaker et al.'s (2007) Linguistic Inquiry and Word Count (LIWC) computer program, as well as a conceptually derived coding

system which categorized the participants' responses. Despite the sophisticated, rapid, and inexpensive analyses allowed by LIWC, it is nonetheless still a computerized measure, and therefore has limitations that would ostensibly not be issues for human coders. For example, because LIWC computes text on a word-by-word basis, word order is not taken into account: in both the phrases "I am not happy" as well as "I am happy", "happy" is recognized as an affective process, as well as a positive emotion word. Irony, sarcasm, and idioms are also ignored, and in the phrase "he's mad as a hatter" or "after our fight I sarcastically told him I wasn't mad", "mad" would still be coded as an anger word. I therefore created a supplementary coding system, in order to capture results that the word-by-word analysis of LIWC would not have sufficiently recognized, as well as to investigate qualitatively different results that the program was not designed to analyze.

Though I had certain hypothesis about the outcome of the study, the main goal was to conduct an investigation of a certain set of data, and thus any existing computer program would be too strict and limit the results. In other words, I am interested in the way words work together in a certain context to form meaning. Once the data was collected, various patterns emerged, and from these initial patterns some revealed themselves to be significant trends, whereas others were simply flukes in the first few responses that were read and therefore discounted. However, due to the open ended nature of the writing prompt and subsequently the open ended nature of the responses, a complimentarily open ended coding system was in demand.

#### **Categorization of Positive and Negative Quality**

Though the intent was always to categorize the data, the specific aggregates were determined after data collection. After written responses were collected, the data was read

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over, and lists were made of each student's responses. From these lists general patterns emerged, and the disparate qualities formed more cohesive aggregates. In other words, the categories listed below arose from a familiarity with the data; while individual students' responses varied in word choice – an expected result whose significance is reflected in the LIWC output – their responses fell rather cleanly in to distinct categories.

Participants' best personality quality was placed into one of the following 7 aggregates<sup>1</sup>: Optimism, Helping Others, Expectation, Social, Humor, Tangible, and Miscellaneous Good. (See Appendix H for a complete list of the categories, as well as the qualities that comprised each) To elaborate on each of the categories: as expected, participants were placed in the Optimism category if they either explicitly listed their best quality as such, or expressed a synonymously hopeful, confident or positive quality, such as "open minded", "positive attitude" or "happy most of the time". Similarly, participants categorized under Helping Others displayed an altruistic quality that benefitted friends, family, peers, or strangers, such as "compassion", "thoughtful", or "kind". The Expectation category refers to participants whose best quality was one which society deems as desirable or expected – i.e. "polite", "trustworthy", or "strong work ethic". Participants in this category reported more general and moral qualities, less nuanced than some of the other groups; in other words, I felt that participants in this group more often than not gave a socially 'appropriate' response, one that tended to be vague and often not

<sup>&</sup>lt;sup>1</sup> It should be noted that though the categories are mutually exclusive – i.e. each participant was only given one label, there were occasionally overlaps, meaning a participant could fit into one or more categories. If this was the case, the example provided by the participant was referred to, and the extra detail given by the context of the listed quality allowed it to be placed into one category or another. Similarly, a few participants listed more than one positive and negative quality; when this happened, only the first quality listed was looked at, though again the example was relied on for extra detail.

match up with their example. On many occasions the children who were placed under this category listed one quality as their best quality (i.e. "how much of a gentleman I am") when their example was in many ways showing that they were something else (i.e. "I am always nice to people ... I hold the door open for anyone behind me and I help people up when they are down. Also, I have helped many elderly ladies/men across the street"). The Social category consisted of, not surprisingly, qualities that are central to successful social interactions, such as "friendly", "loyal", and "outgoing"<sup>2</sup>. The Humor category is perhaps the most obvious of all the means of organization, as participants listed qualities directly related to humor, i.e. "funny", "good sense of humor", or "make people laugh"<sup>3</sup>. The Tangible category is ostensibly the most oddly named category, but it refers to participants who responded to the prompt with a concrete, often skill-based quality. For example, "athletic ability", "height", and "dancing" were all listed by students; had the prompt been, "what is your favorite thing about yourself" or "what is your best skill", then these responses would be entirely appropriate. However, because the prompt specifically called for personality qualities (which were explained to each group of participants. See Appendix I for the study scripts) these responses were atypical, and students incorrectly cited a concrete, physical, or tangible thing – typically something the participant *did* rather than *thought* or *felt* – as opposed to a more sophisticated and

<sup>&</sup>lt;sup>2</sup> While these qualities could potentially be categorized under Helping Others (an arguably pro-social category), I was interested in the intensely social focus of these participants' responses, and therefore created a Social category in addition to Helping Others. Similarly, many participants under the Social category prided themselves on said qualities because it brought them popularity, a different motivator than the majority of those under Helping Others.

<sup>&</sup>lt;sup>3</sup> "funny", "good sense of humor" or "make people laugh" are not intended to be parallel, as many of the qualities in the other categories are; because of the definite distinctions between each quality, another measure – the self-based quality versus the other-based quality – was implemented.

abstract quality. Lastly, a Miscellaneous category had to be created for the remaining 8 participants who did not fit into any of the other groups: in this category, one participant cited "active", one cited "quiet" and one cited "observant", two cited "confident" and three cited "creative".

Similarly, the qualities that they would like to change – referred to henceforth as 'negative' qualities - fell under 1 of 7 categories; Tangible, Low Self-Esteem, Expectation Violation, Impulse Control, Anxiety, Overly Emotional, and None. Similar to the positive quality category, negative qualities that fell under the Tangible category were also physical and concrete rather, than more abstract and behavioral -- for example, "better at jokes", "my weight" and "not being able to get up in the morning".<sup>4</sup> The Low Self-Esteem category was for participants who self-identified as such, - i.e. "jealous", "self-conscious", "shy" -- rather than those whose low self-esteem was evident through other aspects of their writing<sup>5</sup>. Expectation Violation corresponds to the Expectation category in positive qualities, encompassing negative qualities that are classically disapproved of. For example, "bossy", "stubborn", or "laziness"; if the expectation is that individuals should be agreeable and hard working, participants in this category recognize that they have violated the societal expectation. Impulse Control is more self-explanatory,

<sup>&</sup>lt;sup>4</sup> Because the study is not only interested in what the participants cited as their best and worst qualities but also how they said it, it is important to note that students did phrase the quality that they would like to change in more tangible terms. While the student who wants to change their weight could be categorized under Low Self-Esteem, they remained under Tangible due to their linguistic choices.

<sup>&</sup>lt;sup>5</sup> In other words, participants who wrote about how much they hated their physical appearance in the example section of the prompt, but cited the quality that they wanted to change as something Impulse Control-related or as falling under another category. Though their self-confidence issues became clear through the ways in which they talked about themselves, they did not identify their self-esteem issues as their least favorite quality.

comprised of qualities such as "impatient", "too competitive", or "short tempered". In other words, when participants cited an inability to govern their own actions or emotions, they were labeled as Impulse Control. Participants in the Anxiety category cited "worry too much", "perfectionist", "paranoid" etc. as the quality they would like to change<sup>6</sup>. Similarly, the Overly Emotional category was filled with "too sensitive", "trust issues", "dramatic", etc. While these qualities are very similar to Impulse Control -- as in the participants wished they could control their emotions and thus maintain a more socially acceptable level of sensitivity --the strictly emotional focus as opposed to competitiveness or procrastination warranted its own category. Lastly, the category None was for the few students who specifically wrote, "I don't want to change"; when participants neglected to list a negative quality (due to misunderstanding of the prompt, lack of time, lack of focus, or another miscellaneous reason), "n/a" was listed in the coding sheet.

#### **Ratio of Positive to Negative Qualities**

In this simple measure, the number of positive qualities as well as the number of negative qualities listed by each participant was recorded. The ratio (positive : negative ) was calculated, and ratios for age and gender were computed.

#### Acknowledgement of the Reader

This measure recorded the number of times the participant addressed or acknowledged the reader, demonstrating awareness of the audience or of the other. This

<sup>&</sup>lt;sup>6</sup> Again, it should be stressed that these categories are mainly reliant on what the participant cites him or herself as opposed to my assessment; for example, there was one student who seemed quite evidently to suffer from anxiety, but because her self-cited quality was more socially related, she fell under the Low Self-Esteem category as opposed to Anxiety.

was scored by giving one 'point' for each instance – an instance of Acknowledgement of the Reader would be a rhetorical question such as "you know?" or other more direct references to the reader. For example, one participant wrote that he was not comfortable sharing facts about his family with a "you, a stranger" (i.e. me, the experimenter), which was coded as an acknowledgement of the reader

#### Acknowledgement of Separate Selves

This measure captured the number of times the participant acknowledged separate selves or identities based on varying social settings. For example, "with my family I'm funny, but with my friends I'm a really good listener". Each time the participant specifically noted different 'versions' of themselves, they received a point. It is important to note that different selves through time (i.e. "when I was little I was shy, but now I'm outgoing") did not count for this measure, because that tracks the individual's ability to recognize themselves and be self-reflective through time, whereas the current study is more interested in the individual's self-perception in the present and varying from setting to setting. It is perhaps more typical of children to be able to reflect on the way they have changed throughout time, as they are more equipped with the linguistic tools with which to discuss it; as an individualist culture, we celebrate birthdays (marking the passage of time) and encourage children to be 'true to themselves', meaning the only permissible mode of change is throughout time, as opposed to throughout a party in different groups of people. For these reasons among others, I chose to focus only on the less frequent occasions in which children overtly recognize the influence of the social other upon the way they present and perceive themselves.

#### Perception of the Self as Mediated Through the Other

Similar to the previous measure, the participant's Perception of the Self as Mediated Through the Other score was based on how many times he/she directly mentions his/her view of himself/herself as mediated through another person. Examples of this are, "my mom tells me I am funny", or "all my friends say that I am rude." Though our self-perception is arguably inextricable from what others say about us, participants received a point if they *explicitly* mentioned the way another person perceived them. The most common format was, "Person X tells me I am Y", or "according to person X I am Y".

#### "Black and White" Statements

This measure allotted a point for each statement a participant made that was "black and white", i.e. asserting something as completely right or as completely wrong. These phrases were also referred to as statements of definitive morality, i.e. when a participant made a blanket statement that did not take in to account any nuance or variability. For example, "It's wrong to lie and one never should", or "people should always be proud of who they are and never change for anyone else".

#### **Introspective Comments**

As with the other measures, a participant received one point for each comment made in this category. Introspective comments were more common in the older participants, and were instances in which individuals demonstrated insight and selfreflection about his or her personality qualities or given examples. For example, "if I could drop all of my worries I'm sure I'd be able to tackle a backflip [on] the trampoline" (See Appendix K for this particular response, as well as example responses from students in each grade) or "I see from writing that if I focus on my best quality I could probably use it to work on the quality that I want to change." The general format for such statements was 'a cognitive mechanism' ("I think", "I know", "I believe") plus 'an understanding of a cause-and-effect relationship': "I think if X then Y".

#### Self-Based Qualities versus Other-Based Qualities

The last and perhaps most data-rich measure recorded whether each student's positive and negative qualities were 'self based' or 'other based': in other words, was their favorite personality quality treasured by them because it primarily affected themselves (self-based) or because it primarily affected others (other-based)? Did they want to change their negative quality because it primarily affected themselves or others? For example, while two participants could both cite their best personality quality as being "funny" and therefore be coded under the Humor category, participant A could say, "my best personality quality is that I am funny, because it makes me the most popular kid in my class", while participant B could say, "my best personality quality is that I am funny, because I can always cheer up my friends when they're having a bad day." Participant A's best quality is therefore coded as 'self based', i.e. mainly affecting himself, whereas participant B is coded as 'other based', i.e. the quality is valued for how it can affect other people.

Similarly, two participants could both write that the quality they want to change is their tendency to procrastinate (and therefore be coded under the Expectation Violation category), but while participant A says, "the quality that I would like to change is how much I procrastinate because I don't do my homework until too late and then I get stressed and can't sleep enough," participant B writes, "the quality that I would like to change is how much I procrastinate because I don't do my chores on time and it really upsets my mom because it makes it harder for her to do what she needs to do around the house." As before, participant A's negative quality would be coded as 'self based', i.e. primarily disrupting his comfort, and participant B would be 'other based', because his motivation for wanting to change that quality is how it affects other people.

#### **Relationship between Self-Based versus Other-Based qualities**

This measure was used in two ways: the first way simply recorded one of the two possible labels ("self" or "other") for each of the two qualities ("positive" or "negative"). This data was analyzed in various ways, as will be discussed further in the Results and Discussion sections. The second way the measure was used was in assigning each participant another label, almost like a ratio, that identified the relationship between their positive quality and negative quality. In other words, if a participant had an other-based positive quality and a self-based negative quality, she would be categorized as "other:self". The significance of said relationship will also be discussed further later on in the chapter. Therefore, the possible categorizations each participant could receive are: "self:other", "self:self", "other:self", or "other:other". It is important to note that the word before the colon ("self" or "other") refers always to the participant's positive quality, whereas the word after the colon (also "self" or "other") refers always to the participant's negative quality. Thus, "self:other" is different than "other:self". All individuals received a categorization of this relationship, except for the few students who did not list either a positive or a negative quality, due to inability to understand or complete the prompt. Those participants were categorized as "self:n/a", "other:n/a", "n/a:other", "n/a:self" or "n/a:n/a" and were excluded from statistical tests. For example, an 8<sup>th</sup> grade female who

listed her best quality as "nice to almost everyone" (and therefore filed under the Helping Others category) and the quality that she would like to change as "scared of a lot of stuff" (and therefore filed under the Anxiety category) would be filed under the "other:self" category, because her kindness affects others whereas she views her anxiety as only affecting herself

#### Procedure

For the study, participants had 15 minutes to write an answer to a written prompt and return their responses anonymously. The students were sent home with an explanatory letter and permission slip prior to data collection (Appendix D), and an additional explanatory email was sent to parent/guardians by the principal. Students who were not given permission to participate remained in their classroom and completed an alternate prompt generated by the student's teacher; these responses were completed in the same amount of time, were not collected, and were not used in data analysis.

As the experimenter, I entered the classroom and introduced myself and the subsequent activity<sup>7</sup>. Two sheets of standardized lined paper<sup>8</sup> provided by the teacher were distributed to all participants. I then briefly explained the writing activity, handed out the prompt face down, and asked participants to fill in their birthday (month and year only) as well as their gender on the back of the prompt. Once that was completed, all participants turned over the prompt and I led the group in reading the prompt out loud. The prompt read, "What do you think is your best personality quality? What is a quality

<sup>&</sup>lt;sup>7</sup> See Appendix I for the verbal script. Two scripts were written and delivered: one script for the younger participants in grades 2 and 5, and one script for the older participants in grades 8 and 11.

<sup>&</sup>lt;sup>8</sup> Students in grade 5, 8, and 11 all used the same lined paper, while students in grade 2 used specialized paper with larger lines.

that you'd like to change? Explain your responses. Give two examples from your life – one for each answer – in which you demonstrated each quality." I allowed for questions about the meaning of the prompt and the previously given instructions. For the younger participants (2<sup>nd</sup> and 5<sup>th</sup> grade) more detail was given about what constituted a personality quality vs. a physical quality, as well as the meaning of the words "anonymous" and "demonstrate". Once vocabulary was clarified and questions were answered, the writing began.

The total writing period lasted 15 minutes; for previous studies using written responses, the typical range of response time is 15-30 minutes (i.e. Pennebaker, 1997). Less than 15 minutes would perhaps cut down on data because it would not allow for enough time to think and write, whereas more than 15 minutes could potentially cut down on data because of the young age of the participants, who would potentially lose focus and motivation for completion. Though the older participants could have ostensibly written for more than 15 minutes and thus produced more raw data, one time limit for all ages was used in order to control for the effect of varying response time lengths. For the 2<sup>nd</sup> and 5<sup>th</sup> grade participants, the experimenter alerted them at the 7-minute mark and encouraged them to move on to the second part of the prompt, i.e. the example-giving section. This was done in order to collect data that addressed as much of the prompt as possible. 8<sup>th</sup> and 11<sup>th</sup> grade students were only alerted when they had 7 minutes remaining, and not urged to move on to the second part of the prompt. In three of the four grades, the only time students were spoken to during the study was to alert them of their

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remaining time<sup>9</sup>. If participants finished early, they were asked to remain at their desks until the experimenter told them otherwise<sup>10</sup>. At the end of the 15 minutes the experimenter asked the students to stop writing, and staplers were passed out to attach all the materials (written responses and information sheet). Responses were collected face down, shuffled, and immediately deposited into a sealed folder, on which only the collection date and the grade of the classroom was written. As I at no point had a copy of a class list, there was no risk of violating confidentiality by placing a student's response in a folder with his or her grade on it.

This procedure was repeated nine times: once for the 2<sup>nd</sup> graders, once for the 5<sup>th</sup> graders, four times for the 8<sup>th</sup> graders, and 3 times for the 11<sup>th</sup> graders. After the prompt was administered and the data collected, the participants were able to ask any questions they had about the process, etc., and were left with the my contact information<sup>11</sup>, as well as the LIWC website (http://www.liwc.net). A follow up letter was sent to home to parents the day of the experiment (See Appendix J) which further clarified the prompt, procedure, and intended use of the data.

<sup>&</sup>lt;sup>9</sup> This procedure was intended to be standardized in all four grades, and was successfully done so in three of them; it quickly became evident in the 2<sup>nd</sup> grade classroom that students needed additional help. The alterations to the procedure and the potential ramifications of said alteration will be discussed further in the 'Limitations' section of the paper.

<sup>&</sup>lt;sup>10</sup> For the 2<sup>nd</sup> graders, the teacher stepped in unexpectedly and told children to draw on the back of their responses if they were finished; while the potential ramifications of this interjection will be discussed further in the 'Limitations' section of the paper, it perhaps cut down on students' responses. (See Appendix K for examples of the student's drawings)

<sup>&</sup>lt;sup>11</sup> None of the participants chose to follow up with the experimenter

## Results

## **Age Differences: Overall Findings**

As hypothesized, there were traceable patterns in both the categorical data and LIWC data as the age of the participants increased. In keeping with previous data (i.e. Buswell, 1937<sup>12</sup>, NAEP, 1971<sup>13</sup>) the average number of words per sentence (WPS) increased over the four groups, with each subsequent grade averaging roughly 1, then 2, then 3 WPS more than the previous: 2<sup>nd</sup> graders averaged 12.53 WPS, 5<sup>th</sup> graders 13.88 WPS, 8<sup>th</sup> graders 16.41 WPS and 11<sup>th</sup> graders with 18.96 WPS. Similarly, the average of overall word count (WC) increased (32.67, 73.82, 136.5, 162.34 for 2<sup>nd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> grade respectively) as did the number of large (6 letters or greater) words.

# Age Differences: Positive and Negative Qualities

As participants aged, they were more likely to cite their negative quality as one that fell under the categorization of Anxiety: 0% of 2<sup>nd</sup> or 5<sup>th</sup> graders were labeled as such, whereas 5.8% of the 8<sup>th</sup> graders and 8% of the 11<sup>th</sup> graders were. The frequency of participants' positive quality falling in the Tangible category decreased as they aged (66.67% of 2<sup>nd</sup> graders, 12.5% of 5<sup>th</sup> graders, 8.7% of 8<sup>th</sup> graders, and 0% of 11<sup>th</sup> graders), meaning fewer children cited their best personality quality as something concrete like "learning to swim", "doing tae kwon doe", or "being tall". 25% of the 2<sup>nd</sup> graders didn't fully answer the question, leaving out either a positive quality or a negative quality (leading to a categorization of "n/a" or, "not applicable"), whereas none of the

<sup>&</sup>lt;sup>12</sup> University of Chicago Professor Guy Buswell conducted a series of tests assessing reading skills in 1,000 adults with varying educational levels. He found that reading skills and practices increase as years of education increase.

<sup>&</sup>lt;sup>13</sup> The National Assessment of Educational Progress (NAEP) tested how students at age 9, 13 and 17, as well as adults 26-35 perform on various tasks. The results showed that age affects performance on the same items. (Stitcht & Armstrong, 1994)

students in higher grades made the same error – mostly likely due to improved listening and reading skills that come with age.

Also interesting is the ratio of positive qualities to negative qualities that each student listed. While not statistically significant the average number of positive qualities listed as well as the average number of negative qualities listed by each participant increased; in the 2<sup>nd</sup> grade, students cited an average of 1.08 positive qualities and 1 negative quality; in the 5<sup>th</sup> grade, they cited an average of 1.19 positive qualities and 1.13 negative qualities; in the 8<sup>th</sup> grade 1.39 positive qualities and 1.23 negative qualities; and in the 11<sup>th</sup> grade 1.78 positive qualities and 1.34 negative qualities. Therefore, the ratio of positive to negative qualities increased as participants aged (1.08:1, 1.19:1.13, 1.39:1.23, 1.78:1.34), meaning that on average, the 2<sup>nd</sup> graders listed 1.05 times as more positive qualities than negative qualities, the 8<sup>th</sup> graders listed 1.13 times more positive qualities than negative qualities, and the 11<sup>th</sup> graders listed 1.33 times more positive qualities than negative qualities.

## Age Differences: Self-Based versus Other-Based qualities

While there was not a uniform increase or decrease across ages in self-based or other-based qualities, participants were more likely to have their positive quality be other-based as they aged: only 8% of 2<sup>nd</sup> graders cited their positive quality as such, while 13% of 5<sup>th</sup> graders, 63% of 8<sup>th</sup> graders, and 70% of 11<sup>th</sup> graders did. Similarly, there was a higher prevalence of participants who displayed the "other:self" relationship as they aged; again, the other potential pattern combinations are "self:other", "self:self",

or "other:other. None of the  $2^{nd}$  or  $5^{th}$  graders displayed this particular relationship, whereas 40.58% of the  $8^{th}$  grade and 54% of the  $11^{th}$  graders did.

# Age Differences: LIWC Results

As sentence complexity increased -- as evidenced by more WPS, higher overall WC -- the use of conjunctions (i.e. "and", "but", "whereas") and cognitive processes (i.e. "cause", "know", "ought") also increased, yielding positive correlations with age of participants (r = 0.323, r = 0.315 respectively, p < 0.01). Also  $3^{rd}$  person plural pronouns ("they") were significantly correlated with age (r = 0.311, p < 0.01). Many measures decreased over time as well; in both males and females, positive emotion words were negatively correlated with age (r = -0.398, p < 0.01), as were affective process words (i.e. "happy", "cried", "abandon") (r = -0.346, p < 0.01), and first person singular pronouns (r = -0.416, p < 0.01).

# Age Differences: 8<sup>th</sup> grade peaks

Though the other:other relationship increased as well as the other:self relationship, the other:other relationship did not do so consistently, peaking in the 8<sup>th</sup> grade: (0% of the 2<sup>nd</sup> or 5<sup>th</sup> grade demonstrated the other:other relationship, while 20.83% of the 8<sup>th</sup> grade did, and only 16% of the 11<sup>th</sup> grade). In other words, nearly one fifth of the 8<sup>th</sup> graders cited both their positive quality and their negative quality as other-based. Other linguistic categories in which the 8<sup>th</sup> grade was highest were in the use of exclusive words ("but", "without", "exclude"), insight words ("think", "know", "consider"), biological processes ("eat", "blood", "pain"), and body words ("cheek", "hands", "spit"). The categories of Expectation (9.72% of 8<sup>th</sup> graders) and Miscellaneous Good (8.33% of 8<sup>th</sup> graders) for positive quality and Overly Emotional (8.33% of 8<sup>th</sup> graders) for negative quality were highest in the 8<sup>th</sup> grade as well.

In the last five measures of the conceptually derived coding system (Acknowledgement of the Reader, Acknowledgement of Separate Selves, Perception of the Self as Mediated Through the Other, "Black and White" statements, and Introspective Comments), 8<sup>th</sup> graders had the highest occurrence of each. For Acknowledgement of the Reader, the scores were 0 instances in the  $2^{nd}$  grade, 0 in the  $5^{th}$  grade, 16 in the  $8^{th}$  grade, and 8 in the 11<sup>th</sup> grade. For Acknowledgment of Separate Selves, the scores were 0, 3, 9, and 7 (for 2<sup>nd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> grade respectively); for Perception of Self as Mediated Through the Other, the scores were 0, 4, 21, 13; for "Black and White" statements, the scores were 0, 1, 27, and 12; and for Introspective comments the scores were 0, 1, 36, and 28.

## **Gender Differences**

### **Gender Differences: Positive and Negative Qualities**

While differences among age accounted for much of the significant data, differences between genders yielded just as many findings. When collapsed across age, girls tended to be categorized under the Optimism and Helping Others categories for their positive qualities<sup>14</sup> with about three times as many girls as boys falling into the Optimism category (22.97% of girls versus 6.97% of boys) and about twice as many into Helping Others (32.43% of girls versus 15.28% of boys). For negative qualities<sup>15</sup>, girls were about three times as likely as boys to be classified in the category of Low Self-Esteem (32.43%) of girls versus 11.11% of boys) and nearly nine times as likely to be in the Overly

 <sup>&</sup>lt;sup>14</sup> For a complete breakdown of girls' positive qualities see Appendix A, Figure 3
<sup>15</sup> For a complete breakdown of girls' negative qualities see Appendix A, Figure 4

Emotional category (10.81% of girls versus 1.39% of boys). Boys were roughly two and a half times more likely than girls to cite Humor as their positive quality<sup>16</sup> (30.56% of boys versus 12.16% of girls as well as Impulse Control as their negative<sup>17</sup> quality (45.83% of boys versus 18.92% of girls) Boys were also about two and a quarter times more likely than girls to list their positive quality as something Tangible (15.28% of boys versus 6.76% of girls), and two and a half times more likely to list their negative quality as Tangible (13.89% of boys versus 5.41% of girls). Additionally, 0% of girls explicitly stated that they did not want to change<sup>18</sup> while 2.78% of boys did. In the reverse, 1.35% of girls did not list a positive quality, whereas 0% of the boys did.

The number of female participants who were categorized as Helping Others for their positive quality increased over the four grades more dramatically than in male participants (14.29% of 2<sup>nd</sup> grade girls, 14.29% of 5<sup>th</sup> grade girls, 34.29% of 8<sup>th</sup> grade girls, and 40% of 11<sup>th</sup> grade girls), though the boys too showed a similar pattern (0% of 2<sup>nd</sup> grade boys, 0% of 5<sup>th</sup> grade boys, 14.71% of 8<sup>th</sup> grade boys, 24% of 11<sup>th</sup> grade boys). Female participants were also more likely to be categorized under the Low Self-Esteem or Anxiety category as they aged: in the Low Self-Esteem group were 28.57% of 2<sup>nd</sup> grade girls, 28.57% of 5<sup>th</sup> grade girls, 34.29% of 8<sup>th</sup> grade girls, and 36% of 11<sup>th</sup> grade girls. For Anxiety, 0% of 2<sup>nd</sup> grade girls fell into that category, 0% of 5<sup>th</sup> grade girls, 5.71% of 8<sup>th</sup> grade girls, and 12% of 11<sup>th</sup> grade girls. Again, male participants increased in citing Low Self-Esteem as a quality that they would like to change too (0% of 2<sup>nd</sup>

<sup>&</sup>lt;sup>16</sup> For a complete breakdown of boys' positive qualities see Appendix A, Figure 5

<sup>&</sup>lt;sup>17</sup> For a complete breakdown of boys' negative qualities, see Appendix A, Figure 6

<sup>&</sup>lt;sup>18</sup> Again, the category None is for participants who explicitly stated that they did not want to change; this is different than a participant who did not answer all parts of the prompt, and thus received an n/a while being coded.

grade boys, 0% of 5<sup>th</sup> grade boys, 11.76% of 8<sup>th</sup> grade boys, and 16% of 11<sup>th</sup> grade boys), but their increase was not as steep as the female population's.

## Gender Differences: Self-Based versus Other-Based qualities

The large majority of girls had an other-based positive quality (72%) and a selfbased negative quality (70.67%), as opposed to the less striking majority of boys, who had a self-based positive quality (57.53%) and a self-based negative quality (53.42%). Thus, more than half of the female participants had an other:self relationship (52%)<sup>19</sup>, as opposed to roughly one fifth of the male participants (21.92%)<sup>20</sup>. Boys were much more evenly divided across the self-based or other-based positive and negative quality relationship categories, with 21.92% of them falling under the other:self relationship as well as the self:other relationship, 15.07% of them exhibiting an other:other relationship, and the largest percentage of them (31.51%) exhibiting a self:self relationship<sup>21</sup>. Girls were much less equally distributed: more than half (52%) exhibited an other:self relationship, 9.33% exhibited a self:other relationship, 17.33% fell under the other:other relationship, and 14.67% under the self:self relationship.<sup>22</sup>

While the "other:self" relationship increased overall, it did so more dramatically in girls as they aged, leaping from 0% in both the  $2^{nd}$  and  $5^{th}$  grade to 51.43% of the  $8^{th}$  grade and 64% of the  $11^{th}$  grade. In contrast, boys increased in the other:self relationship from 0% in  $2^{nd}$  and  $5^{th}$  grade to 29.41% in  $8^{th}$  grade and 44% in  $11^{th}$  grade. As boys aged,

<sup>&</sup>lt;sup>19</sup> See Appendix A, Figure 7

<sup>&</sup>lt;sup>20</sup> See Appendix A, Figure 8

<sup>&</sup>lt;sup>21</sup> The remaining 8.22% of them were categorized under the "n/a" category, which meant that part of the prompt was answered incorrectly and therefore either a positive or a negative quality was not listed, their response completely defied categorization of "other" or "self" based, or lastly they explicitly listed that they did not want to change and thus could not be filed as "other" or "self" based.

<sup>&</sup>lt;sup>22</sup> The remaining 5.33% of girls were categorized under the "n/a" category.

they were less likely to have a self-based positive quality paired with a self-based negative quality (self:self relationship), decreasing from 40% of  $2^{nd}$  grade boys, to 33.33% of 5<sup>th</sup> grade boys, to 29.41% of 8<sup>th</sup> grade boys to 20% of 11<sup>th</sup> grade boys. In addition, the likelihood of boys having a self-based positive quality decreased over time, with 100% of  $2^{nd}$  grade boys citing such, 88.89% of 5<sup>th</sup> grade boys, 50% of 8<sup>th</sup> grade boys, and 48% of 11<sup>th</sup> grade boys. Girls also increased in citing their positive quality as other-based as they aged (14.29% of  $2^{nd}$  grade girls, 28.57% of 5<sup>th</sup> grade girls, 82.86% or 8<sup>th</sup> grade girls, and 88% of 11<sup>th</sup> grade girls) and increased in citing their negative quality as 11<sup>th</sup> grade girls.

### **Gender Differences: Additional Conceptually-Derived Measures**

Boys and girls also differed in the last five measures of the conceptually derived coding system (Acknowledgement of the Reader, Acknowledgement of Separate Selves, Perception of the Self as Mediated Through the Other, "Black and White" statements, and Introspective Comments). See Appendix A, Figure 2. Acknowledgement of the reader was about equal, with girls accounting for 58.3% of the occurrences (14 of 24) and boys accounting for 41.67% (10 of 24). Acknowledgement of Separate Selves was also more evenly split, with girls accounting for 42.4% and boys for 57.89%. However, the Perception of the Self as Mediated Through the Other differed between boys and girls: girls accounted for 65.79% of all instances, and boys for only 34.2%. Similarly, "Black and White" statements were split between girls and boys 62.5% (girls) and 37.5% (boys), and Introspective comments were split 66.2% for girls and 33.8% for boys.

#### **Gender Differences: LIWC results**

To assess statistically significant differences in word use between boys and girls, independent t-tests were performed. Across all four age groups girls and boys differed significantly in use of 'ingestion words' (i.e. "dish", "eat", "pizza") (t(10) =.07, t(15) =.00, t(48) = .024, t(149) = 0.13, for grades 2, 5, 8, and 11, respectively) and 'achievement words' (i.e. "earn", "hero", "win") (t(10) = .00, t(15) = .003, t(48) = .013, t(48) =t(149) = 0.22, for grades 2, 5, 8, and 11, respectively) though more gender differences were found when the data was divided by grade as well as and gender. In grades 2, 5, and 8, girls and boys differed in 'family' words (t(10) = .000, t(15) = .020, t(48) = .029, forgrades 2, 5 and 8 respectively) and 'home' words (t(10) = .009, t(15) = .001, t(48) =.018, for grades 2, 5 and 8 respectively); in grades 5, 8, and 11, girls and boys differed in sadness words (t(15) = .004, t(48) = .002, t(149) = .050 for grades 5, 8, and 11 respectively), use of question marks (t(15) = .001, t(48) = .003, t(149) = .003 for grades 5, 8, and 11 respectively), and health words (t(15) = .000, t(48) = .034, t(149) = .030 for grades 5, 8, and 11 respectively); in grades 2 and 5, girls and boys differed in social words (t(10) = .035, t(15) = .023), anxiety words (t(10) = .002, t(15) = .000), tentative words (t(10) = .007, t(15) = .001), and work related words (t(10) = .022, t(15) = .003); in grades 5 and 8 girls and boys differed in word count (t(15) = .007, t(48) = .035), use of second person pronouns (t(15) = .001, t(48) = .000), numbers (t(15) = .001, t(48) = .037), inclusive words (t(15) = .003, t(48) = .005), and biological process words (t(15) = .017, t(48) = .011; and in grades 5 and 11, girls and boys differed in future tense verb use (t(15) = .016, t(149) = .033), adverb use (t(15) = .027, t(149) = .042), body words (t(15) = .042)

.008, t(149) = .026), space words (t(15) = .000, t(149) = .052), and money words (t(15) = .005, t(149) = .000).

## Discussion

## **Discussion: Age Differences**

Though the current findings are due to a blend of myriad influences, the most striking factor in shaping responses appears to be social awareness; as we age and as social awareness develops the value of peer approval increases, we are adaptive beings, and as awareness and the need for approval from the other increases, childhood and adolescent self-concept adapts to fit that context. First person singular pronouns were significantly negatively correlated with age (r = -0.416, p < 0.01), suggesting both increasing syntactic complexity as well as a shift of focus: as the individual ages, he or she moves away from a view of the self as an isolated being, and towards a view of the self as part of a larger social context. Third person pronouns are also positively correlated with age, which, when coupled with increased use of cognitive words, supports the notion of a heightened awareness of participants' social context as they grow older. Similarly, the other:self relationship increased consistently across the four grades, suggesting not just a heightened recognition of the social sphere but particularly the individual's place in relation to that sphere; because children rely more heavily on peer evaluation as they age (i.e. Montemayor and Eisen, 1977), they increasingly define themselves in comparison to those social relationships (particularly group membership), hence taking pride in positively affecting them.

However, with this growing awareness of social roles and social rules comes knowledge of peer judgment, which leads to decreased self esteem; though perhaps counterintuitive, escalating acknowledgment of the outside world causes increased introspection - the question 'how am I viewed by my peers?' grows louder, and it is therefore logical that as social status becomes the tool with which children and adolescents begin to forge their identities, they look outward for approval (hence the other-based positive quality) and inward for improvement (hence the self-based negative quality). The increased awareness of the self as the subject of observation and evaluation is also likely the cause of increased use of words in the 'see' category, such as "view", "saw", and "seen". Children begin to establish themselves first as different from the physical environment and then as different from the social (i.e. Lewis, 1990), and as they develop metacognition and the ability to be self-reflective (i.e. Fox and Riconscente, 2008) that heightened awareness may lead to more observational and perspective taking words.

Positive emotion words were negatively correlated with age (r = -0.398, p < 0.01) and anger words positive correlated echoing the decrease in self-esteem and the increase in anxiety, trends most likely due to increased social demands. The increase in negative words as well as the decrease in affective process words reveals that a ramification of being thrust into the realm of social scrutiny as one ages leads to a more guarded relationship of one's emotions. Participants perhaps became more aware of their inner emotions and cognitive processes as they aged (as evidenced by increased use of words in the 'cognitive mechanisms' category), but they also became more aware of outward displays of emotion and other affective processes. As children get older their sense of self becomes less disparate, and rather than identifying as someone who cries and then laughs and then yells, a comprehensive image of a complex emotional being emerges; as children aged, affective process words decreased, which is ostensibly explained by a dwindling need for explicitly stating affective processes in writing that explores selfimage. In other words, rather than saying "I am sad", the individual can show that emotion through their writing, rather than telling it. This is due to increased writing skills, as well as increased Theory of Mind; as children age, they are better able to take other people's perspectives and in turn expect others to take theirs. This ability of the reader to understand the basic motivators of the storyteller is part of the magic in storytelling (i.e. Zunshine, 2003).

Similarly, more than half of the 2<sup>nd</sup> graders prided themselves on a Tangible skill like "singing" or "playing football" as opposed to 0% of the 11<sup>th</sup> graders, who are able to draw a distinction between 'who they are' and 'what they do'. This is perhaps due in part to the older participants' enhanced ability to understand the prompt (i.e. understand what a 'personality' quality is, rather than a 'skill' or a 'physical quality'), but more likely is in keeping with the evolution of the child's self-concept from concrete and physical to more abstract and cognitive (i.e. Werner, 1957). As children age they form a more complex self-concept, and rather than identifying with more concrete skills they have, they begin to value and define themselves through their unique personal attributes. Similarly, the number of positive qualities and the number of negative qualities that participants reported increased, suggesting both a greater linguistic ability (when an individual's vocabulary is larger, there is a higher likelihood of that individual using a greater variety of words) as well as a more complex and nuanced view of the self, one that requires multiple descriptors. Also interesting to note is that despite the increase in Anxiety and Low Self-Esteem and the decrease in positive emotion words, on the whole, participants

consistently listed slightly more positive qualities than negative qualities. This could be due to a generally positive self-image, or due to the ordering of the prompt, in which students were asked to first describe their best personality quality and *then* which one they would want to change.

# **Discussion: 8<sup>th</sup> Grade Peaks**

As listed in the results section, the 8<sup>th</sup> grade showed particularly high occurrences of most measures, suggesting a 'spike' or rapid increase between 5<sup>th</sup> and 8<sup>th</sup> grade, which evened out in the 11<sup>th</sup> grade data. The intense increases demonstrated during these years can be explained by many previous findings, both biological and psychological. During early adolescence, puberty begins, and some findings suggest that "pubertal age is more accurate than chronological age" (Gurian, 2012) in predicting emotional states such as stress or depression. Hormones are raging, which affect mood as well as where attention is directed - i.e. towards peers, and often through a sexual lens. A similarly social reason for the unique findings in the 8<sup>th</sup> grade was introduced by David Elkind in 1967: adolescent egocentrism. Elkind defines adolescent egocentrism in two parts, the imaginary audience (the adolescent's tendency to believe that everyone is watching and judging him or her) and the personal fable (the adolescent's belief that he or she is "unique, invulnerable, and omnipotent" (Vartanian, 2000)). A more recent study however suggests that "adolescents worry about what other people think because there are real personal and social consequences. Such concerns are seen as being based in social reality and are not imaginary as Elkind suggested" (Bell and Bromnick, 2003).

## **Discussion: Gender Differences**

Overwhelmingly, the data showed that girls seemed to have the social 'other' in mind more often than boys; not only did they have more other-based qualities, but also increased instances of appearing in the Anxiety, Low Self-Esteem, and Overly Emotional categories. The data are supported by other findings: according to the NYU Child Study Center, "about 10 - 15 % of all children report moderate to severe signs of depression. By age 13, a dramatic shift occurs, and more than twice as many girls as boys are depressed, a proportion that persists into adulthood. This two-to-one ration exists regardless of racial or ethnic background and has been reported in other countries" (Gurian, 2012). Additionally, girls accounted for 65.79% of the instances of Perception of Self as Mediated Through the Other and more frequently used ingestion words. These findings point to a perhaps painfully heightened awareness of the self as the object of evaluation, particularly in the light of behavioral and physical female stereotypes: around puberty, "girls view body changes, such as increased fat layers, as negative. Boys, on the other hand, view body changes, such as increased muscular development, as positive" (Gurian, 2012).

The data are ostensibly due in part to the larger cultural pressures that face girls and young women; girls are taught to be both selfless but self assured, beautiful but not conceited, health conscious but not self conscious, fun but hardworking. It would be naïve to say that boys do not face social pressures, though arguably young girls are bombarded daily with more concrete roles to which they must adhere. The number of female participants who were categorized as Helping Others (14.29% in 2<sup>nd</sup> grade, 14.29% in 5th, 34.29% in 8th, and 40% in 11th) increased over the four grades more dramatically than in male participants, though boys showed a similar pattern too (0%, 0%, 14.71%, 24%). Because girls and women are socialized to be helpful, maternal, and giving, this increase in girls under the Helping Other category supports cultural stereotypes and expectations. As girls get older, they are both trained to fulfill a certain idealized image of femininity and more aware of what they *should* be; an interesting mediating factor to take in to account is that some of these trends are due to participant bias or the social desirability bias, and perhaps girls do not increase in benevolence and Helping Others, but rather are more aware of their audience and understand how to answer 'correctly'.

Another explanation could be that girls are often more socially aware than boys are at a young age, and it is not that the amount of pressure they face is higher, but they simply are more aware of it. It could also be argued that both boys and girls face similar amounts of pressure but girls are taught to be or are more naturally susceptible to social criticism and praise (i.e. Blakemore, 2003); perhaps the root of many gender differences is simply a taught valuing or disregarding of social criticism. Girls are taught to please others and be valued mainly in how they affect other people, whereas boys are encouraged to be independent, strong, and base their self-worth on what they individually can accomplish. Nearly twice as many boys as girls (15.28% vs. 6.76%) fell under the skill-based positive quality, supporting the notion that culturally, young boys value themselves based on what they accomplish, often individually, versus what they do to affect others on a daily basis. Also in support of this hypothesis is that boys and girls differed significantly on achievement words, with more boys than girls employing them.

More than twice as many boys (58.33% vs. 22.97%) had a self-based positive quality, and twice as many boys than girls also had a "self:self" relationship (31.94% vs. 14.86%), meaning both their positive and negative qualities mainly affected themselves. This data is in keeping with previous research by Stapley and Haviland (1989), who found that references to other-direction negative emotions, such as anger, were predominant of boys, and inner-directed negative emotions, such as sadness, fear, guilt, and shame, were characteristic of girls. It is also interesting to consider that there may be some similarity between boys and girls, and some of the differences found in the data are due to linguistic differences between the genders rather than inherent behavioral differences; for example, while only 18.67% of girls (as opposed to 45.21% of boys) were placed under the Impulse Control category, another 21.33% were under Expectation Violation. Within Expectation Violation, the majority of girls who landed there cited "bossiness" as the quality they would like to change, whereas the most common answers for boys under the Impulse Control category were "too competitive" or "get angry too easily" or "get frustrated too easily"; in other words, though the categorization of "competitiveness" versus "bossiness" was different, they are arguably different manifestations of the same thing: childhood and adolescent aggression. "While both boys and girls engage in relational aggression, girls tend to use more indirect, social and verbal forms of aggression...boys are more likely to express their aggression as an impulse act" (Meichenbaum, 2006). Because I am interested in language as a mediating factor in selfconcept, this gender-influenced linguistic difference in describing what is perhaps the same quality (childhood aggression) is a particularly rich finding.

## Limitations

Though the study was designed and implemented to the best of my ability, there were of course inevitable limitations, some of which were inherent in the measures employed and others that arose during data collection or data analysis.

### **Limitations: Study Design**

In the overall ideology of the study, I relied on participants' word choice to lend insight into their self-concept; however, as Tausczik and Pennebaker (2010) point out, "the imprecise measurement of word meaning and psychological states themselves should give pause to anyone who relies too heavily on accurately detecting people's true selves through their use of words." Nevertheless, I strove in this study to eliminate as much of this 'imprecision' as possible by creating a supplementary measure to LIWC as well as confining the intent of the study to exploring children's own self-concept as specifically mediated by language, as opposed to attempting to glean a more objective view of childhood identity; while it is worth quoting Tausczik and Pennebaker's warning and acknowledging the degree of interpretation present in this study, not only do I not feel that there is more 'guesswork' in this study than in others, but my intention was also to specifically study the words children choose when describing themselves. Namely, my goal was never to analyze the 'true' nature of each participant, but rather to study the linguistic lens through which they choose to present themselves. In that sense, it is more a study of the representation of childhood and adolescent self-concept by children and adolescents through language. Therefore, the language studied in this procedure did get at a truth, the truth of the way each child represents him or herself.

Another potential limitation of this study was my employment of the crosssectional method. Ideally, the study would have been longitudinal, in order to eliminate variables of individual participants; in other words, participant A in grade 5 might be inherently more energetic than participant B in grade 11 and therefore participant A might have issues with impulse control throughout his life, whereas even when participant B was in grade 5, he never had the same strengths and limitations. However, if I were able to track participant A throughout his life (ideally in every grade, though for the sake of discussing a parallel study, in 2<sup>nd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> grade), the potential changes throughout his development (i.e. improvement of his impulse control or transference of his energy into academic work ethic) would more likely be due to aging than to other variables, as is the case in the current design in which each grade is intended to be representative of children that age (though of course there are individual differences).

Also inherent in the study design are the limitations that come along with any single participant population. The town in which I conducted my research -- Rhinebeck, New York -- is a relatively affluent town, where the cost of living is 126% of the national average, the violent crime index is as low as it gets (1), and the public schools are rated by GreatSchools between an 8-9 out of 10<sup>23</sup> In order to ensure that this study's results have external validity (i.e. that they can be generalized to the greater population), I would ideally replicate it in other populations with varying qualifications (i.e. higher and lower SES, public versus private schools, single-sex schools, religious schools, homeschooled

<sup>&</sup>lt;sup>23</sup> Chancellor Livingston Elementary and Rhinebeck Senior High School both have ratings of 8, while Bulkeley Middle School has a rating of 9. This rating is based on its public schools' test results, as compared to those of other schools in the state

children, bilingual children, non-native children, etc.). The particular environments in which the study was conducted appeared to be particularly focused on helping each individual child, in whatever their academic needs were as well as in fostering their selfexpression. In a different setting in which creative personal expression was not as encouraged, I imagine the results would vary slightly, though I believe the significant findings discovered in this study would hold true.

Lastly, the phrasing of the actual prompt may have been difficult to understand for various students, specifically the youngest population of 2<sup>nd</sup> graders. ("What do you think is your best personality quality? What is a quality that you'd like to change? Explain your responses. Give two examples from your life – one for each answer – in which you demonstrated each quality.") Many did not understand the word "demonstrate", despite having explained the prompt in the script before the timed responses began.

### **Limitations: Measures**

Though LIWC is a fantastic program, I touched on some of its limitations earlier in the chapter; it does not take into account word-order, slang, or context, though an experimenter could go in and create a new dimension in which to capture various trends if need be. Also worth noting are the populations with which the majority of the research was done in creating LIWC: "more of the research results have come from labs in the United States working with college-aged students, often in highly contrived settings" (Tausczik & Pennebaker, 2010). The researchers also point out that "the relevant social information can vary greatly between language and cultures…indeed, some of the most striking cultural differences in language -- such as markers of politeness, formality, and social closeness -- are inherent in function words rather than content words (Boroditsky, Schmidt & Phillips, 2003)" As mentioned earlier, the study would be stronger if both the creators of LIWC as well as myself studied varying populations.

Because of LIWC's limitations, I created the more categorical means of analyzing the data, though that system had various flaws as well. In any coding system, it is ideal to have more than one judge both in creating the system as well as in analyzing the data -unfortunately for this study I was the sole designer, experimenter and data analyst, and therefore if there was any ambiguity in judging which category a participant belonged in, I made the only and final call. While I did so carefully and thoughtfully, it would be naïve to ignore the inevitable human subjectivity in data analysis, and had another judge been present, perhaps a few categories would be different.

#### **Limitations: Data Collection**

While data collection proceeded more or less as planned, there were a few unexpected occurrences that potentially influenced the data. Though there were set scripts (one for the 2<sup>nd</sup> and 5<sup>th</sup> grade, one for the 8<sup>th</sup> and 11<sup>th</sup> grade. See Appendix I), as the experimenter I occasionally had to be flexible. Procedure went as expected in the 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> grade, but the 2<sup>nd</sup> grade presented a few hiccups to the script and well laid out procedure. The classroom's teacher took more control than previously expected, occasionally giving the students alternate instructions; though these did not compromise the data terribly, it made it difficult to standardize the procedure as firmly as I originally intended. In particular, the teacher told the students to draw on the back of their responses when they had finished. While this made for some very cute additions to the written prompt (see Appendix L for examples), it also potentially cut down on students' responses. In addition, many of the 2<sup>nd</sup> graders needed individual attention when answering the prompt, either because they were unable to fully comprehend the prompt (a phrasing issue that, were the study to be replicated, I would address), or because they were used to checking with the teacher before declaring an assignment completed. Because of this, both the teacher and I spoke to individual students throughout the 15 minute response time, and while I endeavored to answer the students' questions without compromising the data collection (i.e. without revealing the intent of the study, etc.), I was unable to keep track of all the teacher said to the students, and there is a possibility that she inadvertently goaded the participants in a specific direction.

In the 5<sup>th</sup> grade classroom, the majority of the participants responded that their favorite quality was Humor and the quality that they wanted to change was either Impulse Control or Expectation Violation; what is worth commenting on however is that most of them specifically said "I am funny but I am bossy", the exact example I used in the script. Though I standardized this example for all four grades in order to illustrate what was meant by the prompt, this seemed to influence the  $5^{th}$  graders much more strongly than any of the other grades. An alternative would have been to not present an example, but I feared that that would lead confusion which would influence the data more strongly than the imitation of the example given.

Lastly, each time I administered the prompt I remained in the classroom, and I would be curious to explore the effect of the experimenter's presence in the room while participants are asked to anonymously answer an extremely personal prompt. It would have been interesting to divide each grade into two parts, one in which I remained in the classroom and one in which I waited outside. Similarly, the presence of the students'

teacher as well as the answering of the prompt in their own classroom ostensibly affected the data as well; just as many students acknowledged a reader or described different 'versions' of themselves in different social settings, perhaps their responses and word choices would have varied slightly had they been in a more neutral space (i.e. if they are failing English and answered the prompt in their English classroom, they might have cited different positive and negative qualities than if they had been in their math classroom, where they are maintaining an "A" average). Other scenarios to explore would be: had they been told that I was simply the deliverer of the prompt and would not be the one reading them, had they typed their responses on the computer and thus eliminated the potentially identifying factor of handwriting, had they spoken rather than written their responses, etc.

## **Future Directions**

While I consider the study a great success, there is a multitude of ways in which this process could be tweaked and/or built upon for further exploration. As far as the measure of LIWC goes, Tausczik and Pennebaker (2010) cite it as "only a transitional text analysis program in the shift from traditional language analysis to a new era of language analysis. ... Studies have begun to look at *n*-grams, groups of two or more words together in the same way we have used LIWC to look at frequencies of single words (Oberlander & Gill, 2006)." If and when these new types of language processing computer programs are available, it would be worthwhile to replicate the current study, along with the previously noted adjustments (i.e. with different populations, as a longitudinal study, with or without the presence of the experimenter, etc.). Similarly, little research has been done investigating the difference between written and spoken language – I would be interested in replicating the current study (i.e. administering the same prompt) but asking each participant to speak the answer, either to me in an interview setting, or recorded alone at home.

I also believe that there is tremendous therapeutic value in my findings, and modifications of this study can be used in other capacities. As Pennebaker (2007) has shown, introspective personal writing has direct health benefits, and I believe that if children (both of typical and atypical development and circumstance) were assigned or encouraged to keep personal journals, they too would have physical and mental health improvements. Not only would regular writing improve each child's vocabulary and writing skills, but becoming familiar with emotional vocabulary would increase emotional awareness, emotional self-regulation, and emotional 'intelligence' as well, leading to more well-adjusted children. Even when one is writing for oneself in a journal, diary, or writing prompt, there is a perception of an audience, and for children who do not get enough attention on a daily basis, this imagined reader or built in 'safe space' of journal writing is bound to have discernible benefits. It is also important for children to take the time to think about themselves in the way this study demanded, both to bring into practice and thus increase abilities of meta-cognition, but also to begin to be more in touch with one's own thoughts and desires. This self-knowledge can lead to better decision-making and overall happiness, for if a child understands him or herself, he or she is more likely to make choices that benefit him or herself.

Less abstract uses of this current study are potential screening techniques -- as Stirman and Pennebaker (2011) showed, suicidal and depressed individuals tended to use more negative emotion words and more first-person singular pronouns; if this type of self-reflective writing was mandatory a few times a school year every year, teachers and administrators could ostensibly screen children and adolescents for depression issues. getting appropriate help to children who otherwise may not receive it. In this particular study, one 8<sup>th</sup> grade girl identified herself as "suicidal" -- though the girl's teacher and guidance counselor were both already aware of her battle with depression, they were grateful to have the information on file and keep track of her emotional progress. Another use of the current study could be to supplement personality tests (i.e. the Myers-Briggs test) or to adapt them to be personality tests more appropriate for children than the current lengthy queries. Though no correlational tests were performed, by eyeballing the data it appeared that in many participants, their positive or negative quality was predictive of the other; for example, many children who cited Humor as their best quality also cited Impulse Control as their negative (i.e. Appendix J, response #4 and #7), or participants who cited "loyalty" (Expectation) as their best quality identified their negative quality as having "trust issues" (Overly Emotional) (i.e. Appendix J, response #6). In other words, it appears that the current study began to unearth distinct personality types in children – those who pride themselves in their humor perhaps enjoy being the center of attention and thrive on peer approval, and therefore have boundary issues understanding when to stop sacrificing rule obedience for comedic effect. If parents, teachers, and peers better understood this personality 'type' or 'trait', different and ostensibly more effective approaches to discipline could be employed. Similarly, with the child who is both loyal to her friends and mistrustful of others, it is evident that social relationships are extremely important to the way she conducts her life and organizes her world. In both cases, if one understands the child's *motivation* for behavior, one is better

able to cater to that child's individual needs. It would be fascinating to hone in on the measures that most accurately gauge or predict childhood personality type and expand upon them, allowing for the creation of a more accurate, open-ended, and youth-friendly tool with which to understand and help our children.

# **Chapter 2: Aesthetic Representation**

We are not born complete. Both physically and intellectually, the majority of our development takes place outside the womb, in harmony with and reaction to our surroundings. In the first few months of life infants double their weight, gain control of their eyes, head, and neck and soon begin to grasp objects. While this physical development progresses at a steady and predictable rate, social, emotional, and intellectual development tends to as well; babies coo, smile, imitate, and begin to form basic social relationships with those around them. These developmental milestones can be observed, and until the child acquires language, it is through observation alone that we are able to assure that they are following an age-appropriate track and recognize them as developmentally typical; in other words, until they can speak for themselves, they are defined entirely by others, and by what they do rather than what they think.

Pre-linguistically, the child is 'a girl' or 'a boy', '14 months' or '3 years' old, 'appropriately mobile' or 'atypically still'. Occasionally he or she is defined by his or her preferences, such as laughter at the sight of cartoons and tears at the sound of the vacuum. Still, these basic identities are assigned to young children, surmised by the observer based on tangible evidence. Early language is based largely on imitation, and even when speaking ability is obtained it is often with 'inherited' words that children self-define. Before the development of metacognition, children mimic the way they hear themselves being talked about, and often self-describe in terms of what they do rather than what they think. Parents know their young children through observing actions and reactions, and therefore young children know themselves through their parents and their parents' reported assessments. How, then, do children begin to form their own identities, and transcend the labels stamped upon them? Are new identities created independent of, in opposition to, or in conjunction with the others that previously defined them? Does identity evolution, like physical development, also follow a discernible path?

I will explore these questions in the following chapter, drawing on a variety of diverse sources to explore the intricacies of identity formation. While my primary reference points will be two novels – The Waves by Virginia Woolf and A Portrait of the Artist as a Young Man by James Joyce – I will also rely on developmental psychology theorists to support the account of childhood development put forth by the novelists. My intent in combining the two different approaches is not to compare and contrast one approach's findings with the other, but rather to put them in dialogue with one another, combining forces to investigate childhood identity construction. The guiding psychological principles that I will be adhering to in this chapter come from Abraham Maslow and Philippe Rochat, though I will periodically reference empirical studies that give weight to the point being discussed – I find this solidifies the connection between psychological exploration and literary exploration, highlighting the validity in both endeavors. I will be using Maslow and Rochat's developmental theories as lenses through which I analyze the perspectives offered by Woolf and Joyce, and the additional, almost anecdotal empirical references reinforce the real world correlations between what the novels declare is 'true' and what we as people (and not characters in a novel) experience. I will therefore be moving fluidly among the five or so sources – The Waves, A Portrait of the Artist as a Young Man, Maslow's Hierarchy of Needs, Rochat's 5 levels of selfawareness, and miscellaneous studies and theories (i.e. the visual cliff, Maternal Facial Signaling, Violation of Expectation, and the Cocktail Party Effect) – suggesting that

though each source differs in the orientation of its argument, each illuminates a unique aspect of the large picture of childhood and adolescent identity formation.

#### The Value of Empirical Research and Aesthetic Representation

In the specific case of childhood and adolescent identity formation, both an objective and a subjective perspective are necessary to build a full picture of the experience. By collecting first-person non-fiction writing samples from children, I explore the experience from the inside out, gleaning a purely subjective viewpoint to meld in with the rest. Personal narration is invaluable when endeavoring to paint an entire picture of childhood, though there are of course certain limitations to relying solely on the self-report of those still deeply steeped in active identity formation. For this reason, I also draw on arguably more objective means of understanding this distinctive time period, referencing psychology studies and theories that ostensibly analyze the experience from a removed, standardized, and quantitative outlook. This outside-looking-in standpoint ideally eliminates the subjective biases of someone still experiencing the situation he or she is attempting to describe, though there is potentially something lost in boiling individual experience down to a numerical average.

The ideal midpoint between subjective personal narrative and objective, impersonal survey then, is the novel: the unique format allows the author to toy with the line between objectivity and subjectivity. However, it is important to keep in mind a novel is a creative representation of an experience. Though there is tremendous value in the innovative and insightful depiction of various experiences, it must not be mistaken for pure objectivity, as there is a human author with specific motives in the writing of the book. Regardless, the artistic license of the author allows him or her to bring to life long forgotten aspects of childhood, creating a space in which childhood experience is either revived or born for the reader – the profundity of artistic representation is that readers or audience members can both identify with a feeling the art recalls to them (i.e. they vividly recall an experience they had because they see aspects of it reflected in the art) or they can experience something for the first time through the power of the creative narration (i.e. they have never befriended a wealthy, love-sick bootlegger as is the case with Nick in *The Great Gatsby*, but they understand the complexity and tenderness that characterizes the relationship by reading the novel). As Woolf herself says, "the writer must get into touch with his reader by putting before him something which he recognizes, which therefore stimulates his imagination, and makes him willing to cooperate in the far more difficult business of intimacy" (Woolf, 1923).

Novels target emotional knowledge, combining the inside-looking-out with the outside-looking-in perspectives. Both Joyce and Woolf take advantage of this freedom of perspective in different ways; in *The Waves*, Woolf writes six different subjective, inside-looking-out perspectives, all combining to form a magnificent but implicitly objective view, while Joyce focuses on one character. The majority of *A Portrait* is outside-looking-in – i.e. omniscient narration – but as the main character ages and becomes a more self-actualized individual, capable of having his own thoughts and making his own decisions, the narration symbolically changes to first-person, or subjective narration, inside-looking-out. Both works expertly use the freedoms allowed by fiction writing to bring home emotional truths to the reader – the magic in the writing is partially due to the authors' ability to 'show' and not simply 'tell' the trials and tribulations of childhood.

### Why Modernist Literature?

"And now I will hazard a[n] assertion," Woolf said in her 1923 essay, Mr. Bennet and Mrs. Brown, "to the effect that in or about December, 1910, human character changed" (Woolf, 1). More specifically, Woolf is referring to the emergence of the Modernist movement, a gradual shift in cross-cultural consciousness that manifested itself in art and literature. "I am not saying that one went out, as one might into a garden, and there saw that a rose had flowered, or that a hen had laid an egg," she continues. "The change was not sudden and definite like that. But a change there was, nevertheless; and, since one must be arbitrary, let us date it about the year 1910" (Woolf, 2). Characterized by a deliberate split from traditional 19<sup>th</sup> century aesthetic, the focus of Modernist literature shifted from an objective picture of mankind to a more subjective view of the individual experiencing his or her unique world. Rather than art being venerated as a reflection of external reality, an inversion took place at the time when the Modernists wrote: art came to be viewed as a reflection of the *individual's* perception of his or her environment. Scholars and artists alike often cite the catalyst for this movement as an amalgamation of developments in politics (the first World War, British imperialism), technology (and thus in communication), psychology (in particular, Freud's psychoanalysis and the new emphasis on the subconscious as a source of motivation), and wide-spread industrialization. These radical shifts caused generalized discomfort and disappointment, which in turn led to a distrust of institutions. The world was growing both bigger and smaller, and rather than focusing on the whole, artists began to focus on the small individual within that whole: how does the individual fit within a larger social

structure? How do those who comprise the culture shape its consciousness, and how are they in turn shaped by it?

This change in worldview gave birth to new artistic forms that were capable of capturing and expressing the adjusting world – the "fractured surfaces of cubism, the broken, syncopated rhythms of Schoenberg and Stravinsky, the montage method of the movies" (Adams, 22), and of course the scrambled or nonexistent plots, the subjective narration, the non-linear temporal progression, and the mundane subject matter of Modernist literature. One of the goals of writing became "to represent complex synthetic states of mind and the full multiplicity of our emotional subcurrents" (Adams, 28): it is because of this intense attention to the development of the individual's cognition within the larger social context that I am drawn to Modernist novels to expand and compliment my exploration of the maturation of childhood and adolescent self-concept. The Modernists also focus on language -- its capacity and limitations -- and "Woolf's modernism is predicated upon the splitting of the word and unleashing of the power that can be found within it" (Malamud, 33). The notion of a 'steam of consciousness' was first introduced by William James in 1890 (in The Principles of Psychology), and the popularization of this concept in novel form is, in my opinion, central to representation of childhood consciousness, both in a factual and emotional sense. I also feel that there is a distinctly human mark left upon Modernist work, as the artist's effort to make sense of a rapidly changing world is evident in his or her work. As T.S. Eliot said of Joyce's Modernist novels;

It is simply a way of controlling, of ordering, of giving shape and significance to the immense panorama of futility and anarchy which is contemporary history. ...

Psychology...ethnology, and *The Golden Bough*<sup>24</sup> have concurred to make possible what was impossible even a few years ago. Instead of narrative method, we may now use the mythic method. It is, I seriously believe, a step toward making the modern world possible for art.

Thus, there is tremendous value in synthesizing such a diverse range of perspectives and tools. There are different ways to 'know' something, and knowledge can be transferred in a variety of ways. We study to enrich our own everyday experiences, and when we learn something truly of value it resonates with us and expands beyond the moment in which we first encountered it. A successful piece of knowledge - whether it comes in the form of a film or a mathematical proof – revolutionizes our world view and causes us to examine all that we come in contact with afterwards in a different light. While the visceral joy that comes with reading a perfectly balanced line of poetry is what attracts us initially to written art, it is the recognition of our own experience in the semantics of that phrase that sustains our love of the line. It is in the combination of these two approaches that truly valuable 'knowledge' arises, adding depth and meaning to the human experience. "A writer is never alone," says Woolf, "there is always the public with him" (Woolf, 10). We connect with art because of what we have experienced in the past, and we are moved by a psychological study because of our awareness of its truth, which we come to know through art and our every day lives. The two mutually ground each other, working together to weave a richer, fuller relationship between the individual and the world, and in this case between the reader and a full understanding of childhood self-image and identity formation. Novels move us to tears because we can relate to the

<sup>&</sup>lt;sup>24</sup> Written by Scottish anthropologist Sir James George Frazer in 1890, *The Golden Bough: A Study in Magic and* Religion was a comparative study of mythology and religion, whose discussion of religion as a cultural phenomenon was characteristic of Modernism.

human factor in them, the imagined author producing each word, the multifaceted characters that we feel we know more intimately than our best friend. Psychology is able to elicit those same miraculous emotions by analyzing that which we *feel* to be true and moving it to the realm of what we *know* to be true. It is the real life implications and applications of these two disciplines – art and science, literature and psychology- that excite us, that make our lives better and more complex.

### My Argument

According to creative writers and researchers alike, there is arguably a general trajectory that identity formation follows, though within each larger route are thousands of pathways each individual can take. In their novels, both Virginia Woolf and James Joyce demonstrate a similar mode of developmental self-realization, with Woolf in particular exploring the myriad ways this general outline for identity formation can be explored and manifested in different individuals. In Woolf's The Waves (1931) and Joyce's A Portrait of the Artist as a Young Man (1916), the development of the individual's sense of identity is inseparable from the development of his or her relationship to language. As young children we are nearly interchangeable, all separated yet made similar by the wild experiences of childhood for which, at such a small age, we have no words yet to adequately express what we think and feel. We then begin to use our parent's words - inherited language - being, as the character Neville says in The *Waves*, merely "clinger[s] to the outsides of words" (W, 48). Namely, we are users of language without the actual experiences with which to support and fully understand the meaning of what we say. As we age we inevitably gain experience however, which in turn imbues these previously 'borrowed' words with deeper meaning. Along with this

experience comes a recognition of 'the other', both as a group that previously defined us as well as a group with the potential for being defined itself. We then more consciously begin to form our identity, some choosing to establish ourselves in opposition to the other and some wishing to join it, thereby extending some of the characteristics of the large group to the individual. Whether we choose to define ourselves as part of the group or against the group, we rely on peer evaluation in some form or another, either seeking acceptance and group membership or desiring a recognition of our self-perceived difference. In what follows, I will explore the trajectory of childhood identity formation, drawing on canonical modernist texts as well as more recent psychological theories to illustrate my argument.

### Maslow's Hierarchy of Needs (1943)

Whether we choose to define ourselves with or against the other, we still need the social support of our peers in order to instill the confidence that later allows us to become fully formed individuals, capable of uniting the disparate parts of our opinions, feelings, and experiences into a comprehensive and dynamic identity. We see this in the fiction of Woolf and Joyce. But according to developmental psychologist Abraham Maslow, this security is integral to a healthy self-concept, or, as Maslow re-defined it in his 1943 'Hierarchy of Needs', to one's 'self-actualization'; "what a man *can* be, he *must* be" (M, 382). In other words, self-actualization is "the desire to become more and more what one is, to become everything that one is capable of becoming" (M, 382). This quest for one of the final and most elusive pieces of identity formation is only possible, according to Maslow, after a series of other, more basic needs are taken care of; Maslow identifies these as physiological needs, safety, love and belonging, and esteem. Though Maslow

describes these stages of need and development as taking place over the individual's lifetime, for the purposes of this chapter I will be referring to his 'hierarchy' periodically<sup>25</sup>; I intend to introduce his theory in what follows, in order to secure it as an overarching concept that informs my analysis of Woolf's and Joyce's characters.

For Maslow, the most basic motivators are 'physiological' needs, such as breathing, food, water, sleep, shelter and other bodily functions. Without these most simple requirements for human survival taken care of, the individual would literally cease to exist, therefore rendering any subsequent emotional or intellectual needs irrelevant. Once those base qualifications are met, next come 'safety' needs, such as the security of body, employment, resources, family, health, and property. In the absence of these safety needs – such as in the presence of war, economic or natural disaster, family violence, the individual can experience high levels of stress and other psychological disorders that prevent the natural and healthy development of individuality. However, if both physiological and safety needs are met, the third layer of human needs are social, defined by Maslow as 'love and belonging'. The individual "will hunger for affectionate relations with people in general, namely, for a place in his group, and...he will want to attain such a place more than anything else in the world" (M, 381). It is on this need that both Woolf and Joyce focus, with Woolf in particular exploring the implications for this need for 'love and belonging' not being met. In *Portrait*, the main character Stephen Dedalus simultaneously grapples with and takes comfort in the all-encompassing world of theology and academia; while he never ceases to engage existential notions and reflect on his place within the large group of masculine thinkers, it is his reliance on the feelings of

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<sup>&</sup>lt;sup>25</sup> See Appendix M, Figure 1

group unity and social safety that ultimately allow him to move beyond the other needs and reach the triumphant conclusion of the novel, to "encounter for the millionth time the reality of experience and to forge in the smithy of [his] soul the uncreated conscience of [his] race" (J, 275). In other words, without his formative social and academic relationships, i.e. the fulfillment of his need for 'love and belongingness', he would have been unable to reach self-actualization and become an independent thinker and artist.

Alternatively, Woolf explores the outcomes of both the fulfilled and unfulfilled 'love and belongingness' step, illustrating a variety of adult identities and life trajectories that are formed in response to this need being (or not being) met. Most obviously and most tragically is Rhoda, who when "alone, ... fall[s] down into nothingness" (W, 44). Despite having a similar upbringing to the other characters in the novel, Rhoda is perpetually disconnected from her peers, occasionally because of her blatant rejection of social advances, such as with Louis, or more often because of her crippling anxieties. While her suicide is a culmination of many events, it is important to note that though each character struggles with an aspect of social life, it is Rhoda, the epitome of the outsider, "blown for ever outside the loop of time" (W, 22), who ends her own life.

Though she perhaps is responsible for ending or preventing any kind of intimacy between herself and others- specifically in her interactions with Louis - it is true that Rhoda does engage in a few brief relationships; therefore, if one were to argue that her eventual demise was not due to a lack of love and belongingness, it is equally plausible that Rhoda's quest for self-actualization was abandoned at Maslow's penultimate stage of human needs: the need for 'esteem'. Because Maslow's hierarchy is intended to be fulfilled (or not fulfilled) throughout the lifetime, the delicate difference between the love and belongingness stage and the esteem stage is one of age -- at the love and belongingness stage, the child has a sense that he or she is part of the group, and is given a sense of comfort by a more anonymous feel of acceptance. Yet as the person ages, this social support must come in the form of esteem, which is more individualized attention. Rater than simply feeling like a welcome member of the group, he or she must feel recognized and respected for specific qualities or achievements inherent to who he or she is. "All people in our society," Maslow writes, "...have a need or desire for a...high evaluation of themselves...and for the esteem of others" (M, 381). He clarifies this stage further, citing a 'lower' esteem need and a 'higher' one; the lower esteem is that of others, the need to be respected and valued by peers and the desire for greater recognition in the form of fame or prestige. The higher esteem is the need for self-respect, "the desire for strength, for achievement, for adequacy, for confidence in the face of the world, and for independence and freedom" (M, 381). Feelings of self-worth are listed as higher and therefore more important, because they are conceivably more difficult to achieve and yet are more essential than peer-esteem to the individual in becoming self-actualized. Though Jinny thinks "Rhoda's face mooning [is like] white petals," Rhoda says she "hate[s] looking-glasses which show [her her] real face" (W, 42). It does not matter if one is adored by everyone if not also by oneself - self-esteem comes from experience and inner determination. "Thwarting of these needs produces feelings of inferiority, of weakness, and helplessness.... An appreciation of the necessity of basic self-confidence and an understanding of how helpless people are without it, can be easily gained from a study of severe traumatic neurosis," Maslow reports (M, 382).

If all this hierarchy of needs are met, Maslow argues, the individual reaches 'selfactualization', the final stage of human need and identity development. Maslow's model is one of discontent that translates into motivation. Once all the individual's basic needs are taken care of - both physiologically and emotionally- Maslow argues, "a new discontent and restlessness will soon develop, unless the individual is doing what he is fitted for. A musician must make music, an artist must paint, a poet must write, if he is to be ultimately happy" (M, 382) Namely, at this point in the one's life, if all other more basic wants are taken care of, one desires to "become more and more what one is, to become everything that one is capable of becoming" (M, 382). Maslow stresses that the manifestation of self-actualization varies greatly from person to person, and "in one individual it may take the form of the desire to be an ideal mother," like Woolf's character Susan, "in another it may be expressed athletically," perhaps like Percival, "and in still another it may be expressed in painting pictures or in inventions" (M, 383), as exemplified by Bernard in Woolf and Stephen in Joyce.

## "But here I am nobody. I have no face": Pre-Linguistic Interchangeability in *The Waves*

As adults, we define ourselves in comparison to others, forming relationships based on shared characteristics and often taking pride in what makes us unique. As our means of categorizing the world get increasingly complex – evolving from physical, tangible modes of classification to more sophisticated and abstract concepts – so too do our tools for self-definition; we go from bonding over our shirts of the same color to our similar role as older sister, then on to our shared experience of first love and ultimately to our corresponding political or spiritual views. The more advanced and abstracted our means of self-organization and definition become, the more closely tied to language they are, as the only manner we have to express thoughts and opinions which are not visible is through language, written or spoken. Therefore in the beginning of our lives we appear more or less interchangeable; for our first few years of life, we are so young that we have not yet experienced much to set us apart from one another, and, even if singular experiences do present themselves, our grasp on the language we would use to relate these to one another is weak at best. Both Virginia Woolf and James Joyce are aware of this distinct period, one of simultaneous interchangeability and disconnectedness. While Joyce explores this theme from the inside out - namely, via one main character growing up and attempting to classify the world around him – Woolf's omniscient-style narration of six interior monologues presents a unique view of objective subjectivity, allowing the reader to directly observe the unfolding of individualism in multiple characters over time. Woolf uses this technique to express the pre-linguistic consciousness of her characters, and though they are not directly 'speaking' to one another she places each interior monologue in quotation marks. In this way, she offers the reader unparalleled insight into each character's cognitive processes, abstractly representing their perceptions of their surroundings.

In the opening pages of *The Waves*, Woolf draws on the characters' direct observations of their shared environment, each noticing a different – though still limited to physical- aspect of their world; "'I see a ring, said Bernard, hanging above me…' 'I see a slab of pale yellow,' said Susan… 'I hear a sound,' said Rhoda… 'I see a globe,' said Neville… 'I see a crimson tassel,' said Jinny… 'I hear something stamping,' said Louis" (W, 9). Their 'comments' are all of readily observable phenomena, learned about and understood via the senses: Bernard, Susan, Neville and Jinny explore their world visually, and Rhoda and Louis rely on auditory cues. It is interesting to speculate about the potential implications of Rhoda and Louis – the two outsiders of the novel – focusing on their hearing rather than their sight. Perhaps at this early stage of development Woolf is simply trying to demonstrate the various modes of interpretation of the environment (sight, sound, taste, smell), or it is possible that she is setting up the trajectory of these characters' lives; vision is arguably more concrete, because dependence on sight also requires that the perceiver to be within a close range of the object being seen. Hearing, however, is more vague and thus allows for more freedom both of point of observation (one can hear a train passing far away when one can not see it) as well as interpretation (one can guess that the rumbling of that train is not in fact due to a train but rather to the scrape of moving furniture upstairs, or the click of the furnace in the winter). Rhoda and Louis spend their lives on the outskirts of sociability, Louis more intent on absorbing language – through novels and poetry – than putting it forth. They are also the dreamers of the group, and though Susan too is often lost in reverie, she is more nostalgic for a concrete place (i.e. her childhood farm) rather than Rhoda's continual existence in her own head. "Their world is the real world," she says of Jinny and Susan, "the things they lift are heavy. They say Yes, they say No; whereas I shift and change and am seen through in a second." (W, 43).

Because of the varying sensory input as well as the lack of a greater context, upon first glance these observations appear disparate; however, before the close of the first page Woolf has masterfully begun to weave together the six voices, creating one communal consciousness. Though the characters have moments throughout the rest of the novel in which their internal monologues again overlap harmoniously, never again is there the same degree of interchangeability of the speakers as found in the opening pages of the novel. We hear the voices work together at various points later on, but this initial symphony of perspectives is unique in that the characters have not yet established their individual ways of thinking and speaking. It is only through retrospective analysis that we are able to hypothesize that Rhoda and Louis' initial dependence on hearing rather than sight is deliberate and indicative of their character – with no knowledge of the rest of the novel, all six voices blend together seamlessly and are indistinct from one another. As the general framework of *The Waves* is one of development over time, these opening lines represent the characters' earliest childhood memories, at a point in their lives when they are not yet obviously different from one another.

This interchangeability is due in part to a simple lack of experience – as children they have not yet done enough to form distinct opinions and are still absorbing from their environment. Because of their youth and participation in similar activities (i.e. learning together at home and later at school), they are all amassed together: "'here [at this age, in school,] I am nobody," Rhoda mourns, "'I have no face. This great company, all dressed in brown serge, has robbed me of my identity. We are all callous, unfriended" (W, 33). Not only do they share the natural landscape of the opening scene, but they are further bound by the *effect* this shared environment has on them: by the second round of observations, i.e. by the time each character has spoken twice, their comments echo one another without ever directly repeating phrases. Bernard mentions "'beads of water'", and a few lines down Jinny describes "'drops of water'" on another object, while Susan and Neville describe "'the leaves …gathered round the window'" and "'the birds' eyes …bright in the tunnels between the leaves'" (W, 9). As the novel progresses and takes shape, so too does each character's unique world view. Once the characters are a bit older, have had some basic experiences, and improve their grasp on language, it is much more apparent which individual is speaking before reading the 'he said' 'she said'. Yet, in the formative opening pages it is extremely difficult to identify which character is speaking solely by the content of their soliloquies.

#### Interchangeability and Philippe Rochat's Levels of Self-Awareness

Woolf further explores both the impact of the environment on the children as well as their early *awareness* of their place in that environment. While the first set of observations are mutually exclusive and the second set begins to merge the characters, the third exhibits a preliminary understanding of the effects their surroundings have on them. This self-awareness in relation to the environment is supported by the literature in developmental psychology as well; Philippe Rochat from Emory University suggests that self-awareness in the first few years of life is easily categorized into six levels, which he labels as "level 0" thru "level 5". Though his definition of self-awareness is represented through the child's awareness of his or her own reflection in a mirror, the implications of each level can be carried further and applied to daily life. "Level 0: Confusion [is the level] at which the individual is oblivious of any mirror reflection, thus oblivious of the mirror itself...[the mirror] is perceived as a mere extension of the environment, not a reflection of it." (R, 719) Rochat notes that birds that accidentally fly into windows are at level 0 of self-awareness, but there are also "moments of absence when we, adult humans, perceive and sometimes frighten ourselves for an instant when experiencing our own mirror reflection as another person surreptitiously facing us" (R, 719). Level 1, "differentiation", "is the first sign that the individual is not oblivious of mirrors as

reflection...this level entails some basic perceptual differentiation" (R, 720). In other words, Woolf's opening page of observations could be categorized as Level 1 observations: the characters exhibit an early understanding of themselves as separate from their environment, but there is not yet any reflection of their place in that environment. If anything, the characters exist as disembodied aspects of a single omniscient narrator, aware that they are separate from that which they are observing, yet not entirely sure of their footing beyond that.

This second round of observations – in which Woolf examines that characters' awareness of *their* place within the environment – is arguably the manifestation of Rochat's third step, "level 2: situation" (R, 720). In this level, the individual "explore[s] how the experience of their own body relates to the specular [mirror] image...this can be viewed as first signs of a contemplative stance toward the specular image" (R, 721), i.e. the first time the individual is aware of his or herself as a body in control of movements that are separate from but still related to his or her environment. "Stones are cold to my feet,' said Neville... 'The back of my hand burns,' said Jinny, 'but the palm is clammy and damp with dew'... 'Birds are singing up and down and in and out all round us,' said Susan" (W, 10). Neville and Jinny focus on how their surroundings make their body feel, while Susan notices where her physical self is in relation to her surroundings – the birds are above her, below her, in front of her and behind her. Rather than simply observing what they see or hear, the children now begin to place themselves in relation to their surroundings, demonstrating self-awareness, albeit in a limited form. They start to catalog cause and effect, noticing how their physical bodies - the most reliable way they have of knowing themselves – react to the various stimuli around them. These reactions and

realizations can be pleasant, such as when Joyce's protagonist Stephen realizes "his mother had a nicer smell than his father" (J, 3) or confusing, such as "when you wet the bed first it is warm then it gets cold" (J, 3). Yet with each observation, positive or negative, their new world is slowly illuminated.

## "We are in a hostile country"(w,17) : The Environment of Childhood as a Fragile Space

#### Susceptibility and Uncertainty: The Physical Environment in *The Waves*

The characters in *The Waves* as well as *Portrait* understand their environment through direct engagement, but where the two authors differ slightly is in their own subjective conception of what the environment of childhood is like. For Joyce, childhood can be confusing and isolating, but these negative aspects do not seem to overpower the overall experience of youth. Woolf, however, conceives of childhood as a much more delicate, dangerous place, in which ignorance is not bliss and inexperience is not necessarily cause for excitement. Her representation of childhood is a place of helplessness, uncertainty, and simultaneous dependence and isolation. While the six children of *The Waves* explicitly comment on the appearance of their environment through what they say, their constant fear and fragility are implicit in how they say it. Rhoda, the figure most often alone, observes the birds, not long after Susan first notices them "singing up and down and in and out all round" (W, 10). "The birds sang in chorus first,' said Rhoda. 'Now the scullery door is unbarred. Off they fly. Off they fly like a fling of seed. But one sings by the bedroom window alone" (W, 10). Indicative of their core differences, Susan comments on her connectedness to the birds, while Rhoda focuses on their union and subsequent dispersion. Though most of the flock flies off, one is left behind, either of its own volition or unintentionally. As it is evident in the

childhood experience as well, "fear was in [the birds'] song, and apprehension of pain, and joy to be snatched quickly now at this instant" (W, 73). This structure of fluctuating cohesion and dissipation is mimicked innumerable times throughout the rest of the novel; on the following page, Louis notes, "'Now they have all gone...I am alone. They have gone into the house for breakfast, and I am left standing by the wall among the flowers"" (W, 11). Later Rhoda is playing with flower petals in a puddle, pretending that they are ships: "'some will founder. Some will dash themselves against the cliffs. One sails alone. That is my ship"" (W, 19).

Woolf integrates the children and their environment, continually planting parallel patterns of movement in the natural and social world. The omniscient narrator in the beachfront scene describes "the dew dancing on the tips of the flowers and leaves [that] made the garden like a mosaic of single sparks not yet formed into one whole" (W, 29); the characters are comparable to these disconnected dewdrops, joined together by their shared environment but inevitably separated by youth, experience, and human nature. At this young age, Woolf stresses the influence of the environment on the child, much like that of an unprotected and helpless plant or animal: "'I hold a stalk in my hand'" says Louis. "'I am the stalk. My roots go down to the depths of the world… I am all fibre. All tremors shake me, and the weight of the earth is pressed to my ribs'" (W, 12). Even as adults we are influenced by our environment, both natural and social, but it is the unique space of childhood – a space before individualism, language or experience – that allows for such a dramatic degree of susceptibility. With no tools to carve their own way, Woolf views children often as victims to their surroundings, left to wander with knowledge of loneliness and none of how to cure it. "It is difficult not to weep as we sing," Louis says,

"as we pray that God may keep us safe while we sleep, calling ourselves little children. When we are sad and trembling with apprehension it is sweet to sing together, leaning slightly, I towards Susan, Susan towards Bernard, clasping hands, afraid of much, I of my accent, Rhoda of figures; yet resolute to conquer" (W, 26).

### Inclusion and Exclusion: The Social Environment in The Waves

Unfortunately, this acknowledgement of fear and "apprehension" does not equal an understanding of a possible solution - as awareness of the self increases, so does awareness of the other, and therefore the child is now not only afraid of the natural environment but the social environment as well. Rochat defines the 3<sup>rd</sup> level of selfawareness as "identification'...[the level at which] the individual manifests recognition, the fact that what is in the mirror is 'Me,' not another individual starting and showing the self" (R, 721) Level 4 then, is "the self identified beyond the here and now ... the identification of the self is not tied to the temporal simultaneity and spatial coincidence of the body and its reflection" (R, 722). This sense of a permanent self is necessary for the individual to experience many emotions, and it is arguably at this stage that Woolf's characters begin to observe and unfortunately fear their environment; to refer back to Maslow, the children are still stuck on fulfilling the second level of needs, "safety". Once this is achieved however, Woolf's and Joyce's characters begin to have a more social orientation, as supported by Maslow and Rochat. Maslow's third level is "love and belongingness", and in Rochat's sixth level, "Level 5: self--consciousness or 'meta' self-awareness... the self is now recognized not only from a first person perspective, but also from a third person's. Individuals are not only aware of what they are but how they are in the mind of others" (R, 722). Once the individual has a basic understanding of 'self'-- as

basic as the self as different from the other and the self as existing throughout time-- that individual's focus then naturally turns from outward (what is the world?) to inward (what am I?) orientation, and then to a nuanced blending of both (who am I in this world?). Applying this progression to Woolf's understanding of fear as the dominant emotion of childhood, once the child develops a sense of self and then a sense of the other, the next natural fear is that of the social world.

"Jinny and Susan, Bernard and Neville bind themselves into a thong with which to lash me." Louis insists. "They laugh at my neatness, at my Australian accent" (W, 20), in other words, they exclude him for all the ways in which he is different, and the emotional pain of rejection is so acute that it is described in physical terms. Because of an insufficient grasp on language, there is an inherent isolation to early childhood experiences – if one cannot express one's emotions, one feels alone. However once one develops a more sophisticated understanding of 'the self' and 'the other', one realizes that 'the self' is an entity that can be judged by 'the other' – you can evaluate them, but they can just as easily evaluate you. Thus this isolation deepens, as the desire to communicate with one's peers is motivated not only by an attempt to alleviate the pain of aloneness, but also to have some volition and control over how one is viewed by others. Now, confusion at the natural world provides fodder for discomfort and anxiety, as does the fear of ostracism. Neville "'ha[s] no power of ingratiating [him]self" (W, 70) and thus no control over how his 'self'--- the object of scrutiny for others, just as others are the object of scrutiny for him -- is seen.

With the development of this new, more acute sense of the relationship of 'self' and 'other', the individual does not necessarily have to be the obvious subject of exclusion – the desire for inclusion and approval is so great that even the sense of the individual that he or she is out of step with the others is cause for pain. Rhoda reports: "'the others look; they look with understanding. Louis writes, Susan writes; Neville writes; Jinny writes; even Bernard has begun to write. But I cannot write.... I am left alone to find an answer...I begin to draw a figure and the world is looped in it, and I myself am outside the loop; which I now join - so - and seal up, and make entire. The world is entire, and I am outside of it, crying, 'Oh, save me, from being blown for ever outside the loop of time!'" Though there is no explicit exclusion, in this case the feeling of being "outside the loop" is extremely overwhelming.

# Inclusion and Exclusion: The Social Environment in *A Portrait of the Artist as a Young Man*

Stephen experiences a similar phenomenon for the first time at school, as he tries to navigate the social world through the ever-shifting and treacherous footing of jokes, humor and word-play; when the older boys ask if he kisses his mother, he answers 'yes', and then 'no', aware that he is missing some key social exchange but unable to discover which it is. "They all laughed again. Stephen tried to laugh with them. He felt his whole body hot and confused in a moment. What was the right answer to the question? He had given two and still Wells laughed. But Wells must know the right answer for he was in the third of grammar" (J, 11). Like Rhoda, Stephen is aware that he is 'outside the loop', but his understanding of the social world is not yet developed enough for him to deliberately pinpoint the source of his discomfort. Rather than try to parse out the nuanced relationship between himself and 'the others' – Wells and the older boys – Stephen instead focuses on that which he is more familiar with: the actual words used.

"He still tried to think what was the right answer. Was it right to kiss his mother or wrong to kiss his mother? What did that mean, to kiss?" (J, 11)

## "Above all, we have inherited tradition": Inherited Thought Structures and Inherited Language

Here, Stephen exhibits what is arguably the next step in identity formation – beginning to examine the language we use as young children, in order to transcend our status as "clinger[s] to the outsides of words" (W, 48). When we are young, we learn through observation and imitation, copying the actions we see and the words we hear. As we are susceptible to our environment, we become familiar with the words surrounding us, thus 'adopting' them without fully questioning their meaning. Even as Stephen is aware that he is somehow making a mistake, he is certain that there is a 'right' answer to this taunting question, and he further assumes that "Wells must know the right answer for he was in the third of grammar" (J, 11). Because Wells is older, he is a role model to whom Stephen looks in order to learn what is 'right' and what is 'wrong'; children learn through imitation, and Stephen strives to copy Wells' belief system, exploring his own world through the pre-constructed schema of someone older and more experienced. Before we gain direct experience, we espouse the views of those around us and 'try on' their outlook on life. We form ourselves in relation to these structures, embracing them as our own beliefs until we grow older and learn about life for ourselves. As Louis looks back on his time in school, he thinks, "above all, we have inherited traditions" (W, 58). Though he has learned countless facts, the most salient impression strict academia has left is the passing on of tradition, both in the sense of repeated customs (patterns of action) as well as beliefs (patterns of thought).

The use of the word "inherited" is essential to understanding/ the nuanced point as well – it is a relatively passive word, all about 'coming into possession' or 'receiving' something that is given to you. There is no agency in inheritance, rather it is bestowed upon you by someone older, and therefore assumedly wiser. At the end of our parents' lives we inherit their physical possessions, but at the beginning of their lives as parents we inherit their intangible ones, i.e. their *weltanschauung*, or worldview. We not only allow our parents to speak for us, but assume they will. In fact, the first time Stephen is identified to the reader by name it is by his mother: "He hid under the table. His mother said: - O, Stephen will apologise" (J, 4). She calls him by his name and therefore solidifies his identity as a separate if not yet autonomous being. In addition, she makes known her assumption of his current emotions - presumably one of regret, if he is on the precipice of an apology- as well as shaping his next action – he *will* apologize. Interestingly, the first time Stephen is identified by 'the other' and thus thrust into the circle of public scrutiny, it is under the condition of a concession – namely, 'this is Stephen and you will know him as someone who is doing something wrong that warrants an apology'. In the reader's preliminary stages of knowing Stephen, we adopt his mother's view of him, just as Stephen himself does. Before he is able to think selfreflexively, Stephen relies on his parents' opinions of him and their surroundings. At Christmas dinner, Stephen's father's "face was glowing with anger, and Stephen felt the glow rise to his own cheek" (J, 38) though he was not part of the argument directly. Stephen's understanding of his social and physical surroundings are filtered through his parents and other respected adults, and in lieu of his own direct experience – i.e. laughing

at something because it is truly funny - he models his feelings on their emotional cues – i.e. laughing at something because his father is chuckling at it.

Similarly, the opening chapters of *A Portrait of the Artist as a Young Man* are riddled with phrases repeated from Stephen's mother and father: "that was not a nice expression. His mother had told him not to speak with the rough boys in college" (J, 5), and "his father had told him, whatever he did, never to peach on a fellow" (J, 19). Children absorb the *weltanschauung* of their elders, as well as the language they express those worldviews in. As their possession of language strengthens and grows, children begin to collect and categorize passed-down phrases, whether that means avoiding expressions that your mother tells you are 'not nice', or calling yourself a good older brother because your uncle constantly tells you that you are kind to your siblings. As the individual matures, so too does his *weltanschauung*, and he can therefore decide for himself which expressions are 'not nice' and whether or not his relationship to his younger brother is central to his character.

## "Clinger[s] to the outsides of words": Words as symbols of Experience

However, it is from before the developmental sophistication of designing one's own *weltanschauung* that Woolf's Neville mourns his dilemma - the child as the "clinger to the outsides of words" (W, 48). Past the phase of interchangeability and into the phase of early identity formation, the child gathers and repeats frequently heard phrases without necessarily knowing what they mean, without having the true life experience to back up the empty linguistic inheritance. Rhoda is someone riddled with anxiety that prevents her from immersing herself in life experience, and she grieves that others "'know what to say if spoken to. They laugh really; they get angry really; while [she has] to look first and do what other people do when they have done it'" (W, 43). In other words, there seem to have the experience to fill in their previously hollow words, while she, Neville, and the other children are still collectors, hovering around the sounds of the words without understanding their true meaning.

The opposite is Woolf's Percival, "'Percival who inspires poetry'" (W, 40), Percival who, in his unique mode of interacting with the world on a purely physical, sensory, and immediate level, has transcended the role of "clinger" and seems to pierce straight to the message the symbol of the word represents. "'For he cannot read,'" Neville says,

Yet when I read Shakespeare or Catullus, lying in the long grass, he understands more than Louis. Not the words – but what are the words? Do I not know already how to rhyme, how to imitate Pope, Dryden, even Shakespeare? But I cannot stand all day in the sun with my eyes on the ball; I cannot feel the flight of the ball through my body and think only of the ball. I shall be a clinger to the outsides of words all my life. (W, 48)

Neville understands that until he is able to live in the moment, and exist as a corporeal being in a space *without* words, he will never be able to understand what is being 'signified' by the 'signifier' of the word. One may think one has experienced great sadness and freely use words like 'grieve', 'lament', and 'mourn', but until one has had the misfortune of the death of a loved one or a missed opportunity, the words remain mere guesses, attempts at containing the vast and complex emotion of devastation. Though Neville has learned *about* the great writers of the time, he has yet to learn what they are *writing about*, and this knowledge can only come through direct experience. Percival is on the opposing side of the spectrum, existing in the novel as the symbol for all things corporeal, experiential, and present. He is the epitome of youth, dying before he can grow old and occupying a space deeper than language, in the core of the meaning of

words. "But now he is young," says Neville. "Not a thread, not a sheet of paper lies between him and the sun, between him and the rain, between him and the moon as he lies naked, tumbled, hot, on his bed" (W, 48). Namely, there are no words separating him and direct experience. Neville, Bernard, and the others are caught up in learning words before they are able to 'learn' the experience, while Percival concerns himself solely with direct impressions. He is also one of the central characters, though he is the only one without a reader-accessible interior monologue, further emphasizing his inhabitance of immediate, physical experience rather than cerebral analysis. Because of this, however, he is more at the mercy of peer evaluation than the other characters, who are able to have some agency in self-representation through the accessibility of their soliloquies to the reader. This further emphasizes the importance of language in erecting a self-image, a value that the children are aware of yet not capable of doing.

Percival's approach is not the developmental norm; rather, it is more common to first collect the words and later delve into their deeper meaning. This, however, does not mean that one cannot begin to *question* language: these preliminary questions are essential to laying the foundation upon which subsequent experience can build. After the older boys tease Stephen, he asks himself, "What did that mean, to kiss? You put your face up like that to say goodnight and then his mother put her face down. That was to kiss. His mother put her lips on his check; her lips were soft and they wetted his cheek; and they made a tiny little noise: kiss. Why did people do that with their two faces?" (J, 11) It is not until Stephen has the experience of being teased that he backtracks and reflects on the experience of kissing, realizing that there is something inherent in the act that can be cause for ridicule. He questions what it means, beginning with the literal –

"you put your face up.... and then his mother put her face down" – moving on to how it feels – "her lips were soft...and they made a tiny little noise" – and finally settling on an examination of the motivation for the act – "why did people do that with their two faces?" He understands the act of kissing just as he understands the act of speaking – he is capable of completing both as actions, yet he doesn't entirely understand the motivation for or meaning of a kiss, just as he is unaware of the true meaning of most of the language he is using. Because he is still inarticulate and aware of words with multiple meanings, he is particularly vulnerable; he may know that kisses are a way to show affection, just as he knows that words are a way to show thoughts and emotion, but until he matures and experiences love in a more profound manner, the 'true' meaning of a kiss is inaccessible to him.

#### **Understanding Language Through Physical Experiences**

Until Stephen does and feels certain things, his words will be vacant, not yet strengthened by experience. Direct knowledge does not just come in the form of sophisticated emotions like 'love' or 'grief', but instead begins the moment one is born. Before language and other emotional complexities develop, we discover things through our body; therefore noting our physical sensations is the earliest and most basic way to experience things and subsequently give weight to our words. Corporeality as the most basic filter of experience in turn influences our early understanding of the entire world; if we first learn things through our body – i.e. I am cold, I am warm – our first connections are based on these initial experiences – i.e. I am cold in the shade, I am warm in the sun. These simple and concrete cause-and-effect relationships shape the way we form our world schema – i.e. I am cold in the shade thus other people are cold in the shade- and we

therefore don't like and are unable to fully understand situations that go against or blend these strict schema – i.e. I am cold in the shade but she was just running around and so she is sweaty and therefore not cold in the shade. Understanding nuance in life requires a certain level of cognitive sophistication that is unavailable at such a young age, and thus we, as young, corporeal beings, begin to construct preliminary worldviews based on physical sensation. As noted earlier, the children's initial observations in the opening pages of *The Waves* are all physical, and even the characters become more distinct they continue to filter their experiences through their bodies. First there are observations, such as when Woolf's Jinny notes, "'I burn, I shiver … out of this sun, into this shadow'" (W, 11) and soon on to more complex bodily narrations and observations:

I must throw myself on the ground and pant. I am out of breath with running, with triumph. Everything in my body seems thinned out with running and triumph. My blood must be bright red, whipped up, slapping against my ribs. My soles tingle, as if wire rings opened and shut in my feet. I see every blade of grass very clear. But the pulse drums so in my forehead, behind my eyes, that everything dances...there is nothing staid, nothing settled in this universe. All is rippling, all is dancing; all is quickness and triumph. (W, 46)

This victorious declaration begins with physical sensation - because it is the children's primary mode of interaction with their world –and it soon progresses from purely physical observations, to reflections on these physical observations, to preliminary world schema. In this case with Jinny, her excitement at her harmony with her physical body gives birth to the notion that "'all is rippling, all is dancing; all is quickness and triumph." While this literally means that her heart rate is so rapid that her head is pounding and her vision shaking, it metaphorically represents her general outlook on life, one dominated by optimism, physicality, success and slight competition.

Alternatively, other characters' more incongruous relationship with their physical bodies leads to an equally discordant relationship with their surroundings. Not surprisingly, in *The Waves* it is largely Rhoda and Louis – the nebulous, pensive outsiders - who have the most difficulty connecting to their bodies, and thus are the two who also have the most trouble with direct experiences that lead to concrete world schema. "But when darkness comes I put off this unenviable body," says Louis, "my large nose, my thin lips, my colonial accent, and inhabit space" (W, 52). Rhoda as well "hate[s] the looking-glass which show[s her her] real face" (W, 44). Because of these initial insecurities and perhaps an inborn, more introverted orientation, there is a painful but unmistakable separation of mind and body, and they seem to regard their bodies as hindrances rather than valuable lenses through which to experience the world. Rhoda daydreams and must "return [...] very painfully, drawing [her]self back into [her] body" (W, 64), while Louis says, "my body passes vagrant as a bird's shadow. I should be transient as the shadow on the meadow, soon fading, soon darkening and dying there where it meets the wood, were it not that I coerce my brain to form in my forehead" (W, 66). Because Rhoda and Louis are both uneasy with their corporeality they reject it, forming a separate mental and spiritual life away from their physicality. While this may provide moment-to-moment relief, the two characters sacrifice an essential learning tool - the body -- that is integral to world understanding and identity formation.

## Forming Schema Through Physical Experience: The Visual Cliff Experiment and Maternal Facial Signaling

Understanding of bodily sensation and straightforward cause-and-effect relationships enhances early reflection of events, both big and small. The most simple and often used example is that of the child touching the stove and getting burned. Because of the resulting physical discomfort, the child knows not to touch the stove again, or the stove in another person's house, or objects that give off heat or glow red. By reading their environment, children not only avoid bodily harm but potentially emotional harm as well. In 1960, Dr. Gibson and Dr. Walk investigated infant depth perception, conducting an experiment entitled the "visual cliff". The visual cliff was made of a long, thick piece of Plexiglas, placed over a brightly checkered blanket that begins directly beneath the Plexiglas and soon drops a few feet, creating the perspective of a steep drop beneath the safety of the sturdy Plexiglas plank. Gibson and Walk then placed 36 infants, aged 6-8 months, on the shallow side of a visual cliff apparatus, and the infant's mother on the other side of the plank, i.e. at the end of the "deep" side<sup>26</sup>. 27 of the infants crawled over to their mother happily. Though a few were hesitant and a few more refused to cross the apparent drop, most of the infants relied on the solid feel of the glass and their mother's encouraging face to convince them to move across – in other words, they relied on previous experience (crawling on something solid, referring to their mother to gauge the safety of a situation) to help them in their current situation.

Interested in the notion of maternal signaling, James F. Sorce and his colleagues tested to see if mothers with varying facial expressions would affect a baby's choice to proceed across the visual cliff. As hypothesized, when mothers had joyful, encouraging, interested expressions their child was more likely to cross towards them than if they showed fear or anger. Interestingly, in the absence of a perceived drop children did not often reference their mother's face, suggesting that parental emotional signaling is most influential in times of uncertainty. Both experiments - the original visual cliff study as

<sup>&</sup>lt;sup>26</sup> See Appendix M, Figure 2

well as the impact of maternal facial expression - support Joyce and Woolf's notion of corporeal experience as the basis of ensuing world understanding. Though new to crawling, the infants know from previous experience that solid things will support their weight. They also know that if they are unsure as to how to proceed – as they often are, due to lack of experience – they can rely on their mother to directly or indirectly tell them what to do, assuming the parent-child relationship is a typical, healthy, and nurturing one. Jinny understands her world by running through it, touching everything along the way. As she wakes up, she describes reflects: "as each thing in my bedroom grows clear, my heart beats quicker. I feel my body harden, and become pink, yellow, brown. My hands pass over my legs and body. I feel its slopes, its thinness'" (W, 55). The way she begins each day – by seeing, by touching, and by paying attention to her physical reactions – is symbolic of how she and many other children begin their life. In addition, the relationship between Joyce's Stephen and his parents perfectly exemplifies the influential maternal emotional signaling in the Sorce et al. study; in any doubtful situation, Stephen looks to his mother and father for cues, laughing at what they deem funny, shunning what they deem inappropriate, and reacting with a "terrorstricken face [when he] saw that his father's eyes were full of tears" (J, 39). Just as the infants in the experiments relied on a combination of parental assurance – i.e. borrowed schema – and physical confirmation – i.e. personal, corporeal experience -- so too do the characters in *The Waves* and *A Portrait* of the Artist as a Young Man.

## "I require the concrete in everything": Strict Schema Formation

Stephen's early exploration of himself in relation to his environment – albeit a strictly somatic one – is one of the ways in which he and other children systematize their

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environment. They use an embodied mode of experience to establish cause and effect relationships, which they then combine together to form larger and more complex schema. Because of this, the child's world is one of black and white, right and wrong, and children often repeat words and actions simply because they are 'right'; they don't have the sophistication of reflection or life experience to decide for themselves if something is subjectively 'right' or 'wrong' – in their eyes things have an objective 'trueness' or 'falseness', one or the other. Every night, Stephen "had to undress and then kneel and say his own prayers and be in bed before the gas was lowered so that he might not go to hell when he died" (J, 16). Though Stephen continues to pray for quite awhile as he ages, he later does so because he genuinely believes in the religious way of life. At this early stage, however, he has learned from others that if one prays, one does not go to hell, and if one does not pray, one does go to hell. Early thinking of one's world and one's identity is very linear, and believing in these initial right and wrong, black and white situations with clear distinctions allows for the child to process the world. Later, when he or she is older, the child is able to readjust his or her schema and reexamine certain aspects of the world.

There is an almost frantic insistence that these concrete rules must be adhered to, and often it is more painful for expectations to be violated than it is to establish a negative cause and effect relationship initially. For example, when Stephen "felt the touch of the prefect's fingers as they had steadied his hand and at first he had thought he was going to shake hands with him because the fingers were soft and firm: but then in an instant he had heard the swish of the soutane sleeve and the crash" (J, 53). It is painful to be struck, but it is *traumatizing* to be struck after expecting a handshake first – it is the

violence of the transgression rather than the violence itself that is cause for such anguish. When Stephen and the other boys discuss the older students who could choose to be expelled or flogged as punishment for a crime they committed, they are sympathetic towards their peers but not horrified at the notion of a beating; this is not only because "a flogging wears off after a bit but a fellow that has been expelled from college is known all his life on account of it" (J, 44), but also because the boys were given an option and know what to expect from the beginning. When a child is not yet confident in his way of systemizing his universe, it is imperative that the painstakingly constructed cause and effect relationships are not proven false.

# The Violation of Expectation Theory and Fear of the 'Unclassifiable' Rather than the 'Novel'

Similarly, in the developmental psychology literature, the "Violation of Expectation" or 'VOE' task tests "whether children look reliably longer when [experimenters] act in a manner that is inconsistent, as opposed to consistent," (Scott et al., 2011) with what the child is expecting to happen, depending on the paradigm established in the particular experiment. In nearly all the studies in which the VOE has been employed (i.e. Onishi & Baillargeon, 2005, Surian, Caldi & Sperber, 2007), researchers have found that young participants "look longer at unexpected events, whether or not the events were real or pretend" (Tee & Dissanayake, 2011). They concluded that the infants tested might look longer at unexpected events "due to violations of expectations they have about familiar action sequences." Just like these participants, Joyce's Stephen, Woolf's Louis, and Susan, and all the other characters of *The Waves* are often more troubled by the interruption of their meticulously crafted schema than they are by the introduction of new events that require the construction of

new schema all together. Therefore there is a an almost panicky necessity on the part of the characters to deal with the world only in terms of black and white, right and wrong – as Neville says, "I hate dangling things; I hate dampish things. I hate wandering and mixing things together" (W, 19). Dangling things are both attached at a base but free enough to move, while dampness is caught between dry and wet. There is fear in the unclassifiable rather than the novel: Stephen seems more unnerved by "Father Dolan's whitegrey not young face, his baldy white-grey head with fluff at the sides of it, the steel rims of his spectacles and his nocolored eyes looking through the glasses" (J, 51) than if he is definitively monstrous looking. Father Dolan doesn't look 'old' but rather 'not young', his head is not entirely bald nor entirely hairy, and his eyes are not categorically 'blue' or 'brown' but rather 'nocolored'. Because Father Dolan and other ambiguous things in the world defy clear classification, children are not sure how to filter them, and when they are confronted with something that doesn't fit in to their laboriously drafted schema, it produces anxiety and fear.

Even in circumstances of ambiguity - such as 'nocolored' or damp – children actively try to create rules to govern their world. Stephen "wondered whether the scullion's apron was damp too or whether all white things were cold and damp" (J, 9), discovering a particular truth – i.e. that the apron was damp – and hypothesizing that it perhaps applies to all similar things – i.e. that all white things might be cold and damp too. "I require the concrete in everything" (W, 68) Woolf's Bernard explicitly states, and when he is unable to find that concreteness he relies on his imagination to fill in what he does not know, therefore creating the solidity that he 'requires' in his life. By telling stories about his surrounding and narrating his life, he "'run[s] together whatever happens so that instead of incoherence there is perceived a wandering thread, lightly joining one thing to another'" (W, 49). In this way he is always able to make sense of his surroundings, imagining them as part of a larger whole. Comparably, Neville takes comfort in grammar, noting that "each tense…means differently. There is an order in this world; there are distinctions, there are differences in this world, upon whose verge I step" (W, 21).

For a young person constantly assaulted with new experiences, there is solace in adhering to certain rules, which make the disorganized world less chaotic. This mode of world interaction often leads to thinking about less tangible concepts in a more physical and concrete way too: for example, there is a notion that identity is physically dependent, and Stephen wonders "what Father Arnall and Paddy Barrett [and] Mr. McGlade and Mr. Gleeson would have become if they had not become Jesuits. It was hard to think what because you would have to think of them in a different way with different coloured coats and trousers and with beards and moustaches and different kinds of hats" (J, 49). Because Stephen and the other children are in the midst of early schema-creation, it is very trying for them to separate a person's social role or definition from his physical one. Likewise, once a person's social role is established, even if it has been successfully distanced from their appearance, it is arduous for a young child to conceptualize that person's role in any sort of fluid way. Though what someone is supposed to do is not as visible as how they're supposed to *look*, social obligations and definitions are still approached in a stern 'black' vs. 'white' manner: "Was that a sin for Father Arnall to be in a wax or was he allowed to get into a wax when the boys were idle because that made them study better [...]?" Stephen wonders. He reasons "It was [allowed] because [he was a priest and] a priest

would know what a sin was and would not do it" (W, 48). Before a more nuanced understanding of the world develops – i.e. an awareness that things are not always clearcut and people do not always act as they are supposed to – Stephen assumes that people function in the same linear cause and effect manner that many objects do. Because priests do not commit sins and Father Arnall is a priest, that means that Father Arnall does not commit sins, so if he gets angry it must not be a sin. The fact that this analysis is not centered on a physical object but rather is reflecting on intangible activity is a sign of cognitive maturation, yet Stephen's simplistic understanding of the static nature of 'sin' and 'priesthood' is still indicative of a young mind.

## The Corporeal – Linguistic Relationship: Abstract Events as Filtered Through Initially Established Physical Schema

Children copy language and follow parental signals, slowly integrating these carefully gathered phrases and attitudes with their own concrete, bodily experiences. As exposure to corporeal sensations increase, however, the individual begins to categorize and process the rest of his world through similar modes. In other words, as the individual starts to experience more intricate mental and emotional experiences in addition to events related to embodiment, those emotional events are filtered through this initially established physical schema. For example, as Stephen feels homesick for the first time he is aware that he is emotionally upset, but he is so accustomed to dealing with physical sickness that he is delayed in pinpointing the origin of his discomfort. A peer tells him he must be "sick in [his] breadbasket…but he was not sick there. He thought that he was sick in his heart if you could be sick in that place" (J, 10). Stephen's early analysis of 'heart sickness' is an example of his slow but steady categorization of his world. He is not quite developed enough to discuss his emotions in an abstract sense, since his only tools for

organizing his environment are what he physically experiences; he knows what it feels like to have a stomach illness, and because his homesickness is acting in a similar way upon his body and mind, the easiest way for him to process what is going on is to put it into terms he knows. Likewise, he begins to analyze his existential position in the world by first tackling it in a physical and organizational sense:

Stephen Dedalus Class of elements Clongowes Wood College Sallins County Kildare Ireland Europe The world The universe (J, 12)

Stephen sits in class, placing himself in context with the rest of his world. As we age we are able to reflect on our life position more abstractly, highlighting the importance of our social roles or interests in order to orient ourselves in relation to the rest of our world. Still existing in the realm of borrowed language and corporeal experience, Stephen undertakes this immensely philosophical task in a concrete, physical way. He is in his classroom, in his school, in his town, county, country, continent, planet, universe. If he were to write up a similar context 'map' later, it would most likely be less literal and physical and more conceptual and social.

Children's early construction of schema is moderated through their understanding of their own somatic experience, and therefore they are habituated to filtering the environment through their corporeality. It logically follows then that their early impressions of language use are also mediated by embodiment, and both Woolf and Joyce spend time exploring the interaction of physicality and linguistic understanding. In *A Portrait of the Artist as a Young Man*, Stephen muses: "Suck was a queer word, but the sound was ugly. Once he had washed his hands in the lavatory of the Wicklow Hotel and his father pulled the stopper up by the chain after and the dirty water went down through the hole in the basin. And when it had all gone down slowly the hole in the basin had made a sound like that: suck. Only louder" (J, 8). Stephen compares his experience of speaking the onomatopoeic word to his first memory of hearing the source of the sound, and then he reflects on how the word and the sound feel in his mouth as he speaks them. As with literary characters and all real-life individuals, Stephen is an embodied being whose subjective memories of sensory input influence the way he interacts with language. Remembering the way the water basin sounded and felt illuminates a series of associations when Stephen hears the word 'suck' used in a different context. He considers the word "wine" in the same way: "the word was beautiful: wine. It made you think of dark purple because the grapes were dark purple that grew in Greece outside houses like white temples" (J, 47). Stephen's singular sensual experiences of sound, sight, taste and touch affects the way he absorbs and uses language.

The corporeal-linguistic relationship is reciprocal as well, and as beings who are susceptible to sensory input we not only influence words but are also influenced by them. Upon hearing a poem, Stephen remarks, "How beautiful and sad it was! How beautiful the words were where they said *Bury me in the old churchyard*! A tremor passed over his body. How sad and how beautiful! He wanted to cry quietly but not for himself: for the words, so beautiful and sad, like music" (J, 22). This reaction is perhaps due in part to the melodic quality of poetic language – Stephen initially heard the lyrics set to music, though in this context he is simply repeating them back to himself in the form of poetry.

There is also a pleasant rhyme scheme to the lines, creating almost a lilting, lullaby-like feeling. However, Stephen does not seem to be rocked purely by the sounds of the letters, but more likely by the delicate sentiment which they express. Neville shares this reaction, noting that he "love[s] tremendous and sonorous words" (W, 32) For the first time, both are aware of the intense emotion language can not only work to capture, but also that it can inspire in the recipient. Not surprisingly Stephen experiences this early wave of linguistically inspired emotion physically, in the form of a "tremor pass[ing] over his body".

### **Understanding the Power of Language: Words as Objects**

As experiences accumulate, borrowed language is flooded with meaning, which in turn imbues words with a power the young individuals did not previously realize. Children often get a sense of the strength of language when they learn that certain words are not appropriate in particular places or around specific people, themselves included. Stephen grows up hearing things from his mother directed at their friends, such as "you should not speak that way before Stephen. It's not right" (J, 33), and when he hears about the older boys who steal from the church, he wonders, "How could they have done that? ... It was not the chapel but still you had to speak under your breath. It was a holy place" (J, 40). Comparable to the logic Stephen employs when reflecting on Father Arnall's tendency to get angry, he reasons that the chapel is holy and you can not speak loudly there, so all places where you can not speak loudly must be holy; you can not speak loudly in the place the boys stole from, so they must have violated a holy place.

As this developmental stage is reached -- namely, the stage in which children start to understand the tremendous power words can have -- they begin to refer to words as objects, describing how "words fall cold on [their] head like paving-stones" (W, 35) and "those are white words...like stones one picks up by the seashore" (W, 20). Jinny says, "those are yellow words, those are fiery words...I should like a fiery dress, a yellow dress, a fulvous dress to wear in the evening" (W, 20). While this train of thought could be perceived as the product of a child's short attention span, the pointed comparison of words to clothing highlights the unique relationship of children to language at this developmental stage; they are beginning to understand words not as simply parroted phrases but as tools filled with meaning, instruments to be selected with agency, much like an item of clothing. Just as parents dress children in clothing until they are a certain age, so too do they dress them in phrases and ideologies; clothing changes one's appearance just as the language they choose to use changes the way we perceive them. We can modify our outfit depending on what the occasion demands, just as one can adapt one's diction and manner of speaking. The children speculate that "a good phrase, however, seems...to have an independent existence" (W, 68), highlighting the newly discovered power of verbal communication, so potent it can seem not to simply capture emotions or concepts, but to stand in place of them. Neville in particular appreciates "the exactitude of the Latin language" and says he will "step firmly upon the well-laid sentences, and pronounce the explicit...and chant with a passion that is never obscure or formless" (W, 31). His love is partially because of the language's adherence to a clear, "explicit" set of rules and partially because of its power. With her diction and imagery, Woolf likens the Latin language to a reliable, sturdy and economical bridge that connects the speaker and the listener.

## "The time approaches when these soliloquies will be shared": The Power of Language to Create Context

As the individual begins to know from experience that language has specific powers, its uses increase; language not only connects people, but it binds events together into stories, joining disparate happenings into a more palatable whole. "Let [Bernard] describe what we have all seen so that it becomes a sequence," says Neville (W, 37). Stringing together seemingly exclusive occasions into a 'story' creates a context, and just as children gravitate toward straightforward schema, identifying a pattern or other uniting quality in events that appear random -- and thus intimidating -- gives great comfort. Additionally, language can be used to secure isolated events or sequences of events in time, and the job of the poet, the storyteller, the scholar, is to capture and later access those time periods through the words with which they were recorded. "Now let me try,' said Louis, 'before we...go to tea, to fix this moment in one effort of supreme endeavor. This shall endure...this [scene] I see for a second, and shall try tonight to fix in words, to forge in a ring of steel" (W, 40). This desire not only indicates a newfound faith in language -- that it has the ability to encapsulate moments before they fade -- but it also suggests a heightened self awareness in relation to the progression of time; a sense of futurity is only possible when one understands oneself as a consistent existence, as exemplified by Rochat's 5<sup>th</sup> level of awareness, "Permanence" (Rochat, 722). "A permanent self is expressed," he writes, "an entity that is represented as invariant over time and appearance changes." While the characters are not static identities, they at least understand that there is endurance to the 'self' and that even if one changes one is still oneself.

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This notion of self-permanence develops along with improved language skills, and as young people's grasp on language steadies they are consequently further from the first fragile space of childhood. The combination of natural progression away from infancy and childhood combined with improved language skills allow the young individuals to connect with one another. "The time approaches when these soliloquies shall be shared."" Louis says. "We shall not always give out a sound like a beaten gong as one sensation strikes and then another. Children, our lives have been gongs striking, clamour and boasting; cries of despair" (W, 40) As the characters improve their ability to use language deliberately and meaningfully, the space between them seems to decrease. Their "soliloquies", or lifelong internal thoughts, can be expressed, and thus the development of language is imperative to the fulfillment of Maslow's third, fourth, and final steps: love and belongingness, esteem, and self-actualization. To truly feel a sense of belonging or a sense that one is held in high esteem, one must feel like one is understood by surrounding friends and family, and one of the best ways to do that is by expressing one's thoughts, ideas, and opinions through language.

For Woolf, much of the fear and uncertainty surrounding childhood is due to children's inability to express what they are feeling and experiencing. They cannot explain to their peers or parents all the new sensations they are being bombarded with, and the result is an early life of confusion and "sensation strik[ing]". Note that Louis does not announce that the time "when these soliloquies shall be shared" is now – instead, he points out that the time is approaching, implying that he is aware of the power of language for the first time but not fully in control of it. As experience fills in previously meaningless words, the young individuals recognize the astounding capacity for

expression, specifically for their own. When Susan feels that Bernard is better able to manage language than she is, she says to him, " 'now you trail away...making phrases. Now you mount like an air-ball's string, higher and higher through layers of the leaves, out of reach... making phrases. You have escaped me" (W, 18). Linguistic communication is a means to escaping the loneliness inflicted upon those who cannot express their thoughts and feelings. Susan is aware of this almost mystic quality and yet cannot quite command her words in the same powerful manner. Bernard is also gifted in using his words to interact with other people. He describes his conversations as follows: "a smoke ring issues from my lips (about crops) and circles [a man on the train], bringing him into contact. The human voice has a disarming quality -- (we are not single, we are one). As we exchange these few but amiable remarks, about country houses, I furbish him up and make him concrete" (W, 68). Because he is aware of the immense capabilities of words, he imagines them in tangible form, as "a smoke ring". This image also implies that there is a limit to the control one has over language, and that once one puts words forth into the world they float off and dissipate in the way that smoke does. Woolf paints verbal communication in a beautiful manner, illustrating its enticing nature; words can seduce and enthrall, and either by Bernard's imagined narration of this man's life or by the man using language to convey his story, he is suddenly "concrete" to Bernard.

### Naming and Cherry's "Cocktail Party Effect" (1953)

On a much more basic level than emotional expression, we use words to refer to objects, giving each item a name that is either arbitrary or reflective of some inherent quality. We also name people, and one of Stephen's early philosophic struggles is with the name of 'God' versus god's 'true' identity: "But though there were different names

for God in all the different languages in the world ...still God remained always the same God and God's real name was God" (J, 13). Though Stephen begins to understand that a name is simply one way to define someone or something and that there is some 'true' essence to everyone or everything, he has difficulty comprehending the separation between signifier and signified. In fact, the first instance of bullying we see in the novel is when Stephen is teased about his name in the following exchange:

-What is your name? Stephen had answered: -Stephen Dedalus. Then Nasty Roche had said: -what kind of a name is that? (J, 5)

Implicit in this explicit inquiry around Stephen's name is a recognition of Stephen as an 'other', as a person singled out from the group and made to identify himself. It is both flattering and nerve-wracking when someone asks you your name: you have sparked the interest of the questioning party, are isolated from the group, and are the only one meant to answer that question. While a parent or peer could easily interject and give your name for you, "what is your name?" is one of the first questions posed that recognizes us as sentient individuals.

Children typically learn their name even before their age, as there is a supposed unique quality to a name as opposed to an age; there are many four-year-olds, but one likes to think that there is only *one* 'Stephen Dedalus', 'Jessica Lebovits', or 'Virginia Woolf'. People are also more likely to pick up on their own name in a noisy crowd, a phenomenon cognitive scientist Edward Colin Cherry coined as the "cocktail party effect" in 1953. Research shows that this own-name recognition develops very early; in a study conducted by Rochelle S. Newman (2005), Newman explored five-month-old, nine-month-old, and 13-month-old infants' ability to recognize their own name in the context of noise. Though all three age groups listened longer to their names when the target voice was 10dB more intense than background noise, only 13-month-olds were also able to select their own name when the target voice was only 5dB louder than background noise. This demonstrates that the self-name relationship is in place at an extremely young age, and that it strengthens as one grows older. Additionally, if when someone asks your name it means that they are taking the time to recognize and learn about you, it can be insulting when they cannot remember your name after they've asked; Stephen "heard the voice of the prefect of studies asking him twice what his name was. Why could he not remember the name when he was told the first time? Was he not listening the first time or was it to make fun out of the name?" (J, 57) Words stand in for concepts, names stand in for people, therefore we feel that our name represents an aspect of we are. It is significant then that between 86%-92% of women change their name when they get married (Bindley, 2011), indicating almost a shift in identity from young maiden to wife and potentially mother.

#### Self-Identification and The Other: With or Against?

When Stephen is asked about his name, he is first pleased that he is singled out, and then terrified by the ostracism. He notes that "the great men in history had names like [his] and nobody made fun of them" (J, 57), meaning he wishes to blend in enough not to be teased, yet he is insulted when the prefect does not recognize him and forgets his name. Thus Stephen and the other characters approach the next step in their identity formation, and alternately want to be singled out yet indistinguishable from the crowd; according to Maslow one needs both love and belongingness as well as esteem to become self-actualized, yet being esteemed by others requires that they recognize you as a separate individual. Both Joyce and Woolf explore the various ways of establishing oneself in relation to 'the other'-- either in opposition to or in concurrence with; while Joyce traces alternating orientations within one character (i.e. Stephen), Woolf investigates them in six characters, allotting one mode of self-establishment for each -for example, Jinny thrives on being singled out, while Louis greatly prefers the solidarity of the group.

As stressed earlier, children first experience their surroundings through their bodies, and thus their first forms of self-identification are also physically tied. "I am a boy in a gray flannel suit" (W, 13) says Louis. "My mother still knits white socks for me and hems pinafores and I am a child" (W, 16) Susan narrates. After these neutral physical observations come concrete physical observations that are now examined in relation to 'the other'; "my father is a banker in Brisbane and I speak with an Australian accent. I will wait and copy Bernard. He is English. They are all English'" (W, 19) worries Louis; "'I am squat...I am short.... my eyes are hard. Jinny's eyes break into a thousand lights. Rhoda's are like those pale flowers to which moths come in the evening" (W, 16). Children first recognize defining physical qualities about themselves, then about themselves in relation to their peers: Louis defines himself first by what he is wearing, and then later by what makes him different from his friends. Susan too lists qualities about herself that are independent of fellow children -i.e. "my mother knits...for me...and I am a child"- and later views her physicality in comparison to her female friends – i.e. "my eyes are hard. Jinny's eye's break into a thousand lights." Even Jinny, arguably the most confident of all the children, takes issue with certain

aspects of her body, adamantly reporting, "'I hate the small looking-glass ...my lips are too wide, and my eyes are too close together; I show my gums too much when I laugh. Susan's head ... with its grass-green eyes which poets will love... put mine out"" (W, 42) On her own Jinny is very comfortable with her physical appearance, relishing her own energy and ability to be present. "'I leap like one of those flames that run between the cracks of the earth," she says, "'I move, I dance; I never cease to move and dance'" (W, 42) Yet when she places herself in contrast to Rhoda and Susan her self-esteem falters, as she understands herself as an object of scrutiny and judgment for the first time as well.

Because of this typical harsh self-judgment, Maslow divides 'esteem' – the penultimate stage of human needs – into two categories, self-esteem and esteem others have for you. Though both are necessary to become self-actualized, self-esteem is listed as the 'higher' esteem, because it is both more essential and harder to come by. One can be respected by others and not have any self-respect, and "thwarting of these needs produces feelings of inferiority, of weakness, and of helplessness." Maslow goes on to say that "these feelings in turn give rise to either basic discouragement or else compensatory or neurotic trends" (M, 382). The characters in both novels attempt to assuage this low self-esteem in the same way they attempt to forge their identity – by considering the inevitability of their comparison to their peers and deciding if its best to go with them or go against them. Yet whichever path the individual resolves to take, the degree to which he or she can truly separate from the social world is limited; even when one defines oneself *against* the other, one is still dependent on that collective 'other' to set social standards of 'the norm', against which one can orient oneself.

Some of our earliest opportunities for self-definition emerge from our relation to 'the other' -- initially this is our family, then grows to include our peers, and then the rest of the social world.

Nasty Roche had asked [Stephen] -What is your father? Stephen had answered: - A gentleman (5)

After Roche asks Stephen his name and singles him out, he is unsatisfied with the answer, and instead endeavors to know him in a more encompassing social context – i.e., his family. Similarly, Stephen explores his physical and existential world position by writing in his notebook him name, his classroom, his school, town, county, country, continent and universe (J, 12).

## "If my legs were reinforced by theirs, how they would run!": Self-Definition Through Joining the Other

Both Woolf and Joyce take advantage of the microcosm of the school environment to explore the notion of self vs. other; Stephen, Louis, and Neville long to be included in the prestigious world of masculine academia, lusting after the older boys who make up the ranks they long to join. "It pained [Stephen] that he did not know well what politics meant and that he did not know where the universe ended. He felt small and weak. When would he be like the fellows in poetry and rhetoric? They had big voices and big boots and they studied trigonometry" (J, 14). Stephen is only limited by his age, but he wants to cease feeling "small and weak" and instead be like the older boys whom he admires. Likewise, Louis marvels at the unified nature of the academic elders at his school. "They salute simultaneously passing the figure of their general." He describes. "How majestic is their order, how beautiful is their obedience...I note the simultaneity of their movements with delight" (W, 47). To a callow, unsure boy seeking something with which to align himself, the almost impenetrable synchronization of the men is immensely appealing. "If I could follow," he continues, "if I could be with them I would sacrifice all I know... that is what we wish to be, Neville and I. I watch them go with envy... If my legs were reinforced by theirs, how they would run!" (W, 47) The men operate together, adhering to a set of clear, solid rules – at this age, the characters are finally aware of their permanence, aware of needing to create schema, and attracted to a social setting that not only presents itself simply and logically, but seemingly does not have any space in which one must think for oneself. Rather than needing to rely only on his own two legs. Louis reasons that if his "legs were reinforced by theirs, how they would run!" Floating around the free world, Louis and the others must take risks and establish themselves, forming a hodgepodge group of individuals all fighting to be heard. Alternatively, if he were part of a more unified group of people that functions as a complicated but smooth machine, he could focus on what he is told to do rather than having to be self-reflective and figure out what he wants to do. As he and the others march into the chapel, "two by two...orderly, professional...[they] put off [their] distinctions'" (W, 34). There is no need to fret about what distinguishes him from his peers, because the goal has shifted away from individual prominence and towards blending in with the group, which strengthens the individual's identity by focusing on shared characteristics. "I recover my continuity, as he reads," says Louis in church, "I become a figure in the procession, a spoke in the huge wheel that turning, at last erects me, here and now. I have been in the dark; I have been hidden... There is no crudity here, no sudden kisses'" (W, 35). Instead, there is a clear order and consequently a sense of control.

Being part of a group contextualizes and roots the individual, and he then he finds his "continuity", or a compelling reason that aligns all his disparate thoughts and beliefs. Neville feels similarly, and confesses, "nobody guessed the need I had to offer my being to one god; and perish, and disappear" (W, 52). In the tumultuousness of identity formation, the notion of shifting one's focus from oneself to a god, a goal, or a group is enormously appealing. Dedication to a higher purpose gives life meaning, and understanding oneself in a larger context -- historical, religious, social -- soothes smaller day-to-day problems. If one is entirely absorbed by a cause larger than oneself, the pressure of individual life is alleviated; "then there was wind and violent thunder" Rhoda says, "There was a star riding through the clouds one night, and I said to the star 'Consume me'" (W, 64). This desire to cease existence is theoretically the manifestation of the ultimate show of support: if one is dedicated to and thus supported by a god, a belief, a star, one's personal distinctions are lost and one's identity is solely that of the larger object.

## "To be summoned": Self-Definition Through Singularity

On the other hand, Jinny resolves to go the route of singularity, establishing herself as an individual who is separate from the group. Jinny's particular mode of distinction is dangerous however, in that she is not the one separating herself, but rather is waiting around to be separated. Though she thrives on being different from 'the other', she relies on 'the other' to pick her out from the crowd and dub her as different. It is therefore not much different from the desire to dedicate oneself entirely to a higher being; Jinny is drawn to an extremely passive and risky mode of self-identification, always dependent on and therefore at the mercy of the (typically masculine) 'other', just as the religious fanatic is dependent on and at the mercy of a higher cause. Even before Jinny experiences the sexual undertones of being noticed for her unique corporeal beauty, she wants to be recognized for something only she possesses. "'I begin to feel the wish to be singled out;'" she says, "'to be summoned, to be called away by one person who comes to find me, who is attracted towards me, who cannot keep himself from me, but comes to where I sit'" (W, 46). Jinny's youthful aspirations are remarkably passive, as she wants to be "summoned, to be called away" – in other words, she wants someone to want her, as opposed to wanting someone or something because she as a separate entity desires it. In many ways, the establishing of oneself in opposition to others is perhaps *more* dependent on 'the other' than overtly joining a group, because there is little agency.

When she is older, Jinny has her first true experience of being singled out,

specifically because of her gorgeous appearance.

He smiles at my reflection in the tunnel. My body instantly of its own accord puts forth a frill under his gaze. My body lives a life of its own. .... But we have exchanged the approval of our bodies. There is then a great society of bodies, and mine is introduced; ...and the men ... are aware too, as I am aware, of heat and rapture.... I give myself up to rapture...but behold, looking up, I meet the eyes of a sour woman, who suspects me of rapture. My body shuts in her face, impertinently, like a parasol. I open my body, I shut my body at will. Life is beginning. (W, 63)

It is important to note that this entire exchange is due to a fellow passenger seeing Jinny's *reflection*, as opposed to staring directly at her. Though his observance and appreciation of her beauty in her reflection in the window allows him the same visual clarity as looking directly at her would, the fact that this interaction takes place between Jinny, the man, and Jinny's reflection is essential to understanding the delicate danger she places herself in by allowing herself to be defined entirely by the other. In this manner, Jinny is only a partial player, nearly inconsequential in who she truly is when compared to her

physical beauty; this attractiveness is part of her to an extent, but symbolically separated from her in this passage. Her "body instantly of its own accord" reacts, also strangely distant from Jinny's individuality or identity. Her "body lives a life of its own", and because of that she, Jinny, "give[s her]self up to rapture" after it is incited by her body, almost as if she is surrendering to it – this pushes her body ahead of her in rank, making 'it' more powerful than 'she'. By the end of the passage she still discusses her body as distinct from the rest of her, yet she gains a degree of control over it, able to "open [her] body... shut [her] body at will".

Woolf opens a brief discussion of the taboo nature of female sexuality and "'rapture'", as it is something that Jinny is "'suspect[ed]'" of. If one's activities warrant suspicion, it is implied that they are controversial, clandestine, sinful. Jinny's physical reaction to this skepticism is also beautifully symbolic – her "'body shuts in [the woman's] face, impertinently, like a parasol'". A parasol is the epitome of femininity, a delicate, intricate, fragile item that protects modesty and upholds tradition. The fact that her body reacts this way "'impertinently'" could refer to Jinny's agency – i.e. she 'shuts' her body irreverently and thus offends the older, more traditional female figure – or it could suggest that Jinny and her body are not relevant, not pertinent, to the current scene, furthering her dependence on the other to shape and define her.

#### The Inevitability of Social Self-Definition

Though Jinny identifies herself by how she stands out from the crowd, she is extremely dependent on that crowd to give her something with which to contrast her identity. Alternatively, the characters who define themselves in more collectivist terms are perhaps less dependent on 'the other', if all the individuals dedicate themselves to one larger cause, then theoretically those people could continue identifying with the cause even in the absence of their peers. It is futile to speculate however, because whether one is basing one's identity with the group or against the group, the presence of a social 'other' is inevitable, and its support is essential to self-definition. For the characters who wish to dedicate themselves to the good of the group, it is obvious to discern where the social support comes from; if they emphasize shared characteristics and downplay their differences, there is a strength in numbers that works to contextualize the individual. Rather than worrying about how to fight for distinction and forge a new model for being recognized, the collectively minded individuals can embrace the similarity of the group and thus gain support for fine-tuning their identities. For those who establish themselves in opposition, there is a heightened reliance on the other for support, though the support comes in a more subtle form; if you are singling yourself out or waiting to be singled out, you are trusting the other to first recognize and then 'approve' of you, and agree as a collective social body that you are different from them. There must be an agreement on the part of 'the other' that you are not like them, and therefore warrant attention and distinction or suspicion. It is arguably worse to be ignored than insulted. When one is insulted, one is still recognized by the other, whereas when one is ignored, one is not even granted the decency of acknowledgement. Without that support of recognition and subsequent evaluation- albeit a strange manifestation of support - the individual cannot fulfill the love and belongingness nor the esteem category of Maslow's hierarchy, and therefore is unable to reach self-actualization.

The ever-shifting but always vital relationship between the self and the other is exemplified succinctly and eloquently in the following paragraph, taken from the end of the first section of *A Portrait of the Artist as a Young Man*. Before this scene, Stephen has been caned by the prefect of studies, and then confronts the rector about the unfairness of the situation. After his protest is registered, he then leaves the rector's office and returns to his peers.

They made a cradle of their locked hands and hoisted him up among them and carried him along till he struggled to get free. And when he had escaped from them they broke away in all directions, flinging their caps again into the air and whistling as they went spinning up and crying:

- hurroo! (J, 60)

Out of the group of students, Stephen is singled out for not doing his classwork, despite the fact that his glasses were broken and his teacher had previously excused him from his studies. He is then hit in front of the entire class, further isolating him with shame, embarrassment, and pain. After the incident he is absorbed back into the group, "and every fellow had said it was unfair" (J, 55) that he was punished. His peers stand by him, consoling him with their validation of his side of the story. The relationship then shifts again, and the comforting group gently singles Stephen out another time, urging him to go forth and explain to the rector what has happened; in this case, the singling out of Stephen is a demonstration of social support and esteem rather than cruel ostracism. He is then strong enough to go alone into a difficult situation. Had it not been for the support and encouragement of his peers, he would not have successfully presented his argument to the rector and been absolved of his supposed crime. This oscillating relationship is exemplified by the sudden shift in diction in the quoted passage; when Stephen returns from his lone journey, the group makes a "cradle" out of their "locked" hands, demonstrating literal and metaphoric support. A "cradle" is obviously reminiscent of infants, and thus the passage sets itself up to be a synecdoche for the self and the other

throughout a lifetime. Stephen is then lifted up above their heads, but Joyce chooses to say that he is "hoisted up among them" – the term "hoisted" implies being lifted up for a specific goal, i.e. to reach something tall, and Stephen is "among them", as opposed to 'above' or 'separate from' them. He is "carried...along" like a child, and the first part of the sentence mimics the early part of life, where one must be taken care of physically and emotionally by one's social environment in order to ultimately reach self-actualization.

After he is "carried," however, the diction shift occurs: suddenly Stephen "struggled" to come away "free", immediately altering the caring connotation of the carrying and making it seem almost imprisoning. If he is trying to get "free", that implies that he was not free before, and perhaps even felt trapped. He then "escaped" and the group "broke away in all direction" -- he did not simply separate from them, but rather violently "escaped", and the suddenness of the motion is further emphasized by the turbulence of the group's dispersion. In keeping with this paragraph as a miniature model for the self-other relationship throughout the individual's lifetime, the tumultuousness of the central part of the sentence is representative of adolescent years, a time of deliberate and severe separation of the self and the other. The scene ends on a more positive note however, once Stephen is detached from the group and the other boys "fling... their caps...into the air and whistl[e]" happily. Though he is not physically part of the group any more, he is also no longer isolated or excluded; rather, he is peacefully coexisting with 'the other', only able to be a confident individual because of the support given to him early on in the scene, or early on in his life.

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#### Conclusion

Though the majority of psychological theorists that I have mentioned here came after Virginia Woolf and James Joyce, I believe that the ease with which their work blends with current psychological findings further emphasizes the uniqueness of their novels, and perhaps of Modernist literature in general. Through their abstract aesthetic representations of cognition and identity, Woolf and Joyce anticipate developmental theories put forth by psychology, adding invaluable emotional perspective to ideas that can also be known through less personal means, as is the typical format for psychological empirical study. "We are trembling on the verge of one of the great ages of English literature" (Woolf, 12), Woolf wrote in 1923, and in my humble opinion she was correct. Through narration of the "stream of consciousness," she and Joyce attempt and succeed at painting the individual in a light that meshes his or her own subjective views, their society's views and the author's view, all the while building in a space for the reader to fill in his or her own opinions as well: "for example, [each character] will strike you very differently according to the age and country in which you happen to be born," Woolf continues. "You see one thing in character, and I another. You say it means this, and I that" (Woolf, 4).

## Conclusion

Our conception of ourselves is largely mediated by our society, by its opinions in general and, more specifically, its opinion of us. These conceptions (of ourselves, of our peers, of our society) shape the way we absorb art and literature, which subsequently affects what type of art and literature we, as a society, produce. This reciprocal process is comparable to the relationship between the individual and his or her native language, both in that a) literature is comprised of words which, as members of a particular society, will have a particular meaning to us, and b) because our conception of ourselves cannot be disentangled from our language, from the way our society uses that language, and from society itself. Understanding the myriad levels of mediation leaves the investigator (the author, the individual, myself) with feelings of despair and powerlessness -- how will I understand myself if I cannot remove myself from myself, from my society, from my influences? How will I understand others, knowing my perspective is hopelessly limited and subjective?

I have attempted to alleviate these issues in the multidisciplinary project, by combining literature and psychology -- the subjective and the objective, the aesthetic and the empirical -- and forging for myself as complete a picture of identity formation as I can conceive of, while working within realistic limitations. What the literary representations appear to be improvising, psychology confirms or denies, and what the statistically valid experiments can lack in empathetic representation, the literature brings to life and makes resonant. Therefore, the two approaches should not – and arguably cannot – be separated. As William James said in *The Principles of Psychology*, science "must be constantly reminded that her purposes are not the only purposes, and that the

order of uniform causation which she has use for, and is therefore right in postulating, may be enveloped in a wider order, on which she has no claims at all" (James, 1179). I would argue this same 'reminder' be issued for literature as well, and for other disciplines -- when studied in isolation, both literature and psychology are cheated, are not explored to their full potential. As Woolf's Bernard says, "'I do not believe in separation. We are not single…we are one"" (W, 67).

I have tried to keep both James' and Bernard's dictum in mind throughout the creation of this project, during research, outlining, drafting, editing, and rewriting. I continually strove to balance the differing approaches, taking care to not push either my psychology research or my literature analysis too far into itself, for fear of losing track of the other. Yet each time the concern crossed my mind, the material would surprise me, and I was perpetually confronted with the very reasons I undertook this multidisciplinary investigation; when I least expected to forge a connection between Woolf and Maslow, Joyce and Rochat, Modernism and developmental psychology, sure enough one would arise. A child's response would call to mind something Woolf's Bernard said, or Joyce would eloquently portray a trend in early childhood that has been a focus of developmental psychologists for years. I would be astonished by the findings of an empirical study, moved by a literary passage, and within a short span of time the other discipline would reveal to me the same phenomenon, distilled down to its essence and manifested again in another form. These luminous moments of connection always seemed to come at precisely the right moment, at a hiccup in my work, a brief standstill; if it were not utterly beyond the realm of possibility I would have suspected the two fields to be talking to each other, conspiring and collaborating, unbeknownst to me.

The ultimate and, for me, most poignant link came recently, as I sat down to write my conclusion. Informal and unconventional as it may be for me to share the intimacies of my writing process at the end of a lengthy academic endeavor, the manner in which this last connection brought itself to my attention is particularly profound. Determined to have a conclusion that not only recapitulated my project, but also delighted and moved my readers, I turned again to the original texts I worked so closely with, *The Waves* by Virginia Woolf and A Portrait of the Artist as a Young Man by James Joyce, in search of the perfect parting quotation. I re-read the last page of the section I heavily explicated in The Waves, as well as the final and famed passages of A Portrait. As Neville steps off the train after graduation, ready to begin his life as a young adult, he says, "I feel insignificant, lost, but exultant" (W, 72). He "grasp[s] tightly all that [he] possess[es in] one bag" and steps off the platform, into "that chaos, that tumult." In A Portrait, Stephen readies himself to leave home, and "learn in [his] own life and away from home and friends what the heart is and what it feels" (J, 275). He describes the tacit pull of his equally restless peers: "the voices say...We are your kinsmen. And the air is thick with their company as they call to me, their kinsman, making ready to go, shaking the wings of their exultant and terrible youth."

The repeated word then immediately jumped out at me; *exultant*. In the entirety of my time reading and analyzing both novels, never did two passages -- read one after the other, no less -- echo each other so beautifully, and resonate with a shared idea so harmoniously. Exultant. Adjective. "Triumphantly happy". Woolf and Joyce both describe the state of their characters as such at pivotal points, instances crucial to the rhythm of the novel as well as the characters' lives; Neville is exiting a train that has

taken him from his childhood and adolescence to his newfound freedom and adulthood, and Stephen is poised on the precipice of *his* young adulthood, days away from his renowned invitation, "Welcome, O life!" (J, 275). There is something about this word then, *exultant*, that reaches the core of what it means to be young, that correctly identifies something inherent in the collision of childhood and adulthood. Perhaps it is because of the mastery of the Modernist writers; perhaps because of the sentimentality I feel as I approach the end of this comprehensive project, which has been gestating within me for quite some time; or perhaps because I, too am facing the intersection of adolescence and young adulthood; but "exultance", mixed with Neville's "chaos [and] tumult'" and the "terrible[ness]" of Stephen's youth, seems to capture this particular stage of life. Stephen, Neville, and the other characters are beginning the first chapter of their new life, their childhood having been a wonderful, fragile, and necessary prologue. They are aware of who they are and yet blissfully aware of all that they can still be, all that they can achieve, all that they can attain. To put it in Maslow's terms, they are rapidly moving towards selfactualization, understanding that "what [they] *can* be, [they] *must* be" (M, 382).

It is the beauty of this particular life position, this period of pure exultance, that makes the study of childhood and adolescence worthwhile; rather than the light, inconsequential joy one feels as a child, or the blind, instantaneous triumph (as a young Jinny said, "'all is quickness and triumph'" (W, 46)), exultance combines the two, lending weight and significance to each component. One can be happy with no real cause, and one can feel triumph without truly overcoming adversity; in order to feel triumphantly happy, however, one must conquer, prevail, over distress and hardship, and subsequently appreciate the euphoria as an emotion earned and made sweeter by the difficulty that came before it. Exultance is therefore the matured iteration of happiness, as it is a nuanced type of joy known only by those who have experienced *both* pleasure and pain, success and failure. To refer back to the Rilke quotation which opens my project, "children are still the way you were as a child...and if you think of your childhood, you once again live among them." In this same mode of thought, I posit that the exultance with which the young characters in Woolf and Joyce's novels approach their new lives can -- and should be -- maintained throughout the lifetime. In studying childhood and adolescent self-concept from the beginning through the very end where adolescence meets adulthood, I argue that this precious period of self-actualization does not have to be dependent on a particular chronological age, but rather is indicative of a particular mindset; while this attitude may not emerge until young adulthood, the balance of self-awareness and awareness of one's potential can -- and should -- be sustained.

Studying the way children and adolescents construct their identity has inspired me to take their joy and their triumph and combine it with my own life experiences, creating and sustaining the exultance that is integral to Joyce and Woolf's conception of young adulthood. It is about balancing metaphoric potential energy with metaphoric kinetic energy -- making sure we are moving, creating, pushing forth with our lives (kinetic) while never forgetting that within us is infinite potential energy, which renews itself with each new experience. We as a culture envy children and the seemingly innumerable paths their lives can take, while somehow forgetting or neglecting that we, too have the power to shift the course of our lives, if only we can muster up the childish excitement of simply living and channel it into matured exultance. Rather than wishing to *be* children, we should wish to be as open as possible in learning from them; we must maintain their

wonder, delight, indulgence and ability to be present and combine it with the wisdom, self-control, determination and knowledge that only comes with age. In the personal responses I gathered from the children, I could see the beginnings of the difficult amalgamation of youth and age, and had I continued to ask adolescents, young adults, and adults to contribute to my study, I imagine the juggling act would have both intensified and gotten easier.

In a letter dated July 16, 1903 the German poet Rainer Maria Rilke asks his anxious correspondent to sit with the questions he has about his life, rather than franticly look for answers. Though this particular plea is directed at an aspiring teenage poet, I propose that, like the sustaining of youthful exultance, Rilke's words are not only relevant to the young inquirer; rather, they are invaluable to thinkers of all ages, to any individual who has ever questioned herself, or the world around her. I will thus end as I began, with a beloved quotation of Rilke's, whose sage advice has been to me, in my inevitable hours of questioning and self-reflection, ineffably sweet.

You are so young, so much before all beginning, and I would like to beg you, dear sir, as well as I can, to have patience with everything unresolved in your heart and to try to love *the questions themselves* as if they were locked rooms or books written in a very foreign language. Don't search for the answers, which could not be given to you now, because you would not be able to live them. And the point is, to live everything. *Live* the questions now. Perhaps then, someday far in the future, you will gradually, without even noticing it, live your way into the answer....but take whatever comes, with great trust, and as long as it comes out of your will, out of some need of your innermost self, then take it upon yourself, and don't hate anything.

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## **APPENDIX A**

	Females		Ma	ales	Total		
Grade	Average	Range	Average	Range	Average	Range	
2	91	84 - 97	92.25	89 – 97	92.33	84 - 102	
5	127.38	124 – 131	128.33	122 - 140	127.88	122 - 140	
8	163.81	153 - 173	164.97	157 – 175	164.39	153 - 175	
11	199.88	194 – 217	200.28	193 – 217	200.08	193 - 217	

Figure 1: Participant ages, in months

		edgement Reader		edgement ate Selves	Me Thro	elf as ediated ough the Other	W	ck and hite ements		pective ments
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
Females	14	58.3 %	8	42.12%	25	65.79%	25	62.5%	43	66.2%
Males	10	41.6%	11	57.89%	13	34.2%	15	37.5%	22	33.8%
Total	2	24	1	9		38		40	6	55

Figure 2: 5 measures of conceptually derived coding system, broken down by gender

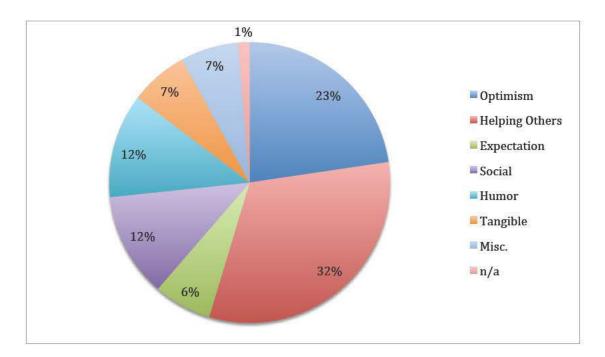


Figure 3: All Girls' Positive Qualities

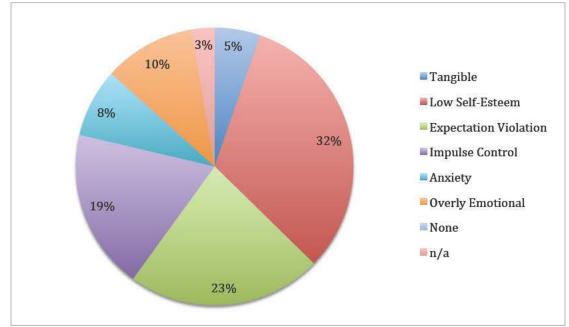


Figure 4: All Girls' Negative Qualities

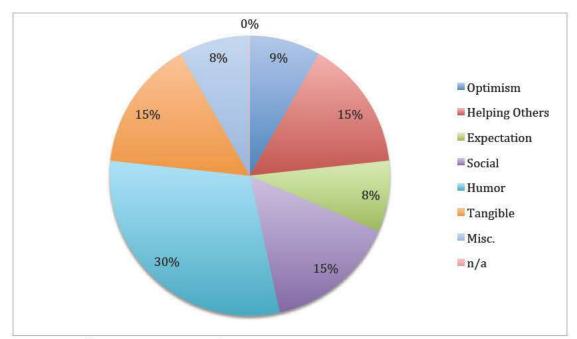


Figure 5: All Boys' Positive Qualities

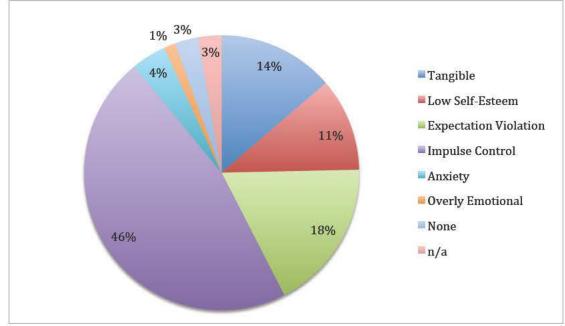


Figure 6: All Boys' Negative Qualities

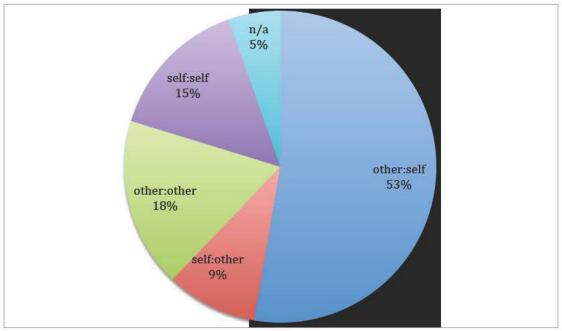


Figure 7: Breakdown of Self-Based vs. Other-Based Positive: Negative Qualities in Girls

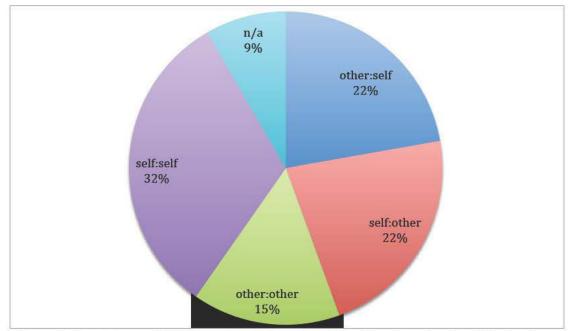


Figure 8: Breakdown of Self-Based vs. Other-Based Positive: Negative Qualities in Boys

#### **APPENDIX B**

July 13, 2011

Hello Principal King,

Thank you very for agreeing to meet with Professor D'Albertis on my behalf! My name is Jessica Lebovits, and I am a senior at Bard College. I am majoring in literature and psychology with a concentration in gender and sexuality studies, and within the psychology department my interests are in developmental psychology and psycholinguistics. For my upcoming senior project, I would like to focus on language development and acquisition, exploring the broad topic through both main disciplines. While I will be completing a related but separate literature-related section of the project, for the psychology portion I am hoping to work with elementary, middle, and high schools in the area to gather data in the form of students' written work.

Let me preface my explanation of the specifics of the study by saying that I am very grateful for any type of assistance you and Chancellor Livingston Elementary can offer – if what I am proposing seems too difficult to implement, then I would love to communicate with you further about a modified version of my project that would still involve your students to any degree you feel would be possible.

I would ideally love to work with students from 2<sup>nd</sup> or 3<sup>rd</sup> grade through 12<sup>th</sup> grade- if possible, every grade between them, but if not possible then perhaps every 3 or 4 years (2<sup>nd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, 11<sup>th</sup>). I am interested not only in how written language use evolves over a student's pre-college career, but specifically how the nuances in word choice and other linguistic patterns are indicative of much more than what is on the surface. I would like to come in to the classroom and ask the students to answer a writing prompt, giving them 30 minutes to complete their response. All responses would be completely anonymous, and I would identify each student through their birth date (mm/dd/yy) which they can place themselves at the top of the page, along with "male" or "female". Each student that participates – grade 2 through 12- will get the same prompt and the same amount of time to respond. Though the precise wording of the prompt is not yet solidified, it would be along the lines of: "What do you think is your best quality? Why? What is your least favorite quality? Why? Explain both your favorite and least favorite qualities, giving examples from your life in which you showed each quality."

Through this series of questions I would like to analyze the development of: understanding of emotions, emotional self-regulation, social relationships, perspective taking skills, narrative construction and positive and negative idea of self-image. For example, if a student responds that their least favorite quality is that they are bossy, then they might describe a time in which they were bossy and upset a peer (demonstrating an understanding of emotions, social relationships, perspective taking, narrative construction) and explain that to try to be less bossy they counted to 10 every time they got angry (emotional self-regulation). I would then input the collected responses to a fascinating computer program that I have been working with, called the Linguistic Inquiry and Word Count (LIWC) program. LIWC was created by the psychologist James Pennebaker and his colleagues that analyzes text and categorizes it almost instantaneously into 82 different parts of speech. For example, if I put in a student's response, it would give me how many words were used, average sentence length, percentage of the text that used first-person singular pronouns, positive emotion words, future tense verbs, etc. (definitely visit http://www.LIWC.net/ if you're interested!) From this data I will be able to analyze the written responses and compare various statistics; for example, what are the differences in the types of language students use to describe their best quality (a positive self-image) vs. their worst quality (a negative self-image)? Do they use more insight words ("think", "know", "consider") when describing their worst quality, suggesting a conscious reevaluation of something they are not proud of? Is there a gender difference in the ability to control and regulate emotions? What types of differences are there in the responses of the 3<sup>rd</sup> graders vs. the 11<sup>th</sup> graders? Is there a common self-identified "best" or "worst" quality among students of a certain age? Among each gender, regardless of the age? Etc., etc.

Again, I understand that you, the teachers, and the students are always very busy, and that often it is difficult enough to get through a predetermined curriculum without Bard students coming in and trying to tack on extra work! Any way that you would be willing to incorporate my research this upcoming year would be deeply appreciated. Though for reasons of eliminating variables, etc it would be ideal to have the students complete the prompt in-class in a set amount of time with me present, I am flexible and would be willing to adapt my exploration; either to previously scheduled writing prompts, or to have the teacher deliver my prompt, or to give the students the questions as homework.

Thank you very, very much for taking the time to speak with Professor D'Albertis and for reading this perhaps overly detailed summary! Please do not hesitate to contact me with any questions or comments.

Sincerely,

Jessica Lebovits

<u>Jl517@bard.edu</u> (617) 223 - 1388

### **APPENDIX C**

#### Hello Teacher,

My name is Jessica Lebovits, and I am a senior at Bard College. I am majoring in literature and psychology with a concentration in gender and sexuality studies, and within the psychology department my interests are in developmental psychology and psycholinguistics. For my upcoming senior project, I would like to focus on the development of self-image in children, exploring the broad topic through both main disciplines. While I will be completing a related but separate literarily-based section of the project, for the psychology portion I am hoping to work with elementary, middle, and high schools in the area to gather data in the form of students' written work. I am interested not only in how written language use evolves over a student's pre-college career, but specifically how the nuances in word choice and other linguistic patterns are indicative of much more than what is on the surface.

Let me preface my explanation of the specifics of the study by saying that I am very grateful for any type of assistance you and Chancellor Livingston Elementary can offer – I have spoken with Principal Brett King, who hoped that we would be able to work with children in 2<sup>nd</sup> and 5<sup>th</sup> grade at Chancellor Livingston, as well as 8<sup>th</sup> and 11<sup>th</sup> graders at Bulkeley Middle School and Rhinebeck High School.

I would like to come in to the classroom and ask the students to answer a writing prompt, giving them 15 minutes to complete their response. All responses would be completely anonymous, and I would identify each student through their birth date (mm/yy) which they can place themselves at the top of the page, along with "male" or "female". Each student that participates – grade 2 through 11- will get the same prompt and the same amount of time to respond. The prompt that I would like to deliver reads as follows; "What do you think is your best personality quality? What is a quality that you'd like to change? Explain your responses. Give two examples from your life – one for each answer -in which you demonstrated each quality."

Through this series of questions I would like to analyze the development of: understanding of emotions, emotional self-regulation, social relationships, perspective taking skills, narrative construction and positive and negative idea of self-image. For example, if a student responds that his least favorite quality is that he is bossy, then he might describe a time in which he was bossy and upset a peer (demonstrating an understanding of emotions, social relationships, perspective taking, narrative construction) and explain that to try to be less bossy he counted to 10 every time he got angry (emotional self-regulation).

I will then input the collected responses to a fascinating computer program that I have been working with, called the Linguistic Inquiry and Word Count (LIWC) program. LIWC, created by the psychologist James Pennebaker and his colleagues, analyzes text and categorizes it almost instantaneously into 82 different parts of speech. For example, if I put in a student's response, it will give me how many words were used, average sentence length, percentage of the text that used first-person singular pronouns, positive emotion words, future tense verbs, etc. (visit <u>http://www.LIWC.net/</u> if you're interested!) From this data I will be able to analyze the written responses and compare various statistics; for example, what are the differences in the types of language students use to describe their best quality (a positive self-image) vs. their worst quality (a negative self-image)? Do they use more insight words ("think", "know", "consider") when describing their worst quality, suggesting a conscious reevaluation of something they are not proud of? Is there a gender difference in the responses of the 2<sup>rd</sup> graders vs. the 11<sup>th</sup> graders? Is there a common self-identified "best" or "worst" quality among students of a certain age? Among each gender, regardless of the age? Etc., etc.

Again, I understand that the teachers, and the students are always very busy, and that often it is difficult enough to get through a predetermined curriculum without Bard students coming in and trying to tack on extra work! Any way that you would be willing to incorporate my research this upcoming year would be deeply appreciated.

Thank you very much for taking the time to read this. Please do not hesitate to contact me with any questions or comments.

Sincerely,

Jessica Lebovits

<u>Jl517@bard.edu</u> (617) 223 - 1388 Dear Parent/Guardian,

My name is Jessica Lebovits, and I am a senior at Bard College. I am majoring in literature and psychology with a concentration in gender studies, and within the psychology department my interests are in developmental psychology and psycholinguistics.

At Bard we are each asked to complete a senior project, and for the psychology portion of that project I am focusing on childhood and adolescent development. Thanks to the cooperation of the Rhinebeck principals, I am thrilled to be working with the Chancellor Livingston Elementary, Bulkeley Middle School, and Rhinebeck High School to conduct a study of students' written work between 2<sup>nd</sup> and 11<sup>th</sup> grade. I am interested not only in how written language use evolves over a student's school career, but specifically how the nuances in word choice and other linguistic patterns evolve as children get older.

I will be visiting your student's classroom on XX/XX and will ask the participants to answer a writing prompt, giving them 30 minutes to complete their response. All responses will be completely anonymous, and I will identify each answer through the student's birth date (mm/dd/yy) which they can place themselves at the top of the page, along with "male" or "female". Each student that participates – grade 2 through 11- will be given the same prompt and the same amount of time to respond. The responses will then be collected and inputted into a language processing program that analyzes text and categorizes it almost instantaneously into 82 different parts of speech. When I put in a student's response, the program will tell me how many words were used, average sentence length, percentage of the text that used first-person singular pronouns, positive emotion words, future tense verbs, etc. (visit <u>http://www.LIWC.net/</u> if you're interested!) Each student's response will be photocopied and sent home, along with a follow up letter that further explains my research and the specific prompt your student has answered.

The responses collected will be used for the purposes of my senior project only, and like all senior projects they final results will be available in the Bard library. If you do not wish your child to participate, please send this form back to school with your child by XX/XX. If you choose to excuse your child from the study, they will remain in their classroom with their peers and complete the writing prompt and I will not collect their response. Once the data has been analyzed, I would be thrilled to share a summary of the overall results with you.

Thank you very much for your time and cooperation – please, please do not hesitate to get in touch with me with any questions, comments, or concerns.

Sincerely,

Jessica Lebovits J1517@bard.edu (617) 223 – 1388 I have read Jessica Lebovits' study summary and I <u>do not give</u> my child permission to participate. I understand that there will be no repercussions for excusing my child from this research.

Student's Name:
Student's Classroom:
Denout/Coordian Signatures
Parent/Guardian Signature:
Date:

## **APPENDIX E**

What do you think is your best personality quality?

What is a quality that you'd like to change?

Explain your responses. Give two examples from your life – one for each

answer – in which you demonstrated each quality.

Birthday: \_\_\_\_/\_\_\_\_/

□ male

□ female

## **APPENDIX F**

# LIWC2007 Output Variable Information

		Examples	Words in	Validity (judges)	Alpha: Binary/raw
Category	Abbrev		category		
Linguistic Processes					
Word count	wc				
words/sentence	wps				
Dictionary words	dic				
Words>6 letters	sixltr				
Total function words	funct		464		.97/.40
Total pronouns	pronoun	I, them, itself	116		.91/.38
Personal pronouns	ppron	I, them, her	70		.88/.20
1st pers singular	i	I, me, mine	12	.52	.62/.44
1st pers plural	we	We, us, our	12		.66/.47
2nd person	you	You, your, thou	20		.73/.34
3rd pers singular	shehe	She, her, him	17		.75/.52
3rd pers plural	they	They, their, they'd	10		.50/.36
Impersonal pronouns	ipron	It, it's, those	46		.78/.46
Articles	article	A, an, the	3		.14/.14
[Common verbs] <sup>a</sup>	verb	Walk, went, see	383		.97/.42
Auxiliary verbs	auxverb	Am, will, have	144		.91/.23
Past tense <sup>a</sup>	past	Went, ran, had	145	.79	.94/.75
Present tense <sup>a</sup>	present	Is, does, hear	169		.91/.74
Future tense <sup>a</sup>	future	Will, gonna	48		.75/.02
		Very, really,	69		.84/.48
Adverbs	adverb	quickly			
Prepositions	prep	To, with, above	60		.88/.35
Conjunctions	conj	And, but, whereas	28		.70/.21
Negations	negate	No, not, never	57		.80/.28
Quantifiers	quant	Few, many, much	89		.88/.12
Numbers	number	Second, thousand	34		.87/.61
Swear words	swear	Damn, piss, fuck	53		.65/.48
Psychological					
Processes					
a i i b		Mate, talk, they,	455		.97/.59
Social processes <sup>b</sup>	social	child			04/67
	c '1	Daughter, husband,	64	.87	.81/.65
Family	family	aunt	27	=0	52/10
	C · 1	Buddy, friend,	37	.70	.53/.12
Friends	friend	neighbor	(1		06/06
Humans	human	Adult, baby, boy	61		.86/.26
	- <b>ff</b> 4	Happy, cried,	915		.97/.36
Affective processes	affect	abandon			

Positive emotion	posemo	Love, nice, sweet	406	.41	.97/.40
Negative emotion	negemo	Hurt, ugly, nasty	499	.31	.97/.61
		Worried, fearful,	91	.38	.89/.33
Anxiety	anx	nervous			
Anger	anger	Hate, kill, annoyed	184	.22	.92/.55
Sadness	sad	Crying, grief, sad	101	.07	.91/.45
Cognitive processes	cogmech	cause, know, ought	730		.97/.37
		think, know,	195		.94/.51
Insight	insight	consider			
		because, effect,	108	.44	.88/.26
Causation	cause	hence			
		should, would,	76	.21	.80/.28
Discrepancy	discrep	could			
	-	maybe, perhaps,	155		.87/.13
Tentative	tentat	guess			
Certainty	certain	always, never	83		.85/.29
-		block, constrain,	111		.91/.20
Inhibition	inhib	stop			
Inclusive	incl	And, with, include	18		.66/.32
		, ,	Words	Validity	Alpha:
		Examples	in	(judges)	Binary/raw
Category	Abbrev	•	category		·
8 V		But, without,	17		.67/.47
Exclusive	excl	exclude			
Exclusive	excl		273		.96/.43
		Observing, heard,	273		.96/.43
Exclusive Perceptual processes <sup>c</sup> See	excl percept see	Observing, heard, feeling	273 72		.96/.43
Perceptual processes <sup>c</sup>	percept	Observing, heard, feeling View, saw, seen			
Perceptual processes <sup>c</sup> See	percept see	Observing, heard, feeling View, saw, seen Listen, hearing	72		.90/.43
Perceptual processes <sup>c</sup> See Hear Feel	percept see hear feel	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch	72 51 75	.53	.90/.43 .89/.37 .88/.26
Perceptual processes <sup>c</sup> See Hear Feel Biological processes	percept see hear feel bio	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain	72 51 75 567	.53	.90/.43 .89/.37 .88/.26 .95/.53
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body	percept see hear feel bio body	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit	72 51 75 567 180	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health	percept see hear feel bio body health	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill	72 51 75 567 180 236	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual	percept see hear feel bio body health sexual	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest	72 51 75 567 180 236 96	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health	percept see hear feel bio body health	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza	72 51 75 567 180 236 96 111	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion	percept see hear feel bio body health sexual ingest	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit,	72 51 75 567 180 236 96	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion Relativity	percept see hear feel bio body health sexual ingest relativ	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit, stop	72 51 75 567 180 236 96 111 638	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68 .98/.51
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion Relativity Motion	percept see hear feel bio body health sexual ingest relativ motion	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit, stop Arrive, car, go	72 51 75 567 180 236 96 111 638 168	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68 .98/.51
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion Relativity Motion Space	percept see hear feel bio body health sexual ingest relativ motion space	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit, stop Arrive, car, go Down, in, thin	72 51 75 567 180 236 96 111 638 168 220	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68 .98/.51 .96/.41 .96/.44
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion Relativity Motion Space Time	percept see hear feel bio body health sexual ingest relativ motion	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit, stop Arrive, car, go	72 51 75 567 180 236 96 111 638 168	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68 .98/.51
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion Relativity Motion Space Time <b>Personal Concerns</b>	percept see hear feel bio body health sexual ingest relativ motion space time	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit, stop Arrive, car, go Down, in, thin End, until, season	72 51 75 567 180 236 96 111 638 168 220 239	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68 .98/.51 .96/.41 .96/.44 .94/.58
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion Relativity Motion Space Time <b>Personal Concerns</b> Work	percept see hear feel bio body health sexual ingest relativ motion space time work	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit, stop Arrive, car, go Down, in, thin End, until, season Job, majors, xerox	72 51 75 567 180 236 96 111 638 168 220 239 327	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68 .98/.51 .96/.41 .96/.44 .94/.58 .91/.69
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion Relativity Motion Space Time <b>Personal Concerns</b> Work Achievement	percept see hear feel bio body health sexual ingest relativ motion space time work achieve	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit, stop Arrive, car, go Down, in, thin End, until, season Job, majors, xerox Earn, hero, win	72 51 75 567 180 236 96 111 638 168 220 239 327 186	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68 .98/.51 .96/.41 .96/.44 .94/.58 .91/.69 .93/.37
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion Relativity Motion Space Time <b>Personal Concerns</b> Work	percept see hear feel bio body health sexual ingest relativ motion space time work	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit, stop Arrive, car, go Down, in, thin End, until, season Job, majors, xerox Earn, hero, win Cook, chat, movie	72 51 75 567 180 236 96 111 638 168 220 239 327 186 229	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68 .98/.51 .96/.41 .96/.44 .94/.58 .91/.69 .93/.37 .88/.50
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion Relativity Motion Space Time <b>Personal Concerns</b> Work Achievement Leisure	percept see hear feel bio body health sexual ingest relativ motion space time work achieve leisure	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit, stop Arrive, car, go Down, in, thin End, until, season Job, majors, xerox Earn, hero, win Cook, chat, movie Apartment, kitchen,	72 51 75 567 180 236 96 111 638 168 220 239 327 186	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68 .98/.51 .96/.41 .96/.44 .94/.58 .91/.69 .93/.37
Perceptual processes <sup>c</sup> See Hear Feel Biological processes Body Health Sexual Ingestion Relativity Motion Space Time <b>Personal Concerns</b> Work Achievement	percept see hear feel bio body health sexual ingest relativ motion space time work achieve	Observing, heard, feeling View, saw, seen Listen, hearing Feels, touch Eat, blood, pain Cheek, hands, spit Clinic, flu, pill Horny, love, incest Dish, eat, pizza Area, bend, exit, stop Arrive, car, go Down, in, thin End, until, season Job, majors, xerox Earn, hero, win Cook, chat, movie	72 51 75 567 180 236 96 111 638 168 220 239 327 186 229	.53	.90/.43 .89/.37 .88/.26 .95/.53 .93/.45 .85/.38 .69/.34 .86/.68 .98/.51 .96/.41 .96/.44 .94/.58 .91/.69 .93/.37 .88/.50

		Altar, church,	159	.91/.53
Religion	relig	mosque		
Death	death	Bury, coffin, kill	62	.86/.40
Spoken categories				
Assent	assent	Agree, OK, yes	30	.59/.41
Nonfluencies	nonflu	Er, hm, umm	8	.28/.23
		Blah, Imean,	9	.63/.18
Fillers	filler	youknow		

"Words in category" refers to the number of different dictionary words that make up the variable category; "Validity judges" reflect the simple correlations between judges' ratings of the category with the LIWC variable (from Pennebaker & Francis, 1996). "Alphas" refer to the Cronbach alphas for the internal reliability of the specific words within each category. The binary alphas are computed on the occurrence/non-occurrence of each dictionary word whereas the raw or uncorrected alphas are based on the percentage of use of each of the category words within the texts. All alphas were computed on a sample of 2800 randomly selected text files from our language corpus.

The LIWC dictionary generally arranges categories hierachically. For example, all pronouns are included in the overarching category of function words. The category of pronouns is the sum of personal and impersonal pronouns. There are some exceptions to the hierarchy rules:

<sup>a</sup> Common verbs are not included in the function word category. Similarly, common verbs (as opposed to auxiliary verbs) that are tagged by verb tense are included in the past, present, and future tense categories but not in the overall function word categories.

<sup>b</sup> Social processes include a large group of words (originally used in LIWC2001) that denote social processes, including all non-first-person-singular personal pronouns as well as verbs that suggest human interaction (talking, sharing).

<sup>c</sup> Perceptual processes include the entire dictionary of the Qualia category (which is a separate dictionary), which includes multiple sensory and perceptual dimensions associated with the five senses.

			APPENDIX G
Category	The Waves	incl	0.25
Seg	1	excl	7.21
WC	402	percept	1.99
WPS	25.12	see	7.71
Sixltr	13.68	hear	4.48
Dic	74.13	feel	0.25
Numerals	0	bio	2.99
funct	51.24	body	3.73
pronoun	4.48	health	1.24
ppron	1	sexual	0.75
i	0	ingest	0
we	0	relativ	1.74
you	0	motion	16.17
shehe	0.5	space	1.74
they	0.5	time	11.19
ipron	3.48	work	4.23
article	16.17	achieve	0
verb	5.97	leisure	0.25
auxverb	3.98	home	1.49
past	4.73	money	1.24
present	0.75	relig	0
future	0	death	0.25
adverb	1.24	assent	0
preps	14.18	nonfl	0
conj	9.45	filler	0
negate	0.25	Period	1
quant	1.99	Comma	3.98
number	1.49	Colon	4.73
swear	0	SemiC	0
social	1.49	QMark	0.75
family	0	Exclam	0
friend	0	Dash	0
humans	0.25	Quote	1.99
affect	0.75	Apostro	0
posemo	0	Parenth	0
negemo	0.5	OtherP	0
anx	0	AllPct	11.19
anger	0		
sad	0.5		
cogmech	11.94		
insight cause	1		
discrep	0.5		
tentat	1		
certain	1.74		
inhib	0.75		

## **APPENDIX H**

### **Optimism**

Optimistic Open mind Positive attitude Ability to find the good in people Take life in a good perspective Happy most of the time Happiness Joy Calm Patient Acceptance of others Great at following my dreams Turn a bad situation good

## Social

Energetic Bubbly personality Friendliness Outgoing Spontaneous Very social Personable Sociable Laid back Likeable Easy to get along with Fun to be around Have good friends Loval Ability to read people Get along with all groups Don't hold grudges Acceptance of others Good around other people Good leader Can communicate with every type of person

## Helping others

Compassion Kind Understanding Caring Empathy Nice Willingness to help others I think about my friends and family before myself Thoughtful Good listener Helpful Gentleman

## **Tangible (Positive)**

cook intelligent in math and science intelligent dancing creativity strategy athletic ability memory singing learning to swim reading build with legos tae kwon do baseball lego bricks football mental ability bright

#### Expectation

Polite Trustworthy Hard worker Honest Work ethic Determination Brave Ability to tell right and wrong Patience Think about what I say or do Ability to understand unfairness Do my best on projects Take good care of myself, brother and sister

# Miscellaneous Good

Confident Quiet Observant Active Creative

## Humor

Funny (sense of) Humor sarcasm make people laugh lightening the situation turn a bad situation good

#### **Tangible (Negative)**

My age Change my guinea pig's name Better at jokes Baseball My age Fighting with my brother Lack of skill at sports Weight Better at spelling and handwriting Bad sister Lack of social skills Chooses friends badly Not being able to wake up in the morning

# Expectation Violation

Bossy Stubborn Lying Selfish Procrastinate Laziness Work ethic Dishonest Mean Annoying

#### **Impulse Control**

Short tempered Be less confrontational Get frustrated easily Impatient How I deal with problems The way I react to things Getting annoved easily Impulse control Competitive Take out anger on people closest to me Talk too much about things I shouldn't Pick fights Aggressive Quickly can turn evil Temper Lack of attention Too loud Unfair Cheat Hot head Angry easily Temper towards family Talk too much Yell a lot Immaturity Not paying attention at all

#### Low Self-esteem

Letting people's opinions get to me too much Jealous Get down on myself easily Don't stick up for myself Self-conscious Awkward I think I can't do something when in reality I can if I work Low self esteem Nervous talking in front of groups Too hard on myself Scared Better sense of humor Be more outgoing Confidence Passive Cares too much what other people think Care less about physical appearance Lack of confidence Do not talk much Too reliant on people

#### Anxiety

Worrying too much Indecisive Perfectionist shy

## **Overly emotional**

Too sensitive Trust issues Emotional Dramatic

#### **APPENDIX I**

# Verbal Script for Study (2<sup>nd</sup> and 5<sup>th</sup> grade)

Hello. My name is Jessica, and I'm a senior at Bard College. I'm a literature and psychology major, and I'm very interested in developmental psychology, which studies the way people change over their life. At Bard we're asked to complete a long project during our senior year, and for my project I'm looking at the different types of answers students of all ages give when asked the same question.

Today you are going to be asked a question, given time to write a response, and then I will collect your answers. Even though writing a response will be helpful to me, what we're doing today is not required, and you are allowed to stop at any point.

I'm going to give everyone a piece of paper that has a question on it. Please keep the paper face down on your desk until I ask you to turn it over.

\*hand out papers\*

Does everyone have a paper? Does everyone have lined paper to write on? Does everyone have something to write with?

Before you turn over the paper, please write your full birthday on the back, including the month, the day and the year.

Once you have written your birthday, please write either "male" if you are a boy, or "female" if you are a girl.

Please do not write your name on the piece of paper

On the other side of this piece of paper is a question. In a moment we will all turn the paper over, I will read the question out loud, and then you will have 30 minutes to write your response to the question. I will let you know when it has been 15 minutes, which means that you will have 15 minutes more to finish writing. If you finish writing and have extra time, please sit quietly at your desk. Do not worry if you run out of time.

Whatever you write will be completely anonymous, which means that there is no way for anyone to find out who wrote what. Please be as honest as you can and remember that there is no right or wrong answer to the question. Don't worry about spelling – this is not a test! Again, please remember that if you would like to stop at any time, you are allowed to sit quietly at your desk.

Does anyone have any questions?

Ok, please turn over the piece of paper. The question says, "What do you think is your best personality quality? What is a quality that you'd like to change? Explain your

responses. Give two examples from your life – one for each answer – in which you demonstrated each quality."

Can someone tell me what a personality quality is? How is that different from a physical quality?

Does everyone know what the word "demonstrate" means? Does someone want to give us a definition?

Are there any more questions?

If there are no more questions then let's begin! I will let you know when 15 minutes have passed. If you finish early, please sit quietly at your desk until I collect your responses. Please be sure to answer all parts of the question. Thank you!

\*after 15 minutes\*

15 minutes have gone by, which means that you have 15 more minutes to complete your response. Please be sure to answer all parts of the question. Again, if you have already finished, please sit quietly at your desk until I collect your responses.

\*after 15 more minutes\*

Ok everyone, the 30 minutes are up. Please finish your sentence and turn your responses over. I'm going to hand out paper clips. Please make sure that all the pieces of paper that you wrote on are attached to the piece of paper that I handed out earlier.

\*hand out paper clips\*

\*collect responses\*

Thank you so much everyone! Now that you guys have helped me with my psychology study, let me explain a bit more about what I'm looking at. I'm asking students in 2<sup>nd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> grade this same question and collecting their responses just like I've collected yours. Then I'm going to take these answers and put them into a computer program that reads them very quickly and tells me what type of words each student or groups of students used. For example, if I take all the answers from your class, the computer program might tell me that half of you used words that talked about your feelings, and it might tell me that boys used more verbs and girls used more nouns. Then I'm going to compare all the answers that I get and see how children of different ages answer the same question, how boys or girls answer the same question or how different children of the same age answer the same question. It will take me a few months to go over all of the answers, but I would be happy to come back soon and let you guys know what I find.

Are there any last questions? Thank you very much for your participation!

#### Verbal Script for Study (8<sup>th</sup> and 11<sup>th</sup> grade)

Hello. My name is Jessica, and I'm a senior at Bard College. I'm a literature and psychology major, and I'm very interested in developmental psychology, which studies the way people change over their life. At Bard we're asked to complete a long project during our senior year, and for my project I'm looking at the different types of answers students of all ages give when asked the same question.

Today you are going to be asked a question, given time to write a response, and then I will collect your answers. Though these responses will help with my research, participation is not required and you are allowed to stop at any point.

I'm going to give everyone a piece of paper that has a question on it. Please keep the paper face down on your desk until I ask you to turn it over.

\*hand out papers\*

Does everyone have a paper? Does everyone have lined paper to write on? Does everyone have something to write with?

Before you turn over the paper, please write your full birthday on the back, including the month, the day and the year.

Once you have written your birthday, please write either "male" if you are a boy, or "female" if you are a girl.

Please do not write your name on the piece of paper

On the other side of this piece of paper is a question. In a moment we will all turn the paper over, I will read the question out loud, and then you will have 30 minutes to write your response to the question. I will let you know when it has been 15 minutes, which means that you will have 15 minutes more to finish writing. If you finish writing and have extra time, please sit quietly at your desk. Do not worry if you run out of time.

Whatever you write will be completely anonymous, which means that there is no way for anyone to find out who wrote what. Please be as honest as you can and remember that there is no right or wrong answer to the question. Don't worry about spelling – this is not a test! Again, please remember that if you would like to stop at any time, you are allowed to sit quietly at your desk.

Does anyone have any questions?

Ok, please turn over the piece of paper. The question says, "What do you think is your best personality quality? What is a quality that you'd like to change? Explain your responses. Give two examples from your life – one for each answer – in which you demonstrated each quality."

Are there any more questions? Please remember to write about a personality quality as opposed to a physical one. For example, writing about your amazing goalie skills would be a physical quality, whereas writing about your patience or humor would be a personality quality.

If there are no more questions then let's begin! I will let you know when 15 minutes have passed. If you finish early, please sit quietly at your desk until I collect your responses. Please be sure to answer all parts of the question. Thank you!

\*after 15 minutes\*

15 minutes have gone by, which means that you have 15 more minutes to complete your response. Please be sure to answer all parts of the question. Again, if you have already finished, please sit quietly at your desk until I collect your responses.

\*after 15 more minutes\*

Ok everyone, the 30 minutes are up. Please finish your sentence and turn your responses over. I'm going to hand out paper clips. Please make sure that all the pieces of paper that you wrote on are attached to the piece of paper that I handed out earlier.

\*hand out paper clips\*

\*collect responses\*

Thank you so much everyone! Now that you guys have helped me with my psychology study, let me explain a bit more about what I'm looking at. I'm asking students in  $2^{nd}$ ,  $5^{th}$ ,  $8^{th}$ , and  $11^{th}$  grade this same question and collecting their responses just like I've collected yours. Then I'm going to take these answers and put them into a computer program that processes text and organizes it into different categories, such as pronouns, verbs, "emotion words" like "happy", "angry", etc. The program then tells me what percentage of the text is made up of these categories. For example, the program might say that action words made up 20% of  $2^{nd}$  grade boys' responses, and emotion words made up 25% of  $5^{th}$  grade girls' responses. Because everyone is responding to the same question, I'm interested in comparing word use among ages as well as genders. I'm also going to be looking at the different types of words that people use when talking about a favorite quality of theirs vs. a quality of theirs that they'd like to change. It will take me a few months to go over all the data, but I would be happy to come back in a few months and share the results!

Are there any last questions? I will write my email address on the board incase anyone thinks of anything they'd like to ask, as well as the website that describes the computer program that I'm using. (j1517@bard.edu, http://www.liwc.net/)

Thank you very much for your participation!

Dear Parent/Guardian,

Thank you for allowing your child to participate in my senior project research. Today, XX/XX, I visited your child's classroom and conducted the writing prompt that I mentioned in a similar letter a few weeks earlier. Now that the data collection is complete, please let me further explain today's activity as well as the focus of my research.

In class I explained that I was going to ask a question, everyone would have 30 minutes to answer the question, and then I would collect the responses. I reminded the students that participation was not required and that their answers would be entirely anonymous. We then read the prompt out loud, answered any questions they had regarding the meaning of the prompt, and began writing. The written prompt that all students in my study - grades 2, 5, 8 and 11- is as follows; "What do you think is your best personality quality? What is a quality that you'd like to change? Explain your responses. Give two examples from your life – one for each answer – in which you demonstrated each quality."

By asking all students this open-ended yet specific set of questions, I am hoping to analyze a few aspects of child development, particularly the idea of self-image. I'm interested in the conflicting ways that students talk about things they are proud of (their best personality quality, a positive self-image) versus aspects of themselves that they are not as satisfied with (a negative self-image). Within this broad question of linguistic variation, I would like to more closely analyze the different word choices between girls and boys, as well as across ages. With the real life examples that I've asked students to give, I'm hoping to study the development of the understanding of emotions, of social relationships, of perspective taking, and of narrative construction. For example, if a student responds that his least favorite quality is that he is bossy, then he might describe a time in which he was bossy and upset a peer (demonstrating an understanding of emotions, social relationships, perspective taking, narrative construction).

Once I have collected data from all the classrooms, I will be inputting the written work into a language processing program called Linguistic Inquiry and Word Count (<u>www.LIWC.net</u> if you'd like to learn more). This program organizes large blocks of text into 82 different linguistic categories, such as first-person singular pronouns, positive emotion words, action words, etc. By analyzing the percentage of types of words used in each group (girls vs. boys, 3<sup>rd</sup> graders vs. 8<sup>th</sup> graders, 5<sup>th</sup> grade girls vs. 11<sup>th</sup> grade girls, etc), I'm hoping to draw preliminary conclusions about the development of childhood and adolescent self-image.

Thank you again very, very much for you and your child's cooperation and participation. Please do not hesitate to contact me with any questions or comments.

Sincerely, Jessica Lebovits J1517@bard.edu

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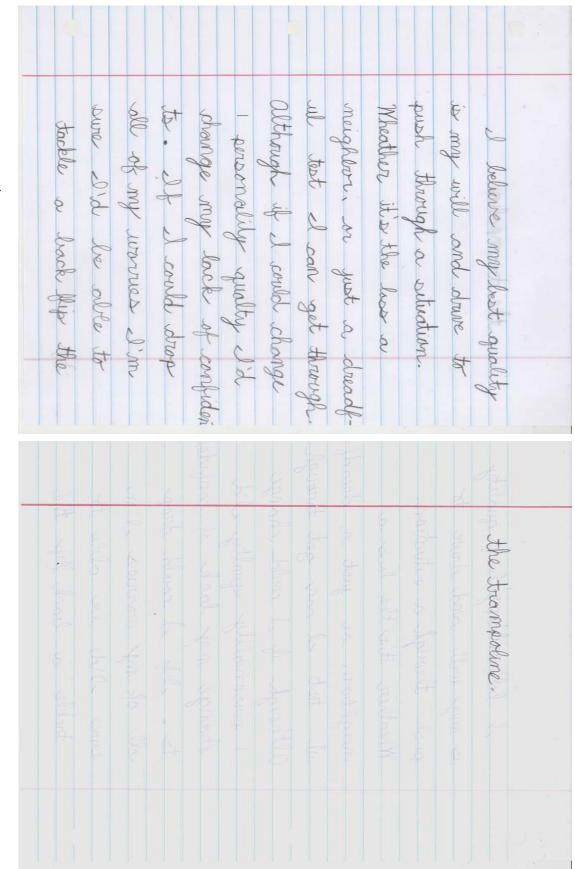
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Female, 7 years 9 months, 2<sup>nd</sup> grade

Male, 8 years 1 month, 2<sup>nd</sup> grade

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**APPENDIX K** 



Female, 10 years 6 months, 5<sup>th</sup> grade

I thirk my best personality guild the first he should so that so there, he had so the southers, and so get the southers are when I have been formed to subtry the southers are when I have been been been been been been been be												
time he tried to Prink the entrance, and the got really, really needly, REALLY, and may yelled at me	many pinneapples do you have on top??!" Every	the dish they were serving and I yelled "How	my dad uses talking about some cooking show and	when to styp being Faminy. An example is once,	A quality I want to change is not knowing	of amunichin!!!" really land and everybedy laughed	pap gun, I cried out "OH NO! Peter your out	the part when Peter shots the wolf with his	we were watching "Peter and the wolf". At	was in music class and we had be subistute and	is being furing. One example was when I	
	4											

Male, 11 years 1 month, 5<sup>th</sup> grade

A Guy: Personality. Its what defines us. Without it we would all be the same and has a larger and the the and has a larger and the to add same defit to this within Pere. In terms of my best Rersonality trait its index that I don't hold gnadses. Not to say I don't get thad at the offends it is not stay med of them offends me, I'll get to for a personality that is to for a personality that that the in what beoffer that
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Male, 13 years 6 months, 8<sup>th</sup> grade

I believe that my best personality quality is my loyality. Listick by people, and Laon't go behind their backs. Once, when L was in elementary scheel, in 4th or 5th grades, one of my Griends Vept on getting pieced on We were all situ pretty yourg, but people were already beginning to disize fields who weren't as pretty in popular as them. I gress you could say had been too, but all of a sudden everyons hated her. She started crying when no are usouted tall to her ord, she weren't as pretty field being to work all of a sudden everyons hated her. She started crying when no are usouted tall to her ord, she weren't as friends sold if i work after her have my friends weekit. A quality I would like to charge is the way I don't thust people easily. My group of friends, with this exception of a rew people, are always stabling each enter in the back, which has led me that the girl didn't like the her i was beauting close with another girl. My best friend lean trast, here you about me behind my back. I friend the girl herited about me behind my back. I friend the girl herited about me behind my back. I friend the girl
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# Female, 13 years 9 months, 8th grade

most of it is because I have A.D.D. but I don't like to think of it as ADD, I like to think of it as having a mind thats much more complex than other People's. One example of me talking too much is fight now in this essay.	nothing. For example there was this kid F linew and I cavid make him laugh just by saying Auddin' (it work on loss of have), one quality that I would like to chang about myself is that I taik way to much and the time for no reason and I don't know why. I've gotten pretty good at remembering to stop taking. I think that	I think that my best personality quality is that I'm pretty Quany. I ensuy making Realle laugh and I'm really good at it, I scan make someone laugh by Joing almost

Male, 13 years 9 months, 8<sup>th</sup> grade

Contraction of the local distance	wiend but 1	" wasn't such a youd Friend, and	want anyone to ever move to go through that. Back then	the authors I was cleaning, but I did	the been in that position, the	that best fixed i can lat to	I am most proud of and stri	spirts and to see tracin happy. Honestry tracts the quality	any fitterds, i'm an amoreiry for	sport tailwhy to, Also I would have to say my love	quality is my suppress I goess it would that a white	conformate around so although twould shy my pest personality	perfect the way I am, the although a little shy, ifeel campletely	and allows me to be myself, if shows me that I am	thates another guy lets call him Blake, Blake is succe	1 accept myself for who I am	Supert girt who were very awknewd, to a quite lovely individual	That's when I brake dut of my shell", I went from the	learned that I can't make ex	I learned many	he honesty made me this w	this guy lets call min Ryan, we dated for abit and	making people laugh and making their hoppy. There was	vau	a 160 very outgoing. Yes at times	a positive work on myself and we would, and I am	a mappy characterize person, Because of this I have	I take life	I would say my best	
	veryda	and in not saying in the	go through that. Back then	I was cleaver, but I dight many that and I don't	position, live wanted a friend trave for	to servicionic in meet, believe	and shave for every days to be	by. Honestly trats the quality	Priend. I am there to lift peoples	have to say my lave for	1 gue 55 it would clearly on who	I would shy my best personality	nough a little shar i feel completely	the shows me that I am	ninn Blake, Blake is succer	accept myself for who I and, which malkes are so outgoing	and, to a quite ravely individual.	viry shell", I went from the	I can't make everyone happy so why try.	ming. Mest importantly 1	way, Although our relationship	we dated for abit and	my mean reapy. There was	L	at times I can be shy	and the world, and I am	on, Because of this I have	in a good prospectice, I am always	best personality quality	

Female, 16 years 11 months, 11th grade

	0
T believe my best quality is lightening the situation. When people begin to be stressed at over whethered of angly the best thing to do is keep a positive attude and the is lighten the situation, the change the other the situation, whether state of name in a upbeat positive stressed out, use human even pady is stressed out, use human even pady is improve on it may work ethic. I concentration and ethant that t is not into my work. An example used be nucling that that t availed be nucling that that t availed be nucling that that t availed be nucling that the the stressed out is not the analytic the shall be nucling that the stress is a stressed out, used the the stressed out is not the analytic the stressed out is not the analytic the stressed out is not the analytic the stressed out is not the stress the stressed out is not the stressed out is stressed out is not in the stressed out is stressed out is not interval is the stressed out is stressed out is not the stressed out is stressed out is not is the stressed out is stressed out is not interval is the stressed out is stressed out is not interval is not is stressed out is not is not is not is not is stressed out is not is not is not is not is not is not is stressed out is not is not is not is not is not is not is stressed out is not is not is not is not is not is stressed out is not is not is not is not is not is not is	

Male, 16 years 10 months, 11th grade

# APPENDIX L



Female, 7 years 7 months, 2<sup>nd</sup> grade Portrait of the Experimenter

00 B.J. Non He

Male, 8 years 1 month, 2<sup>nd</sup> grade Subject Unclear.

## **APPENDIX M**

Self-actualization	morality, creativity, spontaneity, problem solving, lack of prejudice, acceptance of facts
Esteem	self-esteem, confidence, achievement, respect of others, respect by others
Love/belonging	friendship, family, sexual intimacy
Safety	security of: body, employment, resources, morality, the family, health, property
Physiological bre	athing, food, water, sex, sleep, homeostasis, excretion

Figure 1: Maslow's Hierarchy of Needs

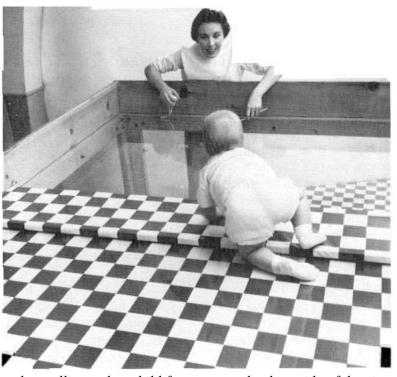


Figure 2: A mother calling to her child from across the deep side of the visual cliff.