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Words of Change: How Linguistic Shifts Over the Course of a Short-Term Exposure Therapy Represent Movement Towards Psychological Health

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WORDS OF CHANGE: HOW LINGUISTIC SHIFTS OVER THE COURSE OF A SHORT-TERM EXPOSURE THERAPY REPRESENT MOVEMENT TOWARDS PSYCHOLOGICAL HEALTH

by

Zachary Aaron Kahn

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy

The City University of New York

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This manuscript has been read and accepted for the Graduate Faculty in Psychology
in satisfaction of the dissertation requirement for the degree of Doctor of
Philosophy

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ABSTRACT

Words of Change: How Linguistic Shifts Over the Course of a Short-Term Exposure Therapy Represent Movement Towards Psychological Health

by

Zachary Aaron Kahn

Advisor: Denise Hien, Ph.D.

Exposure therapy is currently considered the “gold standard” in treating posttraumatic stress disorder (PTSD). Though exposure therapy has been increasingly used and studied as an intervention for PTSD in recent years, little is known about the mechanisms of change in this type of treatment. The Trauma and Addiction Project at the City College of New York ran a clinical research trial for individuals with co-morbid PTSD and Substance Use Disorders (SUDs). Participants randomized into the experimental group, Concurrent Treatment with Prolonged Exposure (COPE), participated in a twelve-session therapeutic intervention that combined exposure therapy focused on the participant’s primary trauma with relapse prevention techniques. This dissertation extends the research on the mechanisms of change in exposure therapy for PTSD by applying a computerized linguistic analysis program (DAAP), which measures components of the referential process (Bucci, 1997), to the COPE Imaginal Exposures of two demographically matched participants, one treatment responder and one treatment non-responder.

This investigation set out to examine the relationship between Bucci’s referential process theory, the language participants use in their Imaginal Exposure
narratives, and treatment outcome in an exposure therapy for co-morbid PTSD and SUD. The predictions included: 1) referential activity in the participants’ Imaginal Exposures will increase over the course of the intervention; 2) an increase in referential activity scores will be associated with a decrease in substance use and cravings, posttraumatic stress, and dissociative symptomatology; and 3) the COPE treatment responder will have higher referential activity scores in his Imaginal Exposure narratives than the treatment non-responder.

Results showed: 1) an increase in narrative immersion over the course of the Imaginal Exposures for the treatment responder; 2) that the increase in narrative immersion occurred alongside improvements in posttraumatic stress and substance use symptom severity in the treatment responder; and 3) the mean referential activity scores in the Imaginal Exposures for the treatment responder were significantly higher (at a 95% Confidence Interval) than those of the treatment non-responder.

These findings have implications with regard to the nature of exposure therapy for co-morbid PTSD and SUD, and the relationship between the language a participant uses to describe their primary traumas and their progression towards health.

Keywords: PTSD, exposure therapy, referential process, linguistic analysis.
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It’s taken a village, or at least the City community to raise me into a psychologist. I didn’t know it then, but when I first climbed the stairs to the eighth floor of the NAC, beyond those funky orange walls I would find a group of peers who would inspire me to think, connect, and push myself in ways I could have only hoped to accomplish.

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The process of turning an idea a dissertation was in many ways a team effort. My thanks to Jesse Barton, Anna Gurgenidze, and Ron Nicholson for their hard-
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Chapter One: Review of the Literature

Preface

To support the power of simple, clear, no-nonsense language, I would like to cite an essay written by Adam Gopnik in the *New Yorker*. Gopnik's piece is a response to seeing Richard Martinez bravely speak about the American culture of guns and violence, following the senseless murder of his twenty year-old son in the UC-Santa Barbara killings of May 23, 2014.

The war against euphemism and cliché matters not because we can guarantee that eliminating them will help us speak nothing but the truth but, rather, because eliminating them from our language is an act of courage that helps us get just a little closer to the truth. Clear speech takes courage. Every time we tell the truth about a subject that attracts a lot of lies, we advance the sanity of the nation. Plain speech matters because when we speak clearly we are more likely to speak truth than when we retreat into slogan and euphemism; avoiding euphemism takes courage because it almost always points plainly to responsibility. To say 'torture' instead of 'enhanced interrogation' is hard, because it means that someone we placed in power was a torturer. That's a hard truth and a brutal responsibility to accept. But it's so.

- Gopnik, *The New Yorker, May 25, 2014*

Though my project is based upon studying individuals' use of language in relation to their own personal truths, Gopnik's reflection on the importance of the clarity of language and truth as a national crisis echoes the driving theory behind Wilma Bucci's system and my research. In the web of false truths, we attempt to soften hard blows and unacceptable facts, but there they remain, lingering and metastasizing; euphemisms are not digestible.
Origins

One of the most fundamental tenets of psychotherapy rests upon the concept that the use of language can be transformative. Physical and psychological health is tied to the richness of one's ability to construct a narrative and to use symbolic language (Bucci, 1997; Pennebaker & Graybeal, 2001). Verbal language is the medium of psychotherapy. The act of telling one’s own story, often a story that has never before been told, has an immense therapeutic value. From the clinician’s vantage point, it must be remembered that the construction of one’s linguistic canon is a developmental task; in a healthy childhood, new words with new meanings are continuously being discovered, and that learning process shifts and continues throughout the lifespan. In infancy, the development of verbal language gives room for significant movement towards both independence and towards connecting with others (Stern, 1985). Yet, a complete vocabulary can never be fully reached because some feelings and experiences are wordless. Wordlessness can rest upon development, lexicon, and environment; what is spoken or not spoken is a confluence of those three factors.

Traumatic experiences are often left unspoken. The affects and experiences of trauma are therefore not heard. Following the incident itself, the feelings associated with the trauma that come in the subsequent minutes, hours, days, weeks, months and years can evoke shame, fear, guilt, horror, and numbness. The pairing of feeling with experience is often unshared and unmetabolized, existing in residual; it’s laughed off, it’s drunk away, it’s smoked into nonexistence. It’s kept locked up in that dark corner that no one talks about, but nonetheless seeps into the
rest of the house. Maybe there are words for those feelings and experiences. Maybe there are not. And, maybe there could be words, but they have not yet been (and in some cases, cannot be) found.

In many cases, the memories of the trauma remain intact – in fact, many survivors of trauma can recall their traumatic experiences with a concrete exactness (van der Kolk, van der Hart, Marmar, 1996). Yet, the feelings associated with trauma, the immense feelings that no one wants to feel, do not remain as they once did. These are feelings without words. For words cannot necessarily capture the enormity. Shengold describes childhood trauma as the experience of, “too much too muchness” (Shengold, 1989). When intense child trauma is the root of mental illness in adulthood, oftentimes both the affect and the memory exist, but are not speaking to one another (Fraiberg, Adelson, and Shapiro, 1975). Before going forward, the word “trauma,” must be defined. This word can be casually used in everyday language, but that is dangerous and misleading; the actual meaning of trauma is a precise one: an acute intrusive experience that overwhelms the body and mind causing both an inability to integrate that experience psychologically, and such stress that one’s life is (at least temporarily) reorganized around the experience itself. Following a trauma, especially when traumas are repeatedly inflicted (and of course depending on the severity and a myriad of factors of risk and resiliency), affect is often cut-off from memory. Some experiences are so upsetting that they cannot be integrated into one’s experience of self; some experiences and the feelings that they stir up are so unthinkable that to keep them in mind is to psychologically disintegrate. In this way, dissociation is adaptive. For without this
ability to remove oneself from the unthinkable (and unspeakable), the traumatized individual becomes vulnerable to psychic annihilation (Davies & Frawley, 1994). As a result, the traumatized often has a narrative of their experience, but the integration of memory and affect in that narrative is lacking.

The first chapter will begin with a description of the clinical research project that serves as the basis of this work. One of the foci of both the research project and my dissertation is the therapeutic value of a 12-session exposure therapy treatment for participants who meet criteria for Post Traumatic Stress Disorder and a past or current substance use disorder. As my research question hinges on attempting to capture the ability to tolerate, express, and remember traumatic experiences through language, this chapter will have short sections devoted to the meaning of trauma, how language and verbalization is conceptualized from a psychological perspective, the function and mechanisms behind exposure therapy, how trauma and language impact one another, and the relationship between problematic substance use and trauma. These brief reviews will lead me to the following question: is the ability to verbalize symbolic and affective language in relation to trauma one of the primary mechanisms of change in achieving psychological health? I will conclude the chapter by positing the questions that drive my research and the hypotheses I seek to evaluate.

**The Treatment**

Before reading a literature review that addresses the background for a study based on a linguistic analysis of the psychological changes that occur over the
experience of an exposure therapy, it is first necessary to briefly explain the intervention, though it will be elaborated in great detail in Chapter Two.

Half the participants who fit criteria to participate in this clinical research treatment for individuals with comorbid PTSD and substance use disorders (SUDs) are randomly assigned to the Concurrent Treatment with Prolonged Exposure (COPE) condition, a treatment which combines relapse prevention strategies with exposure therapy for trauma-related symptomatology. In this twelve-session treatment, participants engage in Imaginal Exposures during sessions five through eleven. The Imaginal Exposure is an evocative experience: participants are asked to close their eyes and speak in the first-person present-tense as they recall the most intrusive traumatic event of their lives, the event that most often pops into their minds which has continued to cause the most distress. Participants are instructed to give their narrative three distinct temporal points: a beginning, a middle, and an end. Before starting, participants are reminded that the therapy room is a safe place; the clinician will do them no harm. The clinician will sit with ill feelings, making room to discuss the feelings that telling this untold narrative stir up; there is an attempt to create a “safe space” where danger used to live. The experience and the memory of the trauma are deeply associated with fear (Solomon, Laor, & McFarlane, 1996), a primary focal region associated with the PTSD reaction\(^1\) to trauma, so it is therefore vital that the therapy space itself be experienced as “a safe

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\(^1\) Post Traumatic Stress Disorder is a cluster of symptoms that can derive from exposure to a traumatic event. One of the core elements of PTSD is an unhinging of the fear center as a direct result of the traumatic experience(s). PTSD is not the only psychological or physiological response of being exposed to a terrifying and upsetting event. It is but one of many possible psychological responses.
space,” in order to allow for new associations and feelings to be had during the telling (and in the time before and after) of one’s trauma narrative. Participants are told a version of the following analogy as a representation of the clinical purpose of the exposure therapy:

The traumatic event is a book that has already been written, and when you begin to read it, you are so terrified, disgusted and angered that you put the book down and don’t finish reading it. Instead, you avoid the book. You never read it in its entirety, so it just fester there. So, our task is to read the book together. Our task is to acknowledge that the event itself was traumatic, but the book itself, the narrative now, is not.

- Dr. Teresa Lopez-Castro (with subject 1564, COPE Session 5, First IE, 5/30/13.)

There is a hope that in being able to give words to this narrative, there will be a shift in both the language used to describe the experience as well as the feelings that are evoked by memory.

The following question is raised: does a shift in the language one uses to describe a traumatic event mediate a shift in that person's feeling states? Or, might it be the other way: that, a shift in feeling states enables a shift in linguistic expression. This question needs to be considered with regards to Bucci’s postulation of the directional movement from nonverbal to verbal versus verbal to nonverbal systems (Bucci, 1997). The directionality will be considered as a critical question that will be explored over the course of this study, but beyond directionality, I hope to prove an association between how an experience is spoken, with how that experience shapes one’s psychological health.

Verbal Expression
The development of language is a critical process. Language serves as one of the main pathways in learning and socialization. It is through language that one develops the capacity to communicate inner experience outward. As such, the acquisition of language is a vital part of ego development as it involves a binding of primary and secondary processing (Freud, 1900). The capacity to use words to convey experience, wishes, and needs is a remarkable ability; it opens the door for others to hear, experience and attend to aspects of one’s inner self that would otherwise go unattended. Freud understood language to be the mechanism that bridged drives and physical energies into a more complex psychological organization, one that could be shared with others in ways that allow for complexity and nuance that are beyond what is capable in purely physical manifestations (Freud, 1915). In the fields of psychotherapy and psychoanalysis, it has long been believed that when thing-presentations, which are wordless and physically-derived, become cathected into word-presentations, it represents a higher level of psychological organization which can be better understood by others (Freud, 1915; Laplanche and Pontalis, 1973; Loewald, 1980; Wachtel, 1997).

Where does the ability to put thoughts into words come from? Why is it important? And how is the ability to put nonverbal experiences and feelings into verbal expression a marker of psychological attributes? To attempt to answer these complicated questions, it's necessary to start at the beginning of verbal language, in early childhood. Much of the theoretical basis for Wilma Bucci’s conceptualization of the subsymbolic, symbolic nonverbal, and symbolic verbal systems derives from developmental psychology (1997). It is necessary to review the thinkers who
helped conceptualize where verbal language comes from (on a psychological, interpersonal, and developmental level) in order to begin to understand how studying language use in adults can give the psychological community a rich and nuanced clinical picture of pathology and health.

In infancy, the baby’s capacity to verbally articulate himself marks a major step in the path towards psychic individuation from the caregiver. Mahler, Pine, and Bergman (1975) argue that in addition to allowing for a new mode of play, in which make-believe and fantasy play now has aims towards constructive goals, verbal expression also brings about a degree of agency and a sense of time that was not previously manifest. Verbal expression gives the infant an interpersonal motility that was not previously accessible; there now exists a profound tool with which to shape one’s own experience of both self and other. Suddenly, there is a way for feelings, needs, and wishes to be expressed and heard; language allows for a medium between thoughts and words, changing the experience of self in relation to both experience and other.

Vygotsky understood the relationship between verbal expression and thoughts as, “not a thing, but a process, a continual movement back and forth from thought to word and from word to thought” (1962, p. 125). Hence, verbal expression grants the developing child the ability to make meaning of their thoughts. Vygotsky (1978) believed that language serves as the guide to behavior for children, and he conceptualized language as a cornerstone in the development towards an integration between thoughts, relationships, and behavior. He writes, “When speech is moved to the starting point of an activity, a new relation between
word and action emerges. Now speech guides, determines, and dominates the course of action” (p. 28, 1978). This meaning making is something that shapes the speaker’s experience, but also the experience of people who hear the speaker’s words; there is a dynamic interaction between one’s use of words, and their individual and interpersonal environment.

While language has traditionally been seen as a vital aspect in the development of individuation from the caregiver, Stern stresses how it is just as critical in terms of allowing connectedness with others (1985). He writes that, “The acquisition of language is potent in the service of union and togetherness. In fact, every word learned is the by-product of uniting two mentalities in a common symbol system, a forging of shared meaning” (p. 172). This is something that changes one’s experience of the world; learning to put one’s inner experience into words allows a being with others that enables a richer way of being. To explain further, putting experiences into words brings about the internalization of that experience (Stern, 1985), making it one’s own. Ego psychologists Hartmann (1964) and Loewenstein (1956) found that the use of language crystalizes psychic energy, such that as the capacity for speech develops, behavioral acting out diminishes. As many a parent has instructed their child, if you “use your words,” you may not have to use your fists.

Werner and Kaplan (1963) derived a developmental linguistic theory that accounts for individual differences along a developmental and emotional continuum. Influenced by Anna Freud’s work on developmental lines (1965), Werner and Kaplan postulate that linguistic ability hinges on the child’s multilinear
development; mirroring how a child will experience varying strengths and weaknesses across different skill sets, the acquisition of speech and language is flexible. It is vulnerable to regression if the child experiences stress, and open to growth in times of nurturance.

In learning speech and language, Werner and Kaplan (1963) focus on symbolic representation as a critical developmental process which gives the child the ability to recognize self and other and have greater agency over how he shapes his experience with the outside world. Being able to use symbolic representation in speech denotes health in one’s ability to construct a relationship between abstract concepts and concrete examples. Prior to developing this crucial skill, there is a pervasive permanency of experience, a stuckness that inhibits psychological growth.

Werner and Kaplan (1963) argue that the use of symbolism is an outgrowth of one’s object relations. Early merger between the child, parent, and environment allows for sensorsimotor development in such a way that the child begins to derive a greater capacity to influence the environment around him through language. Werner and Kaplan call this achievement the “orthogenetic principle,” and it comes from the gradual internalization of sensorsimotor patterns in context to learning affectual responses to those patterns from both the child himself, and his parent’s responses. In turn, the child comes to understand language as a way to communicate emotion and experience so that he can be heard by his caregivers, and his needs can be met.
So, how can this knowledge of language be operationalized into psychotherapy research? Many years ago, addressing the American Psychological Association, Carl Rogers asked the same question, saying:

Verbal expressions of inner dynamics are preserved by electrical recording makes possible a detailed analysis of a sort not heretofore possible. Recording has given us a microscope by which we may examine at leisure, and in minute detail, almost every aspect of what was, in its occurrence, a fleeting moment impossible of accurate observation.
- Carl Rogers, 1947

Psychologists have been addressing this dilemma and opportunity since Rogers. It was not until Wilma Bucci developed the multiple code theory, that Rogers’s hopes could be put into action.

In health, language is one of the primary landscapes through which sensory modalities can be ingested, understood, and communicated onto others. In Bucci’s model, three different systems work together to take in and make sense of the experienced world: these are called the subsymbolic, the symbolic nonverbal, and the symbolic verbal codes (Bucci, 2007). She posits a multiple code theory to explain how emotions are experienced on both inner and verbalized dimensions (Bucci, 1997). The verbal system is a logical and conceptual means of sharing language with others. The nonverbal system codes sensory images. The ability to name and identify feelings and experiences, and to communicate those feelings and experiences to others is dependent on how the images encoded in the nonverbal system are translated onto the verbal system. That “translation” is what Wilma Bucci calls the “Referential Process.” This Referential Process is bidirectional, in

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2 The reference to Rogers address to the American Psychological Association was originally derived from Wilma Bucci and Bernie Maskit’s Referential Activity Seminar, held at Adelphi University on May 15, 2014.
that information is translated both from nonverbal to verbal and verbal to nonverbal (Bucci, 1997). In other words, the Referential Process is concerned with how things go from the mind level to the verbal level.

In more specific terms, the Referential Process is captured by what Bucci and Maskit call “Referential Activity” or RA (Bucci, 1997). Bucci argues that RA reflects the degree to which people are capable of accessing the links (or lack thereof) between their verbal and nonverbal systems. For Bucci and Maskit, the more one’s language has clarity, specificity, concreteness and richness of imagery, the higher it is scored on the RA scale (Bucci, 1997). In Referential Activity, these linguistic attributes are defined in the following manner: specificity is the quantity of detail, imagery is the degree to which language evokes imagery, clarity is the organization of focus of language, and concreteness is the degree of reference to sensory and other bodily experiences (Bucci & Maskit, 2005).

Wilma Bucci believes that each person experiences degrees of “disjunction between subsymbolic and symbolic processing formats” (dissociation), but when there has been trauma which has dislodged and continues to imbalance psychic equilibrium, “these inherent dissociations are exacerbated and transformed in particular ways” (Bucci, p. 171, 2007). One loses the ability to find symbolic representation between abstraction and concreteness. There can be clarity of experience, but that clarity is often rigidly fixed – the capacity to take in one’s whole experience of time and space is compromised, as particularly vivid sensorsimotor experiences dominate one’s information processing. Trauma causes a severing of the connection between the different information systems. This severance is what
is called dissociation, and when the means of going through the world is done by severing connections between body and mind in a chronic fashion, clinicians would expect significant impacts in both physical and psychological functioning. Most of the participants who have been treated in COPE have experienced chronic trauma, forcing the utilization of dissociative defenses from an early age (this will be further explored in the Trauma section).

The Referential Process can be coded using a computer analysis system, and this system has been applied to psychotherapy treatment as a means of determining the quality of the relationship between a person’s narrative and their emotional experience (Kingsley, 2010). Though Bucci has written on the subject of trauma’s impact on the translation between the symbolic and subsymbolic systems (2007), and Davies and Frawley (1994), Shengold (1989), and van der Kolk, McFarlane, and Weisaeth (1996) have written on the impact of trauma on language systems, [and the underlying psychic mechanisms of exposure therapy], there has yet to be a study which analyzes how an exposure therapy treatment on people who meet criteria for PTSD and a past or current substance dependence will impact the change in those subject’s referential activity. It is hypothesized that trauma has caused a rupture between time, feelings, experience and fear which has manifest in both the symptom cluster that forms PTSD and the individual’s ability to verbalize experience. By telling and re-telling this unspeakable story in a therapeutic environment, participants who benefit from the treatment will experience an integration of parts of their experience and self that have been existing in split off spaces (Bromberg, 1998). Thus, the exposure therapy may allow the distance between split off spaces
to lessen, and Bucci’s Referential Activity system can capture that psychological shift in real time.

Carl Rogers’ goal of analyzing the language of psychotherapy is realized in the way the Referential Process can be mechanized electronically. In relation to using this system for the purposes of my research, the Discourse Attributes Analysis Program (DAAP), a computerized text-analysis program, developed by Maskit (Maskit, 2014), will capture how connections between the subsymbolic nonverbal and verbal systems develop over the course of the Imaginal Exposures. With regards to dissociation as a linguistic symptom of trauma, the following question should be asked: will telling and re-telling of this traumatic experience in this therapeutic environment allow for the severance between different processing systems to be healed? And, can DAAP capture this change?

In order to get a richer sense of how Bucci’s multiple code theory works, below is an excerpt from her book (1997), which gives an example of high and low RA:

High RA—active and direct connections between imagery and words—is reflected in language that captures a quality of immediacy in the speaker’s representations and that is likely to evoke vivid, specific, and immediate experience in the listener as well, as in the following example:

‘I can’t stand fruit with bad spots in it. It gives me the creeps. So I picked up that pineapple and it looked so nice, and then my finger went right through inside it, into this brown, slimy, mushy stuff, and my stomach just turned over.’

In contrast, low RA language is general, abstract, and vague. The speaker appears not to be connecting to his own experience and fails to connect to the listener:

‘I can’t really think of too many times when he forced me to do something when I didn’t want to. I mean, there’s a lot of times he
didn’t do stuff that I wanted him to do. The other way around. He was...
if I didn’t understand something, he would tell me what was going on, stuff like that.’


There is a powerful relationship between RA level and dissociative defenses, an indicator of psychological health (Bucci, 2007). Bucci’s model for Referential Activity derives from four fundamental tenets of written and spoken language as described in Shrunk & White’s The Elements of Style: Concreteness, Clarity, Specificity and Imagery (www.thereferentialprocess.org).

Bucci’s multiple code theory is a method to evaluate the psychological nuance of language in such a way as Rogers imagined possible all the way back in 1947. This system breaks language down into generality, specificity, and imagery. Descriptive details which determine the quality of specific feelings and behaviors, are captured on tape and analyzed by the DAAP program. The connection between the three dynamically interacting systems operating in the mind, the subsymbolic codes, symbolic linguistic codes, and symbolic verbal codes, which were earlier described, is the basis of the referential process. It has been shown that emotionally rich language does not depend on directly naming feeling states, but rather by being able to be clear and descriptive in speech (Mergenthaler and Bucci, 1993). Mergenthaler and Bucci (1993) elaborate on how the heart of multiple code theory lies within this specificity; truly emotional language evokes emotion in the listener:

The major way in which people – writers, poets, and psychotherapy patients alike – verbalize inner experience is through the telling of specific images and episodes, rather than through direct naming of an emotion. The royal road to emotional expression is not the simple statement that one felt angry, sad or happy, but a narrative description of what happened, when, where, and with whom one felt that way” (p. 4).
This description of multiple code theory resonates with the fundamental tenets of the Adult Attachment Interview (Hesse & Main, 2000). In Main’s interview to assess quality of attachment, she has found that adults with secure attachment use speech that “is strikingly fresh and original” (p. 1079) and has a coherent structure, whereas insecurely attached adults have language marked by vagueness and contradictory facts. Like Gopnik’s ideal, clear and specific language indicates both transparency and health.

Bucci’s multiple code theory, which is the idea behind the referential process, is a way of capturing how well a human being can translate the channeling between their nonverbal and verbal representational systems. This description begs a few questions.

Namely, what makes an integrated self? Further, what is the relationship between an integrated self and the language a person uses? Therefore, can RA serve as a linguistic representation of an integrated self? In other words, can the RA methodology serve as a medium to capture the divergent connections between nonverbal and verbal representational systems that have been exacerbated by trauma? And if so, can the RA methodology assess change in how an individual moves towards integrating disparate channels within the dynamically interacting system of nonverbal and verbal codes? Can DAAP perform an analysis that determines change over the course of thirty to forty Imaginal Exposures?

These are important questions with regard to my project. They will be addressed across the course of this research. But, what theoretical push led to those questions being asked in the first place? Interestingly, in a chapter on linguistic
development in infancy, Daniel Stern (1985) bridges to the transformative power that lies in being able to create a narrative of one’s own. He writes:

The advent of language ultimately brings about the ability to narrate one’s own life story with all the potential that holds for changing how one views oneself. The making of a narrative is not the same as any other kind of thinking or talking. It appears to involve a different mode of thought from problem solving or pure description. It involves thinking in terms of persons who act as agents with intentions and goals that unfold in some causal sequence with a beginning, middle, and end. (Narrative-making may prove to be a universal human phenomenon reflecting the design of the human mind.) (1985, p. 174)

As in the Imaginal Exposures, Stern notes that a verbal narrative is told with a beginning, a middle, and an end; narrative-making is the practice of putting together parts of one’s own experience. Following severe trauma(s), the experience of time can be disjointed (van der Hart & Steele, 1997). Part of the healing process of telling one’s narrative in such a way is in the reintegration of time and space.

Wilma Bucci has shown that adaptive functioning can be captured in the coordination a subject displays between the subsymbolic and symbolic systems as measured in the Referential Process (2007). According to Bucci, the main organizing structure behind an individual’s connectivity between processing systems are emotion schemas (2007). Similar to a conceptualization of object relations, Bucci (2007) defines emotion schemas as:

The fundamental organizing systems of human life...[they] are built through registration in memory of specific episodes of one’s life. They represent the characteristic form of one’s interactions with other people from the beginning of life. Interactions with caretakers play a central role in these constructions...emotion schemas, like all memory schemas, are active and constructive processes, not passive storage receptacles. →p. 172

Emotion schemas are alive and malleable; they are subject to change when individuals are exposed to new experiences and interactions. In social and
emotional isolation, emotion schemas stay rigid; one’s way of connecting affective
states with expressed language becomes fixed, and one’s affective experience
remains static. My research intends to demonstrate that over the course of telling
and retelling one’s traumatic experience in the Imaginal Exposures, while verbally
connecting the feelings evoked by that experience to one’s level of anxiety, we will
see a shift towards integration of emotion schemas, as determined by the subject’s
Referential Process scores.

**Trauma and Language**

In the same vein as dissociation, repression can interfere with clarity of
thinking, which inhibits higher mental processes (Wachtel, 1997). Wachtel writes of
the harmful impact that repressing thoughts and memories can make:

The individual unable to think and verbalize things of importance in his life,
is deprived of the opportunities language and thought provide for making
fine distinctions and for categorizing and conceptualizing in complex ways
that go beyond immediate stimulus properties. Socially sophisticated
equivalencies require language to represent them and are interfered with
when there are inhibitions of language and thought. Further, words and
thoughts are essential to a great deal of our planning and problem-solving
and, by enabling us to represent past and future events, they free us from the
control of immediately present stimuli. - p. 85, 1997

Like both Stern (1985) and Mahler (1975) describe, language serves as a
developmental milestone towards autonomy. In trauma, the individual does all they
can to protect themselves from psychic pain and discord. Such is the experience of
attempting to make sense of intolerable affective states – when a feeling or
experience is too psychically painful to organize into one’s experience, repression
can be utilized. However, that does not mean that the affective experience of the
trauma is gone, oftentimes that experience becomes morphed into one’s very being. Those feelings often need to be felt and verbalized in order to be excised.

Freud believed that powerful experiences from early childhood, which were not understood at the time, were later acted out in adulthood (1914). Freud wrote, “The patient does not remember anything of what he has forgotten and repressed, but acts it out. He reproduces it not as a memory but as an action; he repeats it, without, of course, knowing that he is repeating it” (p. 150, 1914). Like the ghosts in the nursery that Fraiberg and her colleagues so beautifully describe (1975), traumata can be repeated generation after generation if it is not exterminated. The treatment (extermination process) that Fraiberg initiates involves intensive family therapy, with the goal of granting the traumatized parent permission to both feel and remember. Fraiberg and her colleagues’ first clinical hypothesis being, “when this mother’s own cries are heard, she will hear her child’s cries” (p. 396, 1975). When a patient feels that it is safe enough to experience feeling states that they have long avoided, those experiences will no longer need to be acted out or suffered continuously beneath the surface, which otherwise would result in a myriad of possible mental health disorders.

With PTSD, people organize their life around the trauma (van der Kolk & McFarlane, 1996) they have experienced. There is no singular psychic reaction to trauma. PTSD is a unique cluster of symptoms following a trauma, in which fear and overstimulation become the means of navigating the world. In the Trauma and Addiction Project (TAP) lab, the existence of PTSD and the assessment of its severity is determined primarily through the Clinician-Administered PTSD Scale (CAPS), which the department of Veteran’s Affairs calls the “gold standard in PTSD.
assessment” (pstd.va.gov). According to the DSM-IV\(^3\) (2000) and assessed step-by-step on the CAPS, PTSD involves the following: before considering current symptomatology, an individual must have experienced a Criterion A stressor, which entails having experienced firsthand or witnessed an event that involved serious threat of death to one’s self or another person or the threat of maintaining physical integrity. This stressor leads to a response of such immense fear, horror or helplessness that it leaves the individual profoundly vulnerable. The psychological and physical reactions to this stressor make up the different symptom clusters of PTSD. The first symptom cluster, or Criterion B, involves re-experiencing – such as feeling as if the event itself is happening again, having persistent and intrusive memories of the event return in different and disturbing ways. The second symptom cluster, Criterion C, involves avoidance – not wanting to talk or think about the event, avoiding things that may serve as reminders (i.e., visceral, olfactory, or geographical), and cutting off one’s life in terms of activities and/or being able to emotionally connect with others. The third symptom cluster, Criterion D, involves arousal – it is manifest in needing to stay on, to be hypervigilant in such a way that sleep, concentration, emotional homeostasis, and reactivity becomes impacted. For each of these possible posttraumatic stress manifestations to qualify as an actual symptom, it must not only be present, but it must also cause a significant disturbance in functionality. For example, if a subject reports re-experiencing memories of the traumatic event when walking down a crowded street, this experience would cause the subject to avoid crowded streets, interfering with his

\(^3\) The *DSM-IV* was used to define the criteria of mental illnesses on the SCID and the CAPS during the exposure study.
ability to get and maintain a job. In addition to Criteria A, B, C, and D, Criterion E assesses how long the current symptom picture has been in place (the duration must be at least a month), and Criterion F assesses the degree to which the subject’s posttraumatic stress symptoms are impairing the subject’s social, work, or other important areas of functioning. At the end of the CAPS interview, the administering clinician determines if a subject meets for full-threshold PTSD, sub-threshold PTSD, or no PTSD. The CAPS interview also yields a score, which reflects the total number of symptoms and the degree of severity in which each symptom is impacting one’s functioning.

As a means of evaluating posttraumatic stress, in addition to the CAPS, participants in the TAP study are given the Post Traumatic Symptom Self Report (PSSR), a self-report measure which serves as a traumatic stress symptom inventory assessment. The PSSR targets the frequency and severity of PTSD symptoms within the past seven days, with seventeen prompts, each one addressing a specific PTSD symptom. During the treatment protocol, the CAPS interview takes place during the Baseline Interview, and at each of the four post-treatment follow-up sessions. Participants self-report their weekly PTSD symptom frequency and severity with the PSSR at each treatment encounter throughout the protocol, from the Baseline Interview to the final follow-up session.

Humans are very good at adapting to their environments. When presented with a threatening stimuli, we automatically react: an emergency response mode activates, in which physiological reactivity allows for a human to mobilize in a defensive posture, immediately ready to engage in a fight, flight, or freeze response.
This defensive reaction is adaptive, and has long enabled humans (and animals), to ward-off danger. This defensive system is physiologically-bound: the adrenal gland is activated releasing epinephrine, cortisol is released which increases blood pressure and heart rate while suppressing the immune system (van der Kolk, 1994). This is an adaptive reaction to real danger, as it is adaptive for heart rate to reduce and hypervigilance to slowly diminish once the threat is removed. In PTSD, the ability to regulate one’s bodily and psychological state according to threat level has been thrown off-kilter. The person is not able to recognize when a threat has passed, continuing to be on guard as if danger is impending.

It is not a coincidence that the word ‘trauma’ derives from the Greek word for ‘wound.’ As such, Cloitre and her colleagues define psychological trauma as “a circumstance in which an event overwhelms or exceeds a person’s capacity to protect his or her psychic well-being and integrity. It is a collision between an event and a person’s resources, where the power of the event is greater than the resources available for effective response and recovery” (p. 3, Cloitre, Cohen & Koenen, 2006). When an individual learns they need to always be keyed-up, always protecting themselves from the potential dangers which may pop up at any moment, how can more complex organizational tasks or feeling states be achieved when one is fixed in such a rigid (protective) position? It’s as if the experience of the trauma has become so large, it has become unmoveable; there is a stickness to it, an omnipresent itch that both takes over and inhibits one’s psychological and physiological state.
Shengold (1989) writes eloquently of the relationship between individuation and the capacity to symbolize. In his chapter, “Insight as Metaphor,” Shengold states:

Metaphor leads to memory and the experiential: this is the first phase of the process of insight. A genetic principle is at work in relation to attaining the feelings of conviction and of ‘the real.’ When we use metaphor freely and creatively, we resuscitate something of that period of wonder of the second year of life, when we establish both a sense of self and a registration of the external world by laying down mental representations, equating as well as differentiating the inner and outer worlds. Mahler (1974) calls this the time of psychological birth. The sensory intensity stemming from the drives and body feelings matches and blends with the great excitement of the wish to explore and possess the universe (especially the parents); the universe and the parents are being separated from the previously inchoate, undelineated self. - 1989, p. 298.

Achieving the ability to use metaphor is a great developmental progression. It is a triumph for a youngster, one that opens up his experience with his environment; like the unbridled joy with which a newly walking infant explores his living room at will, all of a sudden there is a newfound emotional motility accessible to this child. Yet, this triumph can be fleeting; individuals can experience such profound bumps in the road that this great gift of symbolic communication can be lost.

Campbell and Pennebaker (2003) found that a primary indicator of both psychological and physical health is flexibility in written expression. Through a content analysis of essays written by college students and prisoners, Campbell and Pennebaker (2003) noticed that there were some participants who exhibited more variability in their writing styles as they wrote about a traumatic incident of multiple occasions. By changing the descriptions and adding depth and more variation to their language as they wrote the same story, participants became less likely to need to visit the infirmary (Campbell & Pennebaker, 2003). Pennebaker
and Campbell’s hypothesis was that coming to terms with a trauma is tied to changing how one views oneself in relation to their environment and to other people, and that those changes are measured by the changes which occur in an individual's writing styles.

In a more recent study regarding expressive writing, Pennebaker and Chung (2007) found that defenses such as denial, detachment, and distraction can be beneficial for psychic and physical health if utilized in the immediate hours and days following a traumatic incident. This reasoning has been supported by research that has shown that when victims of violent crime are forced to speak to authorities about their trauma in the hours following the incident, it can impede natural recovery from trauma (McNally, Bryant, & Ehlers, 2003). On the other hand, Pennebaker and Chung (2007) argue that when a defense such as denial is held onto for a period of a month or longer following the traumatic event, health can be negatively impacted. Participants found beneficial health effects as a result of engaging in an expressive writing treatment with a focus about the event and the feelings it evoked. The mechanism behind this phenomenon is well articulated by the authors: “When people transform their feelings and thoughts about personally upsetting experiences into language, their physical and mental health often improve” (Pennebaker and Chung, 2007, p. 3). In their research, Pennebaker and Chung cite a study by Cole, Kemeny, Taylor & Visscher which found that keeping a trauma secret negatively impacts health, thus increasing one’s chances of experiencing physical illnesses (1996).
Over the course of administering the CAPS to participants at baseline for a year, it became commonplace to hear participants saying things like, “I don’t think about it,” and “I don’t talk about it,” in regards to their Criterion A trauma. Avoidance is a symptom of PTSD. It would be interesting to investigate if there is an association between pre and post treatment levels of Avoidance with Referential Activity scores. I would predict that improvement on Avoidant symptoms would be negatively correlated with increased Referential Activity scores (e.g. as Avoidant symptoms diminish, RA scores will increase).

Findings have supported significant physiological benefits to putting traumatic experiences in writing, what Pennebaker and Chung refer to as “the disclosure paradigm” (2007). Putting the experiences of traumatic events in words effects the autonomic nervous system, causing systolic blood pressure and heart rate to drop below baseline rates following the disclosure of personal traumatic experiences (Pennebaker, Hughes, & O’Heeron, 1987). Another study found similar results, as Sloan and Marx (2004) saw that participants who engaged in writing a trauma narrative had elevated physiological responses compared to controls during the first writing session, but as they progressed in the study, engaging in the trauma narrative-writing on multiple occasions, they experienced lowered physiological activation than they had had at baseline.

Loss for Words: Dissociation & Trauma

As Arietta Slade writes (1999), in childhood trauma evoked by the caregiver, the traumatic events are psychologically:
Unintegrated and sometimes unacknowledged ‘knowledge’ [which] remains unmetabolized and distinct in consciousness from more idealized or banal descriptions of the relationship. These are evidenced linguistically in disruptions in the narrative and other linguistic inconsistencies such as logical and factual contradictions, losing track of the narrative, slips of the tongue, anomalous intrusions into the narrative, and so on. (1999, p. 802)

Where can such experiences go? Is there psychologically enough space to hold someone in mind as both a loving parental caregiver and an inflictor of unspeakable pain and confusion? The concept of holding complexity has its limits, particularly in relation to experiencing trauma at the hands of a protective figure at an early age.

The roots of the concept of dissociation derive from Janet, who over one hundred years ago, wrote that, “Forgetting the event which precipitated the emotion...has frequently been found to accompany intense emotional experiences in the form of continuous and retrograde amnesia” (1909, p. 1607 as cited in van der Kolk, et al., 1996). Bucci has been greatly influenced by Janet’s work, particularly the way in which he connected the relationship between trauma and the ability to create a cohesive narrative; stating extremely upsetting events create a “phobia of memory” (1925, p. 601 as cited in van der Kolk, et al., 1996) which inhibits clear recollection in which feelings and memories are connected to one another.

What Bucci refers to as referential activity has much overlap with the concept of metacognitive monitoring, the capacity to reflect on internal affective experiences in a complex and symbolic way (Fonagy, Steele, Steele, Leigh, Kennedy, Mattoon, & Target, 1995). One of the most profound consequences of trauma, is that over time, an overactivated fear center can compromise one’s ability to monitor his or her internal affective state (van der Kolk, 1995). For those who have experienced
chronic trauma, dissociation was an initially adaptive defense, necessary to maintain psychic equilibrium (i.e. ward off psychotic symptoms), but what was once adaptive has become inhibitory. Dissociation is a defense that everyone uses to some degree or another; it is a defense that does not necessarily derive from trauma (Bucci, 2007). In fact, contemporary psychoanalysts like Bromberg and Bucci have deemed dissociation a fundamental aspect of normal everyday human experience. People cannot always be fully present, connecting feeling with experience in the richest of possible ways; in health, people need to shut down momentarily, to focus-in on a particular goal, or “get in the zone” (Bucci, 2007). These are all dissociated states. But oftentimes, the experiences of trauma create an over-reliance on dissociation: memories, the ability to symbolize, and even the experience of oneself as a whole person can be seriously compromised.

Chronic dissociation, in it being a manifestation of psychic injuries that remain unhealed (Bucci, 2007), interferes with the ability to symbolize and think fluidly about the relationship between thoughts and feelings, leading to both stuckness and repetition. Perhaps this phenomena is best described by Bromberg, who writes:

Dissociated experience thus tends to remain unsymbolized by thought and language, exists as a separate reality outside of self-expression, and is cut off from authentic human relatedness and deadened to full participation in the life of the rest of the personality....Meaningful existence in the present is preempted by the repetitive, timeless, traumatic past, and the present is little more than a medium through which this unprocessed past may be known (p. 405-406, 1991).

Thus, the treatment of patients who utilize dissociative defenses involves working towards what Davies and Frawley refer to as “active integration” (pp. 81, 1994). As
patients are confronted by their therapists with an interaction that requires thinking and feeling about experiences that had been shuttered away and marked as terrifying in a new way, these same thoughts and feelings, when experienced in a safe and containing environment, and then are put into words, serve the function of integrating the split off parts. In the study, the interaction between the therapeutic experience of having this safe space, and safe person, alongside the repetitious act of telling one’s own story again and again in the IEs, creates a systemized active integration between the parts of one’s self that have been hidden away.

**Exposure Therapy**

There is an inherent courage in coming to therapy, the courage of telling one’s own story in the hope of bettering one’s station. It is a brave act, for to enter the consulting room is to expose one’s vulnerability. Many of the participants who arrive for baselines at TAP have never before spoken to a clinician, many have never told their stories aloud. These are stories that haunt their days, oftentimes making it nearly impossible to get on a subway, go to a job interview, or even feel emotionally connected with family and friends.

The act of engaging in an exposure therapy, giving voice and words to experiences that have been long held at bay – wordlessly – seems, at first, overwhelming. An inherent concern regarding exposure treatments for anxiety-based disorders, especially PTSD, is that forcing patients to face the very driving thing behind their anxiety will serve to increase that anxiety. There’s no doubt that the beginning of such a treatment can stir up more bad feelings than good. Foa and
her colleagues (2002) show that, while imaginal exposure can exacerbate PTSD symptoms early on in the treatment, particularly between the first and second session of imaginal exposures, over the course of treatment PTSD symptoms are not exacerbated by imaginal exposures. The experience of engaging in imaginal exposures for trauma-related treatments can, at first, be overstimulating, but as Hembree, et al. (2003) describe, that anxiety and fear response dissipates as the treatment is experienced over time with a clinician who makes space for the patient to make meaning of the work and to feel safe in the therapeutic environment.

In describing how and why to treat Posttraumatic Stress Disorder with Exposure Therapy, van der Kolk, McFarlane and van der Hart (1996) highlight two conditions that Foa and Kozak (1985) indicate are fundamental to reducing fear and improving PTSD symptomatology:

1. The person must attend to trauma-related information in a manner that will activate his or her own traumatic memories. As long as trauma-related affects are not experienced, the traumatic structure cannot be modified. The decrease of fear or anxiety is dependent upon the controlled and coordinated evocation of (a) the stimulus components (environmental cues), (b) the response components (e.g., motoric actions, heart pounding), and (c) the meaning elements (e.g., cues regarding morality and guilt) of the traumatic memory (Keane & Kaloupek, 1982; Foa et al., 1989; Litz & Keane, 1989).

2. In order for the person to form a new, nontraumatic structure, trauma-discrepant information must be provided. The critical issue is to expose the patient to an experience that contains elements that are sufficiently similar to the trauma to activate it, and at the same time contains aspects that are incompatible enough to change it (1996, p. 430).

The mechanism of change in imaginal exposure for PTSD may be cognitive-behavioral in the very essence of the phrase; engaging in behaviors in new reframed ways will allow new reframed cognitions to emerge: what was once stress-inducing is no longer. However, this type of treatment has psychoanalytic derivatives.
Writing about how to make the best type of psychoanalytic intervention for patients whose trauma history has led them to over-rely on dissociative defenses, Bromberg (2003) writes that:

affective ‘triggering...’ facilitates the growth of a patient’s confidence...not on avoiding such encounters but on enabling a patient’s here-and-now experience of them to be felt as more and more relationally trustworthy, making it possible for him to rely less and less automatically on dissociation as a proactive warning system. (p. 561)

The COPE imaginal exposures foster an environment in which affective and linguistic triggering can be heightened again and again in the here-and-now. Being able to put a horrific experience into words in an imaginal exposure allows for a newfound tool for habituation, for distinguishing between remembering and retraumatization, increased agency and mastery of one’s own history and sense of self (Foa, Hembree, & Rothbaum, 2007).

Prior to having this newfound tool, individuals suffering from PTSD use many different methods in the attempt to achieve affective equilibrium. For better, but oftentimes for worse, people over-rely on drugs and alcohol as a way to regulate spikes in affective arousal. This method may seem to produce the desired effect, especially in the short-term, but it does not allow for psychic healing; in a way, substances keep the impact of trauma frozen in time, and oftentimes new residuals develop during this deep freeze.

Drugs and Alcohol

Writing about alcohol abuse from an object relational perspective, Balint (1968) notes that the substance is used in an attempt to fill a void. He writes:
Whatever the cause, the first effect of intoxication is invariably the establishment of a feeling that everything is now well between them and their environment. In my experience the yearning for this feeling of ‘harmony’ is the most important cause of alcoholism or, for that matter, any form of addiction. At this point all sorts of secondary processes set in which threaten the ‘harmony’, and the alcoholic in his despair drinks more and more in order to maintain, or at any rate salvage, some of it (1968, p. 55-56).

Such ‘harmony’ is not one that is shared with other people, nor is it shared with the environment. It is meant to take away demands (Balint, 1968), to relieve pressure from familiar people or environments, and to inhibit change.

Perhaps the theoretical roots of Balint’s conceptualization derive from Freud’s essay on *Mourning and Melancholia* (1917). The effort to keep powerful and emotionally disruptive feelings out of consciousness is exhausting; sometimes the traumatized needs to take a break from their trauma. This is how Freud thought about mania (1917). Mania was understood by Freud as a discharge of joyful and excitable emotions in attempt to triumph over the depression of melancholia. Freud wrote that mania is a false “triumph” in which, “The ego has surmounted and what it is triumphing over remains hidden from it” (1917, p. 59). It is a temporary solution to fill emptiness with joy, and one of the ways Freud believed that state is reached is through alcohol or drug consumption. He wrote, “Alcoholic intoxication [may be explained in the same way as mania]; there is probably a suspension, produced by toxins, of expenditures of energy in repression” (1917, p. 59) which temporarily relieves the melancholic or traumatized of bearing the psychic weight of their unconscious conflict.

The number of individuals who meet criteria for either an alcohol use disorder (AUD) or substance use disorder (SUD) is staggering. According to a 2005
study on the prevalence of DSM-IV diagnoses within a 12-month period, 4.4% of the U.S. population met criteria for an AUD, that being either alcohol abuse or alcohol dependence, and 1.8% of the U.S. population meet criteria for a SUD, that being either drug abuse or drug dependence (Kessler, et al., 2005). Not surprisingly, of those who meet criteria for an AUD or a SUD, there exists high comorbidity rates with other DSM-IV diagnoses, particularly anxiety disorders.

The statistics vary, but much research has shown a strong relationship between PTSD and Substance and Alcohol Use Disorders. One recent research study found the prevalence of current PTSD in individuals with SUDs to be about three times higher than the general population (Giele, et al., 2012). In her review of treatments of co-occurring PTSD and SUDs, van Dam posits that prevalence estimates for PTSD in SUD samples range from 11% to 41% (van Dam, et al., 2012), which likely reflects a more accurate number – the comorbidity is contingent upon the study sample and the patient population. There have been mixed results in determining if SUDs or AUDs are more or less prevalent in relation to PTSD (i.e. is there a stronger relationship between a particular type of substance and PTSD?), with some studies determining a significant association between AUDs and PTSD, but not SUDs (Kessler, et al., 2005), and some studies determining a significant association between SUDs and PTSD, but not between AUDs and PTSD (Breslau, et al., 2003).

There are many different conceptualizations of drug and alcohol use in relation to underlying psychiatric vulnerabilities, three of which I’ll describe. The first is the self-medication hypothesis (Khantzian, 1997), which proposes that
individuals use alcohol or substances as an attempt to alleviate intolerable emotional or psychological states. Individuals attempt to reduce psychiatric symptoms and overwhelming affective states by using drugs and/or alcohol, which both heightens the risk of drug and/or alcohol use to become a psychiatric disorder of itself, and inhibits alternative methods of reducing those psychiatric symptoms and overwhelming affective states (such as clinical intervention). Many patients suffering from Anxiety Disorders claim that self-medication is the goal of their substance use (Ruglass, Lopez-Castro, Cheref, Papini, & Hien, 2014). Self-medication may seem to work, particularly in the short-term, but over time it leads to SUDs, AUDs, and exacerbations of the original underlying psychiatric symptoms. The most convincing argument for the self-medication hypothesis is that for the most part, individuals have PTSD prior to developing a SUD, not the other way around (Stewart & Conrod, 2003). A second theory is the substance-induced hypothesis, which suggests that the use of substances will have a contradictory psychological impact for those seeking self-medication; substances may worsen symptoms of PTSD directly by its impact on the central nervous system (Ruglass, et al., 2014). This theory indicates that the use of drugs and alcohol serve to further dysregulate an individual who may already be dysregulated. A third theory is the high risk hypothesis, which proposes a causal relationship between substance use and trauma: substance and alcohol use leads to high risk situations and environments, which in turn leads to disproportionally high rates of unwanted and traumatic experiences, increasing the risk of developing PTSD (Hien, Cohen, & Campbell, 2005).
Though Freud’s essay was written almost a hundred years ago, treatment is just being introduced today that connects alcohol or substance disorders with underlying psychological conflict. Substance and alcohol disorders and Post Traumatic Stress symptoms work hand in hand, they interact together in a way that can both camouflage and intensify suffering. There is evidence that PTSD and SUDs and/or AUDs become entangled in a vicious cycle, in which PTSD symptoms trigger the use of substances, and the use of substances increases risk of re-traumatization, and withdrawal from substance use can (at least temporarily) increase PTSD symptomatology (van Dam, et al., 2012). It is therefore imperative when making a clinical intervention for comorbid PTSD and SUD to treat the person as a whole, attending to the trauma, the substance use, and the relationship between the two. Historically, SUD clinicians have avoided questions regarding a patient’s experiences of trauma, for fear that bringing up a patient’s unwanted memories will steer the patient towards psychic decompensation (Hien, Cohen, Miele, Litt, & Capstick, 2004). This is quite reasonable from the clinical vantage point of a SUD therapist, however when a patient suffers comorbidly from PTSD and a SUD or AUD, as so many people do, to solely treat the substance use is like putting ointment on a skin infection that needs antibiotics.

**Coming Full Circle**

I have reviewed literature and theory on linguistic development, trauma, dissociation, exposure therapy, and drugs and alcohol. There is a complex relationship that exists between each of these factors. The study uses a treatment
intervention that combines exposure therapy with teaching individuals how to cope with substance use in a clinical population that meets criteria for substance dependence and PTSD. My study aims to determine if there is an association between changes in the spoken language individuals use to describe their trauma and their psychological health.

Questions and Hypotheses

Questions Driving this Study

What does trauma do? What psychological pathways does it affect? What is it about trauma that affects health? Can a linguistic analysis capture the psychological impact of trauma? In turn, can a linguistic analysis capture psychic improvement over time? Can we capture the mechanism of change in an exposure therapy for patients PTSD and SUDs with Bucci and Maskit’s conceptualization of the Referential Process?

My dissertation aims to pose and answer the following three questions:

1. Will there be changes in the main components of a subject’s Referential Activity in Session 5 (the first Imaginal Exposure) compared to Session 11 (the final Imaginal Exposure)?
2. If there indeed is a change, are these changes in Referential Activity associated with changes in the outcome measures that assess dissociative tendencies, posttraumatic stress symptoms and substance use?
3. Are there differences in Referential Activity when a treatment responder is compared to a treatment non-responder?
Hypotheses

Over time, treatment will lower dissociative tendencies and increase symbolization, phenomena which are captured in the referential process, a linguistic encapsulation of the concept of holding complexity as well as other aspects of psychic health. Over the course of an effective COPE treatment, subject's referential activity scores will rise. My hypotheses are as follows:

1. The Referential Activity scores in subject's Imaginal Exposures will increase over the course of the treatment.

2. Over the treatment, the increase in Referential Activity score is associated with a decrease in dissociation level, posttraumatic stress symptoms, and substance and alcohol use diminishment.

3. The COPE treatment responder will have higher Referential Activity levels than the treatment non-responder.
Chapter Two: Methods

The Exposure Study: An Explanation of the Research

From 2009 to 2015, Dr. Denise Hien and her team at the Trauma and Addiction Project (TAP) ran a clinical research trial for participants with dual-PTSD- and SUD\(^4\). If participants met criteria (described in the following pages) to participate in research and chose to do so, they were randomized into one of two possible once weekly twelve-session therapies: Concurrent Treatment with Prolonged Exposure (COPE), an exposure therapy focused on both trauma-related symptomatology and substance use or Relapse Prevention Therapy (RPT), a SUD-focused treatment. COPE is an integration of two evidence-based treatments: a Cognitive-Behavioral therapy for SUDs developed by Dr. Kathleen Carroll (1998) and Dr. Edna Foa’s Cognitive-Behavioral exposure therapy for PTSD (Foa, Hembree, and Rothbaum, 2007), which has not yet been published. The goal of COPE is to, “help clients reduce severity of all three clusters of PTSD symptoms, reduce severity of alcohol and drug use, and minimize the residual impact that PTSD and SUDs have on their life” (Back, Foa, Killeen, Mills, Teesson, Cotton, Carroll & Brady, 2015).

The participants who volunteer to be a part of the research each have their own stories. The participants are men and women between 18 to 65 years of age who come from an array of racial, ethnic and cultural backgrounds. At the baseline interview, participants are informed of the potential risks and benefits of the research protocol, and must both provide informed consent and pass a brief quiz.

\(^4\) In order to be eligible, subject need to meet criteria for current PTSD or subthreshold PSTD as determined by the CAPS interview. However, participants do not need a current SUD to qualify; a past or present SUD diagnosis as determined by the SCID is sufficient.
assessing their understanding of the consent materials. In order to participate in the research, participants must meet full or sub-threshold criteria for Post-Traumatic Stress Disorder as determined by the Clinician Administered PTSD Scale (CAPS). Potential participants are excluded from the study if they have a history of or meet criteria for a current psychotic, schizoaffective or bipolar disorder. Other rule-outs include current acute suicidality, untoward violent behavior onto others, co-concurrent therapeutic treatment that addresses past trauma, and the use of anxiolytic, antidepressant, or mood stabilizing medications whose type or dosage has been modified in the 8 weeks prior to study participation. The participants come from a great variety of socio-economic backgrounds: there are participants from prep schools, doctoral programs, and Wall Street workers as well as participants who have spent a significant part of their lives living day-to-day on the streets. What participants have in common is having either a past or current alcohol or substance dependence diagnosis as well as having used substances within the last 90 days, having met DSM-IV criteria for current full or sub-threshold PTSD, and a willingness to participate in a twelve week structured treatment aimed at either purely reducing substance and/or alcohol use or a treatment for reducing trauma symptomatology as well as substance and/or alcohol use as determined by an unpaid Motivational Interview which follows the Baseline eligibility interview.

Once randomized into COPE, participants have four treatment sessions before their first prolonged Imaginal Exposure (IE). In those four initial sessions,
Participants are introduced to the treatment and give their clinicians brief trauma and substance use histories. Participants then begin to identify connections between their substance use and trauma history, working on recognizing what might trigger them to want to use substances, as a means of developing a craving plan to get through moments of vulnerability – moments that can be easily aroused when engaging in trauma-based therapy (van der Kolk, McFarlane, van der Hart, 1996), particularly in the early stages. Other important aspects of the first four sessions include learning and practicing breathing exercises and building substance refusal skills. From the fifth through eleventh COPE sessions, participants participate in prolonged Imaginal Exposures, which are described in Chapter 1.

Following the twelve-session treatment, participants attend four post-treatment follow-up sessions, which take place one week, one month, two months, and three months after the final COPE or RPT session, respectively. During each of these follow-up sessions, participants are re-administered both the SCID and the CAPS, and other psychological assessment tools which evaluate substance use, as well as self-report evaluations for depression, dissociation, and PTSD symptomatology. The four follow-up sessions allow the research team to both see the trajectory of the intervention, and the sustainability of the treatment over time.

Only a small number of participants have attended all 12 sessions of the treatment (less than ten). However, there is a substantial amount of data for each of those participants. In addition to the Baseline and follow-up assessment data that is described above, which allows for a comparison of many different pre to post-treatment outcome variables, participants fill out multiple self-report measures at
each of the twelve treatment sessions. Some of the weekly self-report measures that are relevant to this research include a substance use and craving measure, a dissociation measure, and trauma symptom inventory. But for the purpose of this study, the key data lies in the audio-recorded session material, which will be transcribed so that it can be analyzed by Bucci and Maskit’s DAAP program.

**Research Design**

According to Alan Kazdin, in order for a case study to have internal validity as a research tool, it must meet a number of empirical standards (2003). The first standard is that a case study needs multiple types of assessment modalities and techniques (Kazdin, 2003). The second standard is that the data must be collected throughout the intervention, not just at pre and post treatment time points, but rather continuously (and consistently) collected over the course of the intervention (Kazdin, 2003). The third standard is that the illness that the participant presents with must be chronic; if the participant presents with an acute or episodic problem it is too difficult to discern if the symptom alleviation is due to the intervention or other potential variables (Kazdin, 2003). And finally, the fourth standard for a case study is that there both be an immediacy and significant magnitude to the change which occurs once the treatment gets underway (Kazdin, 2003). In conducting a single participant design case study with the COPE data, all of Kazdin’s qualifications for internal validity within a case study are met.

There are both strengths and limitations to using a single case design. The most glaring weakness in a single case design is the potential lack of generalizability
of an intervention’s impact (Nock, Michel, & Photos, 2008). Other limitation of single case designs are cyclic variations, which can be behavioral (i.e., changes in eating or fitness habits), biological (i.e., circadian rhythms, estrus cycles), seasonal cycles (i.e. affective seasonal disorders) which have greatly impact a small sample (Ellis, 1999). A benefit of single case designs in clinical studies is that they show clear causal relations between intervention and behavior change with better efficiency than large-sample designs (Nock, Michel, Photos, 2008). While it can also be considered in terms of how it could be a limitation, having a small sample in a clinical study allows for a close examination of patterns of change, and the temporal relations between those changes and the administration of the intervention (Nock, Michel, Photos, 2008).

Substantial and prominent psychotherapy research has long used single case design, including valuable research by present day psychodynamic researchers (Bucci & Maskit, 2007; Safran, Greenberg & Rice, 1988). Given the vast individual differences that exist between people, there are limitations to doing extensive group analyses in psychotherapy research, as there rarely is such a thing as an average participant; people have unique histories, and unique responses to treatment (Safran et al, 1988). In fact, some of the most important findings in the history of the field of psychology (such as the seminal works of Freud and Breuer, Ebbinghaus, Pavlov, Skinner, Bandura, and Piaget to a name a few) have derived from the observation of single cases (Ellis, 1999).

**Methodology**
Design

I will adopt a single case longitudinal design for the present study in order to examine the linguistic development of two COPE participants: one treatment responder and one treatment non-responder, to evaluate change in Referential Activity over the course of telling and re-telling their primary traumatic experience in the form of Imaginal Exposures. A treatment responder will be defined as a participant whose PTSD symptoms and substance use greatly diminished during COPE and was sustained during follow-up sessions. Whereas a treatment non-responder will be defined as someone whose PTSD symptoms and substance use did not improve over the course of treatment. In clinical studies, repeated measures designs are used with small samples or case studies, when each participant produces multiple and repeated sets of data (i.e. multiple treatment measures) (Ellis, 1999).

Referential Activity

In health, language is one of the primary landscapes through which sensory modalities can be ingested, understood, and communicated onto others. Wilma Bucci and Bernie Maskit’s Discourse Attributes Analysis Program (DAAP) captures the ebb and flow of specificity, concreteness, clarity, and richness of imagery, the hallmarks of Referential Activity, as well as a myriad of other psychological indicators, most importantly being the interaction between the verbal and nonverbal representational systems. This research aims to capture and analyze the movement from disjunction to junction between the verbal and nonverbal representational systems in participant’s narrative tellings that are predicted to
occur across the course of the COPE treatment. I have transcribed each of the twenty-five to forty Imaginal Exposure narratives according to the format that can be processed by the DAAP system. This allowed me to see changes in RA across the course of the COPE treatment, changes in posttraumatic stress scores, dissociation scores, and substance use inventories across the COPE treatment, as well as if there are associations between posttraumatic stress, dissociation, and substance use data with RA data across the intervention. For these reasons, DAAP will serve as the primary apparatus through which the data will derive.

After transcribing all the Imaginal Exposures in proper format (Maskit, 2014) they will be run through DAAP, a computer-based text analysis program, which will then compute scores for each Imaginal Exposure for measures of the referential process. The DAAP program has the capability of analyzing transcribed language in a variety of ways. DAAP will measure the language in each Imaginal Exposure with the following tools: Weighted Referential Activity Dictionary (WRAD), Mean High WRAD (MHWRAD), Reflection (REF), and the Reflection WRAD Covariation measure (Ref_WRAD).

WRAD, the primary method for scoring Referential Activity, is a psychological construct designed to assess Referential Activity level in speech (or in the written word, for that matter). Prior to the development of the computerized technologies, WRAD and DAAP, Referential Activity were scored by trained individual judges, using four scales (concreteness, specificity, imagery, and clarity). Now, Referential Activity can be scored via the WRAD, a weighted measure within DAAP, based on the WRAD dictionary, which consists of a list of 697 words that
represent an average of 85 percent of spoken language (Bucci & Maskit, 2005). Each word within that 697 word WRAD dictionary has been assigned its own weight, representative of its unique Referential Activity value. The weight of each word in the WRAD dictionary ranges from 0 to 1, with a neutral value of 0.5; higher numbers represent high referential activity, and lower numbers represent low referential activity.

Mean High WRAD (MHWRAD) is a weighted dictionary that measures how high Referential Activity is when it is high (above 0.5). In relation to WRAD, which Bucci and Maskit metaphorically describe as one’s overall average rate of speed if they were to engage multiple types of movement, such as walking, crawling, jogging, etc., they extend this metaphor to explain MHWRAD as one’s average speed when running (www.thereferentialprocess.org). The higher a speaker’s MHWRAD score, the more immersed that speaker is in their narrative. Given the nature of the research – Imaginal Exposures telling and re-telling one’s most traumatic life event – it is likely that much of the language of the Imaginal Exposures will be scored in the MHWRAD dictionary as the task itself prompts for linguistic intensity and immersion.

Reflection (REF) is an unweighted measure based on a dictionary of words that concern how people think and communicate their thoughts. The REF dictionary is composed of words that refer to various aspects of reflection, including words referring to cognitive or logical functions, such as “think” and “plan;” words associated with problems or failures of cognitive functions, like “confuse;” words related to complex verbal communicative functions, such as “convince” and
“obfuscate;” and words related to features of mental functioning, like “creative” and “logical” (www.thereferentialprocess.org). The higher the percentage of words from the REF dictionary an Imaginal Exposure contains, the higher its REF score will be.

The DAAP also can compute the correlation between two dictionaries, called a covariation. The directionality between REF and WRAD output is known as the Ref_WRAD covariation, and it is a measure of narrative immersion. As REF and WRAD typically move in opposite directions when a speaker is immersed in a narrative, a strong negative Ref_WRAD score indicates immersion in the narrative (www.thereferentialprocess.org).

As each treatment has between twenty-five and forty Imaginal Exposures, it is hypothesized that, when exposure therapy works, there will be a change in one’s Referential Activity across those narrative tellings. When exposure therapy does not work, it is hypothesized that there will not be a change in Referential Activity in the narratives over the duration of the IEs, as one’s experience of self and emotion schemas will remain static.

**Diagnoses**

Pre-and-post treatment CAPS scores and SCID diagnoses will be used to assess Baseline and post-treatment health. In addition to CAPS scores and SCID measures, I will track the two participants’ changes in dissociative tendencies, posttraumatic stress symptoms, and substance use over the course of the treatment and follow-up. This will be achieved through use of the following instruments.

**Dissociative Symptoms**
The Dissociative Experiences Scale (DES-II) measure is used to capture participant’s levels of dissociative symptoms from Baseline through the final Post-Treatment Follow-Up. Originally developed by Bernstein and Putnam (1986), the DES-II is a self-report measure that determines the degree to which participants experience dissociation in their daily lives. The measure is composed of 28 items, and participants are asked to indicate a percentile between 0% and 100% that represents their experience. For example:

2. Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said. Circle the number to show what percentage of the time this happens to you. 0% 10 20 30 40 50 60 70 80 90 100%

Participants fill out the DES-II measure at Baseline, before each of the twelve therapy sessions, and during each Post-Treatment Follow-Up sessions. The DES has been used in hundreds of studies on dissociation. van Ijzendoorn and Schuengel (1996) conducted a meta-analysis to determine the validity of the DES-II, and determined that the measure has excellent convergent validity with other dissociative symptom questionnaires and interviews (combined effect size: $d = 1.05$; $N = 1,705$). The meta-analysis determined that the DES-II has superb predictive validity with regard to dissociative disorders and traumatic experiences (van Ijzendoorn & Schuengel, 1996). The study’s main critique of the DES-II measure was that discriminant validity was not as well established; the DES-II’s discriminant validity is sensitive to response and experimenter bias, but has been found to improve if the DES-II is administered over multiple time points (van Ijzendoorn & Schuengel, 1996), and this weakness should be mitigated by the numerous administrations of the DES-II across the exposure treatment.
Posttraumatic Stress Symptoms

All COPE and RPT participants fill out the Post Traumatic Symptom Self Report (PSSR) at each visit, from Baseline through the last Post-Treatment Follow-Up. The PSSR is a self-report PTSD symptom inventory made up of 17 items, each of which corresponds to a distinct DSM-IV diagnostic criteria for PTSD (American Psychological Association, 2000). Each of the 17 items are individually rated for frequency and severity; frequency of symptoms is rated on a 4-point scale (1 = Not at all to 4 = 5 or more times per week/Almost always) and severity is rated on a 5-point scale (1 = Not at all to 5 = Extremely). For example:

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Trying to avoid activities, people, or places that remind you of the trauma</td>
<td></td>
</tr>
</tbody>
</table>

At Pre-Treatment and Follow-Up sessions, participants are prompted to consider the frequency and intensity of his or her PTSD symptoms within the past seven days. During the treatment phase, during which participants are seen weekly, they are prompted to consider symptom frequency and severity since their last visit. The measure, which was first created by Foa and her colleagues in 1993 (Foa, Riggs, Dancu, & Rothbaum, 1993), and called the PTSD Symptom Scale (PSS), has gone through multiple iterations. The iteration most recently found to be a reliable and valid measure (Ruglass, Papini, Trub, & Hien, 2014) is called the Modified Posttraumatic Stress Disorder Symptom Scale, Self-Report (MPSS-SR), and this measure is identical to the PSSR. In fact, the PSSR is simply a re-titled version of the MPSS-SR that incorporates instructions for participants in the Hien protocol. In a
psychometric analysis of the MPSS-SR (Ruglass, et al., 2014), the measure was found to have strong concurrent and convergent validity, with the authors concluding that it as a reliable and valid tool to both assess and monitor PTSD severity and frequency over time. A limitation, however, is that the psychometric analysis (Ruglass, et al., 2014) used a sample comprised of women who met criteria for both PTSD and a SUD. On one hand, the co-morbidity limitation is not necessarily a limitation for the present research, as participants in the COPE and RPT study also met criteria for both PTSD and a SUD. On the other hand, the participants in my study are men, so future research into the PSSR’s validity and reliability with a mixed sex population is indicated.

Substance Use

Participant’s substance and alcohol use and cravings are monitored by the use of multiple assessment tools from Baseline through Posttreatment Follow-Up. Participants are given a breathalyzer to determine Blood Alcohol Content (BAC), and a urine test which identifies recent substance use at the beginning of each session from Baseline through Follow-Up. At the Baseline and Follow-Up sessions, the assessor conducts a Timeline Follow-Back, in which substance and alcohol ingestion in either the last ninety or last thirty-day period is recounted. During those sessions, the assessor also administers the SCID-IV, part of which serves as an evaluation of current and past DSM-IV substance and alcohol use disorders. For my linguistic analysis, the Substance Use Inventory (SUI) will be used to measure how participant’s both use of and cravings for drugs and alcohol change over the course of the treatment. The SUI (Weiss, Hufford, Najavits, & Shaw, 1995) is a self-report
measure which assesses an individual’s quantity and frequency of use, degree of craving, and money spent on alcohol, marijuana, cocaine, heroin, sedatives, stimulants, or other drugs within the last seven days.

**The Data**

The data for this study were comprised of transcripts of the Imaginal Exposures of two individual COPE participants, which were computed in the DAAP analysis program to produce Referential Activity scores. Data will also include CAPS, PSSR, DES-II, SUI, timeline follow-back, and SCID scores and results.

**The Participants**

In order to accomplish the purported goal of analyzing two individual participant’s linguistic (verbal and nonverbal) change over the course of COPE, I first need to decide which two participants to research. Ideally, I would like to do as thorough an analysis as possible of the participant who displayed the greatest improvement in PTSD symptomatology from baseline through post-treatment as determined by CAPS scores. When comparing two individuals, there cannot be a perfect match. Each person has their own object relations, their own family history, current relationships. Each person has their own strengths and weaknesses; there is a myriad of possible reasons why two individuals cannot be perfectly matched. For the purposes of this case study, two participants are being chosen on the basis on demographic compatibility; their individual differences and personal histories

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7 The Imaginal Exposures will begin being transcribed in accordance to the DAAP analyzable-format following the Dissertation Proposal.
will serve as a limitation. The following is a surface description of the two participants.

Participant 521 and Participant 1017 are both 53 year-old African-American men who suffered severe childhood trauma. Both men are native New Yorkers who are both college educated (one has two years of college, the other has a B.A.) and have a history of homelessness. Both men presented with primary traumas from childhood, traumas that have impacted them for a lifetime. Both participants began treatment meeting criteria for High Severity PTSD, as determined by the CAPS. Participant 521 presented as meeting for alcohol and cocaine dependence. Participant 1017 presented as meeting for alcohol dependence. Participant 521 was a treatment responder as determined by his change in trauma and SUD symptoms over the course of the treatment; Participant 1017’s trauma and SUD symptoms and experienced limited change throughout the treatment and follow-up. A much more in-depth history and comparison of these two individuals will be included in the following chapter.

Statistics

Using a statistical design based on classical test theory (Magnusson, 1967), Mueser and colleagues created a statistical analysis for single-case designs to demarcate intraindividual changes across different outcome measures over time (Meuser, Yarnod, & Foy, 1991). When measures are repeated at different intervals within a treatment, this statistical design has been found to be efficacious in a study that used data from an imaginal exposure intervention for combat veterans with PTSD (Meuser, et al., 1991). This method calls for converting all raw scores to
Ipsative z-scores; this is completed for each dependent measure. Ipsative z-scores are then calculated by subtracting the variable's average score from the score of each individual session. Following this initial calculation, each individual difference is then divided by the measure's standard deviation. This method will allow for dependent variable changes within participant over the course of the treatment to have quantitative statistical meaning. In the parent study, data were gathered from individual participants at repeated times over of the course of the treatment, and is therefore serially dependent (establishing an autocorrelation). Meuser's statistical methodology is a useful strategy for assessing clinical change over the course of treatment for single-case designs that have data which is serially correlated (Meuser, et al., 1991).

**Gathering the Data**

From March 2015 through February 2016, I, along with the assistance of two research assistants, spent hundreds of hours of listening to exposure audio and transcribing that audio in concert with DAAP protocol (Maskit, 2014). After transcribing the exposure audio, and reviewing it, the data was gathered to run a linguistic analysis through DAAP which produced WRAD, MHWRAD, REF, and Ref_WRAD scores for each individual Imaginal Exposure. Additionally, all existent DES-II, PSSR, and SUI data from participants 521 and 1017 were gathered. Statistical analyses were run to determine quantitative changes in Referential Activity measures as well as changes in DES-II, PSSR, and SUI scores across the
treatment for participants 521 and 1017\textsuperscript{8}.  

\textsuperscript{8} A correlation or multiple regression analysis comparing DAAP data with symptom data (PSSR, DES, SUI) was not statistically possible as the data pairs are not independent.
Chapter Three: Results

As described in the Methods section, this study is a linguistic analysis of the language used in the exposure narratives. The exposure narrative is first spoken in Session 5 of the 12-Session treatment, and it is then spoken repeatedly in (again in) Session 5, Session 6, Session 7, Session 8, Session 9, Session 10, and finally, Session 11. This study looks closely at the linguistic markers of the exposure narrative to see if and how the story changes over the course of exposure treatment, and to see whether related symptomatology (dissociative symptoms, PTSD symptoms, and SUD symptoms) change during the corresponding time/treatment period. The results of both the treatment responder and treatment non-responder’s Referential Activity, PTSD symptoms, severity of dissociation, substance and alcohol use and cravings, as well as the relationship between the participant’s language in the exposure narratives and each of the three areas of focus (PTSD symptoms, dissociation, substance and alcohol use) will be explored in detail in the following pages.

In the second half of this chapter, qualitative results will be presented as a means of demonstrating the actual language the treatment responder and treatment non-responder use to tell their trauma narratives. The qualitative results will be presented in chronological order, to show how the language used in the Imaginal Exposures changes as the story is told and re-told. A few themes from each participant will be highlighted in the results section. A detailed analysis of both the quantitative and qualitative results will be presented in the Discussion section.

Results of Hypothesis Testing
Hypothesis 1: The Referential Activity scores in participant’s Imaginal Exposures will increase over the course of the treatment.

Participant 521 (treatment responder) had a statistically significant change is his Ref_WRAD covariation, with a slope of -0.03 (p = .025). The more negative a Ref_WRAD result, the more immersed the speaker is in the narrative. This change demonstrates that per DAAP results, Participant 521 became more immersed in the narrative of his Imaginal Exposure as the treatment intervention progressed (See Figure 1).

There were no other statistically significant results regarding Referential Activity scores for either Participant 521 or 1017. Participant 521 had slope of 0 on his MWRAD, REF, and Ref_WRAD measures across treatment. Participant 1017 had a slope of 0 on his MWRAD, REF, and Ref_WRAD measures across treatment. Participant 1017, did however, have a positive slope of .01 on the Ref_WRAD covariation, suggesting a slight lessening of narrative immersion over the course of treatment.
Hypothesis 2: Over the treatment, the increase in Referential Activity score is associated with a decrease in dissociation level (as determined by the DES-II), posttraumatic stress symptoms (as determined by the PSSR), and substance and alcohol use diminishment (as determined by the SUI).

Participant 521 (treatment responder) had a statistically significant improvement in his narrative immersion (Ref_WRAD covariation) over the course of treatment alongside a statistically significant improvement in posttraumatic stress symptoms (PSSR dropped at a slope of -4.63 \(p < .05\)) from Baseline through Session 12. Participant 521’s improvement in narrative immersion corresponded with a statistically significant alcohol and substance use diminishment (SUI dropped at a slope of -.59 \(p < .01\)) from Baseline through Session 12. The data supports this hypothesis with the treatment responder on the PSSR and SUI measures.
Participant 521 did not experience a statistically significant drop in his DES scores across the treatment. As Participant 1017 (treatment non-responder) did not experience any significant changes in his Referential Activity levels across treatment, this hypothesis does not apply to his results.

*Hypothesis 3: The COPE treatment responder will have higher Referential Activity levels than the treatment non-responder.*

Participant 521 (treatment responder) had higher mean Referential Activity levels across the Imaginal Exposure treatment as determined by the WRAD and MHWRAD measures than Participant 1017 (treatment non-responder). Participant 521’s mean WRAD score was 0.598 (SD = .022) compared to Participant 1017’s mean WRAD of 0.521 (SD = .034), and Participant 521’s mean high WRAD (MHWRAD) across the IEs was 0.11 (SD = .015) compared to Participant 1017’s MHWRAD of 0.068 (SD = .018). Although there is no statistical test than can compare these, confidence intervals (CI) around these means can be computed and compared to determine whether the two means are likely to be similar or dissimilar. Using the logic of statistical reasoning, if the mean of one participant falls outside the 95% CI of the other’s mean, then it is highly likely that the two means are different. Figure 2 and 3 present the 95% CIs and means for the WRAD and MHWRAD results for the two participants. For both the WRAD and the MHWRAD, the CIs are non-overlapping and each mean falls outside of the other’s CI. Therefore, it is likely that both the WRAD scores and the MHWRAD scores are different.
Figure 2

*MWRAD mean and confidence intervals for Participant 1017 and Participant 521.*

Note: Line represents 95% Confidence interval, diamond marker represents the participant’s average MWRAD score.

Figure 3

*MHWRAD mean and confidence intervals for Participant 1017 and Participant 521.*

Note: Line represents 95% Confidence interval, diamond marker represents the participant’s average MHWRAD score.
**Symptomatology Across Treatment**

Visual analyses were conducted to inspect if there were any changes in dependent measures over the course of the treatment intervention. Visual analyses were conducted by depicting both participants' scores graphically from the Baseline phase (Baseline interview and Session 1), to the pre-Imaginal Exposure Phase of treatment (Sessions 2-4), to the Imaginal Exposure Phase of treatment (Sessions 5-11), and finally to the final session and Post-treatment Phase (Session 12 and Post-treatment Follow-Up). In order to systemically report changes in PSSR, SUI, and DES scores, these results have been operationalized in Table 1. Derived from case study visual inspection protocols (McCabe, 2014) this operationalization utilized the average standard deviation across the two participants by dependent measure. The standard deviation scores were rounded to the nearest whole number and used to determine if there was a small, medium, large, or no effect size.

Using the method of Meuser and colleagues (Meuser, et al., 1991), ipsative z-scores were computed for each participant separately. The z-scores for both participants' major time points (baseline, end of treatment, average follow-up) are presented in Table 3 (Participant 521) and Table 5 (Participant 1017) along with a critical difference score for each scale. Change is considered significant if the amount of change is greater than the critical difference score. There was substantial reduction in Participant 521’s symptomatology across treatment in DES, PSSR, and SUI levels, however based on the methodology (Meuser, et al., 1991) none of the aipsative z-scores met criteria for a drop at the level of statistical significance. 

Following the review of each measure across treatment for Participant 521 and
Participant 1017, raw scores (see Tables 2 and 4) and z-scores (see Tables 3 and 5) are presented.

Table 1
Operationalized Definitions for Visual Analyses by Dependent Measure

<table>
<thead>
<tr>
<th>Scale</th>
<th>Magnitude</th>
<th>Range^a</th>
</tr>
</thead>
<tbody>
<tr>
<td>DES</td>
<td>No Change</td>
<td>Less than 5^b</td>
</tr>
<tr>
<td></td>
<td>Small</td>
<td>5 – less than 10^c</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>10 – less than 20^d</td>
</tr>
<tr>
<td></td>
<td>Large</td>
<td>20^e</td>
</tr>
<tr>
<td>PSSR</td>
<td>No Change</td>
<td>Less than 13^b</td>
</tr>
<tr>
<td></td>
<td>Small</td>
<td>13 – less than 26^c</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>26 – less than 52^d</td>
</tr>
<tr>
<td></td>
<td>Large</td>
<td>52^e</td>
</tr>
<tr>
<td>SUI</td>
<td>No Change</td>
<td>Less than 0.5^b</td>
</tr>
<tr>
<td></td>
<td>Small</td>
<td>0.5 – less than 1^c</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>1 – less than 2^d</td>
</tr>
<tr>
<td></td>
<td>Large</td>
<td>2^e</td>
</tr>
<tr>
<td>Cravings</td>
<td>No Change</td>
<td>Less than 0.75^b</td>
</tr>
<tr>
<td></td>
<td>Small</td>
<td>0.75 – less than 1.50^c</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>1.50 – less than 3^d</td>
</tr>
<tr>
<td></td>
<td>Large</td>
<td>3^e</td>
</tr>
</tbody>
</table>

Note. DES = Dissociative Experience Scale; PSSR = Post Traumatic Symptom Self Report; SUI = Substance Use Inventory. All values based upon average standard deviation across participants for each respective dependent measure. All subscales are treated as separate scores when interpreted using these definitions.

^aAll range scores represent a difference in raw scores between phases. ^bLess than 0.5 standard deviations. ^cBetween 0.5 standard deviation and 1 standard deviation. ^dBetween 1 standard deviation and 2 standard deviations. ^eGreater than 2 standard deviations.

Dissociation

Participant 521 was administered the DES self-report measure at each treatment contact from Baseline through the 3-month Follow-Up (see Figure 4). At Sessions 4 and 5, Participant 521 only filled out the first page of the 3-page measure,
rendering those data invalid. Further, all self-report data from Session 10 is missing. Participant 521’s DES scores showed a decreasing trend across the intervention. From the initial Baseline Session through Session 12, the DES had a slope of -1.26. Participant 521’s DES scores had a mean Baseline of 23.55 (Average of Pre-Treatment Session and Session 1), followed by a single session DES spike of 48.9 at Session 6, immediately following the first week of undergoing Imaginal Exposures, after which his DES scores lowered and stayed low from Session 7 through the final Follow-Up. Participant 521’s Session 6 DES score was an outlier, which impacted the statistical significance of his DES progression from Baseline through Treatment. Outlier notwithstanding, Participant 521’s DES change over the course of treatment represents a medium effect size, as there was a magnitude of change between 1 and 2 standard deviations (see Table 1). Ipsative z-scores decreased from a mean Baseline score of .93 to an end of treatment score of -.70, a change of 1.63. Though the change in DES over the treatment was substantial, it fell just short of critical difference score (1.84).
Participant 1017 was administered the DES-II at each COPE meeting, from Baseline through the 3-month Follow Up. Participant 1017 showed an increasing trend in his DES-II level over the course of the treatment, gradually increasing from Baseline to the early treatment period, prior to beginning the Imaginal Exposures (Sessions 2 – 4). During the Imaginal Exposure intervention, in Sessions 5 through 11, Participant 1017’s DES-II scores continued to rise, and they finally lowered back down to Baseline level during the four Follow-Up sessions. From the initial Baseline Session through Session 12, the DES has an upward slope of 0.49, showing a substantial, but non-significant, rise over the course of treatment (see Figure 5). Participant 1017’s DES-II change over the course of treatment represents a small effect size, as there was a magnitude of change between 0.5 and 1 standard deviations (see Table 1). Ipsative z-scores increased from a mean Baseline score of -0.41 to an end of treatment score of 1.29, a change of 1.7. Participant 1017 had a
rise (1.7) in the DES-II over treatment which is substantial, but it falls just short of critical difference score (1.84).

*Figure 5*

Subject 1017 DES-II

PTSD

Participant 521 was administered the PSSR PTSD self-report measure at each treatment contact from Baseline through the 3-month Follow-Up (see Figure 6). His PSSR data is missing for Sessions 10 and 12. Participant 521’s PSSR scores were high at Baseline, lowered as the treatment began, and got lower still once he engaged in the Imaginal Exposures. Participant 521’s PSSR maintained their low level through the first three Follow Up Sessions, and raised in the fourth and final Follow Up Session. From the initial Baseline Session through Session 12, the PSSR had a slope of -4.63, which is a statistically significant drop ($p < .05$). Participant 521’s PSSR change over the course of treatment represents a small effect Size, as there was a magnitude of change between .5 and 1 standard deviation (see Table 1). Ipsative z-scores decreased from a mean Baseline score of 1.68 to an end of treatment score of -3.12, a change of 4.8. While this PSSR change over the course of
treatment is massive, it did not meet criteria of the conservative critical difference score for the PSSR of 5.47.

*Figure 6*

![Subject 521 PSSR](image)

Participant 1017 was administered the PSSR PTSD self-report measure at each treatment contact from Baseline through the 3-month Follow-Up. Visually, Participant 1017’s PSSR scores were near maximum at Baseline, reached maximum in Session 1, and continued to stay at or quite near the maximum high score all the way through the Imaginal Exposure intervention; his scores stayed at or near peak from Baseline through Session 11. At the conclusion of the Imaginal Exposure part of treatment, Participant 1017’s PSSR scores dropped substantially, and they remained lower in the four Follow-Up sessions than they had been during the Treatment. From the initial Baseline Session through Session 12, the PSSR had a slope of -2.52, which represents a trend ($p < .10$) (see Figure 7). Participant 1017’s PSSR change over the course of treatment represents a medium effect size, as there was a magnitude of change between 1 and 2 standard deviations (see Table 1).
Ipsative z-scores decreased from a mean Baseline score of 0.38 to an end of treatment score of -1.57, a change of 1.95. This represents a substantial change, reflecting the Participant 1017’s PSSR dip in Session 12, it was not strong enough did not meet criteria of the conservative critical difference score for the PSSR of 5.74.

**Figure 7**

![Subject 1017 PSSR](image)

Substance Use and Cravings

Participant 521 was administered the SUI substance and alcohol self-report measure at each treatment contact from Baseline through the 3-month Follow-Up. His SUI data is missing for Session 10, and while Participant 521 completed the primary inquiry of the measure, a question regarding how many days one has used alcohol or substances in the last week, he often neglected to fill in a separate inquiry, regarding his degree of craving for alcohol or cocaine. Thus, information on Participant 521’s substance and alcohol use over the course of treatment is much more known than the degree of cravings he experienced over the same time period. Participant 521’s SUI scores were at maximum (using 7 days a week) at Baseline, lowered as the research protocol began (using 5 days a week in Sessions 2 and 3),
and tapered off almost completely as the treatment moved forward (reporting use of alcohol or cocaine on a total of 2 days between Session 4 and Session 12), other than at the 2-month Follow-Up, where use was high (6 days in a week). Participant 521 maintained low substance use through Follow-Up. (see Figure 8) From the initial Baseline Session through Session 12, the SUI had a slope of -0.59, which is a statistically significant drop ($p < .01$). Participant 521’s SUI change over the course of treatment represents a large effect size, as there was a magnitude of change over 2 standard deviations; his Cravings change over the course of treatment represents a medium effect size, as there was a magnitude of change between 1.5 and 3 standard deviations (see Table 1). With regard to ipsative z-scores, there was a decrease from a mean Baseline score of 1.75 to an end of treatment score of -.40, a change of 2.15. Again, while this change was substantial, it was not large enough to meet the critical difference score (4.29).

*Figure 8*
Participant 1017 was administered the SUI substance and alcohol self-report measure at each treatment contact from Baseline through the 3-month Follow-Up. All data is accounted for, and unlike Participant 521, Participant 1017 completed the entire sheet at each date, so there is also more complete data on his alcohol cravings over the course of treatment. Participant 1017’s SUI scores were at maximum (using alcohol 7 days a week) at Baseline, and maintained the maximum score through each Treatment Session and through the Follow-Up Sessions; he reported having used alcohol each day for the entirety of his contact (over six months) with the TAP lab. As such, Participant 1017’s SUI slope was 0; there was no change. However, there was a change in his craving for alcohol, at a slope of -0.05 across treatment, which is a statistically significant drop (p < .10) (see Figure 9). Similarly, there was no change with regard to effect size for SUI, but Participant 1017 did have a small effect size in his SUI cravings for alcohol, as determined by a magnitude of change between .5 and 1 standard deviations (see Table 1). There was no change in Participant 1017’s SUI ipsative z-scores, but there was a decrease in the z-scores for
cravings, which went from a mean Baseline score of 0.53 to an end of treatment score of -0.47, a change of 1. The decrease in cravings over treatment was not large enough to meet the critical difference score (4.29).

Figure 9

Overall, Participant 521 had negative slopes on all measures across the treatment, showing movement in dissociative symptoms, PTSD symptoms, and SUDs symptoms in the direction towards health. These results support hypothesis 2, as Participant 521 experienced a deepening of his narrative immersion across the intervention (see Narrative Immersion) he also experienced a movement towards health with regard to his PTSD, SUDs, and dissociative symptomatology.
Overall, Participant 1017 had negative slope on the PSSR, a positive slope on the DES-II, and a slope of 0 on the SUI from Baseline through treatment protocol, showing divergent directionality with regard to COPE’s impact on these three dependent variables. With regard to hypothesis 2, as Participant 1017 did not have any statistically significant Referential Activity changes across the treatment, no statement can be made about an association between his linguistic changes (per DAAP) and his SUDs, PTSD, and dissociative symptomatology.
Table 3: Participant 521 z scores: Mean Baseline, End of Intervention, and Follow-up Scores on Dependent Measures

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean Baseline</th>
<th>End of Intervention</th>
<th>Mean Follow-up</th>
<th>Critical Difference a</th>
<th>Baseline to End of Intervention</th>
<th>Baseline to Follow-up</th>
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<tr>
<td>DES</td>
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<td>ns</td>
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<td>-0.73</td>
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<td>ns</td>
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<tr>
<td>Craving Cocaine (urge)</td>
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<td>-0.08</td>
<td>3.83</td>
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</table>

a Using a one-tailed directional hypothesis.

b Significance tests involved comparing the differences between scores for the mean baseline and end of intervention, and the mean baseline and the follow-up score to the Critical Difference score. Differences equal to or greater than the Critical Difference score were considered statistically significant.
Table 4

Subject 1017: Raw Scores, Slopes, and Autocorrelation Factor for Scales Administered

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pre</th>
<th>Session</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Slope&lt;sup&gt;a&lt;/sup&gt;</th>
<th>FU</th>
<th></th>
<th></th>
<th>ACF</th>
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<td>20.6</td>
<td>20.4</td>
<td>23.9</td>
<td>25.4</td>
<td>8.2</td>
<td>37.1</td>
<td>21.4</td>
<td>22.1</td>
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<td>119</td>
<td>119</td>
<td>117</td>
<td>92</td>
<td>110</td>
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<td>7</td>
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</tr>
</tbody>
</table>

<sup>a</sup> Slope from session "pre" to session 12.
<sup>b</sup> Using a one tailed directional hypothesis.

Table 5

Participant 1017 Z scores: Mean Baseline, End of Intervention, and Follow-up Scores on Dependent Measures

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean Baseline</th>
<th>End of Intervention</th>
<th>Mean Follow-up</th>
<th>Critical Difference&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Baseline to End of Intervention</th>
<th>Baseline to Follow-up</th>
</tr>
</thead>
<tbody>
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<td>DES-II</td>
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<td>0.00</td>
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<td>ns</td>
</tr>
<tr>
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<td>-0.47</td>
<td>-1.21</td>
<td>4.29</td>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>

<sup>a</sup> Using a one tailed directional hypothesis.
<sup>b</sup> Significance tests involved comparing the differences between scores for the mean baseline and end of intervention, and the mean baseline and the follow-up score to the Critical Difference score. Difference equal than or greater to the Critical Difference in the predicted direction were considered statistically significant.
Linguistic Analysis Across the Imaginal Exposures

Due to the large number of data points in the linguistic analysis, making statistical analysis overly conservative, z-score tables were not included for either Participant 521 or 1017.

Referential Activity

Participant 521’s Referential Activity, as measured by the WRAD, was high from the very first Imaginal Exposure (Session 5, Exposure 1). In fact, his WRAD score in the first Imaginal of 0.638 was the highest RA level in the entire treatment. Visually, it looks like Participant 521’s WRAD slightly diminished over the course of treatment, but in fact, it had a slope of 0, meaning that there was no statistical movement in either direction (see Figure 10). Other than a dip in Participant 521’s WRAD scores in Session 9, he stayed quite consistent in his Referential Activity scores across the treatment. He had a mean WRAD of 0.598 over the 28 tellings, a score which is substantially above the neutral value of 0.5, demonstrating high Referential Activity.
Participant 1017’s Referential Activity, as measured by the WRAD, had a slope of 0, indicating that no movement that could be captured statistically occurred in his Referential Activity across the treatment. Visually, it appears that Participant 1017’s WRAD scores slightly increase across the treatment (see Figure 11) but this represents a minor change in score. Though Participant 1017’s WRAD scores had a slope of 0, there was much variability in his WRAD scores. Also of note, there was tremendous variability in his WRAD scores within his individual Sessions themselves (note Sessions 8, 9, and 10 below), with substantial WRAD changes from
Imaginal Exposure to next within the same Session. Participant 1017 had a mean WRAD of 0.52 over the 39 tellings, a score which is above the neutral value of 0.5, demonstrating high Referential Activity in the Imaginal Exposures.

Figure 11

Mean High WRAD

Participant 521’s Mean High WRAD, or MHWRAD, was also high from the very first Imaginal Exposure (Session 5, Exposure 1). As MHWRAD is a measure of RA when RA is elevated, it makes sense that like his elevated initial WRAD score, Participant 521’s MHWRAD score of 0.144 in Session 5, Exposure 1 was his highest MHWRAD level over the course of all the Imaginal Exposures. Again, similar to the
WRAD, Participant 521’s MHWRAD diminished in Session 9, but other than that, the MHWRAD scores were relatively consistent over the course of his 28 Imaginal Exposure tellings, as he had a slope of 0 on this measure (see Figure 12).

Figure 12

Like his WRAD data, Participant 1017’s Mean High WRAD, or MHWRAD, had a slope of 0 across treatment. Visually, Participant 1017’s MHWRAD seemed to begin at a relatively low point, rise continuously through the middle of the treatment intervention (Session 9), and then fall back towards around its starting point in the final two Imaginal Exposure Sessions (see Figure 13).
**Reflection**

Upon visual inspection, Participant 521’s Reflection, or MR (Mean Reflection), seems to decrease across the course of the Imaginal Exposures. According to a statistical analysis, however, MR had a slope of 0 across Participant 521’s 28 Imaginal Exposures (see Figure 14).
Upon visual inspection, Participant 1017’s Reflection, or MR (Mean Reflection), does not seem to move in a clear direction over treatment, but his MR scores seem to become more disparate as he gets deeper into the Imaginal Exposure intervention (see Figure 15). According to a statistical analysis, MR had a slope of 0 across Participant 1017’s 39 Imaginal Exposures.
Narrative Immersion

Participant 521’s Narrative Immersion, as captured by the Reflection/Referential Activity covariation, or Ref_WRAD (R_WRAD below) did, in fact, change over the course of the Imaginal Exposures. As can be seen visually (see Figure 1), and is also demonstrated by a statistically significant slope of -.03 (p=.025), Participant 521’s R_WRAD covariation becomes more negative over the course of Imaginal Exposures. The more negative a Ref_WRAD score, the more the speaker is immersed in the narrative, so this demonstrates that Participant 521
becomes increasingly immersed in the narrative as he progresses with his Imaginal Exposure tellings.

Participant 1017’s Narrative Immersion, a product of the Reflection Referential Activity covariation, or Ref_WRAD (R_WRAD below) changed slightly over the course of the Imaginal Exposures. As can be seen visually (see Figure 16), there is a small rise in Participant 1017’s R_WRAD scores across the treatment, indicating a small lessening in how immersed the speaker is in his narrative. This change was not statistically significant; his R_WRAD change occurs at a slope of .01.

Figure 16
Linguistic Changes in the Treatment Responder: a Qualitative Review

Background

Participant 521, who was given the pseudonym, James Lewis, is, at the time of treatment, a fifty-three year old African-American man who lives in an apartment with his sister and works part-time as a bar back. According to data gathered from the Baseline Interview, Mr. Lewis reports that he has a High School degree, and that he completed two years of college. He denies having ever experienced physical or sexual abuse. Mr. Lewis reports that he is divorced, and that no one he is currently living with has an alcohol or drug problem. As gathered from the SCID-IV at Baseline, Mr. Lewis meets criteria for both past and current Major Depressive Disorder with a Moderate Severity, and reports that its first onset occurred at the age of ten. He also meets criteria for past and current Alcohol Dependence with a Moderate Severity, and reports that its first onset occurred at the age of fourteen. Further, the SCID-IV found that Mr. Lewis meets criteria for past and current Cocaine Dependence with a Moderate Severity, and he reports that its first onset occurred at the age of twenty-eight. Mr. Lewis reports having a history of depression and anxiety, and has had four outpatient psychiatric treatments (he has been prescribed Lexapro in the past), and no inpatient hospital admissions. At the conclusion of the Baseline Interview, it was determined that Mr. Lewis had a High Substance Use Severity and a High PTSD Severity; with consent to be randomized into one of the two treatment protocols, Mr. Lewis was assigned to COPE.

Substance Use Severity (Low or High) is determined by the number of substances the participant is dependent on at Baseline; if it is a single substance, the participant
The primary trauma that Mr. Lewis identifies in his Baseline CAPS interview was the murder of his father. It is the narrative of this terrible event that Mr. Lewis tells and re-tells in twenty-eight imaginal exposures over the span of seven treatment sessions (sessions five through eleven). At the time of his father’s murder, Mr. Lewis was six years old. At the time, he was living in an apartment in Hell’s Kitchen with his mother and father, three sisters and older brother. Mr. Lewis’ father was a veteran of World War II and the Korean War, who was involved in labor union organization; Mr. Lewis reports that his father’s life was in danger because of his pro-union work, and that in the time prior to his murder, he was frequently being harassed by men opposed to his efforts.

In its entirety, Mr. Lewis’ exposure narrative is composed of the following sequence of events:

a. James is out with his father and older brother, Junior. They are on a subway platform, heading to a barbershop, when two men approach James’ father. The men begin pushing James’ father, but are quickly diverted as a police officer approaches. The men run away, and James, Junior and their father walk home.

b. Back at home, with the entire family present, James’ mother, Jackie, announces that she is going to go grocery shopping at the A & P. Five minutes after she leaves, there is a knock on the door, and James’ father opens the door to find his wife, who had forgotten her shopping cart. She takes the cart, and leaves again. During this time, James and Junior are playing in the back of the apartment.

c. Five minutes after the initial knock, there is another knock at the door. James’ father opens the door, and James hears two loud pops. James hears sounds coming from the front of the apartment, and he and Junior peek down the hall to see their father in a physical confrontation with two men, the same men who had assaulted their father on the subway platform.

d. James’ father calls out to him and his brother, telling them to gather their sisters and escape. James hears two more loud pops. James and Junior get their sisters and climb out a window to the fire escape. Once on the fire escape, a neighbor, Ms. Mary, opens her window, and James and Junior help

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is marked as having ‘Low Severity,’ if it is two or more substances, the participants is marked as having ‘High Severity.’

10 To protect patient confidentiality, all names have been changed.
their sisters into her apartment. Ms. Mary encourages James to come into her apartment, but he declines, following his brother down the fire escape. 

e. James and Junior find themselves in the middle of the St. Patrick's Day parade, and they search for their mother and for a police officer in the crowd. James and Junior find both their mother and a police officer, and the four head back towards the family's apartment.

f. James, Junior, Jackie and the police officer walk up the stairs of the building, and they find the door to their second-floor apartment ajar. The police officer, who is walking in front, opens the door, and James sees his father's body on the floor. His father has been decapitated. Jackie faints. James urinates in his pants.

g. Instructed by his brother, James goes into the apartment to get water from the bathroom to help revive their mother. As James walks towards his mother, he sees his father and takes a moment to look at him.

h. James and Junior rouse their mother, who begins to scream when she is revived. Jackie then tells the officer that her brother-in-law is a Homicide detective at a local precinct. The officer makes a phone call, and soon there are many police officers on the scene, including James' uncle.

i. James and Junior go with their uncle to the police station, where they look at photographs of potential suspects. On the first page of photographs, James and Junior point to one of the men who they believe had murdered their father.

The following excerpts demonstrate how Mr. Lewis’ description of four distinct aspects of his story change and develop over the course of the exposure treatment.

The In-Home Invasion

Session 5, Exposure 1 (1st Telling)

I assume my father probably thought that that was my mother, and he opened the door. He opened the door, and we were not really paying it no mind because my mother was on her way / on her way; mother was at the door, too. We start hearing a lot of scuffling. And my father called my brother, who was // who was, older than me, and my brother said, James! And I look, my father was bleeding, and I heard a couple of pops. And, nothing but blood. And, my brother grabbed me, and [inaudible], and father said, he told my brother to get / get James and them kids out of here, James, Junior.

Session 6, Exposure 2 (6th Telling)

I think it’s my mother. And, I hear two shots, but I thought I hear two firecrackers. And, and, I find out they were not firecrackers. [Inaudible] they look, we look, they look, I look, / I see my father trying to get up. And he did; got up, he is holding the
wall with one hand, his stomach and his chest area, with the other. And, he screams to my brother, telling him to get them girls out of here.

**Session 7, Exposure 3 (11th Telling)**

Me and my brother was playing /\ and // hm hear a knock at the door. We think it is my mother again; my father answered it // and not even a hot minute, we hear this tussling. We hear this tussling [lots of emphasis]. My father was a naturally built guy; he was short like I am, just naturally built; and, you could feel his body hitting the wall. And, me and my brother, my brother got up and peeped first, and he waved to me to come back and take a look at this. And, he was tussling. My father turned around, said James, Junior, get them girls out of here.

**Session 11, Exposure 2 (28th Telling)**

The door / somebody knocks on the door again. He [my father] said, Jackie, I’m telling you do not worry about these kids. I got these children. But he didn’t realize it was them. We didn’t realize it. And me and my brother is in the back trying to get in the closet, trying to get the racing car set out. And we hear this tussling. We probably thought it was a doors that were shot or something. We hear tussling. My father is trying to hold these men down from getting in here. Pop // and another pop. Junior [inaudible] runs to the hallway, gets down to the hallway // and my father tussling with these two dudes, I mean, tussling hard. And um // he turned around and said, Junior, get your sisters out of here! Get them out of here.

*Finding Help in a Crowd*

**Session 5, Exposure 1 (1st Telling)**

And, there is a parade going on, on Ninth Avenue. Hell’s Kitchen at the time was a lot of Irish. And, um, my brother said he had seen my mother, but it was a crowd, so we could not / we had to run to get through the crowd to get to my mother. And by the time we got to my mother, we told my mother, something is going on in the house with our father.

**Session 5, Exposure 4 (4th Telling)**

We went towards Ninth Avenue, where the parade was at, and we looked north, [inaudible] at the A and P's, and we see our mother cause she had on // she had on an outfit, um, blue and white outfit. She stood out because everybody had all that green. Anyway um, we got, we had to fight through the crowd, but we got her, we got my mother, and uh, I / I could see the expression on her face. As we got closer, she got more and more worried about the level of life, being dead.

**Session 7, Exposure 3 (11th Telling)**

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11 Per DAAP instructions, each / symbol represents a one second pause.
I’m walking through, I’m walking from fifty second street towards / I’m walking south and I seen the cops. But I was specifically / there was a specific cop that I wanted [inaudible]; that was his beat, as I remember, it was his beat. And / um / he was familiar with me and my family, and I remembered him. And um, I got him; I grabbed him; he, and he, he came, you know, I held him by the hand. I told him somebody was hurting my father, and he he said, somebody is hurting your father? I said, somebody is hurting my father right now. And I turn around, and my brother’s fighting through the crowd; he he spotted my mother, and um, he seen it, too, he knew my mother also. And um / he seen it. And / my mother came // was coming towards us // and she worried, you can see it in her face. I could not hear what my brother was telling her / because of the bagpipes, / but um, I knew she knew.

**Session 7, Exposure 4 (12th Telling)**

We get to fifty second street, we come up, looking right, and we looking left, we hear the bagpipes. My brother said, James, get one of them, get a cop, I'm going to get mommy. And I knew that he was going to go the super market on fifty fourth street to go get her, the A and P, but he never made it that far / something; I guess my mother was, was, she was back on her way. Anyway, I grabbed the police officer, officer O’Hara. I grabbed him, if I remember correctly. Um, and / I told him, somebody is hurting my father upstairs. And / he had a smile on his face, but [inaudible] understood what I was saying. I had him by the hand, I told him, somebody is hurting my father. And, I was pulling him; as I pulled him, I looked forward. [Inaudible] people; I see my mother and my brother. I see my brother walking towards my mother. And, I don’t know what he said to her, but you could tell her whole expression changed.

**Session 11, Exposure 1 (27th Telling)**

We got out, got out of the backyard, made a left on Ninth Avenue. And that is when we seen the parade and Junior says, come on, hurry up! Hurry up! So we ran to Ninth Avenue, see police / looking for police. We have seen him like it was [Inaudible] we had to fight through the crowd. We fought through the crowd. My brother grabbed the police officer. At first he thought he was / my brother was just trying to get through the crowd and it was not like that. My brother wanted his attention and grabbed him. I was crying. I was scared. And he seen it on our face. He said, somebody shot our father. He’s there in the house now. And he told the guy that he was on a post with / the officer / and he came with us towards fifty second street, between fifty first and fifty second. We seen my mother / again. She is coming. She is [Inaudible] coming. My brother told me to take the officer to the house, to the building. I’m going to go get mommy. We seen [Inaudible] my mother. It was strange how we seen our mother trough that crowd because she is a / she was a short women and we still managed to see her. I think / an act of faith or something but I seen her.
Return to the Scene of the Crime

**Session 5, Exposure 1 (1st Telling)**

And, we ran [Inaudible], we grabbed my mother by the hand to get upstairs, and by the time she came upstairs, my father was already dead. Decapitated. So, you know, wow.

**Session 6, Exposure 2 (6th Telling)**

When he [police officer] came into the house with his hand on his gun, he see, he saw, he saw my father, and he turned around and let us know, let my mother know, that your husband [inaudible], he is gone. Anyway, we had nowhere else to go. With, with Miss Mary's house, at the time, who was our next door neighbor. And, as we were walking into Miss Mary's house, I see my father laying there, dead. And, he was headless. Um, wow.

**Session 7, Exposure 4 (12th Telling)**

And, as we walking up the stoop, I'm scared. I'm scared. That time I realized I peed on myself. I'm scared. But then I see my father. We get upstairs to the house. Before we get upstairs, we see the blood in the hallway. But, when the officer knocked on the door, pushed the door; he opened the door / and the gun smoke / it was still gun smoke in the air. And, you could smell it. You could smell it. And um // he knew it immediately, what it was, because he put his hands on his gun // he put his hands on his gun, and I remember it. And, he told my mother / to step back / go downstairs for a second / and then he went, and he did not know if the criminals were still in the house or not / but he had his hands on his gun. And, // now he obviously [didn't have, inaudible] and I was so happy, with uh, I seen that cop for, I was thankful to him because he protected us. He was trying to protect us.

**Session 9, Exposure 5 (21st Telling)**

Walking up the steps: me, my mother, my brother and a police officer. And the police officer goes in. He is starting / turns around and gives us a stop signal. And, If I remember correctly puts this // Hey, quiet. It was quiet. And my mother's holding my hand. I could feel / I feel her hands, as officer opens the door, my mother's hands start shaking. She's shaking. We are all looking at the door. And the police officer has seen my father's feet and legs. And more the door opens up the more my mother's hands keep shaking. So I sort of let go of her hand.

**Session 10, Exposure 4 (25th Telling)**

Me my mother and my brother and a police officer that is leading us up the steps and across the second floor, and right before we got to the second floor the cop turned around and tells us, stop, and put his finger towards his lips // one finger to
be quiet [Inaudible]. And as he opens the door wider, which was already cracked before he got to the door, he looks down at his feet. He sees blood. And we already saw the blood // but he opens the door, and my mother sees all of the blood and her husband’s body.

Session 11, Exposure 2 (28th Telling)

He [police officer] had his gun out. He said, come in the building, please, quietly. Anyway, um // they coming up the steps. It is the first floor, between first and second floors, start walking up. The door was cracked. That is where the officer turns around to my mother and went like this / put his finger to his mouth, quietly. And the more he opened the door, the more blood that we saw and my mother and my mother saw /// and that is when all hell broke loose.

Response to the Horror

Session 5, Exposure 1 (1st Telling)

My father was already dead. Decapitated. So, you know, wow.

Session 6, Exposure 4 (8th Telling)

And then she [Miss Mary] tells my mother, Jackie, Jackie do you have a change of clothes for James, cause he wet on himself. I didn’t know I had peed on myself, I didn’t know that.

Session 7, Exposure 3 (11th Telling)

And my mother fainted /// she fainted /// and um, [Inaudible] my brother kept saying mommy, get up, you got to get up, mommy, please get up. He was scared also; we were all scared. [Inaudible] I was terrified. I know I peed on myself. Officer was trying to talk to me; he was trying to talk to one of us. My mother was / sedated / she was in no [inaudible], she could not talk.

Session 9, Exposure 2 (18th Telling)

My mother fainted already. As he is in the house / my mother's already / my mother already fainted and me and my brother trying to tussle and keep up. [Inaudible] in the head. I go to the bathroom to get some water and put it on a tissue so I can revive her. I was only 6 years old so you know there was not too much holding I could do. Here is my brother holding her. And I’m standing there not realizing that I peed on myself, you know. This is not / my mother is unconscious cause what she saw; it made me realize how frightening the scene was. This is serious [inaudible]. There is no come back on this one. And I’m realizing this. I’m realizing. Me and my brother we already realized about it. My mother woke up.
Session 9, Exposure 3 (19th Telling)

Meanwhile, as he [police officer] opened the door, my mother seen my father's body, seen the blood; I've seen the blood. And I / my mother has a handle hand over her mouth now and she faints. My brother's holding her and he says, James, help me. I'm helping. And // my brother says, [Inaudible] go to the bathroom. [Inaudible] Go to the bathroom and get the water. I'm getting the water. And the tissue // and it was cold water. And I take the cold water. I'm taking the cold water to my mother. And I pour it on / I squeezed the tissue. And the water is bouncing off my mother's forehead. And I take / I'm taking the tissue and wiping her face with it. And she gets up. She gets up. My brother takes her sleeve. He is wiping the water off of my mother's face. The blood is still coming out of my father. He is moving around. His body is moving around little bit // and it is [Inaudible] scaring me. His head is detached from his body. His eyes is open. I cannot / I cannot.

Session 9, Exposure 5 (21st Telling)

And the next thing you know, my mother, she fainted. She fainted. Junior said, James, get some water. Go into the bathroom, get some water / there is some in the hallway. Get some water. Get some tissue, take it off the roller. I'm just taking as much as I could take, to have the water running, have the water running cold. So I put the tissue in the water and I run out into the hallway and squeeze the water on my mother's forehead. Then I take the tissue and wipe it on her face to [Inaudible] her face. She wakes up. I'm relieved that she is up now. I'm relieved because I thought I was / the cop's inside the house real long again and I'm thinking these people are somewhere in the building. I'm still nervous, scared. I hold my mother. I hold her hand tight. I said, you know, I say at least I still got a mother. And // I'm scared. I see all this blood. I see all these blood. My father's um // legs started shaking. The nerves are still in him. His eyes is open. His head is not there. It is detached from his body. I'm scared. I want to run. I do not know where to run to. Martha is crying because here is my mother. Martha is crying. I look at my big brother. He's standing there in shock. Quietly standing there. I don't know what is wrong with him. He is just standing there, not leaning on nothing just standing there. And I'm scared.

Session 11, Exposure 1 (27th Telling)

But when the officer opened the door quietly that is when my mother seen it, seen her husband laying there. She did not know if he was dead or alive but she knew he was laying there. And we seen the blood. So much blood. So much blood. And my mother just blacked out, fainted. And my brother told me to get some water from the bathroom that was in the hallway. I went and got the water, the handkerchief he gave me. And I wetted it with cold water. And I came down. As I walked by the house, I see my father's body moving, which was strange. Anyway // I got the water. I squeezed it on my mother's face / the water. I squeezed the water on her face from the rag and she started woken waking up a little bit so // my brother took the rag
from me and started wiping her face with it. She started waking up. And she kept saying, oh no, no, no, no.

Thematic Elements that Emerged Across Participant 521’s Imaginal Exposure Narratives

What follows are linguistic examples which represent developments in Mr. Lewis’ Imaginal Exposures. See Chapter Four for an analysis of these qualitative linguistic shifts over the course of the exposure treatment. Two moments in which Mr. Green reflects upon the impact of the trauma, connecting the details of that day to his affective state are captured below. In Session 6 Exposure 4 (8th Telling), directly after Mr. Lewis recalls that he urinated on himself for the first time, he states:

*And I kept peeing on myself until I got to the age of twenty. I had a pissing problem. Did not know it. I didn’t pee on myself as I [inaudible] older, would pee on the bed and everything. And, I didn’t realize I was in shock. And, I have a lot of issues; I have a lot of issues with that day.*

On the first exposure of session 9 (Session 9, Exposure 1 (13th Telling)), after the therapist has prompted Mr. Lewis to begin the exposure narrative, she asks him, “Does it make sense why I am asking you to go through the details?” Mr. Lewis gives the following answer:

*Because it takes away that garbage that’s within me. And its relieved me a lot. Its relieved // it been like it is like a 200 pound weight off of my shoulders that’s been relieved / considerably.*

Linguistic Changes in the Treatment Non-Responder: a Qualitative Review

Background
Participant 1017, who was given the pseudonym, Phillip Green, is, at the time of the treatment, a fifty-three year old single (never married) African-American man who was living in a homeless shelter while in the process of trying to move into his own apartment in New York City. At the Baseline Interview, Mr. Green reports that he completed his BA, with a focus on Computer Technology and Architecture. In that interview, he describes having worked for over thirty years in managerial positions in various business settings. Mr. Green reports that he lost his last job a little over two years ago, has sued that company for wrongful termination, and is awaiting a settlement. Mr. Green reports being on both medical and psychiatric disability. Mr. Green reports having experienced frequent physical abuse at the hands of his parents throughout childhood. He also reports that his parents were alcohol dependent, and that he witnessed physical altercations between them throughout his childhood. As gathered from the SCID-IV at Baseline, Mr. Green meets past criteria for Major Depressive Disorder with a Moderate Severity, and reports its first onset was at the age of thirteen. He does not meet criteria for current Major Depressive Disorder, however Mr. Green does meets criteria for current Dysthymic Disorder with a Severe Severity. He also meets criteria for past and current Alcohol Dependence with a Moderate Severity, and reports that its first onset occurred at the age of forty. Other than alcohol, as per the SCID-IV, Mr. Green does not meet criteria for any other current SUDs, though he does also meets criteria for past Cannabis Dependence, with an initial age of onset of forty years old. With regard to psychiatric history, Mr. Green reports having spent a year in a New York City inpatient hospital at the age of six. At age forty-seven, Mr. Green was
diagnosed with PTSD and Major Depression, and has been treated at an outpatient setting in Manhattan for the past six years. Per the SCID-IV, Mr. Green did not meet criteria for a psychotic disorder, however, he reports having a history of hallucinations, which have occurred over his lifetime as well as within the thirty day period prior to his Baseline Interview. Mr. Green reports current and past suicidal ideation, but has never had a suicide attempt. He has never before received treatment for SUDs. At the conclusion of the Baseline Interview, it was determined that Mr. Green had a Low Substance Use Severity and a High PTSD Severity; with consent to be randomized into one of the two treatment protocols, Mr. Lewis was assigned to COPE.

The primary trauma that Mr. Green identifies in his Baseline CAPS interview was a violent physical altercation between himself, his mother, and his mother’s boyfriend, followed by the immediate aftermath of this violence. It is the story of this day, which Mr. Green states, “was the worst day of my life,” (Session 5, Exposure 2), that he tells and re-tells in thirty-nine imaginal exposures over the course of seven treatment sessions (sessions five through eleven). As will be described in a footnote on the next page, there is some ambiguity with regard to the exact sequence of events on the day of Mr. Green’s traumatic memory. At the time of the violent altercation, the following can be discerned about Mr. Green: he was either fourteen or fifteen years old and living with his maternal aunt in South Carolina. Prior to that day, he had been raised in New York City, and had moved to South Carolina within the last year or so. Mr. Green has a younger brother. His parents have been separated for at least a year, but may still be married. Depending on the
telling, Mr. Green’s father has either passed away within the last year, or will pass away a few months after the event. Mr. Green’s mother is living with a boyfriend, who is also married and has children. Mr. Green’s brother is not living with him or with their mother or father; it is unclear where Mr. Green’s brother is at the time of the incident. On the day of the incident, Mr. Green recalls not having money or clean clothes, and that he decided to go to his mother’s home to ask for money.

In its entirety, Mr. Green’s exposure narrative is usually composed of the following sequence of events:

a. Mr. Green decides to go to his mother’s house to ask her for money.
b. Mr. Green enters his mother’s house, and is verbally confronted by his mother’s boyfriend.
c. Mr. Green’s mother attempts to placate the discord between her son and boyfriend.
d. Mr. Green’s mother and her boyfriend begin to have an argument; the boyfriend strikes his mother in the face.
e. Mr. Green attacks his mother’s boyfriend. As Mr. Green is choking the man, he is struck by a blunt object in the back of his head, knocking him unconscious.
f. Mr. Green wakes handcuffed to a hospital bed. There are people all around him whom he describes as police officers and child welfare workers.

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12 To protect patient confidentiality, all names have been changed.
13 There are many contradictions that occur over the course of the different tellings of Mr. Green’s trauma narrative, making it impossible to state that this or that sequence of events is the “real” sequence of events. For example, on certain tellings, Mr. Green reports that at the hospital, his mother did not visit him there, whereas on other tellings, he describes his mother in his hospital room, telling police officers that she would like him charged. Further, on multiple tellings, Mr. Green states that this event took place after his father’s death; on other tellings, he states that his father is alive at the time, and dies a few months after this event. Other significant details that change dramatically are the nature of the argument between his mother and mother’s boyfriend, as on some tellings, he states that his mother’s boyfriend began arguing with his mother about her giving Mr. Green money; on multiple other occasions, he states that the argument was hinged upon his mother’s boyfriend calling his mother derogatory names. Mr. Green frequently mentions his age at the time of the traumatic incident, however, he refers to himself as both being fourteen and fifteen years old at the time of the incident on multiple occasions.
g. Mr. Green is questioned by the police, who ask him if he attacked his mother's boyfriend. Mr. Green states that he did attack the man. The police ask Mr. Green why he had done so, and he states that it was because his mother's boyfriend hit her.

h. Mr. Green is informed by police that his mother has told the police that she would like to press charges against him.

i. The police inform Mr. Green that no charges will be brought against him; they release him from his handcuffs.

j. The police ask Mr. Green if he would like to press charges against his mother and/or her boyfriend. Mr. Green declines to press charges.

k. The authorities ask Mr. Green if he would like to live with his mother. He declines this offer. The authorities ask Mr. Green if he would like to become an emancipated minor; to this, he agrees.

l. Mr. Green is picked up at the hospital by his maternal aunt, and brought to her home. Once there, he declines to eat, goes to his bedroom and lies on the bed, unable to sleep, his mind racing.

The following excerpts demonstrate how Mr. Green's description of four distinct aspects of his story change and develop over the course of the exposure treatment.

Some excerpts demonstrate the active role Mr. Green's therapist took on in the treatment.

**Entering the Home**

**Session 5, Exposure 2 (1st Telling)**

What I see when I get there / is / I see / my mother and, and, and that bum that she is allowing to live with her in a shouting match.

**Session 6, Exposure 2 (4th Telling)**

Now, one detail I got wrong. Um, I didn't have to knock on the door. The door was actually open. So I, so I walk in, and this is my mother's house, so I walk in. I don't have to knock. Now, my mother's boyfriend / when I walk in the door, my mother's boyfriend goes, do you know how to knock before you come in? My response to him is / I said, listen, motherfucker, you are in my mother's house, I don't have to knock. This / this house / this house belongs to my mother. I don't have to knock, and you know, this is a common occurrence with us butting heads, because, I do not like the son of a bitch. Never did, never will, and I never acknowledge him as my father, even if he had married my mother. Now, um, of course, when I come in, my mother, my mother sort of halfway welcomes me into the house, but she does not hug me. She does not kiss me. She does not approach me in any way a mother would when sees her son because this is a strained situation where I do not live with her, and any
love she shows for me would be, would be crossing her boyfriend, so it, I feel very strange in this situation, because I’m fourteen years old. I’m visiting, visiting my mother, and I’m not, I think, I think that any, any, when any, any fourteen year old sees his mother

Therapist [cuts Mr. Green off]: What do you, what do you see in that situation?
Mr. Green: I see //
Therapist [cuts Mr. Green off]: What do you see?
Mr. Green: I see a relationship between a mother and her son has been destroyed. I see, I see a fourteen year boy, who / who was confused because he cannot figure out why his mother does not treat him
Therapist [cuts Mr. Green off]: You are doing great
Mr. Green [cuts therapist off]: Like he is her first born son.

Session 7, Exposure 1 (6th Telling)

I, we drive up to the front / front door of my mother’s house and that place where my mother and her boyfriend are staying, and I get out of the car and I walk up to the front door and the door’s open, so, and because it is my mom’s house, I go in, and I’m greeted there by her boyfriend. He does not say hello to me. He does not say, how are you doing? He says / he says, what the fuck are you doing walking in here without knocking, boy? And, my responsibility to him is [Inaudible] my response to him is, motherfucker you are in my mother’s house. This is my mom’s house. I can come in when I want to because my mother pays the bills here

Therapist [cuts Mr. Green off]: What / how is he standing? Is he standing? Is he sitting?
Mr. Green: He’s, he’s, he’s, he’s sitting. And I walk into the door, and I’m getting angrier by the second because this guy thinks that he runs the house in spite of the fact that he does not work anywhere, does not have a job.
Therapist: Is that what you are thinking at that moment?
Mr. Green: Yep. I’m thi-
Therapist [cuts Mr. Green off]: So, you are thinking, he does not have a job, he’s
Mr. Green [cuts therapist off]: Yeah.
Therapist: Ok, go on.
Mr. Green: He’s, he’s // I’m thinking, I’m thinking: this guy is a bum. The guy is a fucking bum and a drunk. The fuck / he comes over here and, and like you rule something? Go to, and I’m thinking to myself, why don’t you go to work some God damn where. You know? And / and / and because him and my mom are spending my money. I actually have to work after school to by myself some new clothes.
Therapist [cuts Mr. Green off]: Are you thinking about that in
Mr. Green [cuts therapist off]: Yes
Therapist [cuts Mr. Green off]: that moment?
Mr. Green: Yes I am. I’m thinking about the fact
Therapist [cuts Mr. Green off]: Say those / say those thoughts. Keep going.
Mr. Green: Ok. That’s the / I’m thinking about the fact that I’m a teenager. I’m in High School. Unlike the other kids at school, I do not live with my mother. This guy is living with my mother, and living off money that my father, that my mother migh /
that my mother has because she was married to my father. Money that is earmarked for / that my brother and me are supposed to be using
Therapist [cuts Mr. Green off]: Stay, stay
Mr. Green [cuts therapist off]: To have the things we need. I’m also thinking about the fact that this guy does not work anywhere. This guy has a wife and kids that he’s abandoned to be with my mother. And / and my mother has abandoned me and my brother and my father to be with him, and I’m thinking, you know / this is contrary to everything I’ve ever been taught about family life. And / and after that, I’m not really thinking anymore // because my mother comes in the room. She does not greet me. She does not hug me like a mother hugs her son. Because frankly, I’m just there / I’m just there / I’m not there / I’m not there / for a social visit. I’m just there to get money from her to buy clothes, and leave
Therapist [cuts Mr. Green off]: Mm hmm. Stay with the memory.
Mr. Green: You know, I had, I had no intention of staying there a long time, so while my mother’s getting the money for me, Danny starts talking to her and he starts telling her how much money she should give me, and I’m like, mot
[Inaudible] [Inaudible] which mind you is my money. She gets the money. The checks from the government say, to Susan Green, for the children of Phillip Green. Phillip being my father, and my mother and her boyfriend are living off of money that is earmarked for me and my brother because of money that my father made, because of my father being in the military. And so, when she reaches to give me the money, he puts his hand in between, between me and mother, which is kind of symbolic, because he has come between me and my mother so much so, that even though I don’t know it, our relationship as mother and son is already over.

**A Quickly Escalating Argument (Murderous Rage)**

**Session 5, Exposure 1 (1st Telling)**
[My mother and her boyfriend are] her in a shouting match, an argument and then next thing I know, he hits her. And what I start thinking about is all the times he would hit me and my brother, and all the times me and my brother hit him back, and now he is totally disrespecting me by hitting my mother. It is / is bad enough that I do not live with my mother. I’m a teenager and I do not live with my mother. It is bad enough that they are living off of my money and my brother’s money, but now he is hitting her which just shows absolute total disregard for anything and everything /// and, then I see myself just absolutely losing my mind, just /// and snap. And right after he hits her, I step forward and he / he / he / he / he puts his fist up like, cause he knows, cause he knows what is about to happen. He has to know. And sure enough, sure enough, I hit him. I knock him to the floor because at that point, I / I / I’m pretty young and strong. I’m six feet one and a hundred and seventy five pounds, and I’m, and I’m, and I’m very muscular, and I hit him. I put him on the ground, and then I jump on top of him, and I, and I choke him. I have my hands on his neck. I’m squeezing his neck because I’m trying to kill him. I’m trying to kill him. Because I had made up my mind, you know, I / I had made up my mind. I said, this, this the only time in my life, I ever said, I’m going to take someone’s life. And all I needed was a reason, and him hitting my mother was as good a reason as I needed. /// So, I got my hands on his neck. Next thing I know, I feel something on my head, and I lose consciousness. I pass out.

Session 6, Exposure 1 (3rd Telling)

They [mother and her boyfriend] are talking, and suddenly, their conversation becomes an argument. And it goes from an argument to a screaming match. This is something that / this is a habitual thing with my mother that I have witnessed many times, in her interaction with my father when she did not agree with him, when she was not in agreement with what’s being said. So now, they are screaming at each other at the top of their lungs and it is almost as if, I’m being transformed back to all of those arguments that my mother had and it is / it is turning to screaming matches and all those physical things that between / when I’m between my mother and my father when my family was together. Then, suddenly, her boyfriend reaches out with an open hand, and smacks my mother in the face. Right in front of me; with me sitting there. And, at that point, I forget where I’m. I forget who I’m. And basically, now I’m in this zone, where the only thing only thought on my mind is, I’m going to kill this motherfucker. And within seconds of him hitting her, I get up, I jump across the room, and my / my fist meets his face. And I hit him / I hit him / I hit him in the mouth with a closed fist. I knock him down. And then I jump on top of him and my hands are on his // squeezing his neck. Because I want to kill this man for hitting my mother; because the thought comes into my mind, that if he is doing this when I’m here, what is he doing when I’m not here. And it becomes apparent to me that / that / that he has been hitting her. Only this time, he, he, he can kind of see that this is how / this is how bold and arrogant he is and disrespectful of me that he is. And this is all I can think about while I’m squeezing his neck. I’m squeezing his neck, and
my intent is to kill him. I do not care if I'm going to jail for / I do not care if I'm going to jail for murder, that there's no tomorrow for me. Because after, after seeing all of these going on between my mother and my father, dealing with / dealing with that, then with, with my mother leaving my father, and being snatched from my father by my mother. I / I / I snapped. I absolutely snapped. Now, now, I'm squeezing / I'm squeezing his neck and then I feel something hit the back of my head. And that is / the / that is the only thing I can remember to that point because, I'm not done / because I realize later I'm knocked unconscious because my mother hit me in the back of the head with an empty liquor bottle to get me off of him.

**Session 8, Exposure 4 (13th Telling)**

They start arguing with each other, and then, and then he hits her. He hits her. I hit him. And then I choke him. And then my mother’s screaming, oh no, oh no! Get off of him! Get off of him! And then, I guess while I’m choking him, she finds something to hit me in the back of the head with. I still do not know what it was to this day.

**Session 8, Exposure 6 (15th Telling)**

He [mother’s boyfriend] starts arguing with her, while she has got my money in her hand, and then he just reaches out and smacks / smacks her in the face right in front of me. And then he, he continues to argue with her, and he is arguing with her so hard, he does not / he does not see my fist / see he does not see my fist coming for his face. And then all of a sudden, right in the middle of his talking, I hit him, and I'm on top of him, and then I choke him. And / and my mother is saying, no, do not / do not do it.

Therapist: What are you feeling as you choke him?

Mr. Green: I want to / I’m going to kill / I want / I want to kill him. I’m going to kill this man.

Therapist: Right. Are you feeling angry?

Mr. Green: Anger? I'm, I'm feeling total rage.

Therapist: Are you frightened?

Mr. Green: Rage. No, it is not / I’m not scared. I’m not scared. No, it is not fear. It is anger. And total / it is total anger. It is built up anger for everything that has happened up to that point. It is anger that began all those years ago, and it is anger that escalated first when my mother decided to leave, and then when she came back and snatched us from my father

Therapist [cuts Mr. Green off]: So you are choking him.

Mr. Green [cuts therapist off]: And all that anger is coming back as I'm choking him. Every single bit of it. I'm just out of my / I'm out of my mind. I'm literally out of my mind. /// I'm out of my conscious mind. I'm out of my conscious mind. I am not really thinking about anything. All I am thinking about is, I want this man dead.

Therapist: Keep going. You want him dead. You are choking him.

Mr. Green: I’m choking him and then I feel something hit the back of my head.
Session 9, Exposure 6 (26th Telling)

When she [my mother], she finally reaches to hand me the money, while she has got her arm outstretched to me, to give me the money, he smacks her. And right after he smacks her, I’m not even thinking about the money anymore. All I’m thinking about is killing him. And, and, and I do what any son would do. I hit him in the mouth; loosen a couple of his teeth. Now he is on the ground, and I’m on top of him and I’m choking him. I want / I want / I want him dead. I want to kill him. I do not give a damn if I spend the rest of my life in jail. I’m going to kill this man. I do not give a damn about the consequences. I want to kill this man. I’m in a moment. I’m / I’m in the highest moment of fury and rage as I will ever be in my life. Because I hate him. Yes, I hate him. Because he helped to break up my family. What happens next? As I’m squeezing his neck, and he is slowly losing breath, my mother hits me in the back of the head. I do not know what she hit me with. I do not know whether it was glass, china / it could have even been a metal pot.

Waking in the Hospital

Session 5, Exposure 2 (2nd Telling)

When I wake up, I wake up in the hospital bed, surrounded by police. I’m handcuffed to the bed, and then I learn that my mother wants them to charge me with assault and battery of her boyfriend. And I’m thinking, how did I get here? How did I get to this place? What is going on? Most of all, I’m thinking, what the hell happened to my family? So, I do not know what the hell to think, but the cops question me. I tell them my version of what happened. They leave the room / for an hour.

Session 7, Exposure 2 (7th Telling)

When I wake up, I’m in the hospital bed, with my left hand handcuffed to the rail. I reach back with my right hand, and I feel stitches right here in the back of my head. And I find that the police want to charge me with assault and battery on / on my mother’s boyfriend. And then I find out / from him / from the police what really happened, and then, they asked me, did you, did you choke your mother’s boyfriend? I say yes, I did. And, and they ask me why, I sa-

Therapist [cuts Mr. Green off]: What are you feeling as the police ask you, did you choke your mother’s boyfriend? What did you feel?

Mr. Green: I wanted to respond with, you are God damn right I choked him, because he hit her.

Therapist: Mm hmm. Keep going.

Mr. Green: And they found out [Inaudible] um [Inaudible] my mother does not, um, my mother does not even like. Oh no, I’m getting confused here. Oh my god.

Therapist: It is ok. You are getting tired.

Mr. Green: I’m very / I’m very / no, I’m just getting off the path. What I need to talk about is the fact that I have got my hands on his neck. And I’m squeezing his neck.
And then all of a sudden
Therapist [cuts Mr. Green off]: keep your eyes open.
Mr. Green: I feel a thump on the back of my head
Therapist: Tell me that story. That's right.
Mr. Green: I'm. I'm unconscious. When I wake up, I'm in the hospital bed with my
left hand chained to the bed / handcuffed to the bed. I feel / I reach over with my
right hand and feel what hurts in the back of my head. I feel stitches.
Therapist: What are you feeling, when you are feeling your head like that?
Mr. Green: I'm like, everybody is going to see the back of my head?
Therapist: Everybody's going to see? That is what you think?
Mr. Green: Yeah.
Therapist: Ok.
Mr. Green: And
Therapist [cuts Mr. Green off]: And what are you feeling? Are you feeling
frightened? Are you feeling confused?
Mr. Green: I'm feeling angry, frightened, and confused.

Session 8, Exposure 8 (17th Telling)

When I come to, I'm in the hospital bed; I'm handcuffed to the hospital bed. I have
stitches in the back of my head, and I realize right away that the stitches are from
something that my mother hit me with. And I'm like // wait a minute, my mother,
my mother hit me, my mother hit me in the back of the head, my mother put me in
the fucking hospital.
Therapist: What are you feeling as you realize that?
Mr. Green: I am feeling / I'm feeling absolutely betrayed. I am starting to feel / I'm
starting to realize, that this is not my mother anymore. /// This is not the person
whose womb I came out of.

Session 9, Exposure 4 (24th Telling)

And when I wake up, I'm surrounded by child welfare workers, and policeman, but
no lawyer; nobody to protect me.

Session 11, Exposure 2 (39th Telling)

I'm lying, I'm waking up / I'm in bed / now, mind you / I'm, I'm already feeling
anxious because / of what happened // I mean, ha, I, I, I, I, I just, I just, I just tried to
commit a murder. I killed / I tried to kill him. And, I wondering / is he de, did I kill
him? Is he dead? Is he dead? Then, when I when I come to, I'm handcuffed to a
hospital bed, I got stitches in the back of my head, I'm feeling woozy from getting hit
in the back of the head. You know, and I'm coming to the realization that I have got
stitches in the back of my head because my mom hit me / with probably a liquor
bottle. That is an assault right there. And then, the police ask me // the police and
the child welfare workers who are around me, ask me are you ok? I says, no, I'm not
ok. Which was a stupid ass question! How the fuck can, how the fuck can I be ok?!
Therapist [cuts Mr. Green off]: You are doing really well
Mr. Green [cut Therapist off]: I’m feeling / I’m telling what I’m feeling: how the fuck could I be ok when I have stitches in the back of my god damn head
Therapist [cuts Mr. Green off]: Ok.
Mr. Green: They are asking me, are you ok
Therapist [cuts Mr. Green off]: Good job, Phillip
Mr. Green [cut Therapist off]: Stupid, that was stupid from the beginning
Therapist [cuts Mr. Green off]: Good job
Mr. Green: Then they ask me, well did you choke your mother’s boyfriend? I said, yes. Why? Because he hit her / that is why. And then they said, well do you know it is wrong to assault someone like that. I said, listen, listen, anybody who hits my mom, I will kill any motherfucker who hits my mother. I have hit my father for hitting my mother. And, if you hit her, I will kill you. ///// Then that, then that backs them up for a minute, and then, they leave. I sit there for half an hour; lay in the bed / stitches in the back of my head. And now, I’m angry as hell because they are asking me stupid ass questions.

Mother Presses Charges Against Son

Session 6, Exposure 1 (3rd Telling)
And she [mother] wanted us [police] to charge you with assault. And I remember in my mind just completely going, just on the edge at that point. Why is, and I said wait a minute. I watched her boyfriend hit my mother and I defend her and she wants to, she wants to charge me with a crime? So so so so now, I’m I’m I’m off the cliff. I’m off the cliff.
Therapist: Mm hmm. Keep going.
Mr. Green: I think anybody would be off the cliff going through that experience. I think any kid would / would just be, maybe some kids would even lose their minds. I’m / I do not know, if I were going to lose my mind, if I was going to have a nervous breakdown, it would’ve been at that point, because that is probably. That was the most stressful day of my life. That, and later when / when I became emancipated from my mother basically ending / ending our mother and son relationship, though I did not know it at that time.

Session 7, Exposure 2 (7th Telling)
My mother’s just staring at me
Therapist: Your mother’s there?
Mr. Green: Yeah, my mother’s there // because she’s trying to have me put in jail.
Therapist: So, your mother is there with the police and with the child psychologist?
Mr. Green: Right. She’s trying to have me put in jail. She’s trying to have me locked up. But the police will not do it. And I reduce her to [unclear] by, by commanding that she, that she buy [Inaudible]
Therapist [cuts Mr. Green off]: Hey Phillip, look at me.
Mr. Green: She is, she is like a, um, my mother / at this point, the relationship
between me and my mother, or whatever is left of it, is rapidly disintegrating with each passing moment because I’m feeling like

Therapist [cuts Mr. Green off]: Ok
Mr. Green: I’m feeling like, I / I cannot believe my mother is doing this to me
Therapist [cuts Mr. Green off]: Is your mother standing? Is she sitting?
Mr. Green: She’s sitting.
Therapist: Ok
Mr. Green [cuts Therapist off]: And she’s insisting that the police arrest me.
Therapist: What’s the expression on her face like?
Mr. Green: Stone cold I don’t give a damn.
Therapist: Ok, what are you feeling?
Mr. Green: I’m feeling like hit // I’m feeling like maybe I should hit her.
Mr. Green: She, she wants me arrested.
Therapist: Mmmhmm. I know it’s hard, Phillip. Just stay with it.
Mr. Green: It is. It is hard. So hard

Session 10, Exposure 1 (31st Telling)

So / so, they tell me, well we need to make you aware of the fact that your mother, your mother wants us to arrest you. And, my heart just sank. My heart hit the ground when I heard that from them. That my mother wanted to, my momma, my mother, wanted to; I defended my mother

Therapist [cuts Mr. Green off]: Your heart sank
Mr. Green [cuts Therapist off]: And they

Therapist [cuts Mr. Green off]: Your heart sank and
Mr. Green [cuts Therapist off]: Want to arrest, she wants them to arrest me. This is my mother. The woman whose womb I come from / wants me to be arrested / for defending her.

Therapist [cuts Mr. Green off]: Ok, just stay in the memory.
Mr. Green [exhales].

Therapist [cuts Mr. Green off]: With what you are thinking
Mr. Green [cuts Therapist off]: What, what I’m thinking is, what the fuck is going on here?

Therapist [cuts Mr. Green off]: Ok.
Mr. Green [cuts Therapist off]: That is what I’m thinking.

Therapist [cuts Mr. Green off]: Ok, just stay in the memory.
Mr. Green: I’m thinking, I’m thinking, what is this shit

Therapist [cuts Mr. Green off]: [inaudible] your heart sank, what happened there?

Mr. Green [cuts Therapist off]: So then, they leave the room / I’m there for, I’m there, I’m in the room by myself / handcuffed to the bed with stitches in the back of my head for about an hour, which gives me time to process everything that has gone on. And which gives me time to realize that there is absolutely nobody // on my side in this mess. My mom, even my mother, and this is where I start to realize
Therapist [cuts Mr. Green off]: You want to try to close your eyes?
Mr. Green: This, this is when I really begin to realize that my mother has never given
a fuck about me, or my welfare, or my well being.
Therapist [cuts Mr. Green off]: mm hmm.
Mr. Green: I realize that this woman’s not my mother / if she ever was

Session 11, Exposure 2 (39th Telling)

And then the policemen go, well, we need to tell you, your mother asked us to arrest
you. Your mother wants to charge you / and see, that is the point, your mother
wants to charge you with assault, for choking her boyfriend.
Therapist [cuts Mr. Green off]: mm hmm
Mr. Green: And right now, a five alarm / five alarms are going off like crazy in my
head when I hear that one. When I hear that my mother wants to have me arrested
from keeping her boyfriend from possibly harming her, and maybe even, he might
have, you know what / what
Therapist [cuts Mr. Green off]: Stick with the memory, you are doing great
Mr. Green [cuts Therapist off]: If
Therapist: You are doing fine. It was a shock
Mr. Green [cuts Therapist off]: She wants, she’s she’s trying to have me locked up!
Therapist [cuts Mr. Green off]: It is a shock. So you are in, so you are there and you
are shocked.
Mr. Green: And then / then they tell me, well your mother did not tell us, your
mother told us that you choked her boyfriend, but she did not tell us why. So now,
now, the alarm is really ringing in my head because I realize that this bitch not only
is trying to have me locked up, she’s told a lie!
Therapist: mm hmm
Mr. Green: To have me locked, she told a lie! So I could get locked up! So, now uh m
[inaudible] bells are ringing in my head.
Therapist [cuts Mr. Green off]: So you are saying to yourself, oh my god. She lied to
me, oh my god, she told a lie.
Mr. Green: She, she, she lied on me, she’s trying to me locked up. And, she lied / to
have me locked up!
Therapist [cuts Mr. Green off]: mm hmm, ok. So, you are saying, oh my god, these
alarm bells are going off. What happens next?
Mr. Green: Then, then they leave the room. No, what happens next is that she / she
says, well, why did you choke your mother’s boyfriend? I says, I says because no
motherfucker is going to hurt my mother like that. Nobody can hit my mother. I do
not let my father hit my mother. And no bum ass nigger is going to be hitting on my
mother. I don’t give a fuck who he is. Ok, you know what I said to the cop, I said, if
one of you hit her, I will kill you.
Therapist [cuts Mr. Green off]: mm hmm. // So you say to the cop, I will I would kill
you?
Mr. Green: I would, I would kill you / I told the cop, I will kill you if you hit my
mother. And that, and that, and that got his attention.
Therapist: Ok, what happened next?
Mr. Green: Well, they leave the room // and // they talk to my mother / they question my mother, and they say, is that true, did he hit you? And, you know, now she’s she’s caught because she gets in trouble, now she cannot lie anymore. And she says, yes, he did hit me. So now, they, so now, the cops have decided they are not going to charge me.

*Thematic Elements that Emerged Across Participant 1017’s Imaginal Exposure Narratives*

Over the course of going through the Imaginal Exposure 39 times, various themes emerged, three of which are documented with quotes from Mr. Green’s Imaginal Exposures below. An analysis of these themes and of the qualitative changes that occur over the course of Mr. Green’s Imaginal Exposures is presented in Chapter Four.

*Reflection/Insight*

In Session 6 Exposure 3 (5th Telling), prior to beginning the exposure, the therapist states that it seems like Mr. Green is starting to feel “drained.” He gives her the following response, which seems to show insight into being “drained” as a defense:

*I’m starting to feel / I’m getting drained. You know what / I think I may need, yeah, because what happens is, when I go through this process, I think it makes me, it makes me dehydrated.*

Following a very difficult exposure, Session 9, Exposure 9 (29th Telling), which will be cited in the “Decompensation” section below, the therapist asks Mr. Green how he is doing, to which he reflects upon the emotionally activating nature of the treatment:

*Every time I go through that, I feel the rage and anger I felt, and anger is a draining emotion. And, you know how often I’ve been angry at people in my life? I’ve been angry because people doing these things to me; I’ve been angry because when I’ve tried to explain it to people, they have not understood.*
In the immediate moments after his final exposure narrative (39th Telling), Mr. Green and his therapist discuss how scary this day must have been for him, and Mr. Green shows the capacity to reflect upon its scariness in a way that demonstrates some insight about his PTSD symptomatology:

Therapist: I imagine it was really scary that day.
Mr. Green: It was. To to realize that // to realize that / in the space of three months / I went from living with my family to not living with anyone in my family. I went from living with my mother and my father and my brother to not living with my father or my mother or brother. In three months!
Therapist: But just that day, to know that you almost killed someone, you could have been killed, and then to not know what’s going to happen next. It must have been very scary.
Mr. Green: It was. I mean, for the next three years; just as a side line, my whole High School years, I was I was, I was actually, I was terrified / because I was placed in an environment where my family didn’t care, the people at my school did not care, and nobody in that town // cared. My, the whole time I was in High School, was in that town for three years, the only thought in my mind was; it was not even about academics, really, even though I still made my grades like I was supposed to, and I qualified for a scholarship, but my main thing was: I got to get the hell out of here.

Decompensation

In Session 7, Exposure 4 (9th Telling), Mr. Green seems to show some paranoia as he tells the therapist about leaving the hospital with his aunt. He and his therapist exchange the following dialogue:

Mr. Green: It is [Inaudible]
Therapist: You can do it. Hey, Phillip.
Mr. Green: My mother, I want to make phone calls but
Therapist [cuts Mr. Green off]: Mm hmmm
Mr. Green: I realized that my phone calls are going to be traced, they are going to be listened to, you know, I cannot keep [unclear] anywhere. Especially not now with everybody knowing what’s going on.

There are many instances that occur in the course of the exposure tellings in which Mr. Green includes details that are illogical or erroneous to the story. When he does this, he often immediately recovers, noting that he has lost his direction. Below is an
example from Session 9, Exposure 5 (25th Telling):

And then my mother hits me in the back of the head with some kind of object that puts stitches in the back of my head, and now if you see the place, you drive by on west 131st street and, no / I’m all over the place.

Therapist: Hey, Phillip
Mr. Green: I’m all over the place
Therapist: You are getting, you are getting sleepy.
Mr. Green: That is, I’m all over the place.
Therapist: Are you feeling sleepy?
Mr. Green: No. I’m just veering off the subject. I have got to get back on track here.
And I’m going on tangents.

In Session 9, Exposure 9 (29th Telling), Mr. Green seems tired, and as he gets tired, his narrative becomes less coherent. As his therapist tries to check-in on Mr. Green, he becomes startled, and it is possible that his startle response was a reaction to some kind of break with reality. The exchange, which includes Mr. Green’s description of the altercation with his mother’s boyfriend and waking in the hospital bed, followed by the check-in by his therapist, is below:

And I’m in George, Georges county Maryland, fighting for my rights, and the guy who plays Mount Corleon dies and what happens is, he leaves us a lot of work. Anyway, um, I’m choking him after he hits her, ok? And, I feel something hit the back of my head. And all I can remember after that is waking up in a hospital bed, handcuffed, um, handcuffed to the bed, held by Magic Johnson, Chicken of the Sea, and also, [Inaudible] Therapist: Mm hmm. Where are you right now?
Mr. Green: I’m ///
Therapist: You wake up and you feel something on the back of your head.
Mr. Green: Its ///
Therapist: Hey, Phillip. You can do it.
Mr. Green: Ok. Where was I? Oh yeah. Um. Where was I?
[Long pause. Unclear mumbling].
Therapist: Ok, Phillip.
Mr. Green: You know what? As I’m choking him, I’m thinking of all the things that lead up to that point.
Therapist [cuts Mr. Green off]: As you are choking him
Mr. Green: Yes.
Therapist: Hey, Phillip. Let’s start at the beginning again. I see that you are very very drained. Try to come back a bit.
Mr. Green: Oh my god! What is that?
Therapist: Where are you at right now? Hey, Phillip?
Mr. Green: Yes.

**Therapeutic Relationship**

Mr. Green seemed to have a difficult time with the exposure treatment. He was able to name how difficult he found the process, but he never directly named his frustration with his therapist. There were many points within the exposure treatment during which Mr. Green seems to confabulate his mother with the therapist, particularly when his narrative stimulates anger and frustration with his mother; below is an example from Session 8, Exposure 4 (13th Telling):

I'm thinking / this fucking bitch. I'm thinking, I'm thinking, this fucking bitch has lied on me. I'm her / I'm your son.

In Session 11, Exposure 1 (38th Telling), Mr. Green raises his voice at his therapist in frustration:

I did not really sleep that day, I could think about is what happened that day / with me lying in the hospital bed and // how could she do this to me!? Therapist [cuts Mr. Green off]: Phillip, we are just going to stick with the memory. Ok Mr. Green [cuts Therapist off]: This is the memory! This is what I'm thinking! Therapist [cuts Mr. Green off]: Ok Mr. Green [cuts Therapist off]: This is what I'm thinking! Therapist [cuts Mr. Green off]: That is fine Mr. Green [cuts Therapist off]: This is what I'm thinking! I'm thinking, how the fu, how could she do this to me!? I probably kept her from / getting killed / and she does this!? Therapist [cuts Mr. Green off]: mm hmm Mr. Green: I mean, right now there's, I'm going through a lot of emotions at this point: bewilderment, anger /// mostly, why is this happening? What is, what is this? What is this shit?

In the final exposure, Mr. Green seems very frustrated with not being heard; he is not explicitly stating that he does not feel heard by his therapist, but not being seen, or heard, or treated like a human being by his mother is at the heart of his trauma.

In the transference, Mr. Green's frustration with the therapist or with the process
seems laden with not having been cared for by his mother. In the final session (39th Telling), the following exchange between Mr. Green and his therapist takes place:

Mr. Green: I’m I’m I’m going through some, I’m going through all these different things right now, it was just. I, I this is mother doing this to me.
Therapist: So, you are feeling really bewildered?
Mr. Green: I, I I’m just totally / chaos, confusion
Therapist [cuts Mr. Green off]: mm hmm
Mr. Green: I’m just feeling, all of emotions right now. I’m also feeling a little bit, because nobody seems to be understanding
Therapist [cuts Mr. Green off]: mm hmm
Mr. Green: Because, you know, people outside my house, it is just like everything [inaudible]. People outside my house, it is like they are not aware of what’s going on. Either they are not aware of what’s going on, or they are just looking the other way.
Therapist [cuts Mr. Green off]: mm hmm
Mr. Green: The thing is, the thing that really gets me, is the way I feel right now, when I came in here, today. Nobody’s listening to me. Nobody gives a fuck.
Therapist: Ok. So, you are in your aunt’s house, and you are in your bed, and you are saying, I’m so alone.
Mr. Green: No, I’m saying, nobody gives a fuck
Therapist [cuts Mr. Green off]: I’m so alone
Mr. Green [cuts Therapist off]: No, I’m saying it the way I would say it: I’m saying, nobody gives a fuck
Chapter Four: Discussion

Overview

Trauma’s insidious effects can last a lifetime. Trauma, or multiple traumas, can overwhelm an individual’s mind and body, leading that person to reorganize his experience of being in response to having been so overwhelmed. Such reorganization can happen in many ways (psychologically, physically, and temporally); there is a particular cluster of symptoms that occurs following a traumatic event that has been named posttraumatic stress disorder (PTSD). Per the DSM-IV (2000), in PTSD, following the traumatic event, reorganization, which interferes with one’s ability to function in the world, occurs in the following ways: memories and associations of the traumatic event return in unpleasant and unanticipated ways (re-experiencing), a profound effort is made to reduce any physical or psychological reminders of the trauma (avoidance/numbing), and an extreme vigilance is manifest (hyper-arousal). People suffering from PTSD tend to work really hard in the effort to reduce suffering. Researchers have documented the link between substance or alcohol use and PTSD (Khantzian, 1997; Stewart & Conrod, 2003; Hien, Cohen, & Campbell, 2005; Ruglass, et al., 2014). In fact, a large ($n = 34,653$) U.S. epidemiological survey of Alcohol and related disorders found that individuals who met criteria for PTSD had a 46.4% chance of also meeting criteria for a SUD in their lifetime (Pietrzak, Goldstein, Southwick, & Grant, 2011).

There is a substantial need for accessible clinical interventions for individuals with co-morbid PTSD and SUD or AUD. The work done at the Trauma and Addiction Project at City College of New York hinged on addressing this need by
researching a short-term treatment intervention intended to alleviate some degree of suffering experienced by people who meet criteria for both PTSD and a SUD or AUD. Exposure therapy, which has been referred to by the VA as the “gold standard” for treatment of PTSD (Rauch, Eftekhardi, & Ruzek, 2012) has become increasingly recognized as an evidence-based intervention for PTSD in recent years (Gallagher, Thompson-Hollands, Bourgeois, & Bentley, 2015).

My research aimed to explore the “why” behind this research. What are the mechanisms of change in such a treatment? Psychologically and affectively, what is happening to the individual who is reliving the very trauma that he has long avoided, as he tells the story in the present tense over and over again? Will the language that the individual uses change as he tells the story again and again? Will there be a relationship between the way the story changes and the participant’s psychological well-being, as captured by PTSD symptoms like avoidance, intrusion, and hypervigilance, to name a few? And, if there is an increase in the linguistic elements of Referential Activity for the participant whose PTSD and substance issues substantially decrease over the course of the treatment, does that reflect a lowering of dissociative defenses and an increase in psychic integration, such that Bucci (2007) posits?

Upwards of half the individuals who have posttraumatic stress disorder attempt to cope with it by the use of substances or alcohol (Pietrzak, et al., 2011). Such people often chronically suffer from impactful, debilitating stress – this research attempts to make sense of how such difficulty can be alleviated. So, the final question that this case study intends to contend with is: can a closer look at the
processes of change help determine why this treatment might work for some people, but not others? While many studies have demonstrated the efficacy of exposure therapy as a treatment for PTSD (Foa, Hembree, & Rothbaum, 2007; Rauch, Eftekhardi, & Ruzek, 2012; van Dam, Vedel, Ehring, & Emmelkamp, 2012), it would be beneficial to the field to have a richer understanding of the mechanisms of change.

**Discussion of the Hypotheses**

Of the four variables (WRAD, MHWRAD, Ref, and Ref_WRAD) analyzed by Bucci and Maskit’s Discourse Attributes Analysis Program (DAAP), the computerized linguistic analysis program for the Referential Process, Participant 521 (treatment responder) had a statistically significant improvement across the Imaginal Exposures on one of those, his Ref_WRAD covariation. What exactly does that mean? The covariation between Ref and WRAD is representative of how immersed a speaker is in their language; the more negative this covariation number is, the more immersed a speaker is in what they are saying (Bucci & Maskit, 2007).

In describing the importance of the Ref_WRAD covariation, Bucci and Maskit wrote the following:

> We view the negative WRAD/Reflection covariation as the single best indicator that a referential process is occurring in a session, indicating that the two measures are generally moving in opposite directions. This suggests that the patient is able to be immersed in her material when telling a narrative, without distancing herself from it (2007, p. 1385).

The main statistically significant psycholinguistic finding in my research was that Participant 521’s Ref_WRAD covariation became increasingly negative across the
course of the Imaginal Exposures, thus demonstrating that he became markedly more immersed in the telling of his trauma narrative as the treatment progressed. In other words, the further Participant 521 got in the process of telling and re-telling his trauma narrative, the more he was able to refrain from reflection while immersed in describing the details of his story. As hypothesized, movement towards linguistic immersion in the experience, by the act of repeatedly giving words to the experience of the trauma, and staying in the memory itself, occurred alongside a significant reduction in PTSD and SUD symptoms for Participant 521.

The statistical results of this study were not as substantial as hoped for, as the method's (Meuser, et al., 1991) overly stringent critical difference scores made it so none of the ipsative z-scores met criteria for statistical significance, despite a substantial reduction in Participant 521’s symptomatology across treatment in DES, PSSR, and SUI levels. The basis for stating that the method was overly stringent is the fact that it would have been impossible to get a significant score on these scales; the critical difference was beyond the range of the scales (S. Batchelder, personal communication, August 20, 2016). In essence, despite the fact that Participant 521 went from having an SUI score of 7 (highest possible score) at Baseline to an SUI score of 0 (lowest possible score) at the end of the Imaginal Exposure intervention, this change was not close to meeting the critical difference threshold set by Meuser (Meuser, et al., 1991).

The linguistic analysis demonstrated that Participant 521 was able to not only tolerate the process of engaging in the Imaginal Exposures, but from the very first telling, he confronted this devastating memory with language so high in its
clarity, specificity, concreteness, and richness of imagery that his first telling was actually the telling with the highest Referential Activity score in his entire treatment protocol. That finding, in itself, shows that Participant 521 began the Imaginal Exposure task with a high degree of readiness and openness, hallmarks of high Referential Activity (Bucci, 1997). Results from his Motivational Interview at Baseline\textsuperscript{14} demonstrate that Participant 521 was eager to work on bettering his psychological health, and based on the Referential Activity results, one possible inference is that by the time he engaged in his first Imaginal Exposure telling in Session 5 of the treatment, he had already established enough of a rapport and sense of safety with his therapist to allow for his initial Imaginal Exposure to have such high Referential Activity. While there are no alliance measures that were performed to substantiate such a claim, clinically, one must wonder about the strength of the relationship between Participant 521 and his therapist, given that he was able to express his emotional experiences at his highest level (high RA) the first time he went through the Imaginal Exposure. Further, Participant 521’s high RA scores from the start of the Imaginal Exposure process may explain (statistically) why his slope across the treatment stayed at 0; Participant 521’s Imaginal Exposure RA scores started high and stayed high throughout the intervention.

High mean Referential Activity scores for both participants in the Imaginal Exposure task suggests that the endeavor prompts a cognitive process of connecting words to previously dissociated emotions (Bucci, 2007). Participant 521 and

\textsuperscript{14} A motivational interview addressing readiness to participate in either the COPE or RPT treatment intervention was administered in the second Baseline interview, immediately prior to clinical randomization.
Participant 1017’s mean WRAD, the computerized output of Referential Activity, scores of .598 and .521, respectively, are both higher than the neutral WRAD value of .5, and substantially higher than the normed WRAD value that has been found in conversational speech of .453 (Murphy, 2012). RA has not been previously examined in Imaginal Exposures for patients with co-morbid PTSD and SUDs. Previous research, however, has demonstrated that high RA is found in linguistic tasks that are both short (compared to the length of a psychotherapy session) and emotionally evocative, such as the early memories task (as cited in Murphy, 2012) and narratives expressing central relationship patterns (as cited in Bucci, 1997). While it is not surprising that this psycholinguistic measure has demonstrated heightened verbal output of emotional experience (RA) (Bucci, 1997) in the Imaginal Exposures of trauma narratives, this finding shows that both Participants were engaged in the Imaginal Exposure process.

When looking at the Referential Activity scores of Participant 521 and Participant 1017, two factors stand out: not only did Participant 521 have higher mean WRAD and MHWRAD scores across the Imaginal Exposures than Participant 1017 (treatment non-responder), Participant 521 had smaller standard deviations in his RA scores from telling to telling than Participant 1017. As described in the Results, while these findings are not statistically different, a statistical analysis of the Confidence Interval (CI) of the mean WRAD and MHWRAD scores of the two participants, demonstrated that at the 95% CI, the means of the WRAD and MHWRAD scores do not overlap, and are therefore likely different. In other words, there is a likely difference between the Referential Activity scores between the two
participants, with Participant 521 having higher RA scores than Participant 1017. As Participant 521 went through the process of telling and re-telling his trauma narrative in the form of Imaginal Exposures, it is likely that he was able to consistently access nonverbal emotional experiences and verbally articulate them at a higher level than Participant 1017 (Bucci, 1997). While also not statistically significant, the Standard Deviation finding is a reflection of how much variability there was from one Imaginal Exposure telling to the next for both participants. As Participant 1017 had a WRAD SD (.034) that was about 50% larger than the WRAD SD of Participant 521 (.022), this variability could be due to the difficulty Participant 1017 had with Imaginal Exposure process – in fact, Participant 1017 experienced physical manifestations during the narrative treatment in the form of falling asleep, having dry mouth, and having physiological discomfort. Participant 1017’s larger standard deviations in his RA scores compared to Participant 521 could also reflect how hard it was for him to stick with the process of telling his story; without being able to tell his story in a consistent manner, it made it more difficult for Participant 1017 to habituate, a critical aspect of treatment success in exposure therapy for PTSD (Foa, Steketee, & Rothbaum, 1989). Further, while not statistically significant, Participant 1017’s positive RefWRAD covariation slope across treatment is indicative of becoming less immersed in the story as the treatment moves forward (Bucci & Maskit, 2007); Participant 1017’s method of telling his trauma narrative is rife with interruptions and asides, which may inhibit deeper immersion in the story and also interfere with the ability to habituate, and, according to Foa’s model (2011) improve.
Consideration of the Primary Themes that Emerged in the Imaginal Exposures

Some of the themes that emerged in Mr. Lewis’ and Mr. Green’s Imaginal Exposures are named in Chapter Three; a discussion of those themes follows.

Participant 521

The story of Mr. Lewis’ trauma narrative changes as he tells and re-tells it. In each of the four threads exemplified in Chapter Three, as Mr. Lewis repeatedly goes through the imaginal exposure, new details emerge, the story becomes more vivid, and he uses more affective and reflective language to describe the day his father was murdered. As Mr. Lewis went through the process of telling and re-telling the narrative of his father’s murder, the story became more detailed and elaborated, he began to incorporate more affective language regarding his various feeling states in the moment at the time of the incident, and he showed increasing awareness of what a profound impact that day had had on him.

Mr. Lewis’ story of his father’s murder had a clear beginning, middle and end; as he revisits each facet of his story, new details emerge from his second telling all the way to the last time he did the Imaginal Exposure. These details, such as being able to spot his mother by noticing her blue dress in the sea of green that was the St. Patrick’s day parade, enliven and enrich his story. Over time, smells returned to Mr. Lewis, such as that of “Miss Lopez’s rice and beans and chicken” (Session 6, 15)

As mentioned in Chapter Three, in the linguistic transcription, the Participants were given pseudonyms of Mr. Lewis (Participant 521) and Mr. Green (Participant 1017). In the analysis of the qualitative results, the Participants are referred to by their pseudonyms to maintain consistency with the corresponding section in Chapter Three.
Exposure 1) and the awful smell of lingering gun smoke as the police officer pushed open the door to Mr. Lewis’ apartment (Session 7, Exposure 4). Many other details emerged as Mr. Lewis re-told his story, some of which he seemed to recognize as critical to the posttraumatic suffering he has long-endured, such as recollecting that he urinated on himself when he saw his father's body, leading to the development of what he called a “pissing problem” (Session 6, Exposure 4) which lasted into adulthood. Asking patients to recall their memories in as much detail as possible is a fundamental technique of exposure therapy (Rothbaum & Schwartz, 2002). Perhaps as Mr. Lewis recalled (and was encouraged by his therapist to recall) more and more details of that day’s events, he was better able to link the memory of those details to the etiology of his posttraumatic stress symptoms.

In contemplating the veracity of visceral early traumatic memories, Oliver Sachs argues that there’s no truth but narrative truth (2013). With Sachs’ idea in mind, it is impossible to say whether each detail that emerged over the course of Mr. Lewis’ tellings actually happened. In the very last Imaginal Exposure (Session 11, Exposure 2), Mr. Lewis adds a new detail: he and his older brother were playing with racing cars at the precise moment when those men arrived, forever scarring their young lives. Were they actually playing with racing cars? Might they have been playing something else? Does it matter? The therapeutic value of the exposure treatment is to psychologically organize, synthesize, and allow for an event to become symbolically represented through language in a way that has not previously been allowed. It does not matter whether or not James and Junior were playing with racing cars or baseball cards, what matters is that Mr. James Lewis’ trauma
narrative becomes increasingly articulated as the treatment moves forward, and attaching words to that day allowed for the feelings associated with the memory to be felt in a safe and containable way such that the impact of those feelings could begin to shift.

As Mr. Lewis goes through the process of telling and re-telling his primary trauma, not only does he incorporate more language about his feeling states, he also shows the capacity to hold multiple feeling states simultaneously. Mr. Lewis’ ability to hold complexity is exemplified in Session 9, Exposure 2 (18th Telling), when he describes seeing his father’s body:

I see my father’s body. I see his body. And a lot of hate went through me. A lot of hate. You know, because, you kill a guy and then you [Inaudible] doing this that was totally unnecessary. And they knew we were here / we were there. I mean what kind of message you want to send somebody when you know the guy got kids. You know, I’m scared because because I am thinking they are going to come back. I’m scared. I don’t want to live there no more. I don’t want to live there no more!

Fear, in all its variants, is the hallmark affect in posttraumatic stress. The impact of fear on one's biological makeup naturally interacts with one's affective experience in the world. Recent research examining startle responses in clinical and non-clinical populations has suggested that fear inhibition is a specific biomarker of individuals with PTSD symptoms (Jovanovic, et al., 2010). No doubt, this day was terrifying, and in his Imaginal Exposures, Mr. Lewis did not shy away from exploring the manifestation of fear in ways both subtle and overwhelming. In the above quote, Mr. Lewis demonstrates a capacity to experience feeling hate towards the men who murdered his father while simultaneously acknowledging how frightened he was both in the moment (they might come back) and how fear would impact his future
days (he did not want to live in his home any longer). Psychologically, Mr. Lewis is integrating disparate parts of himself, allowing for his emotions to be felt and linked to one another, an achievement of psychological health (Bion, 1959). By demonstrating tolerance of his affective experiences, Mr. Lewis allows for an increase in being able to reflect upon how much the trauma has impacted him.

As Mr. Lewis becomes more immersed in the Imaginal Exposure process, he also becomes more reflective about the experience itself. In Session 9, Exposure 2 (18th Telling), Mr. Lewis considers how limited he was as a six-year-old faced with this awful scene – as much as he would have liked to, he was not strong enough to physically hold his mother in a way that could provide her comfort. In this same Imaginal Exposure, Mr. Lewis reflects upon his father’s death, saying, “This is serious. There’s no come back on this one. And I’m realizing this. I’m realizing.” This is a very powerful quote, and its meaning can be considered in a few ways: as Mr. Lewis moves further into the exposure process, his vividness of the memory of the trauma returns, and he recalls how as a mere six-year-old, he realized that his life would be forever changed. A second way of considering the meaning of this statement is to understand it as spoken in the present tense; here, over a dozen times into telling the narrative of his father’s gruesome murder, Mr. Lewis is realizing how impacted he has been by this trauma. To return to a quote from the Imaginal Exposures cited in Chapter Three, not only is Mr. Lewis’ story elaborated and affectively enriched over time, he’s cognizant of the mechanism of change driving the intervention:
It takes away that garbage that’s within me. And its relieved me a lot. Its relieved // it been like it is like a 200 pound weight off of my shoulders that’s been relieved / considerably.

Participant 1017

As with Mr. Lewis, Mr. Green’s trauma narrative changes as he tells and re-tells it through the COPE treatment. It is difficult to concretely describe the ebb and flow of Mr. Green’s exposure narrative. In the four threads detailed in Chapter Three, there is great variability in the clarity of Mr. Green’s story, with some renditions of the narrative being vivid, clear, and reflective, while other renditions are impacted by the defenses Mr. Green calls upon to get through the therapeutic task: confusion, anger, tiredness, even breaking with reality, at times. As Mr. Phillip Green went through the process of telling and re-telling the story of the violent altercation between himself, his mother, and his mother’s boyfriend thirty-nine times over the course of seven therapy sessions, there were moments in which he demonstrated the capacity to have meaningful insight into his experience of that day\textsuperscript{16}. However, as noted in Chapter Three, there was also evidence that as Mr. Green moved forward in the Imaginal Exposure process, the task so overwhelmed him that he experienced a form of psychic decompensation, evidenced by becoming confused, falling asleep, and having temporary breaks with reality\textsuperscript{17}. The final

\begin{footnotesize}
\begin{enumerate}
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\item Unlike Mr. Lewis’ trauma, which was an acute incident, the day that Mr. Green focuses on as his primary trauma is an incident that represents the culmination of long-endured interfamilial losses, violence, and discord.
\item Mr. Green’s Imaginal Exposures are filled with disruptions, asides, contradictions, and other confusing information. Faced the task of attempting to make sense of these Imaginal Exposures, I have struggled with bouts of tiredness and confusion; it has been difficult to string together coherent ideas.
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theme that emerged in Mr. Green’s Imaginal Exposure tellings was an intense and fraught relationship between him and his therapist.

In the second Imaginal Exposure session, Mr. Green demonstrated a capacity to be reflective about both the psychological impact of the trauma as well as the intrapsychic strain brought on by engaging in the Imaginal Exposures. Following his first Imaginal in session 6, Mr. Green made the following statement about the day’s events:

I think anybody would be off the cliff going through that experience. I think any kid would / would just be, maybe some kids would even lose their minds. I’m / I don’t know / if I were going to lose my mind, if I was going to have a nervous breakdown, it would’ve been at that point, because that is probably / that was the most stressful day of my life.

Here, Mr. Green touches upon how much that day would impact him for the rest of his life. While stating that other young people could “lose their minds” from enduring such trauma, Mr. Green seems to be wondering about how profoundly impacted he had been (and continues to be) by these events. As cited in Chapter Three, later in the same session (Session 6, Exposure 3), Mr. Green spoke to how he was “starting to feel drained,” and went on to say that he understood that feeling to be directly connected with the process of going through the Imaginal Exposures, as he stated: “I’m getting drained...because what happens is, when I go through this process, I think it makes me, it makes me dehydrated.” Early on in the intervention, Mr. Green is able to reflect upon his defenses, as he’s able to acknowledge a connection between his physical state (drained, dehydrated) and the intensity of going through the Imaginal Exposures. As the treatment moves forward, the ability for Mr. Green to notice how the process is affecting him seems to dissipate, as the
primary affect coursing through Mr. Green’s Imaginal Exposures is an overwhelming rage.

As detailed in Chapter Three, through the progression of the Imaginal Exposures, Mr. Green articulated experiences of paranoia, confusion of where he was (both in the memory and in the present moment), and he spoke in ways that did not make sense. In the tellings, Mr. Green moved the story’s location from the deep South to New York City, stated that his father was alive and that his father was dead, and he described having his mother in the hospital room when he woke and also stated she was never there. He alluded to his phone calls being traced, and said that when he woke in the hospital bed, he was “held by Magic Johnson, Chicken of the Sea” (Session 9, Exposure 9). Research has shown that when individuals who are susceptible to Severe Mental Illnesses (SMI), such as Schizophrenia or Bipolar Disorder, experience traumatic events, it increases their vulnerability to psychotic symptoms (Mueser, et al., 2007). It was upsetting to listen to and transcribe Mr. Green’s psychic decompensation in the Imaginal Exposures. Going through the Imaginal Exposure intervention is an arousing process, and the literature has demonstrated that it can cause patients to experience a profound degree of stress (Tarrier, et al., 1999). While some heightened stress is an expected part of the Imaginal Exposure process (Rothbaum & Foa, 1996), particularly early in the treatment, for individuals like Mr. Green, who are vulnerable to psychiatric symptoms associated with SMI, the increased stress of the exposure process may increase vulnerability to psychic decompensation. It seemed like there was a strong relationship between Mr. Green’s affective state and his reality testing; as he became
more tired (moving deeper into each session), the content of his Imaginal Exposures became more unpredictable. The more Mr. Green got off-task, became confused, and had trouble with the Imaginal Exposures, the harder his therapist would work to try to keep him engaged with the process.

Mr. Green’s therapist worked very hard in her efforts to keep him focused and engaged in the Imaginal Exposures, but it was challenging; they continuously spoke over one another, she needed to redirect him up a dozen times each telling, and he eventually seemed to become quite frustrated with her. The act of trying to encourage and reorient Mr. Green to keep on task across the Imaginal Exposures was akin to pouring water in a bucket with a hole in it. While she may have been able to serve as his auxiliary ego for transient moments, the water kept seeping out of Mr. Green’s bucket, leaving him feeling unheard and having his trauma narratives oft-interrupted and off-course.

**Dynamic Factors in the COPE Treatment Response**

Harkening back to the theorists discussed in Chapter One who inspired Bucci’s work (Freedman & Bucci, 1983), the orthogenetic principle must be first achieved in order for language to communicate affective experiences (Werner and Kaplan, 1963). In other words, the development of the ability for words to have the power of communicating emotions and needs to others, such that those emotions and needs can be recognized and met, is both a privilege and a relational development. Inherently, this phenomenon is an interpersonal one; it cannot be achieved in a vacuum. The power of words to convey one’s internal experience so
that experience can be acknowledged and received is something achieved between speaker and listener. It is an achievement honed in childhood; there is a developmental line for the ability to communicate affective experience, and from childhood onward, the growth of that line is firmly rooted in the internalization of a caring and attuned communication receiver (typically parent). If this achievement is not actualized in a child’s development, in a psychotherapy in which a therapist can provide consistency and a holding environment (Winnicott, 1975) in the face of inevitable regression and resistance, perhaps the orthogenetic principle can be realized in adulthood.

Contemplation of what allowed the COPE treatment to relieve substance and posttraumatic stress symptomatology, and increase narrative immersion in the Imaginal Exposures for Participant 521 in a way that it did not for Participant 1017 raises some fundamental questions about the mechanisms of change in therapy. With the orthogenetic principal in mind, is the development of the ability to use words that allow for cut-off affects and dissociated experiences to be verbalized derived from repeatedly exposing oneself to the avoided memory? Are such developments a product of being a part of a therapeutic relationship in which it feels safe enough for the patient to speak what has long been unspoken? Further, does an individual’s object relations impact how he or she responds to a particular intervention? The epigraph to the book Traumatic Stress: the Effects of Overwhelming Experience on Mind, Body, and Society (van der Kolk, et al., 1996), quotes the following line from W.H. Auden: “Truth, like love and sleep, resents approaches that are too intense.” With regard to psychotherapeutic clinical
intervention, Auden’s words are reminiscent of the oft-used supervisory statement: *the patient must be met where he or she is at.*

Bucci writes about internalized object representations, calling them emotion schemas (Bucci, 2007; Bucci, 2011). To Bucci, emotion schemas are prototypical responses that people have developed which allow them to relate to others and interact in the world that are derived from exposure to repeated patterns of interaction from early in life. She explains this as, “what someone did, how I felt in response, what I did, how the other responded” (Bucci, 2011, p. 249). While Bucci hypotheses that emotion schemas can change, and that the Referential Process is a mechanism for measuring that change, it is possible that Mr. Lewis and Mr. Green had very different emotion schemas at the beginning of treatment.

As a researcher who closely listened to the Imaginal Exposures, my ability to speak to the emotion schemas (or object relations) and dynamics of Mr. Lewis and Mr. Green is very limited, and I must be extremely careful even touching upon the subject. For that reason, I will keep my considerations brief and know that I cannot truly know these men in a way that I might if I was their therapist. That said, Mr. Lewis’ final image of his father is that of a hero, literally fighting to his death to give his children a chance to escape physical harm. In each of the Imaginal Exposures, Mr. Lewis is inseparable from his older brother, who seems to look after him in the midst of the traumatic episode. Though only six years old, Mr. Lewis came from a family in which his mother and father were married, and in the snippets of dialogue he gave between his mother and father, it seemed that they had a playful and loving rapport with one another. As described in Chapter 3, at the time of Mr. Green’s
traumatic incident, he was estranged from his mother and his father had passed away\textsuperscript{18}. He reports having been “kidnapped” by his father in the past, that he frequently witnessed domestic violence in his home, and that both his mother and father had long abused alcohol. Much of Mr. Green’s energy and time in the Imaginal Exposures is dedicated to speaking of feeling betrayed and abandoned by his family, and he reports feeling alone in the world, as if there is no one to protect him. Given this information, it is necessary to wonder about the ways in which both young Mr. Lewis and young Mr. Green internalized their parents. It is also conceivable that their unique backgrounds not only strongly influenced the ability for these two individuals to access the emotive and complex verbal language to describe their traumas, but also has a residual impact on their ability to feel safe and to develop relationships in which a sense of safety and trust can be created.

**Limitations and Considerations for Future Research**

A major limitation of this study was that the within subject data points were not independent, and thus it would be a statistical violation to perform either a multiple regression or correlational analysis between the DAAP data and the PSSR, DES, and SUI data.

Another limitation in this study is the reliance on participant’s self-report of their symptomatology. Though the measures have been studied and validated,\textsuperscript{18} Mr. Green, on a few occasions, stated that his father was alive at the time of the incident. However, on most tellings, he reported that his father had passed away, and that his mother had not been helping him financially despite receiving insurance payments due to his father’s death that had been earmarked to care for Mr. Green and his brother.
whether conscious or unconscious, people will utilize defenses in an effort to regulate or deny the severity of emotional arousal. In future research, the study of physiological markers alongside self-report measures could be used to reduce this limitation.

The fact that this is a case study with two different participants is both a strength and a limitation. It is a strength in that it allowed for a close study of what occurred across the Imaginal Exposure process for each of the participants. It is a limitation (in a way that also makes it a strength) in that there are substantial differences between the matched participants and their treatments. The two participants had different therapists and different relationships with their therapists19. Future research, which is currently underway at City College, into the role of therapeutic alliance in the COPE treatment will help shed light upon how the therapeutic relationship shapes treatment outcome. Further, future research looking to see if there is a relationship between linguistic shifts that occur over the course of the Imaginal Exposures and the therapeutic alliance will be critical in evidencing that much of exposure therapy’s impact is relationally derived. In addition to looking at alliance measures, future research could investigate the Referential Activity of both the Participant as well as the therapist to see if there is an association between the therapist’s and the Participant’s RA.

By focusing on Referential Activity within the Imaginal Exposures themselves as opposed to the COPE session in its entirety, this study was limited to exploring the Referential Cycle in the Symbolizing Phase, the point in which RA is at its peak.

19 The participants would doubtless have different relationships with their therapist even if they had the same therapist.
(Bucci, 1997). Studying Referential Activity across the COPE session as a whole would have allowed for a greater conceptualization of how these two participants moved through the three parts of the Referential Cycle, beginning with the Subsymbolic Phase, going into the Symbolizing Phase, and concluding with the Reflection and Verification Phase (Bucci, 1997). However, as Bucci’s three phase design was not created to look at a manualized CBT intervention, such as COPE, the question remains as to whether the three phases could be captured in COPE similarly to how they capture movement between the preverbal, verbal, and reflective phases of a psychotherapy session (Bucci, 1997).

The nature of the traumas that the two participants experienced is quite different. Participant 1017’s trauma is more complex in its dynamic elements than that of Participant 521. Another difference worth further exploration is that Participant 1017 had an active role in the trauma, whereas Participant 521, as a witness, but neither victim nor perpetrator, had a more passive role in the trauma. Future research is indicated with regard to whether there is a relationship between the nature of a trauma and/or how one’s role in the event plays a part in treatment outcome in exposure therapy for PTSD.

A final, and unusual, idea for future research is the following: what are the psychological motives to kill a human being? In reviewing the transcripts and audio recordings of Participant 1017, it becomes evident that he was fully intent upon killing his mother’s boyfriend. It would be worthwhile to do an in-depth study on this subject, as the data provides numerous tellings in which he discussed his intent to end his mother's boyfriend's life. A potential hypothesis could be that at the time
that Mr. Green attempted to kill his mother’s boyfriend, he felt trapped, without any prospect of possibility or hope. It would be worthwhile to explore if there are linguistic trends in his telling and re-telling of this act of violence that support this (or a different) hypothesis.

**Conclusion**

The experience of listening to Mr. Lewis and Mr. Green tell and re-tell their primary traumas evoked intense and varying emotions. For me, at first, it was harrowing and quite difficult; the act of being a passive listener was different than being in the role of either patient or therapist. As I moved forward, I would sometimes become numb to the experience. I am fortunate to be able to say that such numbing is an unfamiliar feeling; I did not like it. After transcribing three sessions of Mr. Green’s Imaginal Exposures, my research assistant experienced notable psychological distress, which she felt paralleled some of the confusion, rage, and disgust he experienced in the exposure process\(^{20}\). While the listening and transcription process could be physically exhausting at times, there were moments throughout the experience that inspired hope in the two individual participants, and hope that the treatment was serving a valuable purpose. As an outsider listening in, it was remarkable to hear new details, descriptions, and feelings emerge telling by telling, even as the core stories remained intact.

In the introduction to her book *Trauma and Recovery*, Judith Herman writes:

\(^{20}\) When this occurred, my research assistant continued participating in the weekly group supervision, but no longer took part in the transcription process. I continually checked in on her, and made every effort to ensure she was adequately managing the distress the transcription process had brought on.
The ordinary response to atrocities is to banish them from consciousness. Certain violations of the social compact are too terrible to utter aloud: this is the meaning of the word unspeakable.

Atrocities, however, refuse to be buried. Equally as powerful as the desire to deny atrocities is the conviction that denial does not work. Folk wisdom is filled with ghosts who refuse to rest in their graves until their stories are told. Murder will out. Remembering and telling the truth about terrible events are prerequisites both for the restoration of the social order and for the healing of individual victims.

The conflict between the will to deny horrible events and the will to proclaim them aloud is the dialectic of psychological trauma. People who have survived atrocities often tell their stories in a highly emotional, contradictory, and fragmented manner which undermines their credibility and thereby serves the twin imperatives of truth-telling and secrecy. When the truth is finally recognized, survivors can begin their recovery. But far too often secrecy prevails, and the story of the traumatic event surfaces not as a verbal narrative but as a symptom (1992, p. 1)

While critical to recovery, the act of talking about trauma can go against every fabric of the trauma survivor’s intuition. When a trauma shakes the very essence of a person’s sense of safety and predictability, it can be what Herman calls “unspeakable.” The intuition, at such a point, is to protect oneself, and above all, to survive. Ultimately, the impact of a trauma can shift, but it does not go away – what has been done cannot be undone. Forgoing secrecy to yield to truth takes bravery and safety. And what allows each person who has experienced trauma to establish safety and trust with another is unique to that person.

Though I never met them, over the course of the dissertation, I got to spend almost two years with Mr. Lewis and Mr. Green. Being able to listen when I’m able, stop listening when it becomes too much, and to have had years and endless support in my endeavor of trying to have a better understanding of trauma’s impact on the human psyche, and to have a better understanding of how to be somewhat useful to those who have suffered things that are experienced as unspeakable is a true
privilege. I hope to be able to continue to learn, and to try to be useful some of the time, and to build enough safety and rapport to allow for words unspoken to be voiced and heard.
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