

HOW POSTTRAUMATIC STRESS DISORDER AFFECTS
WRITING AND LEARNING:
WHAT NEUROSCIENCE SUGGESTS
ABOUT THE MEMOIR ASSIGNMENT

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Dedication

To the women and men whose struggles after trauma
to learn and achieve their goals have inspired this work

and

To my husband, Denis,
whose unceasing support has made this work possible

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Table of Contents

Acknowledgments	iv
Table of Contents.....	vi
List of Appendixes and Abbreviations.....	vii
How Posttraumatic Stress Disorder Affects Writing and Learning: What Neuroscience Suggests about the Memoir Assignment	1
Considering the Impact of Domestic Abuse on Literacy Learning.....	14
<i>Conclusions</i>	32
Enactionist Theory of Linguistics and Culture.....	34
<i>Enactionism</i>	37
<i>Enactionism and Shifts in Cultural Awareness of Abuse and Violence</i>	44
<i>Enactionism and Domestic Abuse</i>	48
<i>Enactionism and Posttraumatic Stress Disorder</i>	49
<i>Conclusions</i>	57
The Psychobiology of Posttraumatic Stress Disorder.....	62
<i>Experiencing Posttraumatic Stress Disorder</i>	64
<i>Narratives Illustrating Trauma With and Without Resultant PTSD</i>	68
<i>Orderly Versus Disordered Stress Response</i>	76
<i>Memory Formation Under Stress</i>	87
<i>Conclusions: What Neuroscience Suggests About First-Year Students</i>	97
Writing After Posttraumatic Stress Disorder.....	100
<i>Proposal: Literacy Program for Survivors of Abuse</i>	106
References	117
Appendix A.....	134
Appendix B.....	135
Appendix C.....	137
Appendix D.....	139
Appendix E.....	141
Appendix F	143
Endnotes	144

List of Appendixes and Abbreviations

Appendix A	DSM-III, Diagnostic criteria for Post-traumatic Stress Disorder
Appendix B	DSM-III-R, Diagnostic criteria for 309.89 Post-traumatic Stress Disorder
Appendix C	Complex Post-Traumatic Stress Disorder
Appendix D	DSM-IV, Diagnostic criteria for 308.81 Posttraumatic Stress Disorder
Appendix E	DSM-IV, Diagnostic criteria for 308.3 Acute Stress Disorder
Appendix F	Longitudinal Course of Posttraumatic Morbidity: Definition of Range of Outcomes and Their Prevalence Calculated According to GHQ Classification
ACTH	Adrenocorticotrophic Hormone
APA	American Psychiatric Association
CLTL	Changing Lives through Literature
CRH	Corticotropin-releasing Hormone
DSM	Diagnostic and Statistical Manual
fMRI	Functional Magnetic Resonance Imaging
HPA axis	Pathways of neurological activity between the Hypothalamus, Pituitary, and Adrenal Glands
NE	Norepinephrine
PET	Positron Emission Tomography
PNS	Parasympathetic Nervous System
PTSD	Posttraumatic Stress Disorder
rCBF	Regional Cerebral Blood Flow
SNS	Sympathetic Nervous System

How Posttraumatic Stress Disorder Affects Writing and Learning: What Neuroscience Suggests about the Memoir Assignment

For the last fifteen years, I have struggled to understand how domestic abuse affects later pursuits of literacy outside and inside the university. This research, which is synthesized herein, compels me to make a particular argument about the composition instruction of first-year college students: the generic memoir assignment should never be assigned. I do not use the word *never* lightly; however, I am arguing neither against all memoir writing, nor against all memoir writing within college-level intensive writing classes. The argument in this paper is specifically against asking first-year composition students to write a descriptive narrative about a significant life event.

I consider myself an activist teacher deeply committed to the success of all students, especially students deemed underprepared for college writing. Though this activism developed early for me, the fire was banked during the long night of an abusive marriage after a teen pregnancy over thirty years ago—only to be reignited when I sought support from the Center for Nonviolence much later during another, happy, marriage. Moreover, my argument against assigning the memoir or significant life event paper stems directly from my experiences both in the support groups and in the creative writing classes I taught for women at the Center. I see these women as similarly capable and vulnerable as

the first-year students I see in my composition classrooms and in the Writing Center at Indiana University-Purdue University Fort Wayne, a regional, mostly commuter, campus with approximately 12,000 full-time and part-time students.

Before beginning my analysis, I want to show the similarities between first-year composition students you have encountered, particularly in the first week of class, and the English-speaking women¹ with whom I was privileged to work at the Center for Nonviolence. I want them to be seen not as broken shells whose spirits have been beaten out of them—even if for a few, that is the apparent truth as they sit waiting for the group to begin. Instead, I want them to be seen as women determined to change the circumstances of their lives. Sitting in a circle in an off-white room and on a motley assortment of folding chairs, they are anxious women, some of them, grey-skinned with sunken eyes ringed with black eyeliner, heavy mascara, and unruly hair. They are hostile or withdrawn women, some of them, honey-brown calloused hands gripping their generous upper arms, eyes darkly unfocused. The women wear jean jackets or large t-shirts over jeans or stretch pants. They smell of cigarette smoke and perhaps sweat, perhaps perfume; they tap their feet or slump over with elbows on their knees. As they wait for the other women to sign in, they don't really look one another in the eye; they look at the white walls, at their manicured fingernails, at the floor, at the semi-open door—they may even regard each other as people in a doctor's

office look at other patients—only until the look is returned. Whereas students in the first week of class all appear to want to know how they will get through the class or semester, the fifteen women gathered in the Center support group meeting room all want to know the same thing I wanted to know fifteen years ago: How do I get myself out of the mess I'm in? How did I get *here* in the first place?

The *here* for each of the women at the Center for Nonviolence has arisen from some type of domestic abuse, either as victim or perpetrator. Partner abuse or violence may be the most prevalent motivator to attend, but according to Beth Murphy Beams and Maralee Martin, facilitators of this support group, most of the women also have histories that include multiple traumas, such as child abuse or neglect, child molestation, rape, or incest. Some women have lost children to violent deaths or have children who are violently mentally ill. Others have experienced political torture and violence or abuse because of ethnic heritage or sexual orientation. The support groups were originally established for the spouses and partners of men attending the nonviolence (anger-management) classes court-ordered for batterers, and provide women not only emotional support, but education about how to live, as well, without inflicting or tolerating violence and abuse. Whatever motivates them to attend Center support groups may have occurred recently or in the distant past. These are the women I invited to participate in a series of

creative writing classes I led. I expected to help them change their lives; instead, they changed mine.

What I learned at the Center for Nonviolence about the systematic, institutional nature of domestic violence and abuse shaped my critical academic inquiry as a student and feminist, and shapes to this day my teaching philosophy and practices. At the Center for Nonviolence, I had the teaching advantage of knowing that violence and abuse figured prominently in my students' lives, but now as a first-year composition instructor, I have no such advantage, although my personal tragedies and in those of my adolescent, economically privileged white children have sensitized me to the myriad traumas with which students might enter the classroom.

Having evolved as a consequence of this sensitization, my definition of "activist pedagogy," as it will be used in this essay, will sound quite familiar to the rhetoricians and compositionist readers of *College Composition and Communication (CCC)* and *College English*. With them, I argue that activist pedagogy embraces a few basic premises. For activist teachers, all students, regardless of the extent of prior academic successes, are capable of learning and producing college level writing. Thus, despite terms such as "basic writers" and even the less pejorative "underprepared student," all students are characterized as having the necessary biological/cognitive capacity to do college level writing, and the role of the activist teacher, therefore, is to create a learning environment

in which the necessary academic successes can be achieved. With Judith Newman, who argues about whole language learning, activist pedagogy assumes “error is inherent in the process” (as cited in Berlin, 1990, p. 216)—error is not indicative of student deficiency. Belief in the students’ capacity to learn also assumes, with early composition activist teachers Marie Ponsot and Rosemary Deen (1982) and Paulo Freire (1991), that students enter the classroom already writers of literature, already writers (and readers) endowed with agency and authority. As a result, activist pedagogy is transformative rather than additive. As students and teachers learn to examine problems or situations more critically and explicitly through language, not only does their repertoire of writing skills or tools expand, but also their responses or behaviors change, indicating that internal changes or transformations have also occurred. The concept of personal transformation leads to the final premise of activist pedagogy, that teaching and learning are inherently public and thus political, not private, acts. Even though teaching may occur in large lecture halls (not likely for composition classes) or via the internet (much more likely) where student-to-student and student-to-teacher interactions are most tightly circumscribed, students and teachers nonetheless do interact in ways that create meaning socially and that reverberate beyond the initial acts of communication. In other words, activist pedagogy embraces a political agenda, which in the United States might be expressed as a citizenry more fully engaged in the democratic process and perhaps able

to share more fully in the economic or material rewards believed available to those workers who can articulate their ideas and critiques more effectively (Berlin, 1990). Therefore, activist pedagogy aims to effect both idealist and materialist ends; activist pedagogy is supposed to *do* something for students and teachers, to make life better (eventually) for everyone.

A long tradition exists in the pages of *College Composition and Communication* and *College English* of introducing student populations, such as the women at the Center for Nonviolence or the underprepared first-year student, whom scholars deem to merit special attention or reconsideration, to other, perhaps less enlightened, composition and rhetoric professionals. For example, the February 2002 issue of *CCC* focused upon the boundary crossing rhetoric of people negotiating issues associated with race and ethnicity, and the November 2004 issue of *College English* focused upon people negotiating issues associated with social class. The authors in these two particular issues tended to characterize their work as activist, critical, or liberatory/Freirean pedagogy (Beech, 2004; Libretti, 2004; Linkon, Peckham, & Lanier-Nabors, 2004; Okawa, 2002; Pough, 2002). In these two journal issues, I have noticed three rhetorical aims important to the arguments I make in this essay. First, the authors strive to make visible and substantial the (usually not white and not middle class) people about whom they write, their dignity, their worthiness, and the impediments to academic

achievement they encounter. Second, the authors attempt to persuade readers that caring about these (different) peoples or students is not sufficient to enable change in their material circumstances; instead, the reader's changed behavior as an educator is also required. The third rhetorical aim is not often stated as explicitly as Jennifer Beech does in arguing for "the complex subjectivities of [poor and rural] white students" (p. 173) in the 2004 *College English* issue to which I refer:

While Winchester's words are reminiscent of the stock we writing professors put in the transformative capacities of language, . . . Foxworthy's [joke] . . . reminds us that it is equally important to pay heed to the powers of language to harm and to misinform. (p. 172)

In other words, the third rhetorical aim I have observed is to warn that activist pedagogy, especially practices not critically examined with revisionary openness, can harm (as well as benefit) the very students an educator hopes to help.

Although this tradition of activist pedagogy and advocacy seems central in most issues in the last ten years of *CCC* and *College English*, my argument against assigning the memoir paper in first year composition classes appears to fly in the face of much that compositionists—and, in some cases, psychotherapists as well—hold dear about writing "as constitutive" (Berlin, 1990, p. 205), as constructive of a self, or revision of the self, through words. Katherine Kelleher Sohn (2003) compellingly argues that for the Appalachian women participating in her study of their literacy practices, "[o]bviously

we want to bridge the gap from personal to academic writing, but beginning with the personal is a good first step, especially for nontraditional women (p. 435) . . . moving them from silence to voice” (p. 434). I too argue for that move from silence to voice, a move in which writing is constitutive or revisionary. However, instead of suggesting that writing about one’s own traumatic events can be healing, my research suggests the opposite can occur: narrating the story of a traumatic event does not, in itself, reduce or eliminate psychological pain associated with the event, and moreover, can instead re-activate distress symptoms thought long resolved—distress which I argue is outside the scope of a composition instructor’s expertise to assist in healing or mitigating.

This potential for writing about personal trauma to harm the individual writer has been under-theorized by compositionists from the biologically based perspectives explored within this essay. Rather, writers exploring potential risks of memoir or personal writing for *CCC* and *College English* have restricted their analyses to the realm of the sociopolitical impact as brought into existence and countered through language. Lynn Bloom (2003) writes of the ethical issues of writing about others who people memoirs, such as relatives, former lovers, or co-workers. Bronwyn Williams (2003) argues against the dangers of the memoir assignment for non-native speakers of English through the perspective of postcolonial theory. Even Anne Ruggles Gere (2001) who makes the strong argument that all students, particularly students from

groups underrepresented in higher education, should be taught the strategic use of silence to avoid “colonization of their writing” (p. 219) by, among others, their teachers, fails to advert to the biologically situated nature of writing about subjects the students are uncomfortable revealing.

Kristie Fleckenstein (1999) reignited rhetorical and compositionist analyses of personal writing, if not the memoir assignment directly, in the *College English* article, “Writing Bodies: Somatic Mind in Composition Studies.” Fleckenstein argues for a greater understanding, incorporation if you will, of how writing occurs through the body, not only in an abstract mind; but she does not address the effects of the body and its history of experiences, expressed in patterns of neural transmitter-enabled connections, on a person’s production of language orally and in writing. She does not articulate how the body writes (circumscribes or enables) which narrations are available to language and which narrations will resist language. For all her insistence upon the corporeal, the reality of the body, Fleckenstein makes no reference to the body of knowledge about the human body, especially that related to trauma and posttraumatic stress disorder, evolving in the natural sciences. Neither do any of the authors who follow her in the two special issues on personal writing, in September 2001 and September 2003, featured in *College English*.

Therefore, in the process of structuring and supporting the arguments in this essay, and following in the previously articulated tradition of *CCC* and *College English* scholars, I am positioning my arguments so that they can be seen as extensions of—not departures from—the sociopolitically grounded arguments embraced by these journals in the last ten years. Not only do I look at the socially situated nature of literacy struggles after trauma, but I also look to the natural sciences and their tentative but empirically based claims about the nature of the mind and its use of language after trauma. In examining these empirically based claims, I am following directly in the footsteps of Paulo Freire (1987), who in *Education for Critical Consciousness* argues,

We began with the conviction that the role of man was not only to be in the world, but to engage in relations with the world—that through acts of creation and re-creation, man makes cultural reality . . . We were certain that man's relation to reality, expressed as a Subject to an object, results in knowledge, which man could express through language.

. . . As they apprehend a phenomenon or a problem, they also apprehend its causal links. The more accurately men grasp true causality, the more critical their understanding of reality will be. . . . Further, critical consciousness always submits that causality to analysis; what is true today may not be so tomorrow. . . . Critical consciousness represents “things and facts as they exist empirically, in their causal and circumstantial correlations”² . . . Critical consciousness is integrated with reality; . . . Critical understanding leads to critical action . . . (pp.43-44)

Thus, first, I introduce women at the Center for Nonviolence and the challenges they faced in pursuing literacy. Furthermore, I discuss the lines of inquiry pursued in my attempts to understand the nature of

these challenges for them, other battered women, and the many students with whom I have worked as a consultant in the writing center and have taught as a first year college composition instructor at IPFW. My rhetorical goal here is to illustrate the complex effects of domestic abuse on literacy learning as a way to help compositionists better see the effects of multiple forms of trauma that traditional-age students, not only returning adults, bring with them to the college classroom.

I then introduce the theory of enactionism, an extension of the psycholinguistic theory of connectionism, through which I can explain memory phenomena associated with survivors of domestic abuse not accounted for under other theories of the mind. Afterward, I argue that compositionists can better understand the effects of domestic abuse on literacy learning by characterizing domestic abuse as traumatic and understand the most complex effects of domestic abuse as posttraumatic stress disorder. My rhetorical goal here is to demonstrate that the social constructivist theories often espoused by activist teachers of composition cannot explain sufficiently the struggles of students with histories of trauma nor yield adequate teaching practices with them because social constructivism does not account for the neuropsychological effects of trauma on literacy learning. Consequently, I argue that activist compositionists should expand their theoretical grounding beyond the scholarship of our own discipline. Activist composition teachers following in Freire's model should incorporate into our pedagogy the empirically

and quantitatively supported research into biological mechanisms of learning, especially those suggested by correlations between trauma and memory formation and retrieval—in order to facilitate the learning of all our students.

Third, I synthesize current neurobiological studies of posttraumatic stress disorder pertinent to the argument against memoir writing, which suggest that memoir writing subjects first-year college students to unwarranted vulnerability to being re-traumatized or shamed. Then I return to Freire's concept of "critical consciousness" to argue for a type of writing better suited for students in first-year composition. In writing for critical consciousness, instead of positioning their personal experiences as the subject for analysis, students should draw upon their lived experiences as one type of evidence to enhance the strength of their analysis and authority. In addition, based on research included in this essay, I suggest a literacy program that may assist in the development of critical consciousness among clients of community education programs, such as those at the Center for Nonviolence, with reduced risks for reactivating symptoms of posttraumatic distress. My rhetorical goal here is to demonstrate that even though certain literacy practices can indeed harm the very students activist compositionists hope to assist, by attending to empirically based research, compositionists can revise their teaching practices and writing

assignments so they might actually help students living with the legacy of trauma achieve their literacy goals.

Considering the Impact of Domestic Abuse on Literacy Learning

The first concept literacy educators must try to comprehend about students with legacies of abuse who want to improve their literacy skills is that literacy and education are both the means to an end and an end themselves. Education, by which I mean the acquisition of a larger repertoire of all types of literacy skills, is considered by many of my middle class acquaintances as a necessary step in securing “a Good Job,” and a Good Job is an entitlement for having jumped through the cultural hoop of acquiring a college diploma. The undercurrent of anxiety for first-year students who are not eighteen and not at least middle class corresponds directly to their anxiety about claiming entitlement to a college education at all, and then about the probability of their being able to realize the Good Job afterward. Education, then, for nontraditional students can represent a ticket out of poverty and abuse—not a necessary but certain step, not even the threshold to that step, but rather, a ticket to a bus out of poverty that may or may not be running. If or when the bus does run a route close enough to catch, it may not stop where the student needs to go. Moreover, despite the tenuous, unreliable means to an indeterminate end that education may represent, as Amy Robillard (2003) in *College English* points out, education may be conceived of as an escape route that includes opportunities to construct a new life with all the markers of the social class aspired to. Thus,

education can represent for nontraditional students both a first step toward escape and a means by which to create a life obliterating poverty—a motivation for attending college much different from their middle and upper class co-learners. The poverty nontraditional students want to leave behind is more than a material poverty; it is a spiritual poverty as well, as chronicled by the women writing about why they attended my creative writing classes:

I want to be able to express the thoughts and ideas that seem to be trapped inside my mind and heart. I want to learn to use writing as a tool to help me sort out goals and decisions. In the process, I would like to create something beautiful that kind of expresses a motto for my life.

Dianna, mother of five

Oy es un dia mull especial Para mi estuve esperando este dia con ansias porque oy es posible que nasca en mi escritora y todo esto se lo devo a Dios y a las personas que an echo posible todo esto gracias dios por todo lo que Tu nos das sin mereserlo Senor En tus manos pongo todo y que se aga tu boluntad

Anamaria, mother of three

I would like to be able to develop my thoughts more clearly and put them down on paper—to be able to express myself and bring out what is inside me.

Amelia, mother of one

Yo estoy aqui porque desde que empeze este grupo e aprendido muchas cosas 1. como no porque tenga mis problemas e desquitar mi coraje con las ninas 2. de que cuando mi esposo queria el me podia pegarme y yo lo miraba normal pero ahora que estoy en el grupo pues yo pienzo que no deve de ser asi y pues tambien e aprendido a hablar a desir no a las cosas que no quiero y atener mas comunicasion con mi esposo y con mis hijas mas amor y confianza y

tambien estoy hoy aqui porque quiero aprender mas y es que sea poco a poco aprender un poco mas y pues le doy gracias a dios de que me a dado fuerzas de seguir adelante.

Carmelita, mother of two

I hope to get in touch with the caring, loving person whom I know is still in me but has been suffocated with neglect, hurt and pain. When that loving person is allowed to surface, I feel great joy. I need to find that person again not only for myself, but for the sake of my family.

Lisa, mother of two

I want to be able to start writing again. It's been a while since I have written anything I feel that I'm ready but I don't know which way to go. I have so many ideas in my head. I don't know what to write about and what not to write about. I love writing but for the last year or 2 I haven't been able to write anything. I'm hoping and praying that I can start writing again.

Roberta, mother of three

Their spiritual poverty is a condition in which the self has dissolved into the relationship of abuse. What is important to notice about these brief excerpts is the writers' focus upon themselves. They want something for themselves, an important move toward identifying themselves more as survivors of violence or abuse than as victims. This distinction, one a new observer might not initially see, is striking for leaders of the Center for Nonviolence because a woman who is still a victim believes the resolution to violence and abuse revolves around changing the abuser, whereas the woman who is a survivor understands that she must leave the abuse³ and create a life without it. According to Judith Herman (1997) and Jenny Horsman (2000) who explore

intersections of leaving abuse and literacy, even when a woman⁴ attempts to leave abuse, the leaving is not linear or immediate, like turning off a switch, but rather tentative and vulnerable to the weight of old habits. To be effective teachers of women leaving abuse, then, teachers must be aware of the cognitive, perhaps even paradigmatic, shifts occurring for the student.

What are the hallmarks of victimhood that I observed in my years at the Center for Nonviolence? Primary to victimhood is the woman's focus on changing the abuser: *if only he would just (insert any desired change), everything would be all right, and there would be no abuse*. She appears horrified and furious at what the perpetrator has said or done to her. She wants him to change his behavior, his anger, and his denial of a problem. A victim focuses on the partner, wants to change his behavior and his mind about her being the stupid, worthless, ugly creature he says she is. Also primary is her engagement in power struggles with the abusive partner, who may be a life partner, a friend, a parent, or her children. She may participate in the "fighting;" she may bristle at this partner's controlling behavior—his or her not allowing her to go out with her girlfriends, to spend money without prior approval, to take classes of any sort; and she may complain, complain, complain about her lot in life. Another hallmark of victimhood is linguistic: she may not comprehend his behavior with the linguistic categories of abuse and violence, especially if there is infrequent or low physical damage violence such as

pushing or shoving. When a victim sees herself and the abuse she endures only within the boundaries of her relationship to an abuser, as something private, she can see the resolution to violence and abuse only within the dynamics of the relationship. To be a survivor, she must come first to see her “self” as separate from his, and she must recognize and assert that she deserves to be treated with respect. Moreover, to be a survivor, according to support group facilitators at the Center for Nonviolence, a woman also must recognize the abuse and violence in broader, socially constructed terms—not an easy task fifteen or fifty years ago, and not an easy task today, despite the public’s much greater awareness of issues related to domestic abuse and violence.

The notion that the moves away from abuse and violence are tentative and vulnerable to old habits but, nevertheless, can be enhanced through literacy development stems also from my reading of *Women’s Ways of Knowing*, in which Mary Field Belenky, Blythe McVicker Clinchy, Nancy Rule Goldberger, and Jill Mattuck Tarule (1986) argue that the women they studied⁵ conceived of themselves in terms that fit into one of five epistemological categories or positions: Silent Knowers, Received Knowers, Subjective Knowers, Procedural Knowers, and Constructed Knowers. Crucial to the discussions in this essay, the first three epistemological positions, Silent, Received, and Subjective Knowers, indicate increasingly egocentric views of the world and one’s agency or authority within it. Leaving abuse, I am arguing, requires this increasing

egocentrism or subjectivity. However, and as the enactionist theory discussed later in the essay demonstrates, that subjectivity must be supported socially in order to maintain the new “self without abuse” position. Therefore, enactionism suggests that for a woman to be successful in leaving abuse, she has to find her way to the last two epistemological positions, Procedural and Constructed Knowing. As Belenky et al. construct them, these positions suggest the knower’s increasing capacity to consider and account for the knowledge of others in conceiving of one’s agency and authority in the world without relinquishing subjective strength—certainly also a desired outcome from literacy learning in college. These epistemological categories help educators to become sensitive to and to listen for language associated with being a victim or being vulnerable to victimization in their students’ talk or writing, an attunement which in turn can inform attempts to educate students without perpetuating or perpetrating further victimization in students’ lives. Therefore, if revictimization can be avoided in the process, I see efforts to retain “special populations” in college as one means by which educators can assist people leaving abuse.

In concert with activist pedagogy, Belenky et al. (1986) argue that all women enter higher education already knowers; but I can identify very few students who enter higher education already as Procedural or Constructed Knowers. Rather, I see most students—abused or not—

entering the university in one of the first three increasingly subjective, and potentially vulnerable, epistemological positions. I consider the knowers in these positions vulnerable first because moving between positions is not a lock-step, linear progression forward. Like the moves out of being a victim, the epistemological moves are tentative, nonlinear, and highly recursive. Making the matter more complex, a person making these moves can inhabit one epistemological position in one environment—for example, school—and another position in a different environment—for example, home. In other words, the social setting greatly affects the knower’s epistemological position, particularly during periods of social role change such as entering college.

What are some indications and vulnerabilities of these subjective positions? Silent Knowers, who can appear as women who have had their spirits beaten out of them, lived in a world in which to know or, rather, to notice a view different than the norm was to have that knowledge erased or silenced:

You are stupid, I can’t believe it, you have no idea, on and on. . . . The body language I can’t believe. . . . At first I’d fight back . . . but after a while, you can only take it for so long, I’d feel like I was shrinking, I started to believe it. It made me scared to ask for help or try to learn, I thought I couldn’t learn. So I didn’t even try. (emphasis in original, Horizons interview, as cited by Horsman, 2000, p. 58).

When Silent Knowers *do* take their first steps toward literacy development, they may find their attempts actively blocked or resisted by family members. Even significant support from literacy educators may

not be able to neutralize the effects of escalating abuse or violence with which a spouse or domestic partner may react to a learner's efforts. At one point before I started the creative writing class, women in the support group discussed the therapeutic benefits of keeping a journal. The first concern for a few women was how to find a secure place to hide a journal from their husbands or partners, a concern echoing the account of one of Horsman's (2000) literacy educator correspondents:

I have known students whose husbands or partners insist on reading all their notes, or insisted that they only take courses with female instructors, monitor who they talk to—if they were seen talking to a male student it would be reported to them. They make it difficult or impossible for those women to feel strong. (p. 130)

The doubts Silent (or Silenced) Knowers harbor about having sufficient ability to learn and the multiple interferences they experience in resuming literacy efforts suggest that not many who women who are completely Silent Knowers will pursue higher education.

College composition instructors may instead see many more students who fit into categories of Received Knowers or Subjective Knowers. Received Knowers tend to listen and conceive of themselves as learners but do not feel capable of contradicting or challenging the authority of others. Received Knowers tend to be the polite students who expect, in Freirean terms, to have knowledge deposited by their teachers into their brain-banks. When faced with instructions or tasks they do not understand, Received Knowers may wait passively for the teacher's additional instructions. For educators, Received Knowers can make

teaching first-year composition frustrating because it appears they want the teachers to do all the thinking for them. Subjective Knowers tend to be so reactive to perceived challenges or threats to their fragile, emerging selves that they sever relations rather than risk abdicating (their perception) strong convictions. Subjective Knowers can be frustrating for teachers because of the Subjective Knowers' need to be in control of their own learning. As a result, they may challenge everything teachers present. Or, if they do not understand an assignment, they may be so invested in their understanding that they proceed without clarification because they cannot risk being wrong—even to the extent of ignoring teacher feedback. Or, this need for control may manifest itself in the Subjective Knowers' insistence (more through attitude than language) that teachers "Prove this activity will benefit me before I decide which parts I will do." Women in the Center creative writing classes appeared to vacillate between the classifications of Received Knower and Subjective Knower—and I argue that first-year composition students share many of the same characteristics and present some of the same challenges to teachers.

Furthermore, these subjective epistemological positions present students with challenges to learning and to adequate self-care that may place them at higher risk for further victimization in the school setting. According to Belenky et al. (1986), Received Knowers listen too much to others and depend so heavily upon others' authority that they may be

taken advantage of or may feel themselves betrayed by shortcomings of those they consider authorities. For example, composition instructors of first year college students frequently assign the memoir as the first paper because, as Patricia Sullivan (2003) explains, “the personal essay locates students in a topic and form that is familiar to them, that they have a decided interest and stake in, [and] that they can write about with a sense of authority” (p. 43). Received Knowers may choose to write about a traumatic interpersonal event, such as the death of a close relative or leaving an abusive spouse—indeed their most memorable event.

However, Received Knowers in first-year composition do not understand the complexity of writing well about a traumatic event, especially the complexities imposed by their own bodies discussed later in this essay, nor may they yet have established significance for the traumatic event. Thus, when they fail to *write well* even after several drafts: when their writing is full of nonspecific language, short on demonstrating significance, and—heaven forbid—rife with structural and grammatical error, Received Knowers can feel tricked into demonstrating their failures both as writers and as persons—and judge they have been made victims once again.

On the other hand, Subjective Knowers depend so heavily upon their own senses of what is correct or right that they are at great risk for impulsively—on the basis of “gut instinct”—choosing behaviors or actions that can result in self-destruction rather than self-actualization.

Subjective Knowers may take on the memoir assignment with great gusto, giving quite specific but intensely personal detail that leaves them vulnerable to other classmates' challenges to what the writers narrated. Subjective Knowers do not want to hear that perhaps the traumatic event can be seen in more complex terms than they have written, that perhaps they may have contributed to the traumatic event, or that they could suggest significance other than "all men are evil." They too are likely to produce writing filled with structural and grammatical error. And like Received Knowers, Subjective Knowers interpret their failures to *write well*, in academic terms, as rejection of the narrative—and narrator—they have worked so hard to craft. Thus, after receiving negative feedback, both Received and Subjective Knowers may be more likely to withdraw from school, judging themselves (or their teachers) as failures and as victims once again. Before assigning the memoir, educators should teach students first how to move beyond the binary, "either you are or I am right" thinking that tends to signify the perspectives of Received and Subjective Knowers, a process that I argue requires more than one semester or even one year of college courses to accomplish.

Such "either/or" thinking patterns resonate with the "all or nothing" learning and living patterns observed by Jenny Horsman (2000), Canadian literacy expert, in her book *Too Scared to Learn*, a report of her nationwide Canada research into the correlations between low literacy and domestic abuse. Horsman found "[a]ll or nothing . . . [as] a theme

that can frame a learner's reactions to issues of trust, boundaries, and openness" (p. 80) and that can manifest in the abused learners "showing opposing patterns at the same time—moving between complete control and abdicating control, between complete trust and no trust at all, between a defended self and no boundaries or self-protection" (Bain, as cited in Horsman, p. 81). Horsman cites therapist Clarissa Chandler who points to a "tendency for survivors to make enormous, heroic efforts, but to be less likely to carry out daily, on-going work. . . . amazed that what they need to do is consistent daily activity, aghast that something so boring is required" (p. 81). Nadine, a participant in the Center creative writing class, exemplifies the heroism she believes is required from her:

Hard Work

Today was my first real day of school. Lord knows I thought it wouldn't be as hard as it looks. I think that just getting into all the other stuff in my life is hard. Than I wanted to add school on top! Well I feel I am a pretty smart person. But today with all the work I have I feel like I must be dreaming!

I know everyone in school says it just looks hard right now. So I have to fight this need to run away and stick my head under the covers. I had to be there from 7:30 a.m. until 2 p.m. now that's not the times I need to be there everyday. I had to come in a half hour early today to get my books.

They were right I needed a large bookbag to carry them all I'll need to keep it too! Because I have to carry all these same books every day. Talk about needing a release from the day! I need a release from my life. Just a few years should be alright! Well that's just my take on a hard days work! Work I will have to be doing from now on.

Just to give you a look in on the things I mean here is the homework list I have. Medical terminology I have a test every Monday & Thursday. Spelling words 100 of them Monday. Words to break down #ing 20-68. English class write 1 paragraph per week and a test on Thursday. Typing class

timing tests Tues and Thurs. Computer concepts test Thurs. Read chp 1 and weekly exams. Then I have the daily care of my kids and myself. Then I also have these different agentencys to deal with and then I get to study for the next days school work. Maybe after that I will have time to myself.

Nadine, mother of six

Such heroism is exhausting and difficult to maintain for any length of time, putting students prone to acts of heroism at risk of immanent failure, perhaps even reinscribing a familiar pattern of heroic failure. Chandler suggests that this pattern stems from one of the legacies of trauma: learning that the daily routines of self-care can be (or necessarily are) put aside in order to cope with crisis. As a result, all-or-nothing patterns of fierce self-awareness or self-neglect, daily care or slovenliness, chaos or boredom, violent control or self-abnegating affection, freedom or imprisonment, become established as a normal existence, especially with on-going trauma such as domestic abuse. Those either/or, all-or-nothing positions complicate the efforts of students who are struggling with literacy learning to persist in their efforts, perhaps deepening self-images as victims, especially if they view the inevitable mistakes or misunderstandings of the writing process as confirmations of “how stupid they are” even to try.

An interesting alternate scenario presented by Patricia Sullivan (2003) adverts to a more sophisticated use of the “nothing” position taken by one of her first-year composition students. Ellen refused to write the assigned personal narrative. Instead, she wrote “descriptions of nature. . . from the detached perspective a botanist or geologist might

use” (p. 41), resisting Sullivan’s attempts to elicit language that was concrete and included more sensory detail “with a sort of deferential, apologetic smugness” (p. 41). Only once during the semester did the student reveal the source of her resistance, which could be reframed as an attempt to escape her past, in a brief reading response:

Response to a Text

Mr. Percy first suggests that we need to get off the beaten path in order to see, to really see. However, according to him, getting off the beaten path is the most beaten path of all. Apparently it is Mr. Percy’s belief that traveling the well worn path and viewing the sights others have seen dull our powers of observation so that we become blind to reality. All we see is the back of the head in front of us as we follow along like sheep.

What Mr. Percy fails to consider from his privileged upper class perch miles above the Grand Canyon is that the very thing he criticizes, the beaten path, is the place some of us want to be. Some people would give anything to be on that beaten path if they could. What is wanted most by some people is to be like everyone else.

I have been struggling with alcoholism since I was fourteen, two years after my mother died of liver failure. My mother drank every day of her life. I want a drink every day of mine. I have been sober now for almost four months but sometimes it takes everything I have to get through one day, even the next minute. I am not a recovering alcoholic, I am an alcoholic. It is profoundly ironic to me that so many students come to college to drink because college for me, especially my work as Prof. [X]’s research assistant, is what’s keeping me from drinking. The job I have on weekends is also helping me to stay sober. I need this job to stay in school. I am working to put myself through college because my stepfather will not help out with my finances. He protested my decision to go to college. He wanted me to stay at home and work. The reason he does not want me in college is that, the year after my mother died, I took my mother’s place in my stepfather’s home. In every respect I became like his wife. It was the year after that I started drinking.

As I reread this, I realize this response isn't going anywhere and I apologize to you Professor Sullivan, but this is the first piece of writing I have done in college and maybe that I have ever done that is in my own voice, if I can call it that. My customary writing style is scientific, by which I mean it is abstract, factual, and employs a lot of passives (as you pointed out) because it is imitative of the voice I read in the sociological texts of my major. Mr. Percy and Mr. Macrorie for that matter would probably express the opinion that my writing is slavishly imitative of the "language of the schools" and thus they would probably be highly critical of the papers I write. However, these papers have thus far earned me an A and for which I have received a research assistantship in my major of sociology. So I would respond to Mr. Percy that I am training myself to see what sociologists see in their investigations of our society and its manifold human creatures. The scientific way of writing that I employ when I write is much more comfortable to me.

Sullivan wisely frames this reader response essay as a "teaching moment" in which Ellen is the teacher and Sullivan the student, and she points out that she has learned to see how Ellen's resistance to the memoir suggests "Ellen has been the unwilling subject of her own life story and hence she is its reluctant [and resistant] narrator" (p. 43). Moreover, she refers to Ellen's desire to escape her past and characterizes that desire as a drive "to save her life" (p. 43), but rather than suggest that this need to save her life indicates a *problem* with personal writing and the memoir, Sullivan instead insists that "[h]er argument against personal writing becomes, in effect, a powerful argument *for* personal writing" (emphasis added, p. 44). Instead of problematizing the assignment, Sullivan problematizes the way teachers respond to resistances, to students' assertions of agency and authority in the composition classroom, suggesting with Henry Giroux that educators

need to “provide the conditions for students to speak so that their narratives can be affirmed and engaged along with the consistencies and contradictions that characterize such experiences” (Giroux, 1988, p. 18 as cited in Sullivan, p. 53). Such a response is frustrating. While on the one hand, Sullivan appears to be advocating for educators taking a closer look at the content as well as the impulses of student writing, an argument with which I fully concur, on the other hand, she completely ignores how the content and impulses of Ellen’s reader response shape her refusal to participate in the memoir writing asked of her, a refusal made all the more poignant because Ellen makes it clear she is aware of the potential academic costs of her refusal. In other words, Sullivan’s critique suggests there is value (primarily to teachers, it appears) in students telling the stories of their traumas without fully investigating the costs to the students of doing so.

One of the costs of domestic abuse for women attempting to pursue literacy learning is embedded in the persistent claims I heard from women participating in the creative writing class and from literacy learners in Horsman’s (2000) text that they were slow learners or that they would never be able to get it right; that going back to school to earn a GED or college degree would be a waste of time or money; that, even if they did go back to school, they would not be able to finish. Responding to Horsman’s surveys of Canadian basic literacy programs, the teachers report having to run programs with flexible attendance policies to

accommodate the crises—both material and psychological—that interrupt the students’ learning efforts. The women in my creative writing classes and the underprepared students I teach in IPFW’s version of “Basic Writing” also have had significant attendance problems concomitant with multiple “real life” emergencies that draw them away from focusing on their schoolwork. Moreover, I have encountered many students, as classmates or in my consulting work in the IPFW Writing Center, whose current life crises interrupt their abilities to focus on their academic work, most notably, a woman who told of lying wrapped in blankets on the floor of a friend’s car in order to leave her husband and a woman whose ex-husband of several years reappeared and threatened to kill her and their daughter. These interruptions suggest that stress itself in some way contributes to the self-perception of being a slow learner.

Horsman’s (2000) claim that “literacy learning is likely to work as a particularly strong trigger for memories of violence for many women” (p. 5) points to a more insidious stressor or cost of domestic abuse affecting a student’s self-perception as a learner. She explains that

. . . literacy [learning] takes learners back to their failure to learn to read well as children—[and perhaps] to memories of violence at home or school. . . . [The] school-like situation for many learners, . . . in itself, may be terrifying and lead to panic. (p. 5)

It is this panic and distress that I see in the IPFW Writing Center on the faces of some students struggling with the generic memoir assignments given by IPFW first-year composition instructors. I have consulted with

women and men who can think only of their recent harrowing divorce or child custody battles, or the last straw event before they left an abusive marriage, or the death of a loved one. Many of these students needed someone to listen to them as they struggled to put such difficult and previously unspeakable events into words. While it has been my honor and privilege to struggle with them, being present to their difficulties makes Sullivan's argument *for* the memoir assignment particularly distressing. The tone of her article suggests that she is an educator who cares very much about the successes—personal and academic—of her students, but composition teachers and writing center consultants are not psychotherapists trained in the healing arts. As suggested in the introduction, caring and listening alone constitute insufficient responses to the needs of students trying to make sense of even one instance in a history of domestic abuse or trauma. Caring alone cannot address the material basis of students' failures with or resistances to or fears evoked by a memoir assignment. The teacher's role is to assist students, with and without histories of abuse or trauma, in achieving their literacy or education goals involving reading and writing. What I want to know is how to minimize the interferences to learning that situations of abuse or memories of them seem to create for these diverse adult student populations.

Although social scientists have written much about the social forces implicated in domestic abuse or violence, I have found few texts

other than Horsman's (2000) *Too Scared to Learn* discussing directly how domestic violence and abuse affect learning. Because the learning difficulties seemed to be less related to motivation and more to stresses, I began to wonder whether domestic violence and abuse could affect the parameters of an individual's physical/neurological capacity to learn. Again, I found no texts dealing directly with the aftereffects of domestic violence and abuse and the brain's capacity to learn. However, literature on the psychobiology of posttraumatic stress disorder (PTSD) strongly suggests that trauma does affect brain activity, differentially so in those with PTSD. Thus, especially because of the claims that writing the personal narrative or memoir can be healing, compositionists need to be studying the implications of PTSD and brain research for the teaching of writing. Furthermore, just as Belenky et al.'s (1986) theoretical framework can help compositionists understand the variety of ways women know the world, compositionists need a framework for understanding how the scientific findings with regard to PTSD can inform efforts to minimize the possibilities of further victimizing the students educators seek to help. I found that framework in the linguistic theory of enactionism.

Conclusions

Survivors of domestic violence, unlike their victim counterparts, have learned to shift attention from changing their partners to changing

themselves to create lives without violence or abuse. That shift from being a victim to being a survivor can be a tentative, nonlinear, even recursive process. Thus, composition instructors of students with histories of domestic abuse and violence must recognize and actively seek understanding of the habits of mind associated with victimhood, which can lead students to withdraw from school, in order to more effectively assist them in achieving their literacy goals. As college students, survivors may share characteristics with Belenky et al.'s (1986) Received or Subjective Knowers, each an epistemological position representing challenges for educators corresponding with these knowers' tendencies toward either/or and all-or-nothing thinking and associated with their chaotic relationships in which abuse continues and disrupts their learning. Furthermore, because a teacher's work is not to heal but to educate and enable learning, compositionists should strive to understand the effects of stress on learning, in particular by understanding the psychobiology of posttraumatic stress disorder, which has been shown to affect learning centers of the brain. A theoretical framework that facilitates understanding PTSD and its effects on the brain is provided by the linguistic theory of enactionism.

Enactionist Theory of Linguistics and Culture

Anyone who has lived with, or remembers being, an adolescent is familiar with the Subjective Knower position in Belenky et al.'s taxonomy. Common wisdom, especially in the United States where individualism is highly valued, suggests adolescents inhabit a developmental stage in which they are establishing themselves as knowers and authorities separate from other authorities. These moves toward personal authority can be quite frustrating for the others whose earned authority is challenged repeatedly by the adolescent, who has little experience but "knows it all." I argue, though, that educators are wrong to assume that adolescents have little experience, even if adolescents have had fewer experiences than they. As Patricia Sullivan's (2003) genuine dismay over the source of Ellen's refusal to write the personal narrative/memoir paper indicates, teachers have trouble seeing and understanding one experience set most likely to challenge their students' abilities to stay in school: a history of domestic abuse or violence. Teachers have trouble seeing and comprehending the abuse and violence that affect literacy development because in many ways, we too are Silenced Knowers, not enabled or supported in our readings of the institutional and systemic nature of abuse and violence in our culture. In order to teach more effectively students with legacies of abuse and violence, teachers must learn, as women who become survivors of

violence must learn, first, to recognize what constitutes abuse, and second, to create networks of people who publicly and materially support those cognitions.

These are very complex tasks. For much of western history, domestic violence and abuse were not perceived as victimization prosecutable under the law because women and children were not sovereign entities, and thus not citizens, not protected from the right of a husband and father to administer justice to members of his household (Weitzman, as cited in Gelles & Straus, 1988). Thus, the phrases “domestic abuse” and “domestic violence,” as differentiated from “wife beater,” “battered wife,” or “child abuse,” are relatively new and significant shifts in language use. These phrases referring to people affected by violence and abuse result from volatile political and scientific debates about personhood and the rights of citizenship. Indeed, these political and scientific debates continue to shape how we see, let alone comprehend, the nature of being the victim (or survivor) of violence—whether that violence resulted from war, political oppression, criminal activity, natural disaster, accidents, or abuse in the hands of someone with whom the victim lived or saw as significant, such as a parent, step-parent, spouse, or domestic partner (Gelles & Straus, 1988; Herman, 1997). Despite women’s political gains in terms of the right to vote within the past century, fewer than fifteen years ago, police response to domestic violence, in which one spouse was doing more than pushing

or shoving the other, was to pacify the violent spouse—ask him or her to calm down, to take a walk and cool off, or to kiss and make up (Gelles & Straus, 1988; Miller, 1995). In many areas, police did not respond to domestic violence because marital or partner violence was considered a private affair not subject to public scrutiny (Gelles & Straus, 1988). In other words, domestic violence and abuse had been permitted (ignored, turned away from, denied, and minimized) because, as private disputes reflecting (believed) inherent character defects of the participants, there were insufficient social sanctions against them.

Imagine then, how difficult it was for victims of domestic abuse to comprehend the pain and danger they were experiencing. If a woman was being badly beaten up, she was expected to muster her moral outrage and leave her violent partner to protect herself and her children. But when she did leave the relationship and became a single mother, she was shamed for breaking up a family—in which the husband was characterized as the moral head of household. Therefore, despite the circularity of her dilemma, she was motivated to change the relationship to save the socially valued—and often economically valuable—marriage. However, when a woman in the Center for Nonviolence focused upon changing her partner's behavior and saw the abuse as interpersonal conflict rather than as abuse, she was acting as a victim rather than a survivor and less able to see the power she did hold. What if she weren't being beaten badly (at least not often nor badly enough to send her to the

hospital) but instead was “only” being intimidated by a controlling spouse? What sense was she to make of her relationship with a partner who threatened to withhold the household allowance if she was non-compliant, who criticized every attempt she made to do what he wanted, or who refused to allow her to shop by herself because she might attract another man’s attention (Miller, 1995)? Yes, she knew she “wasn’t being treated right,” but what meaning could she make of it? Who was to blame for the abuse and how could she make it stop? What sense can a person make of the pain of being abused within a cultural worldview that has only recently begun to recognize or name domestic violence and abuse as a violation punishable in the court system?

Enactionism

Making sense of domestic abuse is in part a problem of naming, and therefore, constitutes a problem that can be addressed within the realm of language and linguistics. Multiple theoretical frameworks have been constructed to explain how human beings comprehend with and without language their worlds of interaction—public and private, aesthetic and functional, cultural and natural. The inadequacies of theories that privilege either the environment of culture (such as the social constructivist perspective privileged by postmodernists in the humanities and social sciences) over the individual organism or the individual organism (such as medical or artificial intelligence

perspectives privileged by cognitive scientists, neuropsychologists, and physicians) over the environment of culture are resolved for me by enactionism, a theory of culture explicated by anthropological linguist William Foley (1997). Enactionism argues that cognition is the result of the complete and indivisible enactment of both the individual organism and its environment. Human beings know only through the senses AND only within the epistemology privileged by one's community, however small or large that community is. Therefore, enactionism makes an important contribution to understanding the apparent contradiction of a person living with domestic abuse without comprehending it explicitly as abuse. That contribution will make more sense after an overview of the main concepts with which enactionism deals, but first, enactionism can best be understood in contrast to the theory of mental representations. In the introduction to *Anthropological Linguistics*, Foley (1997) argues that humans do not create meaning through mental representations. Mental representations, a theory espoused very early by Plato (p. 81), renewed by Kant (chapter 3) and now by such linguistic heavy-weights as Noam Chomsky (p. 86), connote meaning constructed by a coding system that, after selective attention to sensory input or signals from an external natural world, re-presents or reconstructs these signals in the mind in some analogic form innate to human mentition. For example, proponents of mental representation would say that a three dimensional "table" would be encoded first as an image or re-presentation of the table within

the mind. Reading the word “table” would then elicit either the original image of “table” or some prototypical image of a “table,” signifying that an actual table need not be present because the mind has formed a representation of a table adequate to comprehend the term. Another rather crude way to understand mental representations might be to think of the mind as a type of videotape in which images and data are stored. The mind comprehends the recorded images as representations of but not the original images or data. New knowledge is generated by recombining or reconfiguring mental representations (i.e., cutting and splicing) with the input of new sensory data, and assimilating or accommodating the new configurations to prior schemata (p. 84). Within this epistemological framework of mental representations, the mind is conceived as something greater than, though limited by, the biological parts through which it functions. On the surface, mental representations seem quite plausible. Mental representations explain the phenomena of memories persistent in the absence of the object remembered and they explain the human capacity to imagine an object through close description and analogy without ever having seen it. But mental representations cannot explain, for example, the wordless, imageless flooding panic or nausea a rape or incest victim feels when touched in a certain way—especially if she has “forgotten” the experience that engenders the current response.

Inherent in the theory of memory as mental representations is the idea that the mind is something quite separate from the brain. However, enactionists such as Foley (1997, p. 90) argue that memory, and hence, the mind *are* the brain⁶ and the body. In this vein and in concert with extensive cognitive neuroscience research exploring explicit and implicit memory systems (Abel et al., 1995; Schacter, 1992; Tryon, 1993a; Willingham, Salidis, & Gabrieli, 2002), connectionism⁷ (Tryon, 1999), and the prominent psychologists studying posttraumatic stress disorder, Bessel A. van der Kolk and Rita Fisler (1995), enactionism suggests human beings know very little on a conscious, explicit, or reflective basis. Thus, most of what we know is stored in the body as sensory information that has not been processed consciously. Such knowledge is referred to as implicit, tacit, subconscious or pre-conscious, or pre-reflective⁸—and perhaps the site of knowledge, such as domestic abuse or the touch that evokes panic or nausea, that does not fit into a person’s worldview. Enactionism explains why the body, through its entire network of associations (see endnote 7), remembers the touch associated with rape or incest. And it explains why only the mind (and not necessarily with full consciousness)—with its memories of an abundance of positively construed touch—can counteract the body’s automatic preparation to flee from affectionately offered sexual touch it subconsciously evaluates as sexual “threat.” Therefore, enactionism, more completely than mental representations, contributes to understanding the apparent contradiction

of a person living with domestic abuse without comprehending it explicitly as abuse and, I argue, accounts most fully for the possibility of revising and altering one's physical health and psychological outlook after domestic abuse.

The theory of enactionism, as explained by Foley (1997), proposes that humans create meaning and revisions to meaning through our biological response to the environment. External stimuli are received through the senses, our sense-carrying⁹ neural receptors, and the way we respond to external stimuli reflects an internal neurochemical change in the brain's configuration (see endnote 7), whether or not individuals can articulate those changes or the meaning of them. Furthermore, Foley argues, the brain and nervous system—and thereby the mind, exist as a self-modifying system that responds not only to external stimuli (changes in the environment) but also to changes within the body itself. Each organic response changes the way a person thinks—and the way a person thinks circumscribes future possible responses. Unlike the pre-given, external environment posited by the concept of mental representations,

the “environment” [for the enactionist and] for the purposes of the sensory receptor cells emerges from the world only through the present organization of the organism's nervous system, which . . . is partly a function of its history of previous organizations. . . . The nervous system “affords” (see Gibson 1979) the world as “environment” its significance for present and possible subsequent states of organization, and, in turn, the world contributes to generating a history of the organism's states. (p. 10)

In other words, Foley argues that individuals "know" at any present moment only through how their previous experiences of the environment, whether concrete or abstract, constrain the way they experience the present moment, a process Maturana and Varela (1991, as cited in Foley) call "structural couplings" (or paired connections⁷) within the nervous system's "operational closure" (p. 10, 11). Thus, Foley's enactionist view of cognition as "an expression of structural couplings" poses that the "'environment' cannot specify changes in the nervous system . . . it can only trigger them. . . . Instead of *representing* an independent world, they [living systems, of which humans are but one,] *enact* a world as a domain of differences" (p. 11). In enactionist terms then, the body and brain do not need language or mental representations to act upon knowledge gathered by the senses. For example, through complex and interactive negative feedback systems, the autonomic nervous system regulates heart and respiration rates in response to both environmental and internal stimuli without any conscious awareness. The parasympathetic branch controls their rates under usual circumstances, and more pertinent to this discussion, the sympathetic branch controls or directs heart and respiratory rates when confronted by danger (Seeley, Stephens, & Tate, 1995). Therefore, this subconscious processing of data leading to the perception of danger can in part explain how a person can experience abuse and claim no memory of it—precisely because no

language is required for a “decision” to run from a threat or stay and fight.

However, if a woman understands her partner’s abuse only as a “natural” part of female-male relationships, perhaps because of her own experiences of child abuse or parental fighting, she may not have the “sense” to run away physically or psychically. Instead, she may stay to fight a battle her size and strength may not equip her to win. As an enactionist, I argue that, to counteract this woman’s ineffective conception of and response to her situation, she and her support system must construct language sufficient to articulate the body’s knowledge (distress with her environment of violence and abuse) and bring this knowledge into conscious awareness. With that conscious awareness, the mind can use language to revise how to respond to that knowledge. Then, by revising her judgment of domestic abuse from “natural” to “intolerable,” a woman (or man) can begin to move from being the victim to being the survivor of abuse and violence. However, the cognitive shift an individual woman makes in creating a cohesive, therapeutic narrative for the self is insufficient to support the difficult behavioral choices she must make to end the abuse. In addition, and as enactionist theory proposes, a woman leaving abuse must establish continued and multiple sources of cultural support.

Enactionism and Shifts in Cultural Awareness of Abuse and Violence

Just as individuals are neither essentially socially constructed nor essentially biologically determined, neither are cultures. Foley (1997) explains culture as a community's shared knowledge and judgments about their shared material environment. Defining culture as the resulting "network of [shared] understandings" (p. 11) and behaviors that remain somewhat stable over generations of replaced individuals, he argues that the "coordinated behaviors which trigger social structural coupling in a social system can loosely be called communication . . . [which then serves to] maintain . . . the ongoing structural coupling" (p. 12). Educational support groups such as those at the Center for Nonviolence are one source of public and continued support for the women and men making cognitive and behavioral changes necessary to live without violence. But this is only one source of cultural validation for their hard work, and that validation may be resisted when the support is imposed by another, often oppressive institution, the court system. Validation coming from multiple institutional sources, such as religious leaders or adult literacy development educators, can provide crucial ongoing support these men and women need.

Enactionism provides a framework for understanding *how* cultural support builds for changes in how abuse and violence are viewed. Foley (1997) explains the overwhelmingly tacit nature of our shared meanings,

in other words, the weight of old habits, through Bourdieu's (1977, 1990, as cited in Foley) idea of *habitus*, defined as a “set of dispositions which incline agents to act and react in certain ways . . . which are regular without being consciously coordinated or governed by any ‘rule’” (Thompson, 1991, as cited in Foley, 1997, p. 13). *Habitus*, which Foley calls the “grounding of our cognition” (p. 13) guides without determining behavior; it is pre-conscious and pre-reflective. In other words, *habitus* is knowledge embodied in individuals and formed through the multiple modes of communication between individuals and members of social groups. When we can interrogate what a social communication means and articulate explicitly how we comprehend a communication—for example, when a first-year composition teacher leads students through a rhetorical analysis of any communication medium—that explicit knowledge is yet still infinitesimal—like a head of hair on a mature body of “subsidiary and tacit knowledge” (p. 14). Unless the enactionist mechanisms for cultural change embedded in conception of *habitus* are understood as Foley intends, this body of tacitly understood communications appears as intransigent as the Rocky Mountains.

Perhaps examining two competing analogies about how culture operates may help in understanding Foley's view of *habitus* and why the concept of *habitus* is central to this discussion of why individual educators are so influential in helping people to live without abuse. In the first analogy, from the perspective of the mind as a set of mental

representations, habitus could be seen as the unfolding of a drama; habits beget habits until people do what they do without thinking about the original impulse for doing. While there is no written script, oral and behavioral communications maintain a certain predictability of social behavior. This concept of culture as unfolding drama is deeply embedded in the language used to articulate social position. For example, in trying to relate the impact of teaching on culture building, I had to make a conscious effort to avoid phrases such as “the role teachers play” in order not to work against my own argument. Thus, while this analogy or representation of the effect of habits, tradition, or habitus as unfolding drama might have developed at a time when communities were more closed and in which tradition was more valued, I argue the analogy is inadequate to articulate how culture operates in this society where the individual and innovation are more valued.

In the second analogy, from an enactionist perspective, culture could be seen as more like a game of Scrabble, with the board representing the social context or environment and the letters representing the individual player’s potential contribution to the social context (the board) from the social experiences and biological limitations available at the moment of play (the letter tiles each player has been dealt). Because individuals live in historically situated moments, the first word is already in place and constrains the first move of the individuals participating. The first player both constrains and provides opportunities

for the second player and so on. In a fashion similar to the game, culture is dynamic and the outcome is not entirely dependent on luck (or scripting or predestination), so individual skill and creativity can change the course of the game—even with many constraints imposed by the other players.

These two examples of “habitus as unfolding drama” and “habitus as Scrabble” demonstrate different sets of expectations individuals form about the social performance of roles. In the analogy of “habitus as unfolding drama,” individuals tend to see interactions and behaviors in more binary terms of “right/not right,” whereas in the example of “habitus as Scrabble,” individuals tend to see participants’ behaviors as a more probabilistic, less certain, set of possible outcomes in response to catalysts or causes. In other words, enactionists see culture less as “a play” than as “the play” between three never fully predictable players: environment, individuals, and social groups. This Scrabble analogy for the concept of habitus demonstrates how individual behaviors can effect the shift in cultural cognition necessary to recognize domestic abuse and violence as socially and individually disruptive when for centuries these have been culturally condoned behaviors. This enactionist view of habitus demonstrates why each situation in which abuse or violence is resisted reinforces behaviors and beliefs supporting future attempts to avoid abuse and violence.

Enactionism and Domestic Abuse

Not all cognitive shifts begin at the level of the individual. Cultural or institutional cognitions can exert significant pressure on an individual to make life enhancing individual changes. For example, when Amelia, who later became a member of the Center for Nonviolence creative writing class, again allowed a violent man to live with her, Child Protective Services threatened to take away custody of her child—a potential loss which cracked through her numbness so that she could take action on her and her daughter’s behalf. Because social pressures were exerted to change her family-destructive behavior, Amelia sought help with a strength she did not know she possessed, and at first even that was a tentative strength at best. In the Center for Nonviolence support groups Amelia attended, she struggled with cycling symptoms of numbness, hypervigilance, and hyperarousal, struggles that may have paralyzed her had the social consequences of continued failure to act been less. Many women seeking help at the Center for Nonviolence struggled openly with numbness, minimizing the effects of violence and abuse they live with and perhaps perpetrate, and questioning their hypervigilance and hyperarousal as being signs of paranoia or being too sensitive. They may never have revealed to anyone the shame of being abused, let alone have sought medical help for their symptoms. They did

not realize their constellation of symptoms had a name: posttraumatic stress disorder.

Enactionism and Posttraumatic Stress Disorder

Posttraumatic stress disorder is a diagnosis generated from conflict. To come into being as a concept and a diagnosis, PTSD has required from healthcare providers and the public a paradigmatic shift, a shift away from “blaming the victim” in which the symptoms are seen as expressions of the victims’ inherent character defects and for which symptoms they are personally culpable as cowards (combat soldiers), whores (rape victims), malingerers (environmental disaster or accident victims), or mad (abuse victims). This shift in cultural cognitions has just begun; agreeing on the official name and defining the characteristics of PTSD has required over one hundred years of heated debate. Despite the apparently geometric growth in research on PTSD, neuroscientists and psychologists appear to have reached agreement only that the physiological symptoms are neither rare, nor necessary, nor even normal responses to extreme psychological stressors over which the victims believed they had little or no control (APA DSM-IV, 2000; Amir & Ramati, 2002; Blank, 1993; Davidson & Foa, 1991; Delahanty, Raimonde, Spoonster, & Cullado, 2003; Goodman, Saxe, & Harvey, 1991; McFarlane, 1988).

Judith Lewis Herman, MD, feminist psychiatrist and contemporary expert in psychological trauma, argues and then demonstrates that physicians and psychologists have been able to treat with some efficacy the medically and historically observable symptoms of PTSD only since society in general has considered them legitimate complaints. In *Trauma and Recovery*, Herman (1997) chronicles the intermittent and shifting social and epistemological perspectives about the causes and treatment of the psychological aftereffects of violent trauma. Her rendering of the historical development of the concept and treatment of PTSD is fascinating and important for several reasons. First, her chronicle illustrates the enactionist argument that major shifts in shared cognitions (culture) require shifts in individual cognition, behaviors, and communication across large populations. The furor over the recognition of PTSD—from Janet’s and Freud’s (late 1800s) research in hysteria, to Rivers’s and Kardiner’s (early 1900s) research with shell-shocked soldiers, to current examinations of trauma in multiple circumstances, from war crimes to automobile accidents—reflects how very closely this disorder touches upon and challenges core beliefs western developed nations hold about the nature of human character and social relationships. Then, even when PTSD became defined medically in the 1980 American Psychiatric Association *Diagnostic and Statistical Manual* (DSM-III) (Appendix A), the diagnosis continued to be debated and revised for the next two editions published over fourteen years. Shifting

cultural cognitions and communications, as enactionists would predict, requires considerable and concerted effort.

Second, Herman's (1997) chronicle underscores the importance of subjective assessments (individual cognitions) about traumatic events, especially with regard to social roles, in the development and course of PTSD itself. She shows how, despite huge numbers of valiant men being diverted from the battlefield with combat stress during World Wars I and II, combat stress was thought of as an unfortunate outcome of war and a problem for the government (and culture) primarily during wartime, but not after men returned home. In conjunction with other research (Blank, 1993; McFarlane, 1988; 1997; Yehuda, 2002) suggesting that few people pursue medical or psychological treatment for PTSD, Herman's depiction of soldiers serving prior to the Vietnam conflict points toward the perhaps mitigating (or perhaps silencing) effects of returning to a culture that ennobled their valor and sacrifices to protect hearth and home. On the other hand, Vietnam veterans received little or no appreciation for their service and, instead, in public were shamed by their peers as ineffective participants in an unjust war. They had no way to contextualize their suffering within the heroic model. Their symptoms—very much like those of women shamed for their apparent passivity in the face of domestic violence—became intolerable rather than subsiding or being silenced. Part of the impetus behind assigning medical meaning to the traumatic effects of combat stress appears then

to represent a concerted effort on the parts of Vietnam veterans to denounce publicly the shame inscribed on their service and to reclaim their dignity both as soldiers and as citizens who wanted to live productive lives.

Finally, Herman's (1997) account suggests the organized demand for medical care by these distressed veterans—and the Department of Veteran Affairs (VA) commitment to funding years of extensive scientific research—is responsible for the growing body of scientific evidence that corroborates the social shift away from *blaming the victim* of trauma, in particular the trauma of domestic abuse. The significance of veterans' protest and its effect on enlisting the VA to study and treat combat stress was not lost upon participants of the feminist movement. In the 1970s the usually well-educated, white, and middle class feminists began listening to and politicizing the heretofore private (and ignored) lives of women revealed in the conversations of small, grass-roots organized consciousness raising groups. Because the informal rule guiding most of their conversations was that women's experiences—including sexual experiences—were neither to be challenged nor minimized, women revealed increasingly deeper levels of sexual trauma, somewhat as layers of an encyclopedia's palimpsest of the human body reveal individual systems and structures, see-through page by see-through page. As women in these small groups trusted one another to hear and be moved to public actions in response to revelations of the psychological trauma

of stranger rape, they felt increasingly free to reveal the more private horrors of date rape, spousal rape, and, at last, incest. Thus, just as, laid atop one another, the pages of a human body palimpsest hint at the profound interrelationships of the human systems, so did the reported levels of women's sexual assault, from total strangers to the men most trusted to protect them, suggest to Herman and other feminist scholars that men systematically "enforc[e] the subordination of women through terror" all the while these same men were forwarding the notion that "rape fulfilled women's deepest desires" (p. 30), Freud's legacy from his investigation of hysteria.

Freudian analyses of his patients' hysteria—first, that hysteria resulted from actually experienced sexual assault, later retracted and restated that hysteria resulted from his patients' unresolved illicit sexual fantasies—so influenced the course of psychology that a 1964 report by psychologists "conclud[ing] that marital violence fulfilled these women's 'masochistic needs'" (Herman, 1997, p. 117) continued to be a remarkably unchallenged explanation for the phenomena of the battered woman and her suffering—even after the American Psychiatric Association included posttraumatic stress disorder in the DSM-III. In response, feminist scholars in psychology began researching women's traumatic sexual experiences systematically and found that, rather than "fulfilling women's deepest desires," rape was experienced by women as a "life-threatening event, . . . [one in which they] generally feared

mutilation and death during the assault” (Herman, 1997, p. 31). After making the connection between women’s assessments and symptoms after rape, feminist psychologists built a case to redefine rape as “a crime of violence rather than a sexual act” (p. 30). Next came reframing domestic abuse and violence as crimes of violence. Researchers in the feminist movement collected the preponderance of social and physical evidence from women who were the victims of domestic abuse and made correlations to the scientific evidence gathered from VA studies on combat veterans in order to apply the diagnosis of posttraumatic stress disorder for these homefront psychological casualties. In other words, the pattern of evidence systematically observed among traumatized veterans made it possible to see the same pattern of evidence among the women experiencing all types of domestic abuse.

This diagnostic category of posttraumatic stress disorder was not, however, without its detractors, especially as it was applied to those not traumatized by war. It was 1982 before researchers finally concluded that “psychologically healthy men can indeed be coerced in unmanly ways” (Herman, 1997, p. 116)—thus enabling the shift away from the paradigm of *blaming the victim* for veterans with PTSD. For women, the social cognitive shift would take another ten years and stronger recognition of the importance of the subjective evaluation of having been shamed. The DSM-III and the DSM-III-R emphasized an objective, external judgment of the causal event as traumatic, using language such

as “recognizable stressor,” “event outside the usual human experience,” and “would evoke distress in almost anyone” (Appendixes A & B).

Perhaps the psychiatrists who wrote the DSM-III and DSM-III-R were attempting to limit what counted as an event sufficient to evoke PTSD in order to side-step the possibility of over-diagnosing PTSD or mistakenly enabling a malingerer to profit from a PTSD diagnosis. Holding a mirror to these apparent concerns, Davidson and Foa (1991) questioned how stressor events could be characterized universally as “outside usual experience and . . . markedly distressing to almost anyone” (§ 8)—when, as in their example of being mugged, what was unusual and distressing to a rural resident might be neither unusual nor particularly distressing for the New York City dweller [provided the victim is not injured]. The same dilemma—characterizing domestic abuse as “outside usual experience”—existed for women who were abused physically or emotionally as children and then later as wives or domestic partners. How were they (or their healthcare providers) to distinguish a clear boundary between tolerable “common marital conflict” excluded by both the DSM-III (p. 236) and the DSM-III-R (p. 247) and intolerable traumatic treatment, when for so much of their lives abuse was *inside* their usual experiences?

If a direct correlation between event intensity (an objective assessment) and the development of PTSD could be established, then no one could blame trauma victims for their reactions. However, Herman

(1997) argued that neither the DSM-III or DSM-III-R criteria for diagnosing PTSD accounted for the profound and complex aftereffects of prolonged and/or repeated victimization experienced by hostages, concentration camp survivors, survivors of sexual abuse during childhood, or adults dealing with the legacy of domestic abuse and violence. When articulating the struggles of those treating patients who were the most severely traumatized, repeatedly and over a long period of time, Herman argued that the symptoms of multiple-event trauma are more intransigent, are often personality altering, and are often more generalized and less obviously related to the trauma than these symptoms would be in people who had experienced a single-event trauma. In other words, Herman argued that unless the subjective experience of trauma were included in the revisions to the diagnostic criteria for PTSD in the DSM-IV, many people's suffering from PTSD would remain unrecognized and untreated—or treated ineffectively or in a way that further traumatizes the patient.

Though not incorporated into the DSM-IV in the form Herman (1997) proposed (Appendix C)⁹, subjective assessment of a traumatic event was included in the 1994 DSM-IV (and 2000 DSM-IV-TR) criteria for the PTSD diagnosis (Appendixes D & E). The concern about introducing the patient's subjective experience into the diagnostic criteria, though, responded not only to a concern for enabling the maladaptive behaviors of malingering, masochistic, or hypochondriac

patients. Physicians and psychologists treating PTSD and researchers studying PTSD needed to understand how subjective assessment can be measured and added in some predictable way to the diagnostic equation. By employing ever more sensitive technological tools and precisely focused research questions, scholars have generated a significant body of empirical evidence suggesting some people develop PTSD symptoms after what have been judged measurably lower intensity single events such as minor motor vehicle accidents for which extended hospital care was not required (Delahanty et al., 2003), homelessness not related to an environmental disaster (Goodman et al., 1991), or resolved early stage breast cancer (Amir & Ramati, 2002). Adding complexity to understanding the nature of trauma, lifespan studies suggest increased risk for developing PTSD may relate to more transient biological conditions such as the person's developmental stage of adolescence (Maercker, Schützwohl, & Solomon, 1999)—of particular importance to teachers of college traditional-age students.

Conclusions

Linguist William Foley (1997) argues that the first premise of enactionism is the indivisibility of the effects of biological constraints and social experience on cognition and behavior. Individuals are born with biological systems that constrain social interactions, and social interactions concomitantly modify biological systems. In a similar

manner, culture in enactionist terms is the dynamic interplay between the environment and patterns of individuals' explicit and implicit communications over time. The inherently conservative nature of cultural knowledge and actions, habitus, explains the multiple and ongoing sources of psychological and material support required for an individual to make significant change such as leaving an abusive relationship. This wholly reciprocating relationship between the individual and culture also suggests that greater understanding of interactions between the neural activity and social behavior can indicate how the activities or modifications of either can mitigate the traumatic aftereffects of domestic abuse and violence, which in some can be PTSD.

There are two important points for compositionists to take from this exploration of enactionism. First, how we teach writing can make a real impact on the lives of our students, students about whom we know little at the beginning of the class period and only a little more at the end. In the first year of college, according to Belenky et al. (1986), they are attempting to build a sense of the self and authority in relation to other authorities and may be particularly vulnerable during this epistemological shift. In addition, first-year students bring experiences that they may or may not wish to explore in the writing class—but about which they may feel compelled to write by the memoir assignment. If they do attempt the memoir, they may reveal more than they ever intended to about themselves—and receive low grades for writing poorly about it.

Teachers should ask themselves whether such vulnerability is warranted in the classroom. If an implied tenet of our educational mission is to “do no harm,” then compositionists must be particularly careful about giving assignments requiring personal writing, from which enactionism suggests both benefit and harm can result. Second, enactionism points to what almost seems a truism for literacy educators but, nevertheless, bears repeating: the choices of words, metaphors, analogies, and examples given during instruction and in the assignments given are very significant. Do compositionists’ patterns of language use “add up” to the messages they want to give students about their academic abilities and potential?

Herman’s (1997) depiction of the process to name and define the parameters of PTSD is important for three reasons. First, it illustrates the enactionist arguments about how difficult it is to shift cultural cognitions and values. Second, it underscores the importance of subjective assessment about traumatic events, especially with regard to how the event outcome reflects upon the individual’s execution of social roles. Last, it demonstrates how vital the well-organized efforts of diverse social groups were to capturing public support for expanded application of the diagnosis and sustained scientific investigation into the parameters and treatment of the disorder. In addition, Herman demonstrated that three major cognitions had to change to garner social support for PTSD: people had to believe that even courageous men could

develop PTSD; people had to relinquish Freud's misogynist views about women who claimed to have been abused; and people had to see that even those who had no conceivable secondary gain from the diagnosis could develop PTSD. These cognitive shifts must occur not only in theory, but also in the daily practices of those who must work with survivors of abuse, especially their teachers.

To women in Center for Nonviolence support groups, being able to name their experience as posttraumatic stress disorder provides many benefits. Knowing that how they feel, the alternating numbness and agitation, has been experienced by others such as combat veterans, helps women to reframe their feelings and experiences not only as private and individual, but also as shared by many others experiencing the same type of fear, horror, and helplessness in very dissimilar but traumatic circumstances. Knowing their feelings are shared can help women to see the feelings as symptomatic and as a call to action. They can begin to reframe what appears to be an apparently overwhelming, unrelenting, hopeless situation as a situation in which they have some power to respond. Individual women can experience a cognitive shift that might prompt them to create a life with far less abuse and no violence.

The diagnosis of posttraumatic stress disorder also enables a cultural or institutional reframing of domestic abuse. Although the diagnosis is dispensed to individuals, that the diagnosis stems, at least in part, from social interactions—not merely private, individual

situations—suggests that “healing” requires change in those social interactions, perhaps all social interactions. Therefore, even though the consequences of domestic abuse are experienced on an individual level more intensely than on a cultural level and the difficulties in achieving literacy goals during or after leaving abuse tend to be experienced by individual learners, these problems cannot be characterized as problems belonging to and resolved by individuals only. It is important to characterize domestic abuse and literacy as simultaneously individual and cultural problems that require simultaneous individual and cultural responses to mitigate. Thus educators, as cultural or institutional figures, should investigate the legacies of domestic abuse on the brain and thus on learning through the consequences of trauma—and I am arguing that domestic abuse and violence are traumatic.

The Psychobiology of Posttraumatic Stress Disorder

Compositionists should be aware that just as not everyone who experiences trauma develops PTSD (Blank, 1993; Delahanty et al., 2003; Maercker et al., 1999; McFarlane, 1988, 1997; van der Kolk, 1997), not everyone with a history of abuse and violence has difficulty learning (Belenky et al., 1986; Horsman, 2000). Nonetheless, I argue that the strong correlations between violence and abuse and low literacy established by Horsman require far more attention from compositionists. Horsman proposes that instead of saying violence itself causes learning difficulties, that we should say learning difficulties stem from the learner's trauma in response to violence and abuse. According to Horsman, the term "trauma . . . avoids some of the debates about what counts as violence . . . and draws [attention] to concepts of control, connection, and meaning" (p. 32 & 33) central both to literacy learning and to Herman's (1997) explanation of trauma:

Traumatic events overwhelm the ordinary systems of care that give people a sense of control, connection, and meaning. . . . Traumatic events are extraordinary, not because they occur rarely, but rather because they overwhelm the ordinary human adaptations to life. Unlike commonplace misfortunes, traumatic events generally involve threats to life or bodily integrity, or a close personal encounter with violence and death. They confront human beings with the extremities of helplessness and terror, and evoke the responses of catastrophe. (p. 33)

Even though these "responses of catastrophe" coalesce in PTSD and for some time circumscribe a person's choices, no one wants catastrophe to

define the meaning of her or his life. People want to be effective in achieving goals they set, not their trauma sets—and understanding more about the biological mechanisms of trauma should provide a way for them to meet those goals, especially college literacy goals of interest to compositionists.

By looking at the physiological correlations among trauma, learning, and writing, I am not proposing that the learning problems associated with trauma are medical problems, resolved with medical solutions. Nor am I proposing that these learning problems related to trauma result from strictly psychological problems that can be “healed” in the same sense that broken bones or torn skin can heal after a traumatic accident. Such notions of healing suggest a mending that, if perfectly executed, leaves no or few visible scars. Such notions of healing suggest also a reversal of a potentially destructive process, a “return” to a former equilibrium or wholeness. From an enactionist perspective, such notions are wrong, or at best inadequate. Although trauma is a problem of the mind, enactionists argue that mind and body are inseparable and, try as the mind might with psychic compartmentalization, not segregable from the physical body it inhabits. Enactionists might argue then that all memory, some of which is accessible explicitly with words but most of which is not and is implicit or subconscious and appears automatic or intuitive, is created through biased learning stored contingently in the body. Thus, achieving equilibrium or wholeness must not be conceived of

as a *return to a former state*, but rather must be understood as a *new state*, though perhaps similar to or reminiscent of a former state.

Furthermore, as an activist educator, the equilibrium or wholeness and health which I seek for all learners is better described as an evolving competency: the ability to effect one's own evolving goals, in concert with whatever physical or psychological challenges present.

Experiencing Posttraumatic Stress Disorder

To better understand the challenges to learning that PTSD poses, a review of the criteria for its diagnosis is in order. According to the American Psychiatric Association (APA) (1994/2000), PTSD can be diagnosed if and only if a *stressor event can be identified*, and that stressor event involves witnessing or experiencing the event as a *threat of death or of serious injury to physical integrity*, and the victim responds with feelings of *fear, helplessness, or horror*. Symptoms from each of three types of feelings characterize PTSD and must all be present *longer than one month*:

- three or more symptoms of *avoiding* stimuli associated with the trauma as well as a general *numbing* of responsiveness,
- one or more symptoms of *re-experiencing* the traumatic event, and
- two or more symptoms of increased *arousal*.

What is understood about the effect of these symptoms upon the course of the disorder?

As mentioned, PTSD is neither a common nor necessary outcome of serious trauma (Amir & Ramati, 2002; Blank, 1993; Delahanty et al., 2003; McFarlane, 1988), and a one-to-one correlation between objective measures of event severity and either acute PTSD symptom severity or chronic PTSD symptom persistence has not been established (Blank, 1993; Delahanty et al., 2003; McFarlane, 1988). Because “traumatized persons are notoriously reluctant to seek help for their symptoms, particularly from mental health practitioners” (Yehuda, 2002, p. 112), those treated for PTSD are considered only a small percentage of those with active symptoms or lifetime histories of PTSD. Prevalence studies conservatively suggest “5 to 6% of men and 10 to 14% of women had had PTSD at some time in their lives, making it the fourth most common psychiatric disorder” (Yehuda, p. 109). Sudden death of a loved one is the “single most frequent traumatic event to occur in both men and women” (Yehuda, p. 109), suggesting that PTSD may be related to unresolved loss. Moreover, because the nervous systems of many people with PTSD remain highly reactive even when they report few or no current uncomfortable symptoms of hyperarousal, re-experiencing, or avoidance, it is not surprising that the disorder has no single predictable course or outcome (Blank, 1993; McFarlane, 1988: see Appendix F).

One consequence of the complexity of PTSD is that pharmacological relief is sketchy at best. While existing anti-depressant medications (selective serotonin re-uptake inhibitors, in particular) may

ameliorate some PTSD distress, studies suggest that no one medication alleviates all symptoms and medications tend to affect men and women differently. Most perplexing, even though PTSD is classified as an anxiety disorder, administering drugs traditionally prescribed for anxiety, the benzodiazepines, has been less effective than placebos (Yehuda, p 113; Friedman, 1997) and in large doses can have amnesic properties (Krystal, Southwick, & Charney, 1995). Therefore, for those who do seek treatment for PTSD symptoms, some type of cognitive-behavioral therapy is often the only option available. Among some of the early treatment effectiveness studies, as many as half of the clients were reported as still meeting the criteria for unresolved and active PTSD after release from a short term course of treatment (Green, as cited in Meichenbaum, 1994)—and there are no reports of “durable remission” in chronic PTSD (Shalev et al., 1996, p. 177). Cognitive-behavioral therapies using exposure techniques—in which the patient imagines or is presented with actual traumatic reminders, such as the site of the catastrophe—are most prevalent. However, some treatment effectiveness studies suggest exposure techniques actually strengthen arousal and avoidance symptoms such as dissociation and increase counterproductive coping behaviors, such as substance abuse, with some patients (Krystal et al. 1995; Shalev et al.). Shalev et al. suggest there is no cure for PTSD, only help in reducing symptoms that maintain the disorder. Said in another way by Krystal et al., there is no extinction of traumatic

memories, but rather a masking of their effects (see Paunovic, 2003) and an enhancement of voluntary control over memory retrieval and emotions through language. In other words, even though the use of language to create an appropriate narrative for traumatic experience is central to many treatments for PTSD, a consistent therapeutic outcome seems well beyond the reach of most psychotherapists, let alone writing teachers.

The intransigence alone of PTSD symptoms has shown how very important it is to learn how and when biological responses best might be interrupted in order to mitigate the effects of a second traumatic event or to circumvent persistent re-experiencing of the primary event (Armony & LeDoux, 1997; Blank, 1993; Delahanty et al., 2003; Orr, 1997; Orr et al., 1997; Pynoos, Steinberg, Ornitz & Goenjian, 1997; Roozendaal, Quirarte, & McGaugh, 1997; Spiegel, 1997; Tryon, 1999; van der Kolk & Fisler, 1995). Used frequently as an adjunct to dialogue between therapist and client in cognitive therapies for PTSD, personal writing or memoir writing is believed to help somewhat in alleviating some of the most disturbing symptoms; however, as yet, researchers do not know why therapies that include writing are effective for some but not for all. One possible explanation that seems central to the thesis of this essay involves the shame that PTSD can induce in victims of traumatic events—shame not only about the event that precedes PTSD, but also about the PTSD symptoms themselves (Andrews, Brewin, Rose, & Kirk, 2000; Farber, Berano, & Capobianco, 2004). Because shame has been shown to arouse

the sympathetic nervous system (Gerlach, Wilhelm, & Roth, 2003)—and persistent arousal of the sympathetic nervous system is associated with PTSD maintenance, these feelings of shame associated with having been traumatized may exacerbate the PTSD cycling of avoidance, re-experiencing, and arousal symptoms (Andrews et al.; Buchbinder & Eisikovits, 2003; Herralld & Tomaka, 2002). Investigating these feelings of shame and their effects may provide additional important clues about why not all memoir writing contributes to healing from PTSD—especially memoirs read by people who have not earned the trust of the writer—and why asking first-year students to write in the memoir genre is so risky.

Narratives Illustrating Trauma With and Without Resultant PTSD

Recognizing and making sense of the signs of abuse and trauma in students' communications might be easier were there a handy checklist for educators. However, such a list—as the diagnostic criteria for PTSD suggest—could not begin to capture the complexity of traumatic responses possible. Therefore, to illustrate the concomitantly evolving patterns of physiological response and shame associated with processing trauma, I am going to narrate, as succinctly as possible, two traumatic experiences of which I have first hand knowledge. The first involves a car accident I had that left me quite shaken, and the second involves the loss of employment by a close friend who has given permission to discuss both the event and the ensuing posttraumatic stress disorder. I have

deliberately chosen examples of trauma that occurred in the public domain (with documents to substantiate the details included here) to minimize as much as possible making claims that cannot be corroborated in any way with empirical evidence¹¹. In addition, though I strongly argue that domestic abuse as well as domestic violence can lead to PTSD, the narratives of women familiar to me tend to show the effects of domestic abuse, especially prolonged domestic abuse preceded by abuse during childhood, more gradually accumulating to a threshold level before the constellation of PTSD symptoms ensues, making it difficult to see the direct link between event and disorder (Herman, 1997). Even though the trauma narratives included here do not depict reactions to domestic abuse, they do illustrate many important physiological responses and the cognitions that accompany them. Reflected even in these straightforward examples, trauma can be seen to develop nonlinearly and be resisted.

On a clear spring night in the mid-1990s, I stopped last in a line of cars formed to allow a left hand turn. Glancing up, I remember seeing light flash in the rear view mirror and then lights ramping over the hill. “It’s not going to stop in time!” was my last coherent thought. The crash involved four cars. Even with a seatbelt on, I flew into the steering wheel and then back into a prone position when the seat back broke. Stunned, I struggled out of the car—I don’t know which side—to see if the sedan’s driver was ok. His head lay toward the door on the passenger side of the

front seat. “He’s dead,” I thought, but I could not reach in to help him; I turned away just as a witness rushed up. “I think he’s dead,” I told the person whose arm wrapped my shoulder and moved me back to my car.

I felt short of breath, cold, and completely outside of my body—but not in pain. In my memories, I seem to see the scenes, not from inside my head, but from over my right shoulder. These scenes are less like movies and more like snapshots that can be shuffled without regard to sequence. Someone offered to call my family from a cell phone. I was examined by emergency workers and interviewed by a police officer. I was told that the young driver was not dead but unconscious. Even today, I can work out the sequence logically, moving the frames into some orders more comfortable than others, but not into an order as fluid as a movie.

I rode home in a daze but with my mind racing: I had to explain why I had not been in class to make a scheduled presentation. After making the call, I began to shake and feel a great deal of soreness that dissipated slowly over several weeks. For at least two to three months, however, driving and being a passenger in a car posed serious emotional difficulties: I jumped and shrieked whenever cars appeared to move toward the rear of mine¹²; I screamed into my rear view mirror at cars to slow down as they pulled up behind me at a stoplight; and my children told me repeatedly that I was overreacting to normal driving situations. Although I struggled with anxiety, I persisted in driving because driving had always been a pleasure, and I trusted it would become so again.

Besides, all the evidence at the scene and the full payment of my insurance claim validated my belief that the accident was not my fault. I did not develop PTSD.

Despite every effort and her deep resolve, Merriam Baxter's¹³ distress did not resolve as "neatly" as mine. After 31 years of service during which she received numerous promotions and excellent performance reviews from supervisors and her peers, Baxter was fired from her position as Assistant Vice President, Director of Marketing Technology, with a large corporation. Though Indiana is an employ-at-will state that allows employers to fire without cause, Baxter's manager specified a cause for her termination: based on principles outlined in *Topgrading* by Bradford Smart, she had failed to perform satisfactorily the competencies of her position—a position for which there were neither a written job description nor identified competencies at the time of her termination (e-mail communication by her lawyer).

Shortly preceding Baxter's scheduled family vacation, she was called to a meeting with her supervisor and a member of human resources. In the meeting Baxter was told by her supervisor that she was being terminated ten weeks later. Although she was "given the rest of the week off," her supervisor asked her to refrain from taking her vacation. She was given 21 days to consider the termination agreement, and she was to continue reporting to work. All while these facts were being communicated to her, Baxter remembers sitting stunned, experiencing

the conversation as occurring in slow motion while she observed calmly from outside her body, above and behind herself. The “outside of body” experience continued as she drove home, singing praise and thanksgiving to God. Though a devout and deeply spiritual woman, Baxter remembers thinking while singing, “Why am I doing this? This is very strange.”

A clinical psychologist advised her to journal, and her earliest entries reflect her disbelief, chronic inability to sleep, waking in “terrified sweats,” and being “strangely at peace” despite her concerns for health insurance and making car payments (Baxter’s personal journal). A web designer, Baxter developed a personal web page entitled “My New Life” in which one of the first entries is Psalm 25, in which the first verse is:

To you, O lord, I lift up my soul;
 in you I trust, O my God.
 Do not let me be put to shame,
 nor let my enemies triumph over me.
 No one whose hope is in you
 Will ever be put to shame,
 But they will be put to shame
 who are treacherous without excuse.

Despite this clear reference to feeling shamed and although she used the word “sordid” and “emotionally distressing situation” (Baxter’s personal journal) to describe the situation to her attorney, the journals Baxter shared with me do not reflect many expressions of anger or a desire for vengeance. Instead they reflect a vacillation between trying to organize her thoughts in order to do something to remedy her situation and feeling overwhelmed and yet hopeful that good would result from this

loss. During her vacation, which the human resources representative encouraged her to take despite her supervisor's preferences, Baxter assiduously avoided thoughts of her job. "This was our family time; I didn't want to spoil it," she recalled. Nevertheless, thoughts of her loss "came creeping in" and she cried privately in quiet interludes.

When Baxter returned to work, she had no work to do because all of her projects had been redistributed to her staff. She remembers her boss protested while she packed her belongings (he felt she should not bring attention to her status change). In addition, she remembers avoiding her co-workers and eating lunch alone because she felt "in her own world" and not "up to comforting them" and she read in their faces anger, shock, and embarrassment, signs suggesting to her that they did not know how to respond to her humiliation. Her files at home suggest a less narrow story than she recalls: During the weeks after her termination, she received cards of condolence and gifts of flowers and music from co-workers and friends. Not only was her distress her primary emotion for the weeks following her termination, her distress became the focal point of her memory for that time.

During the first week of August, the company Baxter worked for announced its sale to an international competitor. That same week her supervisor called her into his office where she saw on his whiteboard her own handwriting, her own work mapping out a marketing strategy. Baxter's supervisor, who had terminated her for failing at her job, then

asked her to create a marketing strategy for the merger of the two companies. He wanted the marketing department, under his direction, to leave a good impression on the new owners. Again, Baxter felt very calm and rational, very much the well-spoken professional—and as though she were observing this conversation from “up in the air and looking over her shoulder.” She felt herself thinking very rapidly and saying to herself, “Don’t respond; just ask for clarification.” She calmly asked him to repeat his request, thanked him, and returned to her adjacent office. Locking the door, she typed up her notes, wrote her understanding in an e-mail to him, and left.

I argue that while being fired was traumatic for Merriam, being asked to make the man who unjustly fired her look good before his new bosses as they decided which managers to retain pushed her over the edge. On the car ride home there was no singing; Baxter cried hysterically, all while she had the sense of one voice noting how dangerous her crying while driving on the interstate was and another voice repeating, “I’ve got to get home.” Her lawyer and psychologist advised her not to return to work. Both urged her to see her family doctor, suggesting that she was experiencing posttraumatic stress, and recommended that she request being put on short-term disability until her termination date. Her doctor concurred, wrote a prescription for Prozac (a selective serotonin reuptake inhibitor antidepressant), and signed her disability forms.

Baxter was horrified, afraid, and helpless before the power of the corporation to take away her livelihood and reputation without due process and without apparent regret¹⁴. She felt betrayed not only by her supervisor, but also by all the company's management¹⁵. In being asked to return to the department where she had once felt respected by her co-workers, she felt humiliated and ashamed that these former co-workers might think her termination justified. All her definitions for herself as a businessperson— effective, exacting, team-oriented, and respected worker—were shattered. On a more practical, physical survival level, she worried about how she would make house payments, clothe her children, and afford medical care her doctor said she needed after her termination benefits ran out. She was rejected as unfit by her employer of over 30 years. Who would hire her?

After leaving the company in distress, Baxter could not think of looking for work, let alone think of working, without panicking. In our interviews, she talked about continuing to drive miles out of her way to avoid passing her former place of employment. She is uncomfortable in conversations with former co-workers and sometimes still avoids them. Even though she has not accepted interview and job offers from other divisions in her former company, she has applied for work elsewhere. Several years later, however, Baxter is not employed outside the home, and she insists she will never work for the corporate headquarters of her former employer. Baxter's PTSD left her vulnerable in other ways that I

was not: On September 11, 2001, when New York's Twin Towers were destroyed by terrorists, I was horrified, but Baxter felt again the overwhelming emotions experienced the day she drove home from work crying—as though “the whole world had gone mad” (personal communication, February 7, 2005). She confided that all progress she made after losing her job was “wiped away” in hearing of the attacks.

Orderly Versus Disordered Stress Response

In looking at the narratives, compositionists should notice several points of divergence between the physiological processes at work in my and Baxter's traumatic experiences: the degrees and frequency of dissociation mentioned, the degrees of fear, horror, and shame adverted to, the degrees of avoidance behaviors engaged in, and the degrees of arousal and re-experiencing during and after the traumatic events. In the next few paragraphs, I discuss these points as I unpack the preceding narratives. Next, I discuss in scientific terms the distinctions between an orderly progression of a stress response and a progression that develops into PTSD. In the following section on memory formation, I delve into highly technical neurobiological material to show how trauma can affect the content and accessibility of what is remembered and can affect the beliefs trauma victims form about themselves. Even though the material synthesized here is quite technical, I have attempted to explain how each point contributes to my thesis. While compositionists may not find this

information as compelling as I do, the scientific material is included to illuminate the contexts of so many first-year students' lives and to extend the tradition of scholarship in rhetoric and composition by examining these contexts more closely.

Both Baxter and I describe the sensation of stepping outside of ourselves, looking over our shoulders at the event scene, and in Baxter's case, of being aware of multiple voices interrogating a situation. We both recall feeling stunned, numb, and a bit dazed. I experienced these dissociations very briefly, only at the accident scene. Merriam Baxter, on the other hand, experienced dissociation multiple times. These dissociative symptoms represent criteria B for Acute Stress Disorder (Appendix E). Thought to be a primary mechanism for avoiding pain at the time of the event (McFarlane, Atchison & Yehuda, 1997), initial dissociation is not considered maladaptive (Spiegel, 1997). However, for reasons not yet understood, the degree, frequency, and duration of dissociation around the time of trauma—and memory of it—strongly correlate with the development and intensity of PTSD (McFarlane et al.; Spiegel). When dissociations continue to occur in diagnosed PTSD, psychologists classify them as avoidant behavior—conscious and subconscious efforts to escape trauma memories and reminders. Dissociation is most pernicious when it persists because it affects both memory formation and storage (van der Kolk et al., 1997).

At the accident site, I feared the young driver had died, and though disconcerted by my inability to help him, other people stepped in and took over, absolving me from shame. On the other hand, Baxter's experiences seem meant to shame her: she was fired when she could have been "down-sized" after the move; she was required to come into work but was divested of tasks; and her supervisor asked her to do work she had been publicly deemed incompetent to perform. Baxter demonstrated her shame by reading adverse judgment in her co-workers' faces, by praying and seeking scripture that God would prevent her being shamed, and by avoiding her former workplace and co-workers. She was horrified that her 31 years of service and many promotions would be rewarded in this fashion. She was terrified that she would not be able to support her family. All this fear and shame constituted pain sufficient to enable dissociation and entrench her distress. Recently, neuroscientists have been able to distinguish more discretely the physiological activities of emotions associated with fear, such as anger and shame. Their findings suggest shame follows a discrete physiological arousal pattern (notably, a distinct cardiovascular path) resembling the stress-related experience of threat (Herrald & Tomaka, 2002), and is part of a constellation of emotions inducing social pain (Panksepp, 2005). The social nature of shame is borne out in four empirical studies by Smith, Webster, Parrott, and Eyre (2002) who define shame as:

“public exposure of a [moral] transgression or [nonmoral] incompetency,” more likely to occur in situations that elicit negative self-appraisals. (p. 157)

Moreover, additional studies highly implicate shame as an obstruction to leaving violent and abusive partnerships (Buchbinder & Eisikovits, 2003), and correlate shame, more so even than dissociation, with the long-term continuance of PTSD symptoms (Andrews et al., 2000; Kessler & Bieschke, 1999). In other words, recent empirical studies suggest that threats to a person’s self-appraisal through a public¹⁶ appraisal of incompetency, such as Baxter experienced and survivors of domestic abuse attest, can induce a shame painful enough to warrant avoidance by any means, consciously or subconsciously.

Although I cannot remember any avoidance of driving, the strength of Baxter’s avoidance behaviors—attempts to escape pain—increased with time. At first, she avoided thinking or talking about her job loss, then avoided her coworkers, and then could not think of or drive by her former place of employment without panic. The panic, an arousal symptom that alternated with her avoidance behaviors, yielded to numbness and feeling dazed or confused early in the evolution of her PTSD. This numbness, referred to commonly as “shock,” was her body’s response to being overwhelmed by the stress reactions and constituted an early, subconscious, avoidance maneuver. Gavin de Becker (1997), expert on the prediction and management of violence, explains the

“shock” or “avoidance behavior” as the body’s freeze response to fear, a response that proved beneficial on an evolutionary time scale when stationary prey received far less attention than moving prey. He argues that the freeze response, coupled with the heightened arousal and alertness resulting from cortisol circulation, provides a person with greater physiological ability to evaluate incoming sensory data. Those benefits can be seen as Baxter calmly took the news of being fired and later asked her supervisor to clarify her work assignment. De Becker explains that the initial stress response prepares the body to take action—but it does not mandate action.

The initial stress response energizes the fight-or-flight sympathetic nervous system response or the arousal symptoms in PTSD. Physiological numbness, the response to overwhelming arousal, is more obvious initially than the arousal, but as a victim repeatedly re-experiences reminders of the distressing event, arousal repeats and, then, exacerbates distress. For example, I overreacted for months whenever a car approached from behind while I slowed to a stop. Both the reminder and the arousal were specifically related and did not generalize to all driving situations. However, Baxter’s distress, reinforced by her supervisor’s multiple acts of mistreatment (not all were discussed), expanded (over-generalized) so that she now avoids former co-workers not involved in her dismissal because their association with her former employer elicits substantial distress. These arousal or distress

responses are mediated in part by the endocrine hypothalamic-pituitary-adrenal (HPA) axis, and the normal stress response occurs roughly in the (grossly simplified) manner illustrated in Table 1 (Bear, Connors, & Paradiso, 2001).

Table 1
The Stress Response

<u>Incoming Data</u>	<u>Data tabulated</u>	<u>Data analyzed</u>	<u>Call to action</u>	<u>Action</u>
		Emotional response ▲		
		Many, many cortical areas involved in responding to sensory data ▼ ▲ (Basolateral nucleus)		▲ ▼ Hippocampus (central to learned behaviors) regulates stress response by suppressing release of CRH ◀ ▼ ▲
	► Signals converge in the spinal cord ▼ or ►	► ▲ ▼ Signals integrated in Amygdala.		
Sensory data perceived by sensory system (including “gut”) ►		(Central Nucleus) If stressor is judged as negative, then: ►	► Signals sent to the bed nucleus of the stria terminalis ►	► ▲ ▼ Stress response activated: Excited activation of the hypothalamic-pituitary-adrenal (HPA) axis ▼ ▲
	▼ Some sensations evoke automatic response (no cortical involvement)	Tables 2 discusses actions resulting from increased activity of SNS and presence of cortisol ◀		A. Hypothalamus releases corticotropin-releasing hormone (CRH) B. CRH stimulates Pituitary release of adrenocorticotrophic hormone (ACTH) C. ACTH stimulates adrenal glands to release cortisol ◀ ▼ ▲ More than sufficient cortisol results in hippocampus suppression of CRH. Chronic exposure to cortisol shrinks the hippocampus. ▲ ▼

Note. The sequence outlined begins at the far left and proceeds in the direction of arrows. Arrows pointing both to and from another entry indicate reciprocal relationships. Adapted from “The Stress Response” by Bear et al., 2001, *Neuroscience: Exploring the Brain, 2nd ed.*, pp. 591-680-684.

In some ways, PTSD seems no more than an exaggeration of the normal stress response because they both share similar characteristics:

1. Avoidance behavior
2. Increased arousal & vigilance
3. SNS activation
4. Release of cortisol by adrenal glands (Bear et al., 2001).

Some psychologists refer to this particular constellation as an activation of the “fear network” (Armony & LeDoux, 1997; Tryon, 1999) or “fear structure” (Foa, 1997), which they argue reflects a normal reaction to an abnormal situation. Bear et al. (2001) catalogue the typical SNS response involving the processes in Table 2.

Table 2

Spinal control of Sympathetic Division of Autonomic Nervous System governing responses to fight, flight, fright, and sex

Thoracic nerves	Dilate pupils Inhibit salivation & tearing Constrict blood vessels (and raise blood pressure) Relax airways Stimulate glucose production and release from liver Inhibit digestion Stimulate secretion of epinephrine and norepinephrine (hormone neurotransmitters) from adrenal medulla
Lumbar Nerves	Constrict blood vessels in the gut Relaxes urinary bladder Stimulates orgasm
Primary SNS excitatory neurotransmitter	Norepinephrine (from which epinephrine is made)

Note. Adapted from “ANS Circuits” by Bear et al., 2001, *Neuroscience: Exploring the Brain*, 2nd ed., pp. 507- 511.

The normal stress response slows when the hippocampus, deep within the neocortex's medial temporal lobe, runs out of cortisol receptors and sends out messages to suppress corticotropin-releasing hormone (CRH), which inhibits the release of adrenocorticotrophic hormone (ACTH) and cortisol. Suppressing cortisol production should result in the body moving toward a new state of balance or homeostasis optimal for health. As a result, the sympathetic nervous system will deactivate and the parasympathetic nervous system controlling normal functions will reassert its control.

This relationship between the sympathetic and parasympathetic (PNS) divisions of the Autonomic (not under conscious control) Nervous System reflects the body's attempts to achieve homeostasis on a macro level. When the body is healthy, activity levels of the SNS and PNS divisions tend to reciprocate as would two children balanced on a see-saw—when one division's activity is high, the other's is low. The movements between the two divisions are fluid, measured, and can contain an exhilarating, but not frightening, spring. However, while traumatic stress can be only “stress in the extreme,” posttraumatic stress disorder is not merely an exaggerated or extreme normal response to exaggerated circumstances. Traumatic stress that does not develop into Acute Stress Disorder or PTSD is somewhat like two children of equal weight riding the see-saw as fast as they can. Even though the ride is stressful and challenging for each rider to keep up with the other,

either can effect a change in the pace of the ride. On the other hand, stress that develops into PTSD is more like two children of very different weights riding the see-saw. For the lighter child, the ride up is too fast and the child fears flying off when the heavier child thumps to the ground. And then, try as the lighter child might, she may never get her feet back to earth without help. Likewise, in PTSD, the overwhelming demands placed on the autonomic nervous system when the SNS is called repeatedly into strenuous, but many times ineffective, action can unbalance the body to such an extent that its ability to respond to normal or daily circumstances becomes “broken” or disordered. While this disorder changes [perhaps forever (Friedman, 1997)] the course of the “play” between the SNS and PNS divisions of the autonomic nervous system, the disorder itself does not lead to the body’s death. An appropriate image for the effects of PTSD on the SNS and PNS relationship might be of a see-saw with the central balancing point for the fulcrum destroyed: Try as two children might, they will have trouble establishing a smooth and secure-feeling ride.

Stressors also affect the body’s homeostasis on a micro level, at the level of the neurotransmitter, in the push-pull relationship otherwise known as a negative feedback cycle (Seeley et al., 1995)¹⁷. A negative feedback cycle works (though not consciously) to avoid a crisis as a checks-and-balance system through which the body makes small, less dramatic, adjustments in response to its internal and external

environment to maintain overall health. Failure to make the small adjustments early can result in a positive feedback cycle (see note 17), a cycle that requires intervention to forego possible disaster, even death. Sometimes, and current research in PTSD appears to point in this direction, the homeostatic midpoint shifts permanently in response to persistent imbalances in one direction or another (Morgan, Grillon, Lubin, & Southwick, 1997; Orr, 1997; Pitman, 1997; Pynoos, et al., 1997; Southwick et al., 1997; Wolfe & Schlesinger, 1997). Too much stress at one time or too many stressors over time can similarly, but more complexly, shift the homeostatic midpoints for the multiple sites affected by neurotransmitters involved in the body's response to stress. In turn, these homeostatic shifts correlate strongly with changes in the neural architecture themselves, although at this point, researchers are still unclear about which—the homeostatic shift or changes to the neural architecture—results in the other.

The arousal mechanisms operate simultaneously on the macro and micro levels and cannot be demonstrated in separate personal examples. However, very important to note is the speed with which the SNS is activated greatly increases after a traumatic event and in PTSD. For example, when driving shortly after the car accident, I was not aware of continuously scanning the rearview mirror for oncoming vehicles, but the moment I saw one, I was panicked—not a bit upset, but completely panicked. In automotive terms, I went from zero to 60 in a nanosecond

and calming that response required months of conscious intervention: “No, the car will not crash into you; it is slowing down.” Although in this one instance, I credit the impact of conscious intervention for eventually calming me, neuroscientists might argue that perhaps calming occurred because my distress simply had run its course—or I had acquired a sufficient number of no traumatic driving experiences to assure my brain’s pattern seekers that I could stop looking for another accident. Understanding how (and which) modes of learning can interrupt or alter ensuing patterns of distress response—on the macro and micro levels, therefore, should reveal much about how the body and mind develops and remembers strategies to survive successfully those stressors. As researchers learn more about PTSD, a disorder affecting subconscious or automatic memory for traumatic stimuli and affecting conscious memory formation for events and facts, they also learn about how human beings learn—under both stressful and no stressful circumstances.

Memory Formation Under Stress

Baxter’s and my recall of our traumatic experiences suggest that stress alters memory formation or learning. Connectionist theorist Warren Tryon (1995) suggests that when learning is conceived as occurring across a network of associations, dissociation “is the difference between what was learned [subconsciously] and what can be remembered [consciously]” (p. 309). In other words, our dissociative

experiences changed not merely how we interacted with our environments afterward, they also changed the predictability of our memories and, hence, of our responses to the environment. As a result of their dissociative origins, fragmented and disturbing memories can be difficult to access deliberately (Tryon, 1995; van der Kolk & Fisler, 1995). On the other hand, and paradoxically, these memories tend to be particularly vivid and to arise into consciousness spontaneously (sometimes as flashbacks), to be quite resistant to decay, to be highly charged with emotional and sensory detail, and to have sparse and disorganized narrative quality (Harvey & Bryant, 1999; Roozendaal et al., 1997; van der Kolk et al., 1997). These paradoxes of traumatic memory have stymied clinical psychologists and researchers for decades.

Current research based on neuroendocrinology, functional magnetic resonance imaging (fMRI), and positron emission tomographic (PET) studies of brain architecture and activation under conditions with and without stress (Armony & LeDoux, 1997; Canive et al., 1997; Pitman, 1997; Shin, et al., 1997; Spiegel, 1997) have established that PTSD, rather than representing an impaired access to traumatic memories (Foa & Hearst-Ikeda, 1997, as cited in Harvey & Bryant, 1999), more likely involves disorganization in adequately creating explicit memories (Harvey & Bryant, 1999). These findings, enumerated in the following four points, are particularly important for compositionists

because they point to biological mechanisms of memory involved in writing about personal trauma.

1. *People with lifetime or chronic PTSD retain measurable physiologic sensitivity to environmental stimuli (hyperarousal or hyperstartle) even though they may not currently complain of current PTSD arousal or re-experiencing symptoms.*

Research by Kerr and Landfield (as cited in Bear et al., 2001) supports the explanation that initially cortisol makes the brain more alert, perhaps by allowing brain cells to admit more excitatory calcium, and “better able to cope with stress” (p. 506). Bear et al. suggest that cortisol serves as well to “mobilize energy reserves and suppress the immune system” (p. 504). But chronic stress, with the chronic flow of calcium and cortisol, correlates with neuroreceptor site alteration (Southwick et al., 1997) and with destruction (from excitotoxicity)—and, at times, permanent damage in parts of the brains such as the hippocampus. Such widespread alterations can either stem from or result in abnormalities in “at least seven unique neurobiological systems” (Friedman, 1997, p. 367; Pitman, 1997; Southwick et al., 1997).

In addition to the effects of calcium and cortisol, the effects of norepinephrine (NE), a neurotransmitter essential to SNS activation, contribute to the apparent ubiquity of PTSD alterations. Hence, every time re-experiencing or reminders occur, the SNS system fires up and the startle response is strengthened. The PTSD startle is so strong and sensitive that it frequently does not habituate (become tolerable)

(Garrick, Morrow, Eth, Marciano, & Shalev, 1997; Orr, 1997). This lack of habituation, however, does not quite account for the incidences in which intrusive recollections and arousal symptoms on the one hand and the avoidant symptoms on the other have been observed to coexist *and* to alternate. Antelman et al. (1997) suggest that the seeming paradox of concurrent and alternating intrusive and avoidant symptoms can be explained through the concept of a bi-directional (and oscillating) sensitization mechanism. They argue that the multiple neurobiological systems involved in PTSD become sensitized by stimuli at different rates (yielding arousal symptoms) and then, each system having reached its threshold for arousal tolerance, oscillate or cycle off (yielding avoidance symptoms).

Another explanation for numbing symptoms—and corresponding forgetting or dissociation from traumatic memory—may be related to the action of the dopaminergic (opiate) modulatory system as well as the noradrenergic (NE) modulatory system during memory encoding orchestrated by the amygdala and hippocampus (Abel et al., 1995; Petty, Kramer, Wu, & Davis, 1997). Petty et al. suggest that initial dopamine release at the traumatic event can lead to increased serotonin uptake and depletion. In animal studies, learned helplessness as a result of inescapable stress is correlated with serotonin depletion and alleviated by adequate amounts of norepinephrine in the hippocampus. The human correlate to learned helplessness articulated from the results of animal

studies (Peterson, Maier, & Seligman, 1993) may be numbing, an avoidance symptom, that tends to alternate with arousal symptoms and is correlated with alexithymia (see point 4) (Badura, 2003). Research findings by McGaugh et al. (1989) and Gallagher et al. (1985) (as cited in Abel et al.) suggest repression [dissociation (Tryon, 1993b)] might occur when naturally produced “opiates are released in response to the [traumatic] experience”¹⁸ and in turn “interfere with the memory storage process” (p. 318). Abel et al. suggest that perhaps flashbacks represent repressed (dissociated) memories “retrieved when their noradrenaline [NE] system is activated” (p. 319). Thus, forgetting and remembering (or re-experiencing) may be related to oscillating activations of the PNS and SNS dependent upon the presence of reminders of the traumatic event¹⁹.

2. People with PTSD show a marked preference for trauma-related stimuli (hypervigilance) over nontrauma-related stimuli.

Reminders of the traumatic event are especially significant for people with PTSD because they have a strong tendency to be more aware of trauma-related stimuli of all types (McNally, 1997; Paunovic, Lundh, & Ost, 2002; Sutker, Vasterling, Brailey, & Allain, 1995) and, when these stimuli are present, to pay less attention to other information that may mitigate the salience of trauma-related stimuli. Trauma memories, thus, may seem especially accurate, but may in fact not correspond faithfully with the other verifiable accounts of the event. What this point suggests is that seeing the “whole picture” at the time of the trauma or afterward in remembrance is especially difficult for survivors to accomplish on their

own. Furthermore, the convincing quality of trauma memories with their high levels of sensory data makes it difficult for survivors to imagine that they remember anything less than the whole truth of their experience (Conway & Pleydell-Pearce, 2000). Thus, being confronted or challenged with memory inaccuracies might be necessary to the psychological healing of trauma, but in the process may evoke embarrassment or shame in survivors for being mistaken about the veracity of their own accounting.

Moreover, the presence of trauma-related stimuli not only tends to arouse and perhaps hyperarouse the person, but they tend also to disrupt the person's ability to learn (and remember) non-traumatic material (McNally, 1997; Wolfe & Schlesinger, 1997). The presence of trauma-related stimuli with high emotional valence may contribute to people with PTSD thinking predominantly and automatically in binary, fight or flight, terms and their distractibility toward trauma-related stimuli can make learning a slow and frustratingly recursive process—and can negatively affect a student's confidence in her ability to learn.

3. *The tendency of the hippocampus to malfunction under extreme stress can lead to disorganized memory formation (encoding) without the inclusion of crucial information about the time and location of the event..*

Disruptions in learning also are correlated with effects of trauma on the hippocampus, cortical tissue deep within the temporal lobe and adjacent to limbic (emotion-related) brain structures. Early research involving veterans with combat experiences consistently suggested that

veterans with chronic or lifetime PTSD had reduced hippocampus volume compared with veterans without PTSD (McEwen & Magarinos, 1997; Pitman, 1997; Stein, Hanna, Koverola, Torchia, & McClarty, 1997).

Researchers are not quite sure of the significance of the size reduction—the atrophy seems correlated with but not necessarily caused by PTSD (Stein et al.); cognitive abilities do not seem irreversibly impaired by PTSD (McEwen & Magarinos); and the atrophy itself seems reversible (McEwen & Magarinos). They do agree, however, that the hippocampus under the influence of stress tends to malfunction (Armony & LeDoux, 1997), contributing particularly to disruptions in encoding the context of traumatic memory in time and space (Wolfe & Schlesinger, 1997). In addition, hippocampal failure to contribute vital contextual information in the formation of conscious memories of events results in the amygdala, which modulates the encoding of emotional valence with memories, being unable to evaluate whether the stressor stimuli is current or from the past (Armony & LeDoux; Grolier, Harvey, Steiner, & Yehuda, 1997; van der Kolk et al., 1997). Thus, if new sensory stimuli sufficiently resembling former traumatic stimuli²⁰, the new sensory stimuli are liable to be evaluated as a current threat and provoke inappropriate SNS arousal. Inappropriate SNS arousal may result in features of the current stimuli (now perceived as a threat) being remembered as having features it associates with fear and trauma. Thus, the resultant strong stimulus overgeneralization prompts increasingly

powerful, inappropriate fear responses that are increasingly resistant to extinction (becoming dissociated from fear) and habituation (Armony & LeDoux; Garrick et al., 1997; McEwen & Magarinos). In turn, hippocampal failure to encode memory context (chronology and location) with emotional valence and sensory data is believed to contribute significantly to establishing and maintaining core PTSD symptoms of re-experiencing and arousal (Armony & LeDoux; Morgan et al., 1997; Roozendaal et al., 1997).

4. *During trauma exposure or re-experience, language centers of the left brain (Broca's area and left frontal cortex) tend to shut down and the right brain (particularly limbic structures) tends to be more active.*

Reports of several MRI studies in which groups with and without PTSD read narrative scripts of their own or others' traumatic events (Gerhards, Yehuda, Shoham, & Hellhammer, 1997; Pitman, 1997; Rauch & Shin, 1997; Spiegel, 1997; van der Kolk et al., 1997) suggest that during trauma exposure for those with PTSD, a shift occurs in regional cerebral blood flow (rCBF) away from left brain, in particular showing decreases in Broca's area and the left frontal cortex, and toward greater activation of the right brain, in particular the right amygdala and right frontal pole. Broca's area is associated with language production and lesions in Broca's area can result in an aphasia "characterized by an expressive-language deficit" in which the language produced lacks syntactical integrity and sounds "hesitant and effortful" (Matlin, 2002, p. 296). Also of interest to this discussion, deactivations in the left frontal

cortex can result also in deactivation of the left frontal pole which is associated with euphoria, and a corresponding activation of the right brain, where emotional tone of a message or situation is interpreted, and the right frontal pole, which is associated with dysphoria, suggesting that people with PTSD can create memories for the event with few words but strong negative emotions. Thus not surprising is the Gerhards et al. argument that “in PTSD subjects the degree of abnormal functional asymmetry was particularly strongly associated with alexithymia” (p. 484)—the pathological inability to put feelings into words. Moreover, Rauch & Shin report on several studies demonstrating increased rCBF associated with feeling sadness and fear but not with feeling happiness or neutral emotions, and they suggest that memories associated with (negative) high emotional arousal tend to be better remembered. Correspondingly, other studies (Foa, Molnar, & Cashman, 1995) have shown consistently that early in psychotherapy, oral and written narrations created by patients with PTSD contained notably more filler words (oral), were more disorganized and fragmented, and had much lower emotional content. These findings suggest that traumatic exposure leads to memories—formed with sparse or fragmented verbal content and strongly fear-evoking sensory content—that are strongly resistant to verbal expression.

On the other hand, a study to replicate the work of Amir, Stafford, Freshman, & Foa (1998, as cited in Gray & Lombardo, 2001) and Foa et

al. (1995) by Gray & Lombardo achieved results entirely opposite the expectation that initial trauma narratives would be shorter, less descriptive, and contain less emotional content. Instead, their sample of college-enrolled participants with PTSD, who composed and submitted their trauma narratives almost²¹ anonymously, tended to write the longest, most fully developed narratives about their traumas—longer than trauma, unpleasant, or pleasant narratives written by participants without PTSD. Gray & Lombardo suggest that perhaps the early, fragmented nature of trauma memory communications Foa and her colleagues report stems not from the organization of the memory itself, but rather from the mode of communication. Perhaps, they argue, early fragmentation or poor articulation of the trauma narrative relates to the embarrassment of sharing intimate details in oral disclosures to an unfamiliar (and not proven safe) therapist and may indicate not so much a poorly formed memory, but “avoidance of a trauma or of its meaning to the victim” (p. S182).

The research of Shin et al. (1997), Gerlach et al. (2003), and Fearon & Mansell (2001) offer support for Gray & Lombardo’s argument. Shin et al. reported that after listening to audiotaped readings of autobiographical scripts of trauma, only fear, sadness, and disgust were elicited among control group members without PTSD, whereas feelings of fear, sadness, and disgust, plus feelings of anger and guilt, were elicited among participants with PTSD. Gerlach et al. report that feeling

embarrassment [shame] and anxiety, but not disgust, were highly correlated with SNS activation, particularly important in maintaining arousal symptoms of PTSD. These arousal symptoms, argue Fearon and Mansell, lead to:

idiosyncratic avoidance responses (or safety behaviors) which are specifically related to the appraisals [such as anger, guilt, and shame] that the individual makes of his or her reaction at the time of the event and the ongoing effects and symptoms of the trauma. A safety behavior is a behavioral or cognitive act that is carried out to attempt to prevent or ameliorate a perceived catastrophic outcome (citing Salkovskis, 1991). (p. 387)

In other words, the ability to dissociate at the time of a traumatic event to avoid immediate pain may result in further dissociations when re-experiencing memories of the event, dissociations which stem from the pain connected with an intolerable meaning constructed about the self as a consequence of the event, whether that meaning is logical and correct or not. These feelings and dissociations, then, can make it difficult to orally and/or publicly share the trauma narrative and risk being subject to additional shame, guilt, and anger.

Conclusions: What Neuroscience Suggests About First-Year Students

This neuroscientific information has assisted in uncovering the private worlds of a significant number²² of first-year composition students who have experienced trauma sufficient for them to develop PTSD—whether or not they sought or obtained the diagnosis. Because adolescents may be particularly vulnerable to trauma, even fresh-faced

eighteen year-olds may bring unspeakable losses with them to college, losses which may leave them with a more reactive startle response and a faster SNS arousal speed for the remainder of their lives. When faced with reminders of their trauma, the distressing arousal symptoms may instigate avoidance behaviors. However, those who have been traumatized are more attracted, consciously or not, to environmental stimuli with features resembling features of their traumatic events. This attentional bias for trauma-related stimuli also makes it difficult to attend to other features in the environment that can help them to distinguish current events from past, traumatic events—or that they may have to learn to achieve their literacy goals.

These attentional biases are made all the more distressing because the original trauma—and subsequent reminders—can sufficiently overwhelm neurological synapses and systems, resulting in malfunction of the hippocampus. Without hippocampus involvement in encoding a memory, information regarding when and where the distressing event occurred may be missing from the memory. Thus, reminders of the original event may not only receive more attention, they also may be experienced as having a “here-and-now” quality eliciting as strong—if not stronger—SNS mediated distress responses as the original event. Also overwhelmed in processing a traumatic event or its reminders are important language centers of the brain, suggesting the possibility of less conscious (less language) processing of the event and its meaning and

also suggesting greater negative emotion is associated with the memories that *are* encoded. Consequently, it is quite understandable that memories undercontextualized for mitigating factors and overladen with negative emotion may elicit shame when publicly recounted—or when encountering unanticipated adverse reactions when publicly recounted. Shame, especially if perceived as a threat, is liable to make a person who does not have PTSD defensive and to make a person with PTSD vulnerable to a renewal of PTSD re-experiencing and arousal symptoms, including dissociation.

Asking students to assume positions of such physiological and psychological vulnerability is not warranted in the first-year composition classroom.

Writing After Posttraumatic Stress Disorder

Because the classroom—whether in the university setting or a community setting such as the Center for Nonviolence—is a site where students with histories of trauma may be subjected to additional shame by well-intentioned but inadequately prepared co-learners (including the teacher), I cannot advocate memoir writing assignments for novice writers. As *Received and Subjective Knowers*, which trauma survivors as first-year writers often are, novice writers do not quite have the capacity to separate what they have written from who they are (Belenky et al., 1986). Having no or few experiences with college-level academic discourse, few first-year students can yet comprehend the implicit and explicit demands of academic writing, nor can they understand that the teachers, who care very much about them as individuals, have, as Lester Faigley points out (as cited in Payne, 2000), the institutional power and responsibility to grade student writing according to standards their trauma narrative may not yet meet. Therefore, while writing a compelling, well-developed, structurally and grammatically effective trauma narrative for a personal audience is daunting emotionally and cognitively, writing this same narrative for an academic audience presents a situation with the high probability for failure and public humiliation. These situations of failure and shame, in turn, appear to set up students unsure of their career goals or their abilities for decreased

performance and motivation as the class progresses—whether or not they began the class with high motivation and ability (Turner & Schallert, 2001). Composition teachers should not add to their first-year students' distress by assigning the generic memoir. Out of respect for the power of memoirs recounting trauma for the writer and for the unspoken courage trauma survivors demonstrate in risking exposure of their vulnerabilities, how and when students share their accounts of traumatic events should be at their informed discretion—and well after the students have learned to establish their own authority and voice in academic discourse.

For activist educators, this phrase “students’ establishment of authority and voice in academic discourse” can signal many arguments about personal writing that I am *not* making in this paper. I am *not* arguing that personal writing, especially the type suggested in the concept of “embodied writing” as articulated by Jane Hindman (2001), does not belong in academic writing. I am instead arguing that because the generic memoir makes the self a public object of scrutiny, poor social reception of the narratives can be understood as poor social reception of the narrators—and all the traumatic experiences affecting public presentation of those selves—within the academic institution. Students already concerned about their ability to succeed in college may read that poor reception as a sign of their own irremediable unfitness for college life. Objectifying the self turns the self into a commodity, and in an era in which commodities are more often replaced than remade, objectifying the

self suggests that some students are expendable, should be thrown out, or should remove themselves before they are removed.

Both Jenny Horsman (2000) and prominent compositionist Mike Rose (1985/1997) point to dangers of further alienating students from pursuing literacy learning goals, in college or other community programs, by correlating medical conditions such as PTSD or medical terminology with the learning problems demonstrated by students who have experienced trauma or less than adequate preparation for college. They argue that using medical terminology—such as “remedial”—hides the social conditions that gave rise to the trauma or underpreparedness, and suggests that inherent in the medical model is the notion that individuals who can be repaired or fixed, should be repaired or fixed *before* the public and personal investment of education begins. Such notions of people, medicine, and education are unacceptable to the activist educator and, as I have shown, are answered within the theoretical framework of enactionism. Enactionism suggests instead that individuals are subjects with agency operating within dynamic systems of other individuals and their communicative products: ideas and behaviors. Thus, the medical information about PTSD should be seen as integral to the social condition of students’ needs as they pursue literacy goals. Moreover, this medical information about PTSD should be seen as evidence, an object to be manipulated (e.g., by factoring it into the ideas

and behaviors of teachers of traumatized students), and not be confused with the totality of any student's subject position.

This extended argument against assigning the generic memoir in first-year composition, finally, begs the question of what type of writing *should* be assigned. Many activist teachers turn to Paulo Freire (1987), who believed students from all walks of life should be taught to read and write “in relation to the awakening of their consciousness” (p. 43). Such writing, according to Freire, is analytical, seeking to “clarify situations” of personal or group import, or seeking “action arising from that clarification” (p. 42). This focus on a situation or problem—an object, if you will—requires a student to develop her or his consciousness, not as a “knowledge container,” but as a “Subject,” an “I” who already knows, reads, and writes the world (Freire, 1987; 1991). His ideas about literacy learning assume students' agency in and authority about their worlds and assume that the exigency for literacy development grows out of a need for clarification or action within that world. It appears to me, then, that teachers asking for memoir writing have confused “matter for writing” (the self) with “writing that matters” (Sommers & Saltz, 2004, p. 139) (an exigency for writing elicited by personal need). Therefore, writing in first-year composition should evolve from student needs that they identify, a task that Freire argues, acknowledging the time commitment required, involves dialogue between co-learners (including the teacher) in a “critical matrix . . . linked by love, hope, and mutual trust” (1987, p.

45). Although the impulse of this argument is deeply respectful, students with histories of trauma, in particular the trauma of domestic abuse and violence, have had the links of love, hope, and trust shattered by institutions far more fundamental than the university, and they have every reason to be wary of trusting the stranger-teacher sitting among them. Learning how to trust (or predict the responses of) the institutional representatives who can facilitate or block access to achieving their literacy goals may appear to first-year students a greater need than to clarify a more abstract situation; said another way, learning how to navigate opportunities for failure may be the situation they want to clarify first.

Although claimed as the province of special student populations, such as the victims of domestic abuse about whom I write, Sommers and Saltz (2004) intimate in reporting about Harvard University first-year students, that this attitude of self-defensiveness, of feeling like a “displaced person, . . . the admissions committee’s *one* mistake” (p. 125), appears ubiquitous among first year students. From their four-years of data collected on cross-disciplinary undergraduate writing by one cohort of Harvard students, Sommers and Saltz argue that the first year of college and the writing that students do during the first year are crucial to students relinquishing their defensive stance. They argue further that these students help their own growth as writers by learning to see themselves not as “fixer-uppers” (my term) but rather as novice writers

(open to new experience) expressing themselves as experts (agents capable of reading complex texts and responding with ideas articulating a pattern they discerned)—in other words, by being novice writers “writing *into* expertise” (p. 134). In addition, these scholars suggest that faculty can do much to foster students’ growth as writers by

designing and orchestrating these [best writing] experiences, whether by creating interesting assignments, mentoring through feedback, or simply moving aside and giving students freedom to discover what matters to them. The paradigm shift [to seeing writing as a transaction, an exchange in which they can “get and give”] is more likely to occur when faculty treat freshmen as apprentice scholars, giving them real intellectual tasks that allow them to bring their interests into a course. (pp. 140, 139)

Though Sommers and Saltz offer no prescriptions about what such intellectually engaging assignments should be, the examples in their article all suggest that—whether or not the writers specifically advert to the self—students consistently chose courses and writing topics, as Freire might predict, related to their existential dilemmas. Over the course of their undergraduate programs, they used their writing to examine, critique, and grapple with high stake personal issues or situations from as many perspectives as possible. Thus, though their *selves* were not the objects of study *per se*, students were using their feelings, their embodied responses to issues (Hindman, 2001) as one means, one type of evidence, to interrogate and construct how they wanted to exist—in other words, they were writing deeply personal narratives.

Sommers and Saltz (2004) present a compelling argument for the importance of analytical—and synthetic—writing in all academic disciplines as a means for first year students to “write themselves into a small corner of academia, gradually learning to see themselves . . . as legitimate members of a college community” (p. 131). Moreover, they demonstrate how writing, which employs many strategic tools to hone a piece of communication, is not the tool itself, as Mike Rose (1985/1997) argues, but “an ability fundamental to academic inquiry, an ability whose development is not fixed but ongoing” (p. 544)—an ability that is learned through apprenticeship to experienced writers who will teach their students the rhetorical skills effective within their disciplines. Consequently, I argue that the study of rhetoric: discovering, interrogating, theorizing, and practicing rhetorical strategies through reading and writing, is the appropriate work of first-year composition classes. The study of rhetoric—the art of communication, as I read Freire, is the means by which to awaken critical consciousness in all first-year students, regardless of the homefront from which they hail.

Proposal: Literacy Program for Survivors of Abuse

Before closing this essay, I would like to return to the literacy needs and desires of the women who prompted my research. I have suggested that the women’s participation in the Center for Nonviolence support groups was in large part motivated by a desire to clarify the

situation of their abuse and to seek actions that would resolve the problem of abuse. But the recursive nature of learning to live without abuse and the weight of old habits anchoring women to victimization can make them feel more incompetent with each return to abusive ways, perhaps deepening their shame and making each new effort more difficult. The creative writing classes, though I have no scientific data to support my claim, seemed to make differences in the lives of the participants—perhaps because the classes not only offered them the pleasure of creation, but also because they offered opportunities for analyzing the creative writing of others. They enjoyed these opportunities, and as a consequence, the women seemed to see themselves as more capable, perhaps even more competent. Their abilities to make connections with texts through their own lived experiences seemed particularly important.

Furthermore, competence appears crucial to the development of critical consciousness. Returning to the reader response excerpt discussed earlier (p. 25 of this document), I see Ellen's need for Sullivan (2003) to recognize and respect her demonstrated competencies with employing the tone of social-science writing as motivating her to break the protective silence around personal details of her life. But she did more than only assert her competence with language: she offered a scathing and sophisticated critical analysis of both the assigned text and the memoir assignment she failed earlier in the semester. Ellen

demonstrates that she “gets the point” of both Percy’s article and Sullivan’s assignment. Then, she critiques Percy’s “privileged upper class perch high above the Grand Canyon” (and through implication, Sullivan’s elevated position as teacher) from which they appear neither to understand nor respect her position as a student. She argues for her right to learn and acquire the impersonal, but well worn, language of science, this language she desires *because* it is a beaten path that can privilege her with release from the multiple forms of domestic abuse she endured at home. Through this response, Ellen demonstrates how students come “to speak back to the world,” (Sommers & Saltz (2004, p. 129)—and reflects the critical consciousness Freire poses as both the means and end of literacy development.

Freire (1987) insists that literacy development must involve texts (and he argues radically that the whole world is a text) with “representations of typical existential situations of the group with which one is working” (p. 51). Nevertheless, if women at the Center for Nonviolence have learning difficulties associated with the physiological aftereffects of PTSD, then what kinds of texts and what kinds of writing might be appropriate for them to use in developing both their critical consciousness and literacy skills? Despite their perhaps less sophisticated written command of language than Ellen’s, the emotional energy with which she writes the reader response suggests that, rather than reading and writing her own life, reading the ideas and arguments

of others can motivate a personal connection sufficient to elicit the need to “speak back.” Working from the premise that these texts must in some way represent their lives, I suggest that, while many other kinds of writing might elicit emotional connection among the women at the Center for Nonviolence, the women might choose to read, might want to read fictional narratives involving situations of abuse and loss they find familiar. Again, noting how articulately Ellen identified and criticized the arguments made by the author and her teacher, I suggest that women at the Center for Nonviolence can respond with the same critical eye to texts as sites of cultural communication which, from the safety of talking about the choices and circumstances of fictional characters²³, they can interrogate and criticize situations of abuse. In other words, instead of their own lived choices and circumstances becoming focal points for understanding the dynamics of personal and institutional violence and abuse, their embodied experiences become evidence substantiating the arguments they make about the truths (or lack of truth) embedded in the context, plot, character development, and resolution of the novels they analyze. Their lived experiences, then, despite their shameful origins, can become something of value as well.

This proposal of classes in which students write in response to literature strongly resembles the program affiliated with the University of Massachusetts Dartmouth, *Changing Lives through Literature* (CLTL):

In the fall of 1991, Robert Waxler, Robert Kane, and Wayne St. Pierre, a New Bedford District Court probation officer

(PO), initiated the first program at the University of Massachusetts Dartmouth where Waxler is a professor in the English Department. Eight men were sentenced to probation instead of prison, with an important stipulation: they had to complete a Modern American Literature seminar run by Professor Waxler. The seminar was held on the university campus and included Judge Kane and PO St. Pierre. For 12 weeks, the men, many of whom had not graduated from high school and who had among them 148 convictions for crimes such as armed robbery and theft, met in a seminar room at the university. By discussing books, such as James Dickey's *Deliverance* and Jack London's *Sea Wolf*, the men began to investigate and explore aspects of themselves, to listen to their peers, to increase their ability to communicate ideas and feelings to men of authority who they thought would never listen to them, and to engage in dialogue in a democratic classroom where all ideas were valid. Instead of seeing their world from one angle, they began opening up to new perspectives and started realizing that they had choices in life. Thus, literature became a road to insight. In 1992, a women's program was added by combining the Lynn and Lowell District Courts . . . , and a graduation format was established in which probationers who had finished a set of CLTL sessions received praise and certificates of completion in front of a full courtroom. (<http://ctl.umassd.edu/home-flash.cfm>)

Everything about how the programs operate suggests a strong core commitment to demonstrating that the student-offenders are worthy participants in the pursuit of literacy development. The programs most often are located within university buildings and are sometimes also listed as college courses for which credit is received. Although the classes are located near the hub of campus activity, they also are held in the most luxurious campus setting possible, such as the chancellor's board room. What seems crucial about the program is the inclusion of several voices of traditional authority, a judge and probation officer as well as the teacher. Including these extra voices enables the student-offenders to

witness respectful differences of perspective among those traditionally imbued with authority as they negotiate including their own voices into the conversation in which all are welcomed as equals. Testimonial after testimonial on their website—from criminal offenders, judges, probation officers, and teachers—point directly to the development of additional perspectives and choices available to participants—and to the exploration, orally and in writing, of meanings they and the characters construct for the narrative events. Said another way, the goals of the program, as I understand them, are to read and critique the texts as sites of cultural communications. They are doing rhetorical analysis, and through their rhetorical analyses, their life choices are changing. Empirical studies of CLTL program outcomes suggest participating offenders demonstrate far lower recidivism rates (18.75%, and an almost complete avoidance of violent crime) than non-participating offenders with similar criminal histories (45%) (<http://cltl.umassd.edu/ProgramsFollow1c.cfm>). If, as an alternative to sentencing men and women to prison, doing rhetorical analysis can effect such changed behavior, surely doing rhetorical analysis could effect change in the lives of people who feel imprisoned by abuse and violence. The *Changing Lives through Literature* program, with an emphasis on writing responses as well as orally discussing them, is the literacy development program I would like to bring to clients of the Center for Nonviolence.

Using the novel-told-in-a-series-poems, *Out of the Dust*, by Karen Hesse as a sample text, I want to demonstrate how a CLTL literacy development class might take into consideration some of the physiological challenges PTSD poses for learning. Mitigating the chances of eliciting overwhelming arousal—and a corresponding dissociation—is one of the first concerns in working with students who have been traumatized. Arousal already will be high due to the novelty of the class and the possibility of embarrassment in front of other students and institutional figures. That arousal may dissipate as the focus on the texts, rather than on them, becomes more apparent. However, analyzing narratives including abuse and loss may seem to violate this principle of avoiding excessive arousal were it not for Greenberg, Wortman, and Stone's (1996) suggestion that writing about imaginary trauma provides less emotional arousal than writing about one's own trauma. Still, to minimize similarities between the women's own experiences and those encountered in the literature, I recommend choosing texts set in another time and place, such as the Oklahoma droughts of the 1930s' depression in *Out of the Dust*.

In addition to choosing a narrative setting removed from the students in time and place, choosing a main character, such as 13 year-old, farm-raised Billie Jo, removed in age and cultural situation from them—though not necessarily removed from their traumatic situation—should help students who dissociate easily stay instead with the

character and her narrative. Dissociation, a psychological fleeing from a scene evoking terror, suggests important points about learners in stressful situations. First, a student who dissociates may not have learned that, outside of the abusive relationship in which the dissociation started, she can say no and mean it. She may need to learn how to construct protective, less permeable boundaries around knowledge about her private life and learn how to discern whom she can trust with private information. While reading and responding to the rich, but exotic sensory detail in *Out of the Dust*—at least for an urban Indiana student—she can create clear distinctions between her own experiences and Billie Jo’s in both time and situation. Second, dissociation’s relationship to hyperarousal and therefore to shame suggests that a student who dissociates may need to learn how to empathize with the person she was when her traumatic event occurred. Because a woman who psychologically flees can look at the traumatic scene over her own shoulder, somewhat as Baxter and I did, dissecting our ability to see the world, she may have internalized even inadvertent shaming comments. In *Out of the Dust* there is so much silence surrounding the catastrophic events of crop failure after crop failure—and Billie Jo’s mother’s fiery death—that overheard whisperings are not only taken as blame but are exploded to unmanageable proportions. Students can be invited to interrogate not only the language and circumstances Billie Jo interprets as shaming, but these silences as well. They can investigate silences,

made all the more prominent and poignant by the imagistic poetic form, by asking, based on their emotional responses as adult readers, what other meanings for the whispers besides blame that Billie Jo could have missed. Then, while listening to her classmates' discussion, a student can also listen to her own, perhaps different emotional responses. She can learn how others construct those different responses, and perhaps if theirs are less harsh than hers, she can learn how to feel empathy for both the character and herself. On the other hand, if the classmates' responses are more harsh, she can question why they feel the way they do without taking their responses personally.

Because the hippocampus and language centers tend to malfunction under extreme stress and trauma memories tend to lack crucial contextual information, reminders of the trauma can have a frightening "here-and-now" quality, and students with traumas related to those in fictional narratives may find it harder to articulate what they know. Additionally, students may find their attentional biases for stimuli related to their own trauma distracting and, as a result, to move away from either-or interpretations. Therefore, teachers of students with PTSD should place a great deal of emphasis on collecting evidence, forming interpretations, and revising evaluations (i.e., analysis) based on that empirical evidence. The static nature of a novel—the immutable quality of the printed word—means the student can review pages of the text, look for clues, and distinguish between the now of their reading and the

then of a story. By suggesting that students additionally mine their own experiences for evidence that supports some of the claims they want to make about *Out of the Dust* and its truthfulness, teachers authorize seeing traumatic experience also as one form of valuable expertise the students can draw upon. Moreover, the poetic form of *Out of the Dust* may suggest to students that the imagistic, snapshot quality of their own memories might find a satisfying form in poetry. Writing their response in poetic form may enable them both to articulate the implicit knowledge they bring to the analysis and to do so in an aesthetically pleasing way, additionally reframing and validating personal experience and evidence they have long found painfully necessary to avoid.

Thus, reading, analyzing, and responding to literary texts that address topics and themes surrounding trauma or difficult life situations may stimulate sufficient arousal to engage both sides of the brain without shutting them down. Moreover, when students move knowledge of their own trauma out of implicit storage and into explicit accessibility as evidence to use in the service of analysis, they are freer to organize and reorganize what they know. They can manipulate their knowledge and fill in the blanks with externally available contextual information that might strengthen their abilities to construct delineations between what happened to them in the past and what is happening now. In addition, when they use their traumatic experiences as evidence rather than text, students begin to interrupt what is commonly known as

intuition, which I argue is more accurately thought of as the mind's natural tendency to complete patterns before gathering all significant information. Although intuition is very important in evaluating dangerous situations because it represents the brain's ability to process sensory data in a subconscious, faster way than possible with conscious articulation, an intuition not fully informed may incorrectly evaluate a situation and declare a relatively safe situation an emergency. Forming multiple frameworks or categories for identifying patterns among evidence collected will be a difficult process, but by completing this hard work, students can layer conscious explanations over intuition, increasing their resistance to fear and their beliefs in their own competencies—perhaps increasing their ability to live without abuse.

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Appendix A

DSM-III

Diagnostic criteria for Post-traumatic Stress Disorder

- A. Existence of a recognizable stressor that would evoke significant symptoms of distress in almost anyone.
- B. Re-experiencing of the trauma as evidenced by at least one of the following:
 - (1) Recurrent and intrusive recollections of the event
 - (2) Recurrent dreams of the event
 - (3) Sudden acting or feeling as if the traumatic event were re-occurring, because of an association with an environmental or ideational stimulus
- C. Numbing of responsiveness to or reduced involvement with the external world, beginning some time after the trauma, as shown by at least one of the following:
 - (1) Markedly diminished interest in one or more significant activities
 - (2) Feeling of detachment or estrangement from others
 - (3) Restricted affect
- D. At least two of the following symptoms that were not present before the trauma:
 - (1) Hyperalertness or exaggerated startle response
 - (2) Sleep disturbance
 - (3) Guilt about surviving when others have not, or about behavior required for survival
 - (4) Memory impairment or trouble concentrating
 - (5) Avoidance of activities that arouse recollection of the traumatic event
 - (6) Intensification of symptoms by exposure to events that symbolize or resemble the traumatic event

American Psychiatric Association. (1980). *Diagnostic and Statistical Manual of Mental Disorders*, (3rd ed.) Washington, DC: Author. p. 238

Appendix B

DSM-III-R

Diagnostic criteria for 309.89 Post-traumatic Stress Disorder

- A. The person has experienced an event that is outside the range of usual human experience and that would be markedly distressing to almost anyone, e.g., serious threat to one's life or physical integrity; serious threat or harm to one's children, spouse, or other close relatives and friends; sudden destruction of one's home or community; or seeing another person who has recently been, or is being, seriously injured or killed as a result of an accident or physical violence.
- B. The traumatic event is persistently reexperienced in at least one of the following ways:
- (1) recurrent and intrusive distressing recollections of the event (in young children, repetitive play in which themes or aspects of the trauma are expressed)
 - (2) recurrent distressing dreams of the event
 - (3) sudden acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative [flashback] episodes, even those that occur upon awakening or when intoxicated)
 - (4) intense psychological distress at exposure to events that symbolize or resemble an aspect of the traumatic event, including anniversaries of the trauma
- C. Persistent avoidance of stimuli associated with the trauma or numbing of responsiveness (not present before the trauma), as indicated by at least three of the following:
- (1) efforts to avoid thoughts or feelings associated with the trauma
 - (2) efforts to avoid activities or situations that arouse recollections of the trauma
 - (3) inability to recall an important aspect of the trauma (psychogenic amnesia)
 - (4) markedly diminished interest in significant activities (in young children, loss of recently acquired developmental skills such as toilet training or language skills)
 - (5) feeling of detachment or estrangement from others
 - (6) restricted range of affect, e.g., unable to have loving feelings

(7) sense of a foreshortened future, e.g., child does not expect to have a career, marriage, or children, or a long life

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by at least two of the following:

- (1) difficulty falling or staying asleep
- (2) irritability or outbursts of anger
- (3) difficulty concentrating
- (4) hypervigilance
- (5) exaggerated startle response
- (6) physiologic reactivity at exposure to events that symbolize or resemble an aspect of the traumatic event (e.g., a woman who was raped in an elevator breaks out in a sweat when entering any elevator)

E. Duration of the disturbance (symptoms in B, C, and D) of at least one month.

Specify delayed onset if the onset of symptoms was at least six month after the trauma.

American Psychiatric Association. (1987). *Diagnostic and Statistical Manual of Mental Disorders*, (3rd ed.-rev.) Washington, DC: Author. pp. 250-251

Appendix C

Complex Post-Traumatic Stress Disorder

1. A history of subjection to totalitarian control over a prolonged period (months to years). Examples include hostages, prisoners of war, concentration-camp survivors, and survivors of some religious cults. Examples also include those subjected to totalitarian systems in sexual and domestic life, including survivors of domestic battering, childhood physical or sexual abuse, and organized sexual exploitation.
2. Alterations in affect regulation, including
 - Persistent dysphoria
 - Chronic suicidal preoccupation
 - Self-injury
 - Explosive or extremely inhibited anger (may alternate)
 - Compulsive or extremely inhibited sexuality (may alternate)
3. Alterations in consciousness, including
 - Amnesia or hyperamnesia for traumatic events
 - Transient dissociative episodes
 - Depersonalization/derealization
 - Reliving experiences, either in the form of intrusive post-traumatic stress disorder symptoms or in the form of ruminative preoccupation
4. Alterations in self-perception, including
 - Sense of helplessness or paralysis of initiative
 - Shame, guilt, and self-blame
 - Sense of defilement or stigma
 - Sense of complete difference from others (may include sense of specialness, utter aloneness, belief no other person can understand, or nonhuman identity)
5. Alterations in perception of perpetrator, including
 - Preoccupation with relationship with perpetrator (includes preoccupation with revenge)
 - Unrealistic attribution of total power to perpetrator (Caution: victim's assessment of power realities may be more realistic than clinician's)
 - Idealization or paradoxical gratitude
 - Sense of special or supernatural relationship
 - Acceptance of belief system or rationalizations of perpetrator

6. Alterations in relations with others, including
 - Isolation and withdrawal
 - Disruption in intimate relationships
 - Repeated search for rescuer (may alternate with isolation and withdrawal)
 - Persistent distrust
 - Repeated failures of self-protection

7. Alterations in systems of meaning
 - Loss of sustaining faith
 - Sense of hopelessness and despair

Herman, J. L. (1997/1992). *Trauma and Recovery*. New York: Basic Books-Harper/Collins. p. 121

Appendix D

DSM-IV

Diagnostic criteria for 308.81 Posttraumatic Stress Disorder

- A. The person has been exposed to a traumatic event in which both the following were present:
- (1) The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
 - (2) The person's response involved fear, helplessness, or horror.
Note: In children, this may be expressed instead by disorganised or agitated behavior
- B. The traumatic event is persistently re-experienced in one (or more) of the following ways:
- (1) Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. **Note:** In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.
 - (2) Recurrent distressing dreams of the event. **Note:** In children, there may be frightening dreams without recognisable content.
 - (3) Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). **Note:** In young children, trauma-specific re-enactment may occur.
 - (4) Intense psychological distress at exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event
 - (5) Physiological reactivity on exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event
- C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
- (1) Efforts to avoid thoughts, feelings, or conversations associated with the trauma
 - (2) Efforts to avoid activities, places, or people that arouse recollections of the trauma
 - (3) Inability to recall an important aspect of the trauma

- (4) Markedly diminished interest or participation in significant activities
 - (5) Feeling of detachment or estrangement from others
 - (6) Restricted range of affect (e.g., unable to have loving feelings)
 - (7) Sense of foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)
- D. Persistent symptoms of increased arousal (not present before the trauma) as indicated by two (or more) of the following:
- (1) Difficulty falling or staying asleep
 - (2) Irritability or outbursts of anger
 - (3) Difficulty concentrating
 - (4) Hypervigilance
 - (5) Exaggerated startle response
- E. Duration of the disturbance (symptoms in criteria B, C, and D) is more than one month.
- F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than three months.

Chronic: if duration of symptoms is three months or more.

Specify if:

With delayed onset: if onset of symptoms is at least six months after the stressor.

American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders*, (4th ed.) Washington, DC: Author. pp. 427-428.

Note: There are no revisions of this criteria list in the DSM-IV-TR (2000).

Appendix E

DSM-IV

Diagnostic criteria for 308.3 Acute Stress Disorder

- A. The person has been exposed to a traumatic event in which both of the following were present:
 - (1) The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
 - (2) The person's response involved fear, helplessness, or horror
- B. Either while experiencing or after experiencing the distressing event, the individual has three (or more) of the following dissociative symptoms:
 - (1) A subjective sense of numbing, detachment, or absence of emotional responsiveness
 - (2) A reduction in awareness of his or her surroundings (e.g., "being in a daze")
 - (3) De-realisation
 - (4) Depersonalisation
 - (5) Dissociative amnesia (i.e., inability to recall an important aspect of the trauma)
- C. The traumatic event is persistently re-experienced in at least one of the following ways: recurrent images, thoughts, dreams, illusions, flashback episodes, or a sense of reliving the experience; or distress on exposure to reminders of the traumatic event.
- D. Marked avoidance of stimuli that arouse recollections of the trauma (e.g., thoughts, feelings, conversations, activities, places, people).
- E. Marked symptoms of anxiety or increased arousal (e.g., difficulty sleeping, irritability, poor concentration, hypervigilance, exaggerated startle response, motor restlessness).
- F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or impairs the individual's ability to pursue some necessary task, such as obtaining necessary assistance or

mobilising personal resources by telling family members about the traumatic experience.

- G. The disturbance lasts for a minimum of two days and a maximum of four weeks and occurs within four weeks of the traumatic event.
- H. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or general medical condition, is not better accounted for by Brief Psychotic Disorder, and is not merely an exacerbation of a preexisting Axis I or Axis II disorder.

American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders*, (4th ed.) Washington, DC: Author. pp. 431-432.

Note: There are no revisions of this criteria list in the DSM-IV-TR (2000).

Appendix F

Longitudinal Course of Posttraumatic Morbidity:
 Definition of Range of Outcomes and Their Prevalence
 Calculated According to GHQ Classification
 Case = GHQ > 1, ≤ 2 (N = 315)

Disorder Pattern	Case at 4 Months	Case at 11 Months	Case at 29 Months	% Frequency	N [315]
No disorder group	No	No	No	50.2	158
Acute group	Yes	No	No	9.2	29
Chronic groups				21.0	66
Persistent	Yes	Yes	Yes	10.2	32
Resolved chronic	Yes	Yes	No	5.7	18
Recurrent chronic	Yes	No	Yes	5.1	16
Delayed-onset groups				19.7	62
Persistent	No	Yes	Yes	3.2	10
11 month only	No	Yes	No	5.4	17
29 month only	No	No	Yes	11.1	35

McFarlane, Alexander C. (1988). The longitudinal course of posttraumatic morbidity: The range of outcomes and their predictors. *The Journal of Nervous and Mental Disease*, 176, (1), 32

Endnotes

¹ When I taught creative writing with both English-speaking and Spanish-speaking women at the Center for Nonviolence, I taught each class in the first language of the student-participants. Because English is my first language and my competency with Spanish is intermediate at best, I feel I have much more authority to make claims about my work with the English-speaking women than with the Spanish-speaking women. It is not my intent to make invisible the Spanish-speaking women's endeavors to develop their literacies in Spanish and English, but rather to respect the complexities of those endeavors that I cannot yet articulate.

² Freire cites Álvaro Vieira Pinto, *Consciencia e Realidade Nacional* (Rio de Janeiro, 1961).

³ I am not arguing that being a survivor requires leaving the abuser, only the abuse. Many in abusive relationships love their partners very much, want to live with them, and want to believe they have a chance to live without violence or abuse. More important and as I show later in the essay, abusive relationships rarely are divided into neat categories of abuser and victim, and those who leave abusive relationships without changing their behaviors and without developing and articulating awareness of how they participate in abusive behaviors may find themselves repeating abusive patterns in new relationships. If abusive behavior is learned (and the Center for Nonviolence argues that

it is learned), new, not abusive behaviors must be learned to live without abuse and violence—an enormously complex and evolving educational arena.

⁴ While I am very aware that perpetrators of domestic abuse and violence are both women and men, I argue with Gelles and Straus (1988) that the physical, economic, and socio-political advantages men as a group have over women as a group create more female victims of abuse and violence than male. However, because I believe there are few gender distinctions in the effects trauma—whether from domestic abuse, combat, manmade or natural disasters—on learning, I intend the results of my investigations to be seen as useful for both men and women.

⁵ In *Women's Ways of Knowing*, Belenky et al. articulate an epistemological taxonomy developed as an alternative to William Perry's and Carol Gilligan's models of human development. In contrast to William Perry (1970), who studied the epistemological development of the relatively homogeneous social class of undergraduate Harvard (primarily) men in the 1960s, Belenky et al. (1986) interviewed women from more heterogeneous backgrounds: cross-sections of social-class and ethnicity, and samplings of women who were either high school students, college students, recent college graduates, or women being supported in their parenting by human service agencies (p. 12). Whereas Perry focused upon epistemological development—creating a taxonomy of *basic*

dualism, multiplicity, relativism subordinate, and full relativism (Belenky et al., 1986, pp. 9-10), Gilligan in the 1970s studied how the moral development of women contrast with the ideas of moral development by Piaget (1965) and Kohlberg (1981, 1984), who attempted to articulate a gender neutral model of a “morality of rights.” Gilligan (1982) posed problems with the gender neutrality of a system created after studying mostly male participants; and in response, she argued women follow a developmental model of a “morality of responsibility and care” very different from a “morality of rights” (p. 8). In order to test the conclusions of Perry and Gilligan, Belenky et al. included in their interview structure questions and methods of interviewing from each of the Perry and Gilligan studies.

⁶ Despite my use of the phrase “the brain,” enactionist theory—as well as scientists who study brains’ activities—do not refer to the human brain as entirely singular or predictable in nature. Nonetheless, scientists investigate the outer parameters of the brain as a human organ, parameters that social scientists believe can help in predicting human behavior in response to certain constellations of stimuli.

⁷ Enactionism extends the linguistic theory of connectionism, specifically the “bi-directional associative memory (BAM) model” (p. 374), which according to Warren Tryon (1998) fulfills all the explanatory requirements established in 1990 by Jones and Barlow and Brewin et al.

(1996) for the biological mechanisms of posttraumatic stress disorder. The BAM model of connectionism, as explained by Tryon, proposes an associative model for memory formation in which stimuli are associated with responses, other stimuli, and responses with other responses thereby forming “memories of associations by modifying connection weights that are analogs of synaptic connections between pairs of simulated neurons” (p. 375). Two properties of this model of connectionism important to the discussion of enactionism and PTSD, are that a) memories are stored across the whole network, across all synapses, and “nondestructively on top of” and connected to each other, and b) “each member of an associate pair is sufficient stimulus to recall its partner,” even to the extent that a “complete memory can be returned given a partial stimulus” (also known as the “pattern completion property”) (p. 375). In other words, connectionism proposes a network theory of memory formation in which patterns of synaptic or neural connections that recur repeatedly are reinforced or ‘remembered,’ whereas patterns of connections that do not recur are not reinforced or ‘not remembered.’

⁸ Interestingly, Freud also posited that most of what humans know was implicit knowledge, but his theories provided no biological mechanism for that implicit knowledge that could be investigated empirically. Enactionism and parallel-distributed processing theories of

memory, such as connectionism, suggest biological mechanisms for implicit knowledge and they are being investigated empirically today.

⁹ By the phrase “sense-carrying,” I here intend to correlate directly for the reader of this paper the common linguistic notions of the cognitive “making sense” or “to sense” with the biological sensory data collected by our sensory organs.

¹⁰ Drawing upon the experiences of health care practitioners for the traumatized, Herman (1997) proposed a diagnostic category of Complex Post-Traumatic Stress Disorder (see Appendix C) as separate from “simple post-traumatic stress disorder” (p. 120), a distinction not found in the DSM-III or DSM-III-R, nor incorporated in either the DSM-IV or the DSM-IV-TR.

¹¹ Although my interest this paper topic stems from domestic abuse I experienced in my first marriage, I am choosing to discuss posttraumatic stress disorder through documented incidents unrelated to domestic abuse for two reasons, both related to the arguments I make in this paper. First of all, as the account of the car accident demonstrates, personal memory, by itself, is colored by the judgments made at the time it is laid down and when re-examined. The burden of “proof” lies with the narrator, and without corroborating evidence or a preponderance of personal narratives indicating similar patterns of evidence, a reader has no reason to believe a writer. Memories of domestic abuse I experienced can be corroborated only partially, whereas

the contents of my memories of the car accident and of Baxter's memories surrounding being fired can be corroborated fully by outside sources (eye-witnesses, police reports, diary entries, correspondence, work records, interviews with co-workers, severance agreements), rendering them, I hope, more credible examples. In addition, accounts historically attributed the fault of the victim (e.g., cases of unreported rape or psychological abuse) are often rated as having low credibility and are more likely to be dismissed or relegated to the emotional impasse of "he said—she said." Car accidents not involving substance abuse are not generally considered the fault of the victim. On the other hand, being fired from a job is usually considered the employee's fault—unless the employee can demonstrate a history of documented evaluations of doing excellent work in addition to a pattern of discrimination by a specific supervisor. Although restoration of an employee's good reputation is made extremely complex in states where non-union employees are retained "at-will," potential employers can override the reservations they associate with the dismissal if provided sufficiently documented third-party evidence of an excellent work history. My second reason for not including more than brief references to my own history of domestic abuse stems from my argument in this paper that writing about one's own trauma can be in itself traumatic and shame-evoking, and the ensuing physiological responses can result in further traumatization rather than

healing. By not writing about my own experiences, I claim the right to privacy and the right not to re-experience the trauma of my own history.

¹² Within a week of the initial accident, I had another “fender-bumper” (no damage to either car) to the rear of my car in a parking garage. This seemingly inconsequential accident may have reinforced the hypervigilance I was experiencing and added to the length of time required for me to react to perceived threats at a more normal level.

¹³ “Merriam Baxter” is a pseudonym adopted to protect the privacy of my friend and her family.

¹⁴ According to Merriam Webster’s *Third International Dictionary*, a person who exhibits no regret or is “insensible to disgrace” is behaving in a “shameless” or “brazen” manner, implying disrespect and hardness unsuitable to the occasion.

¹⁵ Baxter consulted a lawyer about her termination rights because she judged that the firing was related not to any incompetence of hers but rather was related a) to her superior’s desire to cut departmental costs before the company’s sale was completed and b) to a pattern and practice of selective discharge based on age and sex. She provided her attorney with a record of her supervisors’ comments made about her:

I asked Male Director why you didn’t have this job, Merriam, and he told me that you were a Cadillac performer in a Studebaker body. And you know he drives a Cadillac. He [Male Director] said he just could not picture you sitting at his senior staff meetings.

Baxter also had documented other incidences. In follow-up conversations to interviews for a position they were filling, her supervisor voiced rejection of candidates based solely on their ages. During the company's pre-sale negotiations, he asked her questions about the expense of her early retirement to the company. She reported to me how, when she complained about the repetition of these and similar comments to a female vice-president of Human Resources—the very person who was to investigate such complaints—her complaints were minimized and denied by the response: “Well, Male Director is a very visual person.” These comments, considered with evidence provided by other complainants from the same company represented by Baxter's attorney, suggested a pattern of discrimination in favor of female executives who were young and beautiful as portrayed by advertising-models and constituted, according to Baxter's attorney, sufficient grounds for filing suit against the corporation. However, Baxter chose not to pursue the uncertain outcome of the suit, which was her opportunity to clear her professional reputation, because she judged that her family needed the surety of her severance package more.

¹⁶ By public, I refer to any social situation involving more than one person. Thus, shaming even within the relatively private domestic sphere is “public.”

17 Rather than connoting something undesirable, the phrase “negative feedback” in physiology is intended to suggest reversal of direction in a process. This reciprocating relationship involves small adjustments to maintain a steady course. Like a tightrope walker’s hold on the bar, a negative feedback cycle steadies a normal process by applying check-and-balance reactions to achieve balance or homeostasis. A system with negative feedback as a standard feature acts to maintain or produce neither too much nor too little of the necessary ingredients for health. For example, to reduce body temperature, the body perspires. Perspiring dehydrates the body, so the body sends a signal of thirst. Drinking satisfies the thirst and the dehydration and may cool the body as well. As can be seen in the analogy of the tightrope walker, a negative feedback cycle is never static but rather always in motion—though certainly with less purpose than the high wire performer’s. On the other hand, the phrase “positive feedback” does not connote, most often, a desired outcome, but rather a normal process unchecked and usually not reversible without externally applied measures. (One desired positive feedback cycle is the expulsion of a baby from the uterus.) Let us return to the example of high body temperature. While a fever is a natural response to infection, a fever that raises body temperature above that body’s tolerance threshold can cause a seizure; therefore, an adult will intervene before the critical temperature is reached by either taking

aspirin or a cool bath, or even seeking medical help. If the person with a fever is unable to care for herself (e.g., is very young or very old), a caretaker must intervene when the fever is rising to the critical temperature. Unless someone attends to the fevered body's need, a positive feedback cycle will ensue until either the fever breaks or the patient is severely damaged or dies. Likewise, a patient with uncompensated shock, shock that has shifted from a negative feedback cycle to a positive feedback cycle—including emotional shock—can result in a person's death without appropriate external care just as a tightrope walker who has adjusted too far can fall to her death—unless a net is in place.

18 The interactions of these important neurotransmitter systems intricately associated with mechanisms for both PTSD (and perhaps unresolved loss) and substance abuse or addiction (Antelman et al., 1997; Cramer, 2002; Resnick, Yehuda, & Acierno, 1997) suggest a strong need for more investigation into connections between adolescent unresolved loss and substance abuse among traditional age college students, a pursuit clearly outside of the scope of this essay.

19 Also outside the scope of this essay but a problem associated with the oscillation between hyperarousal, re-experiencing, and avoidance symptoms is Pynoos, et al.'s (1997) strong correlation between PTSD symptoms in children and the development of attention deficit

disorder symptoms (see also Teicher, Ito, Glod, Andersen, Dumont, & Ackerman, 1997). Furthermore, situational reminders, sometimes as innocuously seeming as a crack in the wall, in the learning environment of the traumatic event have been linked in Pynoos et al. animal studies with “catastrophic cohort aggression,” suggesting that there may be a relationship between situational reminders and cohort “irritability, hostile aggression, and propensity to retaliatory violence” (p. 189). These arguments suggest that children and adolescents with PTSD may experience reminders in the school setting that strengthen PTSD symptoms in association with schooling. Away from situational reminders of both the trauma and schooling, PTSD symptoms may fade only to be re-evoked when they return to school as adults. In a similar fashion, if students who developed PTSD as adults encounter traumatic event reminders in their school locations, they may find themselves unexpectedly re-experiencing trauma memories and hyperarousal that will in turn affect the speed and effectiveness of their efforts to learn.

²⁰ Connectionism, which argues that a particularly robust property of mind is pattern completion, appears to suggest that the resemblance of nontraumatic to traumatic stimuli needs to share very few features to elicit a preliminary judgment of a pattern match (Tryon, 1993a, 1993b, 1995, 1998, 1999).

²¹ When Gray & Lombardo (2001) screened participants, their packets were identified only by code numbers. On a detachable sheet at

the end of the packet, were the code and a permission slip obtaining contact information if they expressed willingness to participate in a future study (of the writing protocol). Participants “wrote alone in a room and were give strong assurances of confidentiality” (p. S182), being told their written trauma descriptions “would remain sealed [in an envelope] until all participants had completed the study” (p. S177). The researchers do not say what identifying codes were placed on the envelope or with the narrative, if any.

²² Yehuda’s (2002) conservative report of estimated PTSD prevalence rates of “5 to 6% of [all] men and 10 to 14% of [all] women” (p. 109) suggest that as many as one man and two or three women in a class of 20 to 22 composition students may have PTSD. These numbers do not take into consideration higher concentrations of PTSD that may be present among urban populations or populations that have experienced a local natural disaster. Nor does this number capture the range and severity of trauma undergraduate students report having experienced in order to qualify for many of the psychological experiments studying, not only PTSD, but rather the effect of writing about trauma on the physical health of experimental populations who were either deeply distressed or met the diagnostic criteria for PTSD. In an early Pennebaker, Kiecolt-Glaser, & Glaser (1988) study, undergraduate students who were asked to write about “the most traumatic experience of your entire life” wrote about events such as coming to college, conflicts

associated with members of the opposite sex, parental problems, death of a significant other, injury or illness including eating disorders and substance abuse, sexual abuse by a family member or stranger, thoughts of suicide, and public humiliation. In a later Pennebaker study, participants “who tended to come from upper-middle class backgrounds . . . [reported] “rape, family violence, suicide attempts, drug problems and other horrors” (Pennebaker & Seagal, 1999, p. 1245). In the Sloan and Marx (2004) study of 49 undergraduate women with PTSD taking “an introductory psychology course at a large, urban university” (Recruitment and Retention section, ¶ 1), experimental and control participants with an average age of 18.9 years reported experiencing traumatic events (many reported 2-5 events) such as motor vehicle accidents, fires, or explosions; natural disaster, nonsexual assault by a family member, acquaintance, or stranger; sexual assault by a family member, acquaintance, or stranger; child sexual abuse; incarceration; and terminal illness (Participants section, ¶ 1, Table 1). These few reports offer only a glimpse into the depth of trauma with which students can enter the composition classroom.

²³ Many researchers have challenged the claims by Pennebaker and his associates that writing about previously undisclosed trauma affords participants physiological benefits from writing about the events (Pennebaker & Seagal, 1999). Greenberg, Wortman, and Stone’s (1996) experimental investigation of the Pennebaker Paradigm assigned a

different writing assignment to participants than any other experimental researchers had. They assigned female college student participants with trauma histories to one of three groups: one was to write about emotions and beliefs about their own real traumas, another was to write about their emotional reactions to and beliefs about imaginary traumas that they had not experienced, and the third group was to write about trivial topics of no emotional significance. Both groups of trauma-writing participants were judged (on the basis of content and fluency) to be equally engaged in the writing process, and both groups experienced the expected heightened arousal during and shortly after writing. The real trauma group, however, reported higher levels of being depressed. Greenberg et al.'s report interests me particularly for the claim that writing about a never experienced imaginary trauma resulted in the same physical health benefits as writing about one's own trauma. Furthermore, writing about one's own trauma—which tended to contain more sensory detail—led to more apparent avoidance behaviors, whereas writing about “imaginary trauma”—which tended to contain more cognitive, appraisal-type comments—led to no change in psychologically-based feelings or behaviors. In other words, the physiological improvements reported by researchers investigating Pennebaker's Paradigm may be obtained just as effectively when not writing about one's own trauma—and the emotional toll after writing may be less problematic for the writer.

