THE EFFECTS OF FREEWRITING ON THE QUALITY AND CHARACTERISTICS OF SHORT ESSAYS

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by
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ABSTRACT

Writing is a complex task that requires the successful management of cognitive resources. Freewriting is a technique, popularized in the 1960's and 70's, where the writer writes for a set period of time without stopping; only after the time is up does the writer return to revise. The technique has been used widely, and is thought to improve writing, perhaps by reducing cognitive overload. However, few well-controlled studies have been conducted to investigate its efficacy and the consequences of its use. In the experiment carried out here, the effects of freewriting on the writing of short, expository essays was examined. Based on review of the literature, it was expected that the use of freewriting would result in essays rated higher in quality than essays written in a control condition (where no specific writing instructions were offered) and also higher that essays written using another writing strategy, the "polished draft" strategy, in which the writer attempts to write as well as possible from the start. The characteristics and quality of essays composed using freewriting were compared to that of essays composed in a control condition and to essays written using the polished draft strategy. Results suggested that excepting students receiving the very lowest course grades, freewriting had an unfavorable effect that increased with course grade; thus, students with average and above-average course grades saw a decrease in essay quality with the use of freewriting. The use of freewriting was also found to produce essays that were longer, used more present tense (as compared to past and future), and contained a smaller proportion of large words.

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CHAPTER 1

INTRODUCTION

Effective writing skills are essential for academic achievement and important for professional success in a wide variety of fields. Despite the importance of writing well, the National Assessment of Educational Progress reports that only 24% of American twelfth-graders and 33% of eighth-graders write at a proficient level (NAEP, 2007). Given the present poor state of writing performance across the U.S., research into strategies to improve writing is crucial. Yet the past two decades have seen a decline in the support for replicable, aggregable, data-supported research on writing (Haswell, 2005).

Freewriting

The present study investigates freewriting, a drafting technique used to improve writing (Elbow, 1973, 2000, 2004, 2010). This technique, sometimes called "stream-of-consciousness" writing, became prevalent in the late 1960s and early 1970s (Fox & Suhor, 1986), and was popularized by Elbow (1973) in his influential book, *Writing Without Teachers*. In a 2004 keynote address to teachers at the Bard Workshop on Thinking and Writing, Elbow commented on the current sentiment about freewriting: "Now, no one seems scared of freewriting. I see no opposition to it even from conservative voices. Virtually every writing textbook describes freewriting as a useful activity. Freewriting is domesticated."

Many claims have been made about freewriting: freewriting helps writers develop confidence (Romano, 2004; Southwell, 1977) and overcome fear (Raymer, 2010); it taps

into unconscious sources of ideas, images, and language (Hoy, 2005; Mullin, 1991); it takes the writer out of an "adapted child ego state" and allows them to write for themselves instead of for a teacher (Putz, 1975); it removes anxiety and inhibition (DeMarco-Barrett, 2005; Elbow, 1973); it increases quality by increasing writing fluency (Romano, 2004); it "sparks creativity" (DeMarco-Barrett, 2005); it promotes "flow" (Akers, 2002; see Csikszentmihalyi, 1997); it "de-automatizes" the writer (Kinney, 1979). Writers have used freewriting for "thought clarification" and "emotional release" (Mullin, 1991).

When freewriting, a writer writes continuously for a pre-set period of time, without paying critical attention to the text produced; the goal is to write without regard to spelling, grammar, or content (Elbow, 1973). The crux of the strategy is described thus: "The main thing about freewriting is that it is nonediting. … [I]t undoes the ingrained habit of editing at the same time you are trying to produce" (Elbow, 1973). Only after the freewriting session is complete does the writer return to the text to edit and revise. In the present study, 79% of participants reported having used the technique. Despite its widespread acceptance (its "domestication"), however, few well-controlled empirical studies have been conducted to investigate the effects of the strategy's use on the writing produced.

As discussed in a meta-analysis of composition research (Hillock, 1986), studies conducted on freewriting have suffered from several methodological flaws. In some studies, the use of freewriting was confounded with other variables, such as teaching approach (Baden, 1974; Delaney, 1980, as cited by Hillocks, 1986; Fox, 1980; Norwood,

1974, as cited by Hillocks, 1986; Walker, 1974, as cited by Hillocks, 1986); and use of peer feedback (Davis, 1979; Gauntlett, 1978, as cited by Hillocks, 1986). In these studies, freewriting was typically one component of a larger experimental manipulation examining teaching. For instance, freewriting was used as part of an investigation comparing an experience-centered teaching approach to a knowledge-centered approach (Norwood, 1974; Walker, 1974, as cited by Hillocks, 1986), or comparing a teacher-centered approach to a student-centered one (Delaney, 1980, as cited by Hillocks, 1986). In one study, freewriting was a component of a treatment that also included using multi-media to stimulate writing; reading aloud to peers; peer feedback; and even changes in the physical environment (furniture) (Gauntlett, 1978, as cited by Hillocks, 1986). Davis (1979) used freewriting as part of an investigation of the efficacy of "traditional" teaching as compared to "workshop" teaching.

Other studies did not employ appropriate writing control groups (Cummings, 1981 as cited by Hillock, 1986; Hilgers, 1980; McKinney, 1976; Mullin, 1991). For example, Hilgers (1980) showed that freewriting increased writing proficiency when compared to the use of a non-writing problem-solving technique. Although those studies are informative, without control groups also doing some kind of writing, the most that can be concluded from the results is that, to improve writing, doing some kind of writing is better than engaging in other activities not involving writing. One informal study of freewriting in 22 freshmen suggested that freewriting kept writers from stopping for various reasons, and that the continuation of writing led to the generation of more ideas (Mullin, 1991). This is a revealing finding, but because there were no control groups, it

is conceivable that instructing students to write for ten minutes with no mention of freewriting would have had the same effect. The study also found support for the role of freewriting in "helping [one] write without thinking about writing" in the disproportionately high number of content-related self-reported notes about thinking process as compared to the number of writing-related notes. Again, there was no comparison group, leaving open the possibility that the same effects might be produced by using other kinds of writing instruction. Also, as the study was not intended to be a formal investigation, the judging of the notes as either content- or writing-oriented was done solely by the author, without verification by a second judge. The use of control groups and multiple raters with measures of inter-rater reliability would have strengthened the conclusions that could be drawn about the freewriting technique specifically.

There is also a definitional problem when looking at studies of freewriting. In some studies, "freewriting" is not the writing-without-stopping, stream-of-consciousness technique as developed by Elbow (2004), but, rather, is simply expressive writing (Dreussi, 1976; Klingman, 1985).

One study, that investigated freewriting specifically and had an appropriate control group, found no effects of daily freewriting on the quality of compositions or on writing anxiety in college students, although teachers *perceived* better performance and improved attitudes in students who participated in the freewriting condition (Cheshire, 1991).

Smagorinsky and Smith (1992), citing the failure of researchers to describe the nature of the writing done in control groups; the lack of pretests; and the fact that the bulk of the studies were not published in peer-reviewed journals, concluded that research on the effectiveness of freewriting was inconclusive. The present study aims to fill that gap in the literature, by examining the effectiveness of freewriting under conditions controlling for confounding variables and focusing the investigation on freewriting specifically, rather than writing practice in general, or freewriting as part of a larger teaching-approach treatment.

Theories of the Writing Process

There will also be an attempt in the present investigation to consider freewriting in the context of the current psychological theories on the writing process. The available theory can be divided into two main approaches. The first approach (the "problem solving model") conceives of the writing process as a top-down, problem-solving process, that transforms ideas into visible text; on this view, writing is at heart no different from other kinds of problem-solving (e.g., solution of laboratory problems, such as the 9-Dot problem; solution of formal problems, such as math or physics problems; or scientific discovery), and effective problem-solving strategies are a critical feature of writing expertise (Bereiter, Burtis, & Scardamalia, 1988; Bereiter & Scardamalia, 1987; Flower & Hayes, 1977, 1981; Hayes, 1996, 2006). This view focuses on explicit thinking processes underlying writing. Taking this view, freewriting may work by affecting

components that together comprise the problem-solving process—components such as the individual or the task environment.

Another—not necessarily opposing—way to think about writing is as a distinct activity involving cognitive and linguistic processes specific to text production (the "text production model"). This view focuses on implicit processes outside conscious control (Galbraith & Torrance, 1999; Torrance & Jeffery, 1999) and stresses the role of resource use and capacity limitations in determining structure and content of the text produced (Torrance & Jeffery, 1999). On this view, general problem solving strategies are not the crucial considerations in the online production of text; instead, the adoption of strategies to reduce overload of attentional, working memory, and processing resources may be an essential component of writing expertise (Kellogg, 1988; Torrance & Jeffery, 1999). Taking this view, freewriting may work by reducing cognitive load, thereby allowing implicit processes to work at their best.

Freewriting in the Problem-Solving Model

The predominant problem-solving model takes a big picture approach, conceptualizing the writing process as having two main components: the *task environment* and the *individual* (Hayes, 1996, 2006). These two main components can be further broken down into subcomponents. The task environment is made up of (a) the *physical environment,* which includes the text the writer has written so far, and a writing medium such as a computer, and (b) the *social environment,* which includes the audience, collaborators, and other texts that the writer may read while writing. The social environment encompasses all social factors that contribute to the writing process,

including the larger culture of expectations and assumptions as well as the writer's immediate social environment. What and how we write, as well as whom we write to, is influenced by culture and social convention.

The *individual* component of the problem-solving model encompasses many different aspects of the individual, each of which influences the writing process: motivation and affect, working memory, long-term memory, and cognitive processes underlying the activity of writing (such as text interpretation, reflection, and text production) (Hayes, 1996, 2006). The cognitive processes of writing include several sub-processes: *text interpretation*, *reflection*, and *text production. Text interpretation* is analogous to the *reading* sub-process in the text-production model: it is a process whereby external text (on a page or screen) is processed to form mental representations. This process is used during the editing of produced text. The cognitive processes involved in text interpretation include reading and scanning text. *Reflection* is a set of processes that together generate mental representations from other mental representations; planning is included in these processes. The cognitive processes that are involved in reflection include problem solving, decision making, and making inferences. *Text production* is a function that produces linguistic output from non-linguistic mental representations, and includes the process of translation; these processes seem to be speech and language processes.

In the problem-solving model, the sub-processes (reading, scanning text, problem solving, decision making, making inferences, and the processes involved in text production) are not unique to writing, but are general processes that are also employed in

other activities, such as reading novels, understanding maps, solving mystery stories, solving arithmetic puzzles, carrying on conversations, and drawing (Hayes, 1996, 2006). Specifically, the problem-solving model hypothesizes that the cognitive processes underlying text interpretation overlap with the cognitive processes involved in comprehending maps; the cognitive processes underlying reflection are processes that also underlie solving math problems; and the cognitive processes involved with text production are also those involved in drawing and everyday speech.

In the context of the problem-solving model, freewriting may work by changing the task environment, or by changing the individual component. For example, freewriting may affect the writing process at the level of the individual, by influencing the individual's affect. A hypothesis that has been put forward is that freewriting may play a role in mitigating negative emotions experienced during writing (DeMarco-Barrett, 2005; Elbow, 1973). The present experiment indirectly tests this hypothesis by examining the emotional content of the text produced as a proxy for writers' emotional states. If the emotional content of the text differs between conditions, that may hint at a change in emotional state due to freewriting.

Freewriting may also influence the *physical environment*, which includes the text the writer has produced so far. During composition, writers typically reread what they wrote, and what they write next is influenced by what is currently on the page (Kaufer, Hayes, and Flower, 1986). While freewriting, however, writers are unlikely to be able to reread what they've just written (more than a few words back) because their attentional resources are presumably devoted to generating text non-stop. Thus, freewriting may

change the physical environment by (in a sense) eliminating a part of it; or, perhaps more accurately, freewriting may modify the *use* of the physical environment by focusing the writer's attention on the empty space rather than the text previously produced.

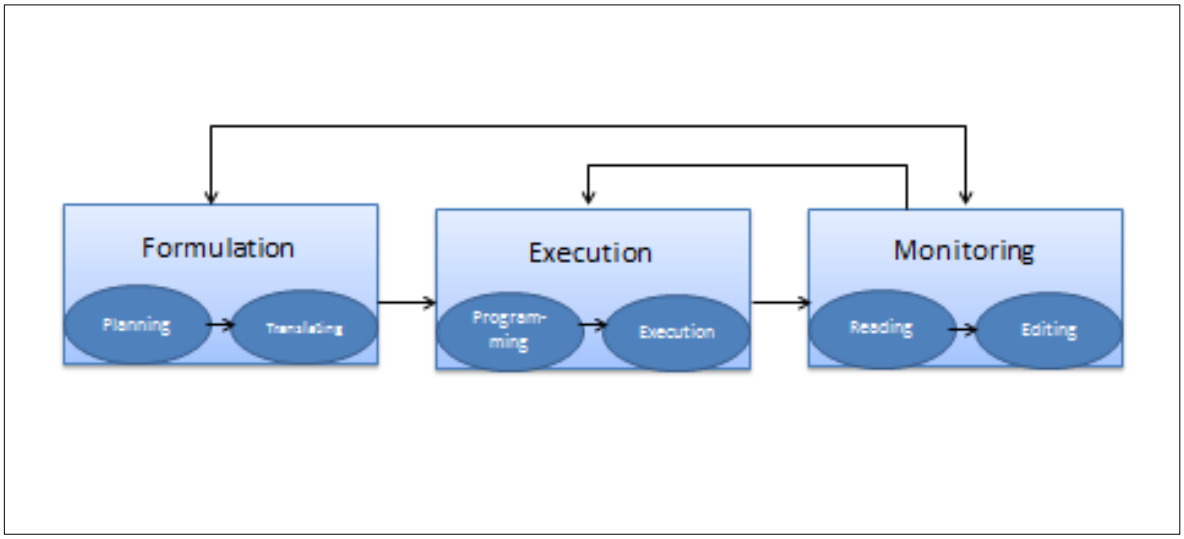
Freewriting in the Text Production Model

The text-production model can be situated within the framework of the problem-solving model. The text production model focuses on the cognitive processes involved in writing. The dominant text-production model, that of Kellogg (1996, 1999), carves out three main systems of text production: the *formulation* of ideas and their linguistic expression; the *execution* of motor processes to write or type; and the *monitoring* of the previous two production systems. Figure 1 is a diagram of the model.

Each of those three systems (formulation, execution, and monitoring) is in turn comprised of two sub-processes. These subprocesses have parallels in Hayes's problem-solving model. (Hayes's text interpretation process is Kellogg's "reading" subprocess (discussed below); Hayes's reflection process is akin to Kellogg's "planning" subprocess; and the text production process is analogous to Kellogg's "translating" subprocess.) Formulation involves *planning* ideas and *translating* those ideas into sentences. The translation process encompasses all linguistic processes involved in converting thought content into language. Execution involves *programming* motor output and *executing* muscle movements.

Finally, the monitoring system "oversees" the formulation and execution systems by taking the output from each of the systems and scanning it for errors. Figure 1 shows the components of the model.

Figure 1. Text Production Model (Kellogg, 1996). Arrows represent flow of information.



Thus, the monitoring system can intervene either immediately after the formulation stage (right after sentences are formed but before motor plans are executed to put those sentences on the page) or after the execution stage (after sentences have been converted to text on the page). The monitoring system is comprised of the sub-processes of *reading* already-generated text and *editing*. Editing refers to the process of detecting errors in the already-generated text; it also refers to the process of detecting errors in sentences that have been formulated and are about to be converted into text by the execution function. Errors can be low-level mistakes such as incorrect spelling, or higher-level issues such as word choice or problems with narrative structure. The editing process does not correct the errors; it merely detects them and signals the need for correction. Errors are flagged at the level of internal language (sentences formed implicitly that have yet to be put on paper) as well as at the level of external language (sentences formed on the page). The reading process aids the editing process at the latter,

external stage, by processing text that has appeared on the page. (Presumably the reading process is not necessary for "reading" internal thoughts.) Once errors have been detected by the editing process, that process then signals the other two systems (formulation and execution) to correct the errors. (It is as yet unclear precisely how the "detection" and "signaling" are accomplished.) The editing process activates the other two systems, and those two systems then correct the error. So the processes that form ideas, generate language, and plan and execute motor movements are the very same processes that change the language and the text produced when commanded to do so by the editing process (Kellogg, 1996, 1999).

Each of the six sub-processes recruits different kinds of working memory (WM) (Baddeley, 2007), and successful composing of text results from the appropriate management of limited WM resources. Figure 2 presents Kellogg's model of working memory in writing. Kellogg proposes that *planning* involves spatial WM and the central executive, but not verbal WM. *Translating*—the process of converting ideas into words—involves verbal WM , and also the central executive, which is invoked when the writer attempts to find the correct words and expression for his ideas. *Programming* uses the central executive but *executing* does not use the central executive, nor does it use spatial or verbal WM. *Editing* involves only spatial WM; and *reading* uses the central executive and verbal WM (Kellogg, 1996). This model emphasizes the critical role of the central executive in resource allocation. According to Kellogg (1999), the limited capacity of the central executive is the primary constraint on using available knowledge (Kellogg, 1999), which is essential to text production.

Kellogg's model predicts that the formulation sub-process will be the most difficult to carry out, because it draws on all three WM components (the visuo-spatial sketchpad, the phonological loop, and the central executive (Baddeley, 1986)). Monitoring (editing and reading) should also be difficult, as reading involves the central executive and the phonological loop, and editing involves the visuo-spatial sketchpad. Finally, the model predicts that execution, which consists of the programming and executing sub-processes, should be the simplest of the three systems, as programming involves only the central executive and executing does not load on the visuo-spatial sketchpad or phonological loop at all.

Figure 2. Working Memory Allocation in Text Production Model (Kellogg, 1996)

	Process	Visuo-Spatial Sketchpad	Central Executive	Phonological Loop
Formulation	Planning (formulation of ideas)	X	X	
	Translating (linguistic expression)		X	X
Execution	Programming (programming motor movements)		X	
	Executing (executing motor movements)			
Monitoring	Reading (reading already produced text)		X	X
	Editing (editing all mental and textual representation output from formulation and execution processes)		X	

The model implicitly endorses a view of revision in which writing and revision are not merely similar, but draw on exactly the same WM resources. Therefore, when a writer attempts to formulate while simultaneously monitoring, WM resources are taxed, and may be overly taxed.

Kellogg's text-production model can be used to conjecture about why freewriting might be an effective strategy. If freewriting does lead to higher-quality final drafts, one explanation for this effect may be that, by separating out the editing process from the language- and idea- generating processes, freewriting reduces the load on the limited-capacity WM system (Akers, 2002). Elbow alludes to this difficulty, writing, "Editing, in itself, is not the problem…The problem is that editing goes on at the same time as

producing" (Elbow, 1973). Other writers have also alluded to explanations of freewriting's benefits that involve attention or resource limitations, for example: "[Freewriting] provides a way for [writers] to write what they already know they want to say, without worrying about what they're going to say next" (Southwell, 1977). "Freewriting does seem to work to keep the generating activities clearly separate from the analytical or editorial" (Mullin, 1991).

In the framework of the text-production model, freewriting entails formulating (planning ideas and translating them into language) and executing (programming and executing motor movements) without monitoring (reading and editing). In Kellogg's model, the monitoring function taxes the *same* WM components as does formulating: both processes engage the central executive, verbal WM, and spatial WM. By eliminating the load devoted to monitoring, the writer is left with more resources to devote to the formulation process, and, therefore, the output of that process should be of higher quality. The process of freewriting disentangles the monitoring process from the formulation process, allowing each to proceed unencumbered by the other. The resources of the central executive, visuo-spatial sketchpad, and phonological loop are devoted entirely to formulation first, then entirely to revision later. As noted earlier, Elbow says that "The main thing about freewriting is that it is nonediting… it undoes the ingrained habit of editing at the same time you are trying to produce" (Elbow, 1973). In the text production model, freewriting, if it is effective, should be effective because it reduces cognitive load by sequencing processes.

To sum up how freewriting can be understood in the two models: in Kellogg's model, freewriting may work by forcing subprocesses to occur sequentially rather than simultaneously, thereby easing working memory load. In Hayes's model, freewriting may work by influencing the individual's emotional state or motivation, or by contributing to aspects of the "physical environment" (such as the text the writer has written so far); or by a combination (perhaps increased motivation changes the physical environment by bringing the writer physically closer to the apparatus of writing—computer, pen, paper).

Other Drafting Strategies

The present study investigates freewriting in comparison to a control group, but also in comparison to another writing strategy, the "polished draft" strategy. Freewriting and polished drafting are two strategies that aim to improve writing by focusing on the drafting stage of the composition process. (Improvement in writing can conceivably result from modifications at any stage of the composition process, or from changes at the level of the individual or the environment at other stages, or in the long-term.) Polished drafting is a strategy that entails composing a draft as well as possible from the start; the writer attempts to formulate ideas and translate them into text as perfectly as possible from the beginning. This strategy can be thought of as the polar opposite of freewriting, as it requires the writer to formulate (plan and translate ideas into text) and monitor (read and edit) simultaneously, whereas freewriting is an attempt to separate the two processes. Polished drafting requires the writer to write and revise simultaneously, whereas freewriting splits up the writing and revising processes.

Creating outlines and writing rough drafts without attention to reviewing are two other drafting strategies. There is evidence that creating outlines improves writing quality (Kellogg, 1988). But the evidence is mixed with regard to the benefits of using a rough-draft strategy—which consists of writing numerous drafts focusing on collecting, planning, and translating, without attention devoted to revising—as compared to a polished-draft strategy, which consists of writers reviewing as they write. Some researchers have found that the polished draft condition produced better essays than the rough draft condition (Gould, Conti, & Hovanyecz, 1983, as cited by Kellogg, 1988). In contrast, Glynn, Britton, Muth, and Dogan (1982) found that the polished-draft strategy produced texts with fewer effective arguments as compared to the rough-draft strategy. They also observed that for students with low verbal ability, draft strategy did not affect number of arguments, so the effects may depend on the abilities or expertise of the individual. Kellogg (1988) found no difference in essay quality between rough draft and polished draft strategies. The present experiment compares essays written using the polished draft strategy to essays written using the freewriting strategy, which can be thought of as a more extreme form of the rough draft strategy. Essays written using the polished draft strategy are also compared to the essays written in the control condition, so the effects of polished drafting are also investigated independently of the effects of freewriting.

The current study addresses the question of quality: Does using freewriting result in better writing? The study also addresses the question of the nature of texts produced using the technique: How do texts composed using freewriting differ from texts

composed using other techniques (polished draft and control)? If the answer to the first question is yes, freewriting is effective; answers to the second question may provide some information as to *why* freewriting is effective. Perhaps freewriting's efficacy lies not in influencing quality directly—perhaps it works by influencing other aspects of the text, such as fluency, which in turn lead to a rise in quality. Or perhaps freewriting works by altering the emotional state of the writer (a hypothesis that has been suggested in the literature (DeMarco-Barrett, 2005; Elbow, 1973, Mullin, 1991), which in turn alters the quality of the writing.

A Controlled Study of the Possible Effectiveness of Freewriting

The widespread use of freewriting suggests that it is believed to help writing somehow—to improve the quality of the final text, through some means, whether it be by increasing the amount of text produced, removing inhibition, tempering fear, or tapping into the powers of the unconscious. While the definition of quality differs from genre to genre and even from task to task, the use of freewriting in composition and creative writing classes suggests that it may help, in some form, with writing in various genres. In the present experiment, freewriting is examined in the context of expository writing, and compared under controlled conditions with the effectiveness of other strategies. The writing tasks were assigned in-class essays, similar to what might appear on an essay exam.

The first question the present experiment attempted to answer was*: Is freewriting effective?* The present experiment investigated whether the use of freewriting led to

higher-quality final texts. The second question the present experiment attempted to answer was: How do texts written using freewriting differ from texts written using students' idiosyncratic strategies (the control group) and texts written using the polished draft strategy (the polished draft group)? Regardless of the effect of freewriting on writing quality, it will be beneficial to gain knowledge about the effect of freewriting on the characteristics of the texts produced. Thus, to address the second question, the following features of the essays were examined: word count, proportion of large words, proportion of positive and negative emotion words, proportion of first person singular pronouns (I, me, my), proportion of first person plural pronouns (we), proportion of words indicating causation ("cause" words such as "because"); and proportion of past, future, and present tense verbs.

A third question the current study investigated was: Does freewriting work differently for different kinds of essays? More specifically, do the (a) quality and (b) features of freewritten essays differ when the essay is written on topics with a more personal focus vs. a more universal focus? This part of the study may help shed light on the question of the effectiveness and effects of freewriting in various contexts—perhaps freewriting is more useful when the writing takes a personal slant (autobiographies, blogs) than when it is relatively impersonal (term papers).

The study was divided into two parts, for ease of analysis and exposition. Part A examined the effects of using a freewriting strategy on specific characteristics of the texts (i.e. the aforementioned text features: word count; proportion of big words, etc.). It was hypothesized that texts produced using freewriting will have a higher word count than

texts produced using a polished draft technique, and will be longer than texts produced using participants' own personal drafting strategies (the control group). Possible differences in these text characteristics between rough and final drafts were examined, as were possible differences between personal and impersonal (i.e. universal) essay focuses.

Part B examined the effects of using a freewriting strategy on the overall quality of the final text, as assessed by independent judges. The relationship between essay quality and essay focus (personal vs. universal) was also examined; it was hypothesized that freewriting would be more effective for essays taking a personal focus as compared to essays taking a universal focus. Finally, interaction effects between student characteristics (such as course grade and SAT scores) and writing strategy were examined. Significant interaction effects would suggest that the efficacy of freewriting may change depending on the verbal ability of the student, or on the student's knowledge of the course material.

CHAPTER 2

EXPERIMENT

Part A

Participants

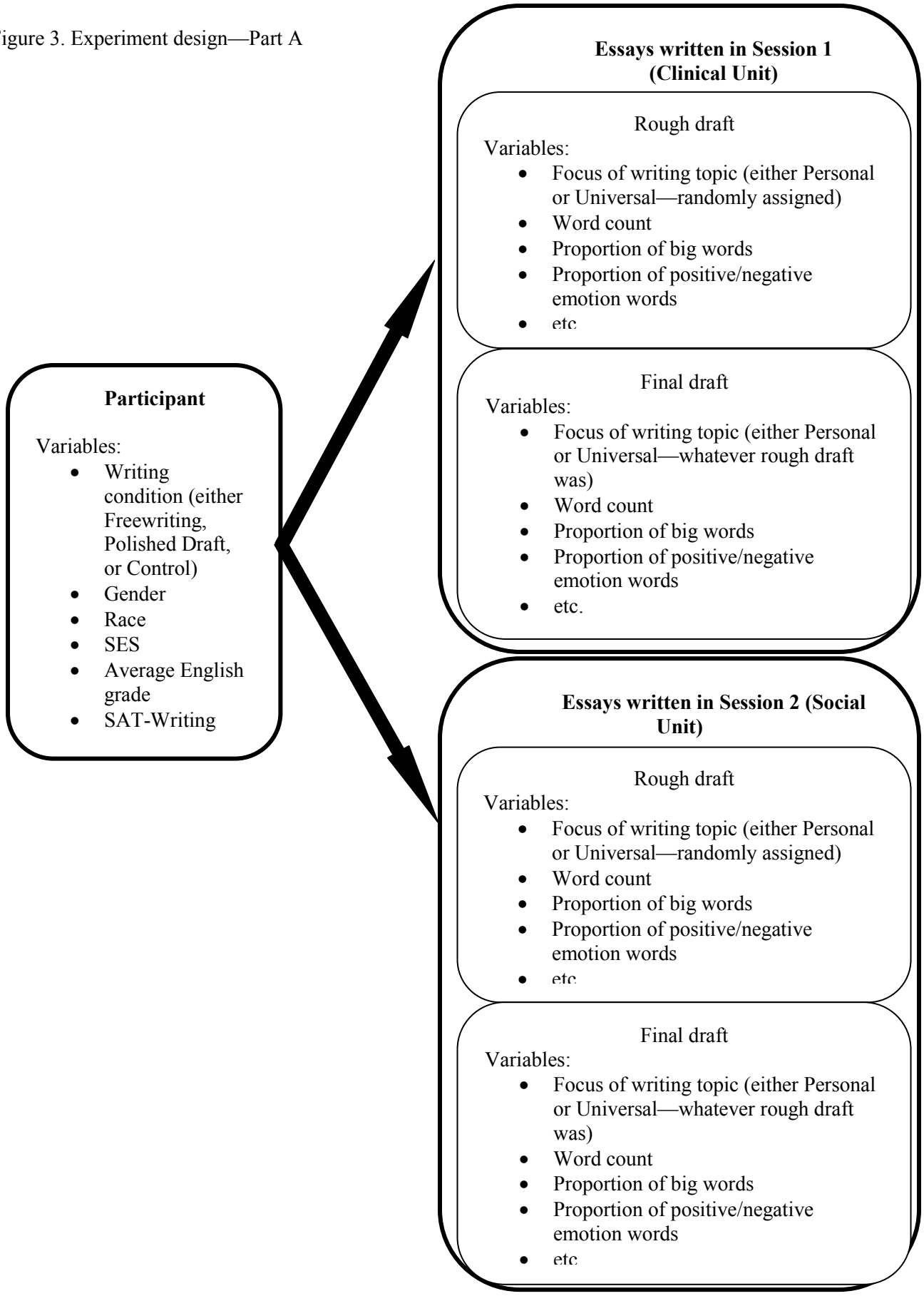
Two hundred ninety-four Temple University undergraduate students (women and men, mean age = 19.08 years) participated as a part of the course Psychology 1061, Psychology as a Social Science. Participants participated as part of recitation-class activities, and all gave informed consent. Roughly 66% of the participants were female, and 56% were Caucasian. Seventy-nine percent had previous freewriting experience. See Table in Appendix for additional demographic characteristics of participants included in the final analysis.

Procedure

Design

The design was a two-level hierarchical model with essays (level 1) nested within participants (level 2). Level-1 predictors were Draft (First draft or Final draft), and Essay Focus (Universal or Personal). Each participant wrote one first draft and one final draft for each session. Two sessions were included in this analysis; thus, each participant had four observations (i.e., four essays per participant). The level-2 predictor of interest was Condition (Freewriting, Polished Draft, or Control). Additional level-2 predictors were variables that needed to be controlled for, such as gender, socioeconomic status, experience using freewriting, verbal IQ, and others. See Figure 3 for illustration of experiment design.

Figure 3. Experiment design—Part A



Data Acquisition

Each of 9 recitation sections in the course was randomly assigned to one of the three conditions (freewriting (FW); polished draft (PD); or control (CT), such that each TA had one section in each of the conditions, and the group sizes were roughly equivalent. Focus (universal or personal) was randomly assigned to participants within recitations. The underlying assumption in this design is that student writing ability and other characteristics were equal across recitations, since students chose recitations essentially randomly as far as the variables investigated in the present study were concerned.

The semester's material in the course was divided into three 4-wk content units, each covering one area of psychology: Developmental, Clinical, and Social. Each participant wrote two essays (one first draft and one final draft) per content unit, for a total of 6 essays throughout the semester. Included in this portion of the analysis (Part A) were essays from the Clinical and Social units only. The Developmental unit essays were not included, because all students, regardless of condition, wrote "baseline" or "control" essays during the Developmental unit—that is, the students in all groups (FW, PD, and CT) wrote their first (i.e. Developmental unit) essays under the same conditions the CT group used for all essays. Because the CT group essays were already included in the analysis, serving as the appropriate control group, and because the inclusion of the Developmental essays from the other groups would have led to a very convoluted analysis and exposition, those essays were not used.

One essay-question prompt was developed for each content unit. The prompts were modeled after those used in Drabick, Weisberg, Paul, and Bubier (2007). (See Appendix for prompts.) Prompts were based on material covered in lectures and textbook chapters. The topics of the prompts were *nature vs. nurture* (for the Developmental unit), *personality* for the Clinical unit), and *cognitive dissonance* (for the Social unit). Each prompt had two versions: in the first version, the question took a more universal focus; in the second version, the question took a more personal focus. The hypothesis was that freewriting would be more effective for essays that were personal.

For each content unit, students listened to a brief introduction to the topic. Each introduction reminded the student to think back to the lecture during which the topic was discussed (e.g. "Think back to Dr. Fauber's first lecture last week."), and gave a brief summary of the material relevant to the topic that was covered in lecture. See Appendix for the summaries that were read for each of the three content units. Students were given packets with blank pages following a page on which was printed the writing prompt. After students listened to the introduction, they were asked to turn to the page with the prompt and take a minute to read it. When participants appeared to be finished reading the prompt, they were then given further instructions, depending on the writing condition. Instructions were provided verbally by the author and simultaneously projected on a Powerpoint slide.

Procedure for Freewriting condition. The procedure for the FW condition was as follows. Instructions, taken verbatim from Elbow (1973), were given: "Write for 10 minutes about the topic. Don't stop for anything. Go quickly without rushing. Never

stop to look back, to cross something out, to wonder how to spell something, to wonder what word or thought to use, or to think about what you are doing. If you can't think of a word or a spelling, just use a squiggle or else write, 'I can't think of it.' Just put down something. The easiest thing is just to put down whatever is in your mind. If you get stuck it's fine to write 'I can't think what to say, I can't think what to say" as many times as you want; or repeat the last word you wrote over and over again; or anything else. The only requirement is that you never stop."

Then the following instructions were given: "Because this is a focused freewrite, whenever you find yourself writing or thinking about things other than the topic, try to steer your writing and thoughts back to address the topic. We don't care what you write at this stage. This is only a rough draft and we don't care about this draft. You will just be using it to write a final draft later today. Are there any questions at this point?" The "focused freewrite" statement was added after pilot data indicated that some students veered completely off track and never returned to the topic.

Participants were timed for 10 min. If participants appeared to be stopping, they were told, "As much as possible, try to keep writing. Try to keep your pen moving." At the 10 min point, participants were given instructions adapted from Elbow (1973), "Please finish your last sentence. Now, take a few moments or more to rest and think about what you wrote. Think, too, about the digressions you started and perhaps continued. Notice when they occurred and where they took you. Think about their connections. Consider them as paths you should explore. You will begin writing again in a minute."

After one min had passed, the following instructions were given: "Now, take the next 10 minutes to revise what you wrote into a final draft that you will submit (write normally, not freewriting)." Instructions from Elbow (1973) were given: "You will have piles of rubble in what you wrote, but you will probably also have a lot of words, phrases, and sentences that seem important. Pick out these good bits. Strip away the rubble. Now use as much careful thought and editorial discrimination as possible in order to see what they add up to: decide how much you believe them, how true they are, in what senses they are true; arrange them somehow so they make sense, and write new and connecting parts when necessary." Then, the instructions were given, "Please turn to a new sheet of paper and use the next 10 minutes to write your final draft. Aim for three paragraphs. Write as if you were submitting this to Dr. Weinraub/Fauber/Karpinski to grade; s/he will not be grading it, but that's your audience. Take a minute to reread the topic question, and make sure your final draft answers that question." The last statement was added after the pilot study indicated that some essays were written about completely different topics.

After nine min had passed, participants were given a warning: "You have about a minute left to finish up." After 10 min, participants were told, "Please finish your last sentence."

Procedure for Polished Draft condition. The procedure for the PD condition was as follows. Instructions, taken from Kellogg (1988), were given: "Use the next 10 minutes to write your essay. Keep corrections to a minimum. Try to express your thoughts as well as possible from the beginning. Add, delete, and review as you proceed

from the first phrase or sentence you write. Try to keep the paper as clean as possible. Are there any questions at this point?"

After 10 min had passed participants were instructed, "Please finish your last sentence. Now, take a few moments or more to reread what you wrote. Although you wrote this draft revising as you went along, in a minute you'll start writing again, and you'll have an opportunity to make further changes to make the essay better. So during these next few moments, don't write anything, but read what you wrote, and think about what would want to change in a final draft.

After 1 min had passed, "As I said earlier, although you wrote your first draft revising as you went along, what I'd like you to do in the next 10 minutes is to revise what you have written into a final final draft. Look back at what you wrote, and make any changes, big or small, that will make your essay stronger. Consider ideas, organization, and content, as well as language. Now, please turn to a new sheet of paper and use the next 10 minutes to write your final draft. Aim for three paragraphs. Write as if you were submitting this to Dr. Weinraub/Fauber/Karpinski to grade; s/he will not be grading it, but that's your audience. Take a minute to reread the topic question, and make sure your final draft answers that question."

After nine min, participants were given a warning: "You have about a minute left to finish up." After 10 min, participants were told, "Please finish your last sentence."

Procedure for CT condition. "Use the next 10 minutes to write a first draft of your essay. Write as you would usually write a rough draft for school assignment. Are there any questions at this point?"

After 10 minutes had passed participants were instructed, “Please finish your last sentence. Now, take a few moments or more to reread what you wrote. In a minute you’ll start writing a final draft, and you’ll have an opportunity to make changes to make the essay better. So during these next few moments, don’t write anything, but read what you wrote, and think about what you would want to change in a final draft.”

After 1 min had passed, “Now, what I’d like you to do in the next 10 minutes is to revise what you have written into a final draft. Look back at what you wrote, and make any changes, big or small, that will make your essay stronger. Consider ideas, organization, and content, as well as language. Now, please turn to a new sheet of paper and use the next 10 minutes to write your final draft. Aim for three paragraphs. Write as if you were submitting this to Dr. Weinraub/Fauber/Karpinski to grade; s/he will not be grading it, but that’s your audience. Take a minute to reread the topic question, and make sure your final draft answers that question.”

After 9 minutes, participants were given a warning: “You have about a minute left to finish up.” After 10 minutes, participants were told, “Please finish your last sentence.”

Questionnaire. At the end of the first session, participants completed a questionnaire requesting demographic information and information about past experience using the freewriting technique. A written version of the KBIT-2 “Riddles” items 21-48 was also administered as a measure of Verbal IQ. See Appendix for questionnaire.

Data Scoring and Analysis

Linguistic Inquiry and Word Count (LIWC). LIWC is a text analysis software program which calculates the degree to which different categories of words are used in a

text (Pennebaker, Booth, & Francis, 2007). The application contains within it a default dictionary with sets of word categories: general descriptor categories (total word count, words per sentence, proportion of words longer than six letters); standard linguistic categories (proportion of words that are pronouns, articles, verbs, etc.); word categories tapping psychological constructs (affect, cognition, negative emotion, etc.); personal concern categories (work, home, leisure); and punctuation categories (periods, commas, etc.).

Transcription. All essays (*M*=983) were typed into MS Word by the author and three research assistants. The MS Word files were then corrected to comply with the requirements of the Linguistic Inquiry and Word Count program 2007 (LIWC) (Pennebaker et al., 2007). Misspellings were corrected. Inappropriate word use (e.g., "its" rather than "it's) was corrected. Meaningful abbreviations were spelled out ("Jan" corrected to "January"). To prevent words from being counted as multiple sentences, periods were removed from common abbreviations (such as "Dr.", "Ms.", "U.S.A.") and time markers (e.g., 6 a.m. or 7:30 p.m.) .

The LIWC program categorizes the words in the essays along various dimensions, such as word count and proportion of "big" words (six or more letters). Included in the present analysis as outcome variables were the following: word count; proportion of six-letter words, first person singular pronouns, first person plural pronouns, present/past/future tense words, positive/negative emotion words, and cognitive mechanism words, including words indicating insight and causation. Aside from word count, the numbers provided by the LIWC program were proportions—e.g. the number of

first person singular pronouns in the essay divided by the total number of words in the essay.

Missing data. Continuous variables with missing data comprising 5% or more of the sample (SAT-V, SAT-Q, SAT-W, English course grades, ratings of liking of writing, ratings of liking of reading, exam grades) were converted to categorical variables with "missing" as a category. A "missing" category was added to categorical variables that were missing 5% or more of their data (native English speaker, race). Variables that had fewer than 5% missing data were left unchanged (cumulative GPA, Verbal IQ, year, gender, mother's education, course grade, freewriting experience), and cases with missing data were deleted.

Analysis. A two-level model was constructed with fixed and random effects. Fixed effects were (a) a main effect of condition; (b) a main effect of essay focus; (c) main effect of draft (first vs. final); and (d) a condition x focus interaction effect. Random effects were (a) an essay-level intercept term; and (b) a student-level intercept term. The intercept terms indicated the extent to which intercepts of the regression equation varied from student to student (student-level), and from essay to essay (essay-level).

Student-level predictors. An exploratory analysis was conducted to guide the selection of level-2 predictors. The primary reason for including the level-2 predictors was to control for possible confounding variables. Women tend to use certain categories of words—such as personal pronouns, verbs, negative emotion words, certainty words (*always, absolutely*), social words, hedge phrases, first-person singular pronouns ("I-

words"), and cognitive words—at higher rates than men (Pennebaker, 2011). People of differing socioeconomic classes also show different patterns of word use in writing: a study of college admissions essays showed a positive correlation between social class and the use of big words, articles, and prepositions (Pennebaker, 2011). To ensure that any effect shown was due to the experimental manipulation and not to other factors, the following factors were included in the model: gender, mother's highest level of education (as a measure of socioeconomic class); SAT-W, Verbal IQ, race, course grade, number of essays written, average English course grades; and teaching assistant.

In national tests of 12th-grade writing proficiency, females consistently outscore males; white students consistently outscore black and Hispanic students; and scores increase with parental education (NAEP, 2007). Although quality was not the outcome variable in the present analyses (analysis of quality is described in Part B), given the reported effects of gender, race, and mother's education on writing proficiency, these factors were controlled for in the LIWC analysis.

Of the remaining predictors, exploratory data analyses were performed to determine which to include. If predictors measured similar concepts, only one was included. The following were strongly correlated:

SAT-V and Verbal IQ, $r(49)=.60$, $p<.001$; SAT-V and SAT-W, $r(49)=.77$ $p<.001$; course grade and cumulative GPA, $r(77)=.78$, $p<.001$; average English grade and cumulative GPA, $r(58)=.71$, $p<.001$.

The following predictors were also correlated: attitudes toward writing and attitudes toward reading, $r(67)=.55$, $p<.001$; Verbal IQ and SAT-W were correlated,

$r(49)=.492$, $p<.001$. Naturally, exam scores and course grade were highly correlated, $r(73)=.93$, $p<.001$.

Preliminary analyses indicated that Teaching Assistant assignment influenced essay quality, so TA was also controlled for in the model. Finally, the number of essays written by each student was also controlled for, as exploratory data analyses indicated a difference between students who wrote three essays, and students who wrote two or one (students who wrote all three tended to have higher exam scores and semester GPAs, but were similar to the other students on cumulative GPA, SAT scores, and verbal IQ). Students missing essays were students who were absent from recitation that day.

Analysis. Because multiple essays were written by each student, models were used to account for the dependence of essay scores within students. Each model was can be conceived in terms of a within-student and a between-student equation; the two equations are estimated simultaneously (Raudenbush & Bryk, 2002). The within-student (essay-level) model presents essay scores as a result of two manipulations: (a) whether the essay was a rough draft or final draft; and (b) whether the essay was written with a universal or personal focus. In other words, the within-student (essay-level) model specifies essay characteristic scores as a function of the draft and focus of that essay. Outcome (dependent) variables, each analyzed in a separate model, were word count; words per sentence; proportion of six-letter words; proportion of first person singular pronouns; proportion of first person plural pronouns; proportion of present/past/future tense words; proportion of positive/negative emotion words; and proportion of words involving causal thinking (e.g. “because,” “reason,” “rationale”) (Pennebaker, 2011).

In preliminary analyses, models were considered in which the effects of draft (first vs. final) and focus (universal vs. personal) were allowed to vary randomly at the student level. This provided a measure of how much the effect of draft or focus varied from student to student (Raudenbusch & Bryk, 2000). If the preliminary analyses indicated that allowing the effect to vary randomly from student to student did not decrease the variance, then fixed effects were retained in the model.

Results

Summary of Results. Table 1 displays mean essay scores for each of the outcome variables, by condition. Significant differences were found between essays written in the freewriting condition and essays written in the control condition for the following outcome variables: word count, proportion of big words, proportion of cause words, and ratio of present and future tense verbs. Significant differences between freewriting and control essays were *not* found for number of words per sentence, proportion of affect words, proportion of positive emotion words, proportion of negative emotion words, ratio of positive emotion words, ratio of negative emotion words, proportion of "I" words, and proportion of "we" words.

No significant differences between the control and polished draft conditions were found for any of the outcome variables.

Table 1

Summary of Mean Essay Characteristics by Drafting Strategy Condition

Dependent variable	Freewriting (n=287)	Polished Draft (n=317)	Control (n=311)
Word count	183.45 (59.49)	144.65 (42.93)	142.31 (40.21)
% Big words (6+ letters)	22.06 (5.21)	24.10 (4.94)	23.15 (5.10)
Words per sentence	20.95 (12.00)	21.37 (5.66)	20.93 (5.82)
% Cause words	4.19 (2.06)	4.57 (2.30)	4.56 (2.17)
Ratio of Past Tense Verbs	.10 (.11)	.12 (.15)	.12 (.12)
Ratio of Present Tense Verbs	.75 (.15)	.69 (.18)	.70 (.17)
Ratio of Future Tense Verbs	.15 (.11)	.19 (.13)	.18 (.12)
Ratio of Positive Emotion Words	.58 (.25)	.58 (.27)	.60 (.28)
Ratio of Negative Emotion Words	.39 (.24)	.39 (.27)	.37 (.27)
% Affect Words	5.03 (2.58)	4.76 (2.10)	4.83 (2.40)
% Positive Emotion Words	2.92 (1.75)	2.82 (1.78)	2.83 (1.75)
% Negative Emotion Words	2.03 (1.58)	1.84 (1.44)	1.90 (1.56)
% "I" words	4.71 (5.01)	4.78 (5.41)	4.46 (5.26)
% "We" words	1.88 (3.04)	1.41 (2.75)	1.23 (2.37)

Note. Values are listed as *M (SD)*

Word count. The results in Table 2 show the extent to which the freewriting and polished draft treatments influenced essay word count, holding constant all other variables (personal/universal focus, rough/final draft, average English grade, gender, etc.). Model 1 displays the main effects of condition. Comparing two hypothetical

essays which were average on all predictors (i.e. “average” on focus and “average” on final/rough draft) written by students average (and identical) on all predictors, except that one student was in the freewriting group and one student was in the control group, the essay written by the student in the freewriting group is predicted to be 39.06 words (27.10%) longer than the essay written by the student in the control group; this difference was statistically significant. There was no main effect of polished drafting on word count.

Condition (freewriting or polished draft) x Draft (rough or final) interaction effects are shown in Model 2. A significant interaction effect was found between draft (rough vs. final) and freewriting: the effect of freewriting on final drafts is smaller than the effect of freewriting on rough drafts. In Model 2, the effect of freewriting (64.46) represents the conditional effect of freewriting: participants using freewriting to write rough drafts write essays that are 64.46 words (46.38%) longer than corresponding rough draft essays in the control condition, holding all else constant. That is, a hypothetical average student (who is “average” on all predictors) in the control condition is predicted to write an essay that is 139.38 words long. The same average student writing in the freewriting condition is predicted to write an essay 203.84 words long. There was no polished draft x draft (rough vs. final) interaction effect.

Table 2
Word Count: The Effects of Condition and Rough vs. Final Draft

	Model 1 (Main effects)			Model 2 (Main effects + Interaction effects)		
	Coeff.	t-Ratio		Coeff.	t-Ratio	
Essay Level						
Personal Focus	4.61	1.57		4.84	1.64	
Final Draft	-8.73	-3.34	**	6.12	2.21	*
Student Level						
Intercept	142.51	38.83	**	139.38	34.69	**
Freewriting (FW)[a]	39.06	6.70	**	64.46	9.30	**
Polished Draft (PD)[a]	1.80	.36		.20	.04	
English 25th percentile	-9.44	-1.38		-8.87	-1.29	
English 50th percentile	-6.48	-.96		-6.00	-.88	
English 75th percentile	6.39	.77		6.37	.77	
Missing on English	2.29	.39		2.74	.46	
SAT-W 25th percentile	-28.22	-3.47	**	-28.89	-3.49	**
SAT-W 50th percentile	-20.44	-2.61	*	-20.74	-2.61	*
SAT-W 75th percentile	-10.45	-1.32		-10.61	-1.33	
Missing on SAT-W	-14.86	-1.97		-15.37	-2.00	
V-IQ 25th percentile	2.63	.41		2.69	.42	
V-IQ 50th percentile	3.30	.50		2.86	.43	
V-IQ 75th percentile	11.27	1.71		11.00	1.66	
Course grade	.72	.23		1.00	.31	
Number of essays written	1.78	.38		1.85	.40	
FW experience	1.04	.19		1.26	.23	
Female	13.02	2.83	**	12.80	2.76	**
Minority	-3.05	-.62		-2.98	.61	
Missing on Race	-1.06	-.11		-.34	-.04	
Mother college degree	-3.47	-.74		-3.55	-.75	
Missing on Mother ed.	1.38	.15		1.59	.18	
Teaching Assistant 2	5.88	1.07		6.39	1.16	
Teaching Assistant 3	12.17	2.07	*	12.19	2.06	*
FW X Final Draft				-.50.08	-8.47	
PD X Final Draft				3.32	.85	
Level 1 Variance R	986.13			1001.17		
Level 2 Variance U0	1206.44	**		1063.16	**	

Table 2, continued

Proportion Reduction in Variance
(Baseline = Model 1)

Notes: M = 909 essays and *N* = 270 participants.
All variables grand-mean centered unless otherwise noted.
a. Variable uncentered.
**p*<.05; ***p*<.01

Non-experimental contributions to word count. Essays written by women were on average 12.80 words longer than essays written by men. Generally, as SAT-Writing scores decreased, fluency decreased: specifically, as compared to students in the top 25% of SAT-W scores, students in the bottom 25% wrote essays that were 28.89 words shorter, and students in the second quartile of SAT-W scores wrote essays that were 20.74 words shorter; these differences were statistically significant. As compared to students in the top 25%, students in the third quartile (50-75%) wrote essays that were 10.61 words shorter, but this difference was not statistically significant. Although SAT-Writing scores are a measure of writing ability (rather than writing experience *per se*), these findings are consistent with literature reporting higher rates of text production in more experienced writers (Chenoweth and Hayes, 2001).

Big Words (Words with six or more letters). There is support for a very small effect of freewriting on proportion of six-letter words. Results (shown in Table 7 in the Appendix) indicated that essays written by students using freewriting have 1.21% *fewer* big words than essays written by students in the control condition. This effect is statistically significant, but, perhaps, not deeply meaningful. The proportion of six-letter words was also lower in essays with a personal focus, lower for students with lower course grades, and higher in final drafts; these effects were all statistically significant.

The draft (rough vs. final) x freewriting interaction effect was not significant, indicating that the effects of freewriting on proportion of big words did not differ between rough and final drafts.

Words per sentence. A model with words per sentence as the outcome revealed no effect of condition, draft, or focus. Condition did not affect how long the sentences were.

Cause words. As compared to essays written in the control condition, essays written using freewriting display .61% fewer cause words. This difference is statistically significant, but trivial. Results are displayed in Table 8 in the Appendix.

Past, Present, and Future Tense Words. The ratio of past tense-verbs to all verbs was analyzed, as was the ratio of present-tense verbs to all verbs and the ratio of future-tense verbs to all verbs. Results are displayed in Tables 9-11 in the Appendix. When freewriting, participants used a higher ratio of present-tense verbs, and a lower ratio of future-tense verbs; these results were both statistically significant. The ratio of present-tense verbs to all verbs was .05 greater for essays in the freewriting condition as compared to essays written in the control condition. The ratio of future-tense verbs to all verbs was .03 lower in essays in the freewriting condition as compared to the control condition.

Affect. Analysis of indicators of affect showed no effect of condition (freewriting or polished draft). Results are shown in Tables 12 and 13 in the Appendix. Indicators of affect included proportion of positive emotion words (i.e. number of positive emotion words in the essay divided by the total number of words in the essay), proportion of

negative emotion words, and proportion of affect words. The non-significant results for all three of these indicators suggest that freewriting did not affect the emotional content of the essays. Other indicators of affect were the ratio of positive to negative emotion words, which also did not differ between conditions. This suggests that the freewritten essays were neither more positive nor more negative in affect than essays written in the control condition. The same was found for the polished draft essays.

The final set of indicators of affect examined were the pronoun indicators of affect—proportion of "I" words and "we" words used. Several studies have found that depressive episodes are associated with higher rates of first-person singular pronouns (I, me, my) and that people use a higher proportion of "we" (we, us) words when writing about positive experiences (Pennebaker, 2011). The use of "I" and "we" words was examined in the present study, and neither freewriting nor polished drafting was found to affect the rate of use of these words. Results are displayed in Tables 14 and 15 in the Appendix.

In sum, essays written in the freewriting condition were not more emotional (as measured by the proportion of affect words) than the control essays; nor were they more emotionally positive or negative (as measured by the ratio of positive to negative emotion words); nor was there evidence for an effect on the pronoun indicators of the writers' emotional states (as measured by the proportion of "I" and "we" words).

Discussion

Freewriting appears to influence two structural characteristics of essays: it increases word count and decreases the rate of usage of large words. It also appears to

influence content to the extent that verb tense can be an indicator of content—the results suggest that writers using freewriting are more likely to write in present or future tense than they are to write in the past tense. The effect of freewriting on word length is substantial and strongest in rough drafts, but the increase in word count also carries over to final drafts, which were produced by revising the first drafts produced by using freewriting. In other words, freewriting helps writers increase writing volume, and this increase in volume is seen not only in the freewritten draft (as would be expected), but in the final product.

Contrary to expectations, freewriting did not affect the *amount* of emotional content present in the essays (as measured by the proportion of affect words), nor the *quality* (positive or negative) of the emotional content that was present in the essays (as measured by the ratio of positive to negative emotion words). In addition, it did not have an effect on indicators of the writers' emotional states (as measured by proportion of "I" and "we" words). It has been suggested in the literature that freewriting works on writers' emotional states (Mullin, 1991, Romano, 2004). The present results provide no evidence consistent with the hypothesis that essays written using freewriting change the emotional state of the writer or the emotional content of the essay.

The results paint a picture of freewriting as a process that influences particular characteristics of the text, and some content (such as whether present or future events are written about as opposed to the past events), but does not influence, as far as these results show, the emotional content of the essay or the emotional state of the writer as indicated by pronoun use in the essay. It should be noted that while the effect found on word count

was substantial, the effects on word length and verb tense, while statistically significant, were very small (and arguably, trivial).

Part B

Whereas Part A of the present investigation examined the effects of the writing treatments (freewriting and polished draft) on the text characteristics of the essays produced, Part B investigated the effects of the writing treatments on the *quality* of the essays produced.

Participants

A subset of the participants (*N*=77) from Part A were chosen at random to be included in the sample for Part B. (The entire experiment (Part A and B together) was run once—Parts A and B were not administered separately. But because of the time required to rate essays for quality, only a subset of the data from the entire experiment was used in Part B.) See Table 16 in the Appendix for demographic characteristics of the sample used in Part B. The demographic characteristics of participants included in the subset were not significantly different from the characteristics of participants in the larger dataset, except the percentage of participants reporting experience with freewriting was smaller in the subset (70% in the subset, 79% in the full sample).

Procedure

Design

The essays included in this portion of the study were the final draft essays from the Freewriting and Polished Draft groups only. Because rating of the essays was a time-consuming process and the students in the Freewriting and Polished Draft groups had all

written initial baseline essays in the "control" condition (where instructions were to write as they usually did—instructions identical to the instructions given to the "true" Control group throughout the semester), the essays from the Control group were not used. Using the baseline essays as the control essays made possible within-student comparisons. Each participant wrote three final drafts, one for each course unit (Developmental, Clinical, Social). The Developmental unit was the first unit in the semester, and essays written in that unit served as a baseline condition—participants were instructed to write as they usually would for a class assignment. Thus, in this analysis, all participants in all conditions wrote one baseline (control) essay and two experimental (either two freewriting or two polished draft) essays. (They also wrote first draft essays for each of the units but those essays were not analyzed—only the final drafts were used in the quality analysis.)

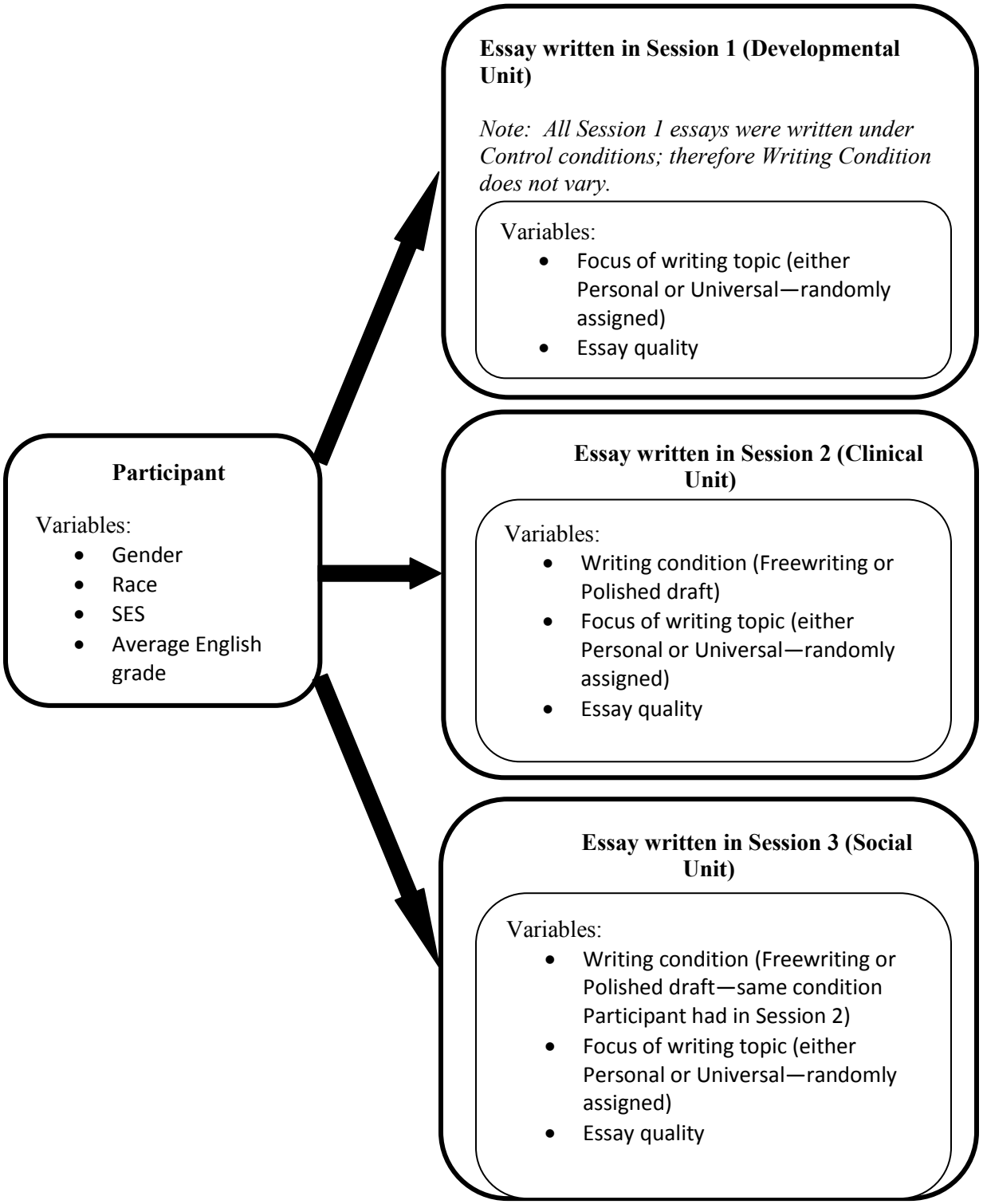
The design was a two-level hierarchical model with essays (level 1) nested within participants (level 2). Only final draft essays were used in this analysis. Level-1 predictors were Condition (Freewriting-Control; Freewriting-Treatment; Polished draft-Control; Polished draft-Treatment) and Essay Focus (Universal or Personal). The "Freewriting-Control" and "Developmental-Control" essays were essays written during the Developmental unit session. The "Freewriting-Control" essays were essays written during the Developmental session by students who in later sessions would be using the freewriting technique. The "Polished draft-Control" essays were essays written during the Developmental session by students who in subsequent sessions would be using the polished draft technique. The "Freewriting-Treatment" essays were essays written by

students in the Freewriting group during the Clinical and Social unit sessions. The "Polished draft-Treatment" essays were essays written by students in the Polished Draft group during the Clinical and Social unit sessions See Figure 2 for illustration of experiment design. (Rough drafts were not included in the figure because they were not analyzed for quality.)

Three sessions were included in this analysis; thus, each participant had three observations (one control essay, and two experimental treatment essays). The experimental treatment was *between students*—so students who wrote one essay using freewriting would have also written the other experimental treatment essay using freewriting. In total, 178 essays were analyzed.

Level-2 predictors were generally variables that needed to be controlled for--such as gender, socioeconomic status, experience using freewriting, verbal IQ, and others. The present analysis was not primarily concerned with the main effects of the level-2 predictors, although interaction effects (such as a condition x course grade) were of interest.

Figure 4. Experiment Design—Part B



Data Scoring and Analysis

Scoring. The author and two other judges, blind to the identity of the participants and to the participants' experimental conditions, scored the essays. The judges were undergraduate research assistants. Their SAT-Verbal scores were 700 and 620. They both had 4.0 averages in their English courses; both were enrolled in additional English courses at the time of the study. A fourth judge, another undergraduate research assistant, also participated in the scoring process. Because reliabilities for this judge were consistently low, essays rated by her were excluded from the analysis. The essays were assigned to judges using a random number generator.

For each topic, the judges were given the appropriate Class Capture video to watch, and the relevant course concepts were explained to the judges. The judges were given the scoring system or rubric (see below) and 15 essays (not part of the present sample) to score. Those ratings were reviewed by the author and feedback was given. The author and the judges then reviewed essays as a group, the author specifying what scores each essay should receive. When it appeared that the judges were consistent in the group meeting, they were then given a subset of essays to rate independently. Judges were always blind to the experimental conditions of the essays.

Rubric. Judges rated the quality of the essays on five dimensions. The Essay Composition: Theme Development and Text Scoring Guide from the WIAT-III was adapted for the prompts used in the present experiment. The "Paragraph" category was eliminated and the remaining five categories (Introduction, Conclusion, Transitions,

Reasons, Elaborations) were used. Changes made to the WIAT-III scoring are detailed in the Appendix.

Each essay was scored by the author on each of the five characteristics (Introduction, Conclusion, Transitions, Reasons, Elaborations). Each essay was also scored by one of the two judges. The two scores (author's plus judge's) were averaged to compute the final score.

Reliability Pearson's *r* was used as an index of inter-rater reliability. The values of *r* were as follows: Introduction $r(176)=\mathbf{.69}$, $p<.001$; Conclusion $r(176)=\mathbf{.66}$, $p<.001$; Transitions $r(176)=\mathbf{.92}$, $p<.001$; Reasons $r(176)=\mathbf{.72}$, $p<.001$; Elaborations $r(176)=\mathbf{.61}$, $p<.001$. The value of *r* for Overall Quality (summed scores of the five subcategories) was $r(176)=\mathbf{.85}$, $p<.001$.

The inter-rater reliabilities between the author and the first judge were: Introduction $r(122)=\mathbf{.76}$, $p<.001$, Conclusion $r(122)=\mathbf{.72}$, $p<.001$; Transitions $r(122)=\mathbf{.94}$, $p<.001$; Reasons $r(122)=\mathbf{.74}$, $p<.001$, Elaborations $r(122)=\mathbf{.69}$, $p<.001$. The value of *r* for Overall Quality (summed scores of the five subcategories) was $r(122)=\mathbf{.86,}$ $p<.001$.

The inter-rater reliability between the author and the second judge were: Introduction $r(52)=\mathbf{.55}$, $p<.001$, Conclusion $r(52)=\mathbf{.39}$, $p=.004$, Transitions $r(52)=\mathbf{.89}$, $p<.001$, Reasons $r(52)=\mathbf{.60}$, $p<.001$, Elaborations $r(52)=\mathbf{.29}$, $p=.03$. The value of *r* for Overall Quality (summed scores of the five subcategories) was $r(52)=\mathbf{.83}$ $p<.001$.

This degree of agreement between judges is higher than has been reported in the literature (Kellogg, 1988; Woodruff, E., Bereiter, C. & Scardamalia, M, 1982). This is

unsurprising, given that the scoring system was adapted from the scoring system for the WIAT-III, a standardized achievement test, and required much less subjective judgment on the part of the rater. The rubric used to score the essays is reproduced in the Appendix.

Analysis. A two-level model was conceived with fixed and random effects. Fixed effects were (a) a main effect of condition; (b) a main effect of essay focus; (c) a condition x focus interaction effect. Random effects were (a) an essay-level intercept term; and (b) a student-level intercept term. The intercept terms indicated the "extent to which intercepts of the regression equation varied from" student to student (student-level), and from essay to essay (essay-level) (citation).

Outliers. A sensitivity analysis was conducted to compare effects with and without (the two) outliers; there were no significant differences in effects, so the outliers were retained in the sample.

Student-level predictors. In national tests of 12th-grade writing proficiency, females consistently outscore males; white and Asian American students consistently outscore black and Hispanic students; and scores increase with parental education (NAEP, 2007). Given these findings, gender, race, and mother's education were controlled in the analysis. Of the remaining predictors, exploratory data analyses were performed to determine which to include. If predictors measured similar concepts, only one was included. The following were strongly correlated: SAT-V and Verbal IQ, $r(49)=.60$, $p<.001$; SAT-V and SAT-W, $r(49)=.77$ $p<.001$; course grade and cumulative GPA, $r(77)=.78$, $p<.001$; average English grade and cumulative GPA, $r(58)=.71$, $p<.001$.

The following predictors were also correlated: attitudes toward writing and attitudes toward reading, $r(67)=.55$, $p<.001$; Verbal IQ and SAT-W were correlated, $r(49)=.492$, $p<.001$. Naturally, exam scores and course grade were highly correlated, $r(73)=.93$, $p<.001$.

Preliminary analyses suggested that attitudes toward writing and attitudes toward reading did not influence essay quality in the sample; because there was no specific theoretical reason to include them, they were excluded. The predictors included in the final analysis were SAT-W, Verbal IQ, course grade, average English grade, number of essays written, teaching assistant, gender, race, mother's education, and prior experience with freewriting. (Preliminary analyses indicated that TA influenced essay quality. The number of essays written by each student was also controlled for, as exploratory data analyses indicated a difference between students who wrote three essays, and students who wrote two or one (students who wrote all three tended to have higher exam scores and semester GPAs, but were similar to the other students on cumulative GPA, SAT score, and verbal IQ).

Essay-level predictors. The within-student (essay-level) model presents essay scores as a result of two manipulations: (a) the Condition under which the essay was written (Freewriting-Control; Freewriting-Treatment; Polished draft-Control; Polished draft-Treatment); and (b) the Focus of the essay (universal or personal).

A cross-product term was also included in the analysis to evaluate the presence of an interaction between Condition and Focus. It is hypothesized that freewriting will be more effective with personal focus essays than with universal focus essays; and the

polished draft technique will be more effective with universal focus essays than with personal focus essays.

Overall essay quality was the outcome (dependent) variable. All measures of essay quality were standardized (z-scored) across the sample.

Results

Group mean essay quality scores are shown in Table 3. The means shown are the means for all the essays scored in that group and condition. Participants were assigned to either (a) the freewriting group; or (b) the polished draft group. Each participant wrote essays in both (a) the control condition; and (b) the treatment condition. Thus, a student who wrote a "freewriting control" essay also wrote two "freewriting treatment" essays (but no polished draft control or polished draft treatment essays). And a student who wrote a "polished draft control" essay also wrote two "polished draft treatment" essays (but no freewriting control or freewriting treatment essays). Table 3 displays means for essays scored in that group (FW or PD) and that condition (control or treatment).

Table 3

Mean Essay Quality Scores by Drafting Strategy Condition

Dependent variable	Freewriting Control (M=35)	Freewriting Treatment (M=62)	Polished draft Control (M=30)	Polished draft Treatment (M=51)
Introduction	.19 (1.01)	-.09 (1.02)	-.19 (.81)	.11 (1.07)
Conclusion	-.09 (.95)	-.14 (.84)	.09 (1.13)	.16 (1.12)

Table 3, continued

Transitions	.00 (1.12)	-.07 (1.02)	-.09 (.87)	.11 (.99)
Reasons	-.00 (1.08)	-.18 (.97)	.43 (1.20)	-.03 (.81)
Elaborations	.10 (1.36)	-.17 (.80)	.15 (1.06)	.03 (1.00)
Overall Quality	.05 (1.16)	-.20 (.99)	.12 (1.07)	.12 (.85)
Reasons + Elaborations only	.04 (1.16)	-.19 (.89)	.33 (1.16)	-.00 (.89)

Note. Values are standardized (z-scores) listed as *M (SD)*

Main effects

Results of the model in Table 4 show the extent to which variation in essay quality can be explained by the effects of both the variables of interest (drafting condition) and the control variables (e.g. English grades, SAT-W scores). Inconsistent with the hypothesis that use of FW during drafting leads to higher quality final essays, the effect of FW-treatment is negative (-.30) and non-significant (p =.06).

Table 4
Overall Essay Quality: Main Effects of Drafting Condition (Reference Group is Freewriting Control)

	Model 1 (Main effects)		
	Coeff.	t-Ratio	
Essay Level			
Freewriting-Treatment (F-T)[a]	-.30	-1.86	
Polished Draft-Control (P-C)[a]	.03	.11	
Polished Draft-Treatment (P-T)[a]	-.06	-.26	
Personal Focus	-.38	-3.02	**
Student Level			
Intercept	.09	.57	
English 25th percentile	-.87	-3.38	**
English 50th percentile	-.71	-2.48	*

Table 4, continued

English 75th percentile	-.26	-.96	
Missing on English	-.53	-2.52	*
SAT-W 25th percentile	-.34	-1.09	
SAT-W 50th percentile	-.29	-.91	
SAT-W 75th percentile	.19	.67	
Missing on SAT-W	-.45	-1.87	
V-IQ 25th percentile	.11	.52	
V-IQ 50th percentile	.23	1.11	
V-IQ 75th percentile	.19	.90	
Missing on V-IQ	-.14	-.35	
Course grade	-.03	-.28	
Number of essays written	.01	.08	
FW experience	.15	.83	
Missing on FW experience	-.51	-1.81	
Female	-.06	-.44	
Minority	.20	1.21	
Missing on Race	.01	.04	
Mother college degree	.07	.49	
Missing on Mother ed.	.17	.71	
Teaching Assistant 2	.36	1.95	
Teaching Assistant 3	.70	3.02	**
Level 1 Variance R	.68		
Level 2 Variance U0	.15	*	

Notes: *M* = 178 essays and N = *77* participants.
All variables centered on grand mean unless otherwise noted.
a. Variable uncentered.
*p<.05; **p<.01

In the analysis in Table 4, the FW-Control group served as the reference category, the group to which the other categories (FW-Treatment, PD-Treatment, PD-Control) were compared. The most relevant comparison in this model was the comparison between the FW-Treatment group and the FW-Control group (the reference group), because the essays belonging to those two groups were written by the same students. The model indicates the extent to which the freewriting treatment led to differences in quality

scores in essays by the same students. The FW-Control is the most appropriate reference group to use when asking questions about the effects of the freewriting treatment.

When investigating the efficacy of the PD treatment, however, using PD-Control as the reference category is the most appropriate, as it allows the comparison between the PD-Treatment essays and the PD-Control essays, which were written by the same students. So another model was constructed, using the PD-control group as the reference category (see Table 20 in Appendix); aside from the different reference category in all other aspects this model was identical to the one shown in Table 4. Results from the second model suggest that the polished draft technique did not affect essay quality: essays written in the control condition (PD-C) and essays written by those same students using the polished draft strategy (PD-T) showed no difference in quality scores. (The PD-T essays scored .09 *SD* lower than the PD-C essays, and this difference was not significant.)

Results of the model in Table 4 (and Table 20 in the Appendix) indicate also that the effect of essay focus (personal or universal) was negative (-.38) and significant ($p <$ .01). Thus, essays written in response to prompts instructing the writer to examine his or her own life scored .38 *SD* lower on quality than essays the prompts of which did not, holding all else constant. This effect of essay focus may be an artifact of the scoring system, which may have been biased in favor of impersonal essays. For example, one way an essay can earn points for "Reasons" is by including qualifying "topic sentences," which are sentences that appear at the beginning of paragraphs and summarize the information presented in the paragraph. Essays also score higher if key words from the

introduction and conclusion are restated in the body of the essay. So the rubric rewards organization and structure—and it is conceivable that when writing essays with a personal focus students treat them less like formal essays and therefore do not bother to structure them as they would formal essays. (This might be the case despite the fact that the instructions were to write as if the essay were being submitted as a class assignment.)

Other contributions to essay quality. Results shown in Table 4 indicated that two other factors (average English grade and Teaching Assistant) influenced essay quality. Essays written by students with higher average English grades tended to have higher scores. Essays written by students who had one particular TA (TA3) tended to have higher scores. SAT-W score, Verbal IQ, Course grade, FW experience, gender, race, and mother's education did not contribute significantly to explaining the variation in essay quality.

For essays written in the control conditions, the effect of average English grade was negative and significant—as average English grade decreased, essay quality decreased. Specifically, as shown in Table 4 (results are the same in Table 20), as compared to an essay written by a student who had an average English grade in the top 25% (the top 25% was the reference category), essays written by students in the bottom 25% scored .87 *SD* lower, holding all else constant. Essays written students in the second quartile (25-50%) scored .71 *SD* lower, and essays written by students in the third quartile (50-75%) score .26 *SD* lower, although this last difference was not statistically significant.

The effect of Teaching Assistant was significant, with TA3's students writing control essays that scored on average .70 *SD* higher than essays written by TA1's students, $p<.01$.

Interaction effects

The following five interaction effects were tested: Condition x Essay Focus; Condition x Experience Freewriting; Condition x Course Grade; Condition x SAT-W score; Condition x SAT-V score. Of the five, only one interaction effect was significant: Condition x Course Grade.

Models from the analyses yielding non-significant results (Condition x Essay Focus; Condition x Experience Freewriting; Condition x SAT-W score; Condition x SAT-V) are displayed in the Appendix. The course grade x condition interaction effect is described below.

Course grade x Condition Interaction.

Table 5
Overall Essay Quality: The Effects of Condition x Participant Course Grade

	Model A (Course grade x Cond)			Model B (Course grade x Cond)		
	Coeff.	t-Ratio		Coeff.	t-Ratio	
Essay Level						
Freewriting-Control (F-C)[a]	N/A			-.00	-.00	
Freewriting-Treatment (F-T)[a]	-.30	-1.87		-.30	-1.47	
Polished Draft-Control (P-C)[a]	.00	.00		N/A		
Polished Draft-Treatment (P-T)[a]	-.00	-.02		-.01	-.03	
Personal Focus	-.34	-2.73	**	-.34	-2.73	**
Student Level						
Intercept	.10	.64		.10	.65	
English 25th percentile	-.81	-3.29	**	-.81	-3.29	**

Table 5, continued

English 50th percentile	-.72	-2.57	*	-.72	-2.57	*
English 75th percentile	-.29	-1.10		-.29	-1.10	
Missing on English	-.53	-2.58	*	-.53	-2.58	*
SAT-W 25th percentile	-.35	-1.15		-.35	-1.15	
SAT-W 50th percentile	-.25	-.82		-.25	-.82	
SAT-W 75th percentile	.21	.76		.21	.76	
Missing on SAT-W	-.45	-1.90		-.45	-1.90	
V-IQ 25th percentile	.11	.54		.11	.54	
V-IQ 50th percentile	.25	1.17		.25	1.17	
V-IQ 75th percentile	.23	1.04		.23	1.04	
Missing on V-IQ	-.14	-.34		-.14	-.34	
Course grade	.18	1.28		.23	.92	
Number of essays written	-.02	-.21		-.02	-.21	
FW experience	.09	.48		.09	.48	
Missing on FW experience	-.53	-1.80		-.53	-1.80	
Female	-.03	-.22		-.03	-.22	
Minority	.19	1.16		.19	1.16	
Missing on Race	.03	.14		.03	.14	
Mother college degree	.06	.38		.06	.38	
Missing on Mother ed.	.13	.53		.13	.53	
Teaching Assistant 2	.31	1.72		.31	1.72	
Teaching Assistant 3	.65	2.93	**	.65	2.93	**
F-C X Course grade				-.05	-.19	
F-T X Course grade	-.31	-2.07	*	-.37	-1.33	
P-C X Course grade	.05	.19		N/A		
P-T X Course grade	-.46	-2.32	*	-.51	-1.79	
Level 1 Variance R	.67			.67		
Level 2 Variance U0	.14			.14		

Notes: *M* = 178 essays and N = *77* participants.
All variables centered on grand mean unless otherwise noted.
a. Variable uncentered.
*p<.05; **p<.01

Table 5 displays the results obtained when the FW-control group was used as the comparison group (Model A) and when the PD-control group was used as the comparison group (Model B). As shown in Model A, a significant FW x Course grade interaction was found (p<.05) when comparing the FW-treatment and FW-control groups. But no

significant PD x Course grade interaction was found when comparing the PD-treatment and PD-control groups (Model B). Figures 5 and 6 display the results shown in Table 5.

Figure 5. Predicted effect of FW condition on essay quality, by course grade

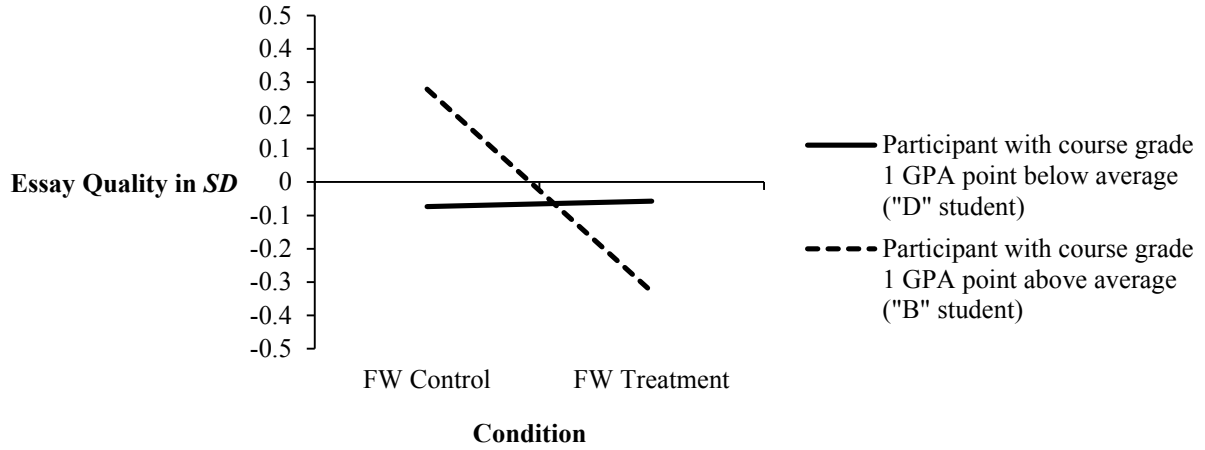


Figure 5 shows predictions made for essays written by students in the FW condition, by course grade (either low course grade (1 GPA point below the mean) or high course grade (1 GPA point above the mean)). The effect of the FW treatment on essay quality depended on student course grade. Essays written by students with course grades of 1 GPA point below the mean showed no effect of the FW treatment. (The difference between control and treatment essays was a difference of .01 *SD*). However, the quality of essays written by students with course grades of 1 GPA point *above* the mean differed depending on condition (control or treatment). An essay written by a student with a high course grade is predicted to score .28 *SD* in the control condition, compared to -.33 *SD* in the treatment (i.e. freewriting) condition, a difference of .61 *SD*.

Figure 6. Predicted effect of freewriting on essay quality, by course grade--detail

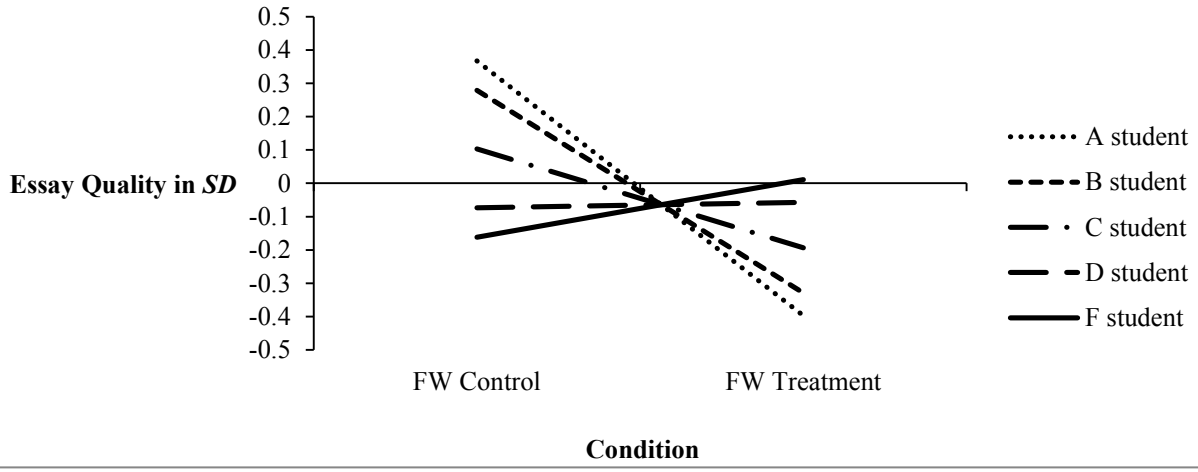


Figure 6 displays predictions for participants broken down further by course grade. Essays written by "A" students in the freewriting condition are predicted to score -.76 *SD* lower than essays written by the same students in the control condition. Essays written by "C" students are predicted to score -.30 *SD* lower when written in the freewriting condition. Essays written by "F" students are predicted to score .17 *SD higher* when written in the freewriting condition. The results suggest that for the very worst students, freewriting may have a slightly positive effect, but for the average and good students, freewriting seems to have a negative effect, and this negative effect increases with course grade.

Discussion

There was no main effect of condition (freewriting or polished draft) on essay quality. There was, however, a significant course grade X condition interaction effect for the freewriting condition. The results suggest that freewriting may have a slightly positive effect for the very worse students (the F students), but may have an unfavorable

effect for students who have an average to excellent grasp of the course material. This adverse effect increases with course grade such that the use of freewriting is the most disadvantageous for the very best students.

CHAPTER 3

GENERAL DISCUSSION

Taken together, the results of the present experiment suggest that freewriting influences certain characteristics of the final text produced; namely word count, proportion of long words used, and verb tense. The technique produces longer essays that tend to contain short words and tend to refer to the present as opposed to the past or future. The technique does not, however, seem to influence the emotional content of the text produced.

Chenoweth and Hayes (2001) propose that fluency is greater when the translation process is allowed to proceed uninterrupted by the revision process. In the present experiment, the greater fluency found in the freewriting condition—word count is a measure of fluency, because all students had the same amount of time to write, and fluency is defined as the rate of text production—is consistent with the idea that freewriting is in fact the translation process uninterrupted by the revision process. The results are consistent with the idea that freewriting can be explained by appealing to the text production model.

The positive effect of freewriting on essay word count and its *lack* of effect on emotional content hints at the possibility that freewriting may work by reducing cognitive load rather than by influencing the emotional state of the writer. Freewriting, then, is better explained by considering cognitive load (as in the text production model, and as in the cognitive aspect of the individual component of the problem-solving model) rather

than by considering the affect aspect of the individual component of the problem-solving model.

Polished drafting influences none of the text characteristics investigated in the present study—polished drafting and drafting in the control condition produced essays that did not differ on any of these text qualities. These findings are interesting in that they suggest that freewriting may be special in some way. They suggest that that it is not a writing intervention, *per se*, that produces essays with different characteristics, but rather one specific technique, freewriting, that does so. Of course, many other writing techniques were not tested here, and it is possible that it is the polished draft technique that is unique among writing interventions (for its lack of effect on these text characteristics).

With respect to its effect on text quality, freewriting seems to work differently for different people. It seems to offer a slight advantage when used by students who have failing course grades, and it seems to have a negative effect when used by students who have average and above-average course grades, with this negative effect increasing with the student's course grade. These findings call into question the practice of using freewriting indiscriminately in writing courses. The possibility that freewriting can actually lead some students to writer poorer essays needs to be investigated further.

Polished drafting had no effect on text quality.

CHAPTER 4

LIMITATIONS AND FUTURE DIRECTIONS

The present study investigated freewriting in a narrow context: participants writing in-class expository essays in one sitting under time constraints. While this narrow context occurs in some high-stakes real-world situations, such as standardized essay exams (e.g. the LSAT or GRE), it may be the case that there are kinds of writing done in different contexts to which these results will not generalize. The process used to write long texts probably differs from that used to write the short texts examined in the present study. At the same time, after high school GPA, the ability to compose an essay within time constraints is the best predictor of freshman GPA (Geiser & Studley, 2001), so investigation of the short essay format is valuable.

The interaction effects between course grade and condition suggest that the efficacy of freewriting is affected by individual differences, and it may be the case that the efficacy of freewriting depends on environmental factors as well. The results of the present study do not rule out the possibility that freewriting may be effective for an experienced writer writing a novel at home.

It is also possible that freewriting is effective only if the writer has practice revising the freewritten text into a final text. The present study did not focus on revision of freewritten texts—the students were instructed to revise according to directions given by Elbow (1973), but they were not given the opportunity to practice this kind of revision, nor to do more than one set of revisions.

Freewriting has been taught and used widely for decades, and the possibility that the technique may have a negative effect on students who have a good grasp of course material has not been previously noted. Thus, the present study has added a significant finding to the results concerning the efficacy of the freewriting technique. The present study highlights the need for more empirical research on writing, and particularly on writing interventions used in educational settings.

The design of the present study may point the way to a deeper understanding of how to integrate the methods of psychology with the methods of composition research in an effective writing research program. Most psychological research on writing is conducted in laboratory settings, with participants tested individually and researchers burdened with a time-consuming essay-rating process. The present study took advantage of a preexisting course to collect essays, and in this way hundreds of essays were obtained in a short period of time. In future studies, finding a way to integrate the rating process with a preexisting grading process will help remedy two weaknesses plaguing much of the psychological research on writing—rating schemes that evaluate relatively superficial characteristics of the writing, and ratings made by trained raters rather than by experts.

Composition research itself has a history of methodological problems. In a meta-analysis of composition research studies, Hillocks (1986) made the following comments:

> Wesdorp (1982) sketches a series of problems in the designs he examined, including the failure to control for intervening variables such as teacher bias and aspirations, the failure to define dependent variables (which he attributes to inadequate theory), the use of indirect measures of composition ability rather than actual pieces of writing, low interrater reliabilities, the use of very small experimental groups, unclear

> descriptions of the population, failure to describe the treatments adequately, and finally the use of inadequate statistical procedures (a problem also noted by Burton). I found the same problems and others in this review. However, some of them deserve more specific attention than Wesdorp allots them. In the present review of over 500 experimental studies, the most pervasive problem had to do with the control of variables. The major function of an experimental design is control--control over variables which might intervene to make a difference where none should be expected.
>
> Because absolute standards in composition achievement (as well as in other areas of academic achievement) do not exist, the control of observations must be based on comparison. That is, the achievement of one group of students must be compared with that of another group receiving some other treatment or no treatment... Studies which do not include comparison groups, including case studies, cannot generalize about the effects of any particular condition. They can report only the specifics of the particular situation (p.129-130).

The use of control groups and the collecting of participant information to control for individual differences are basic practices in psychological research that can be easily extended to composition research (and ought to be, given the results of the present study). The present study corrected for failures of prior composition research by using appropriate statistical procedures, appropriate comparison groups, good inter-rater reliabilities, exact descriptions of the population, relatively large sample sizes, and detailed descriptions of the treatments. Thus, the present study offers an experimental design that marries the strength of composition research and psychological research and that may lead to a better way to conduct research on writing.

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APPENDIX A
ESSAY PROMPTS

Developmental Unit Topic #1 (Universal)

How do you think environment might influence a genetically-influenced trait, such as behavioral inhibition (the propensity to react to unfamiliar situations with fear, avoidance, and withdrawal)? For example, what might parents or teachers of an inhibited toddler do that would either contribute to or tend to decrease later shyness?

Developmental Unit Topic #2 (Personal)

Consider your own personal life and development. How do you think your environment might have influenced a genetically-influenced trait, such as behavioral inhibition (the propensity to react to unfamiliar situations with fear, avoidance, and withdrawal)? For example, *if you were an inhibited toddler*, what might your parents or teachers have done that contributed to or decreased your current level of shyness? Or *if you were an uninhibited toddler*, what might your parents or teachers have done that contributed to or decreased your current level of shyness?

Clinical Unit Topic #1 (Universal)

It has been argued that personality is a social construct--that there is no such thing as personality without other people.

What are the consequences of thinking about personality in this way (as existing only in relation to other people), as opposed to thinking about it as something that exists on its own "inside" a person? For example, if a therapist views personality as a social

construct rather than as a characteristic that exists inside the individual, how might that affect his or her treatment of his or her client/patient?

Clinical Unit Topic #2 (Personal):

It has been argued that personality is a social construct--that there is no such thing as personality without other people.

What are the consequences on your own life of thinking about personality in this way (as existing only in relation to other people), as opposed to thinking about it as something that exists on its own "inside" you? For example, imagine you went to a therapist tomorrow for current concern of yours, something you need help with. If your therapist views your personality as a social construct rather than as a characteristic that exists inside you, how might that affect his or her treatment of you? Answer this with regard to you personally, not anyone else.

Social Unit Topic #1 (Universal)

It has been argued that we have an abiding need to be consistent in thought and behavior. When we detect an inconsistency between our behavior and an attitude that we hold, we change the attitude to alleviate the feeling of dissonance caused by the inconsistency.

What are some consequences of changing our attitudes to match our behavior? Is this drive to reduce cognitive dissonance beneficial? If yes, why? If not, why not?

Social Unit Topic #2 (Personal)

It has been argued that we have an abiding need to be consistent in thought and behavior. When we detect an inconsistency between our behavior and an attitude that we hold, we change the attitude to alleviate the feeling of dissonance caused by the inconsistency.

Consider your own personal life. What consequences might there be for changing your attitudes to match your behavior? Do you think this drive to reduce cognitive dissonance in your own life is beneficial for you? If yes, why? If not, why not? (Answer with regard to your own life, not anyone else's.)

APPENDIX B
QUESTIONNAIRE

Questionnaire #1 (Administered on 1st session.)

PLEASE COMPLETE THIS QUESTIONNAIRE (Your responses are kept strictly confidential. Your responses are separated from your name and other identifying information):

(1) What year are you in in college?

_____Freshman
_____Sophomore
_____Junior
_____Senior
_____Non-matriculated

(2) How old are you?

_____17
_____18
_____19
_____20
_____21
_____22
_____Over 22. Specify:_____

(3) What is the highest degree earned by your mother?

_____Less than high school

_____High school diploma or equivalency (GED)

_____Associate degree (junior college)

_____Bachelor's degree

_____Master's degree

_____Doctorate

_____Professional (MD, JD, DDS, etc.)

_____Other. Specify:

_____

_____I have no idea.

(4) Gender

_____ Male

_____Female

_____Other

(5) Zip code where you grew up (5 digits):

____ ____ ____ ____ ____

(6) Did you attend the lecture at which Dr. Weisberg discussed today's topic material? (Be honest; your response has NO influence whatsoever on your grades in this course.)

_____Yes

_____No

_____I did not attend in person but I listened to the lecture on Class Capture

(7) Did you study the pages in your textbook relevant to today's topic material? (Be honest; your response has NO influence whatsoever to your grades in this course.)

_____Yes

_____No

(8) Have you ever done "freewriting" or "stream-of-consciousness writing" before?

_____Yes

If yes, in what context? (Check all that apply.)

_____English or Composition class

_____Creative Writing class

_____On my own

_____Other. Specify:_____

How often do you write using this technique?

_____Always

_____Often

_____Sometimes

_____Rarely

_____Never

When was the last time you wrote using this technique?

_____Within past week

_____Within past month

_____Within past year

_____Over 1 year ago (but less than 3 years ago)

_____Over 3 years ago

_____No

Questionnaire #2—Administered at Final Exam

PLEASE COMPLETE THIS QUESTIONNAIRE (Please be honest and accurate. Your responses are kept strictly confidential. Your responses are separated from your name and all other identifying information.):

(1) What is your major? _____

(2) What is your race/ethnicity? Please mark the box or boxes that describes the race/ethnicity category with which you primarily identify:

□ **Asian:** Persons having origins in any of the peoples of the Far East, Southeast Asia, or the Indian subcontinent. This area includes, for example, China, Japan, Korea, and the Philippine Islands.

□ **Pacific Islander:** Persons having origins in any of the original peoples of the Pacific Islands. This area includes, for example, Hawaii and Samoa.

□ **African American (not of Hispanic origin):** Person having origins in any of the black ethnic groups.

□ **Hispanic:** Persons having origins in any of the Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Cultures, regardless of ethnicity.

□ **Native American or Alaskan Native**: Persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

□ **Caucasian (not of Hispanic origin):** Persons having origins in any of the original peoples of Europe, North Africa or the Middle East.

□ **Some other race:** ***PLEASE SPECIFY:*** _____

(3) Please choose a response below to indicate how much you agree with the following statement: "I enjoy writing."

_____ Strongly agree

_____ Agree

_____ Neutral

_____ Disagree

_____ Strongly disagree

(4) Please choose a response below to indicate how much you agree with the following statement: "I enjoy reading."

_____ Strongly agree

_____ Agree

_____ Neutral

_____ Disagree

_____ Strongly disagree

(5) Are you a native English speaker?

_____Yes

_____No (If No, SPECIFY your native language:_____)

PLEASE COMPLETE THIS QUESTIONNAIRE. (Please be honest and accurate. Your responses are kept strictly confidential. Your responses are separated from your name and all other identifying information.):

(6) What is the highest degree earned by your mother?

_____Less than high school

_____High school diploma or equivalency (GED)

_____Associate degree (junior college)

_____Bachelor's degree

_____Master's degree

_____Doctorate

_____Professional (MD, JD, DDS, etc.)

_____Other. SPECIFY: _____

_____I have no idea.

(7) Zip code where you grew up (5 digits):

____ ____ ____ ____ ____

(8) Previous to this current semester, have you ever done "freewriting" or "stream-of-consciousness writing" before?

_____Yes

If yes, in what context? (Check all that apply.)

_____English or Composition class

_____Creative Writing class

_____On my own

_____Other. Specify:_____

How often do you write using this technique?

_____Always

_____Often

_____Sometimes

_____Rarely

_____Never

When was the last time you wrote using this technique?

_____Within past week

_____Within past month

_____Within past year

_____Over 1 year ago (but less than 3 years ago)

_____Over 3 years ago

_____No

APPENDIX C
SCORING RUBRIC

Amendments to WIAT-III Scoring Guide--for CLN (Clinical) Essays

In general:
Look at p. 87 (or 89, 91—any of the pages with the examples of scores) of the Scoring Workbook just to familiarize yourself with the scoring structure. You do not need to write down the theses and reasons why in the Excel spreadsheet, but make these marks on the essays themselves:

- Highlight in yellow any THESIS STATEMENT you find in the Introduction or Conclusion. (The Introduction for us is the first two sentences of the essay; the Conclusion is the last two sentences of the essay.)
- Italicize the *key words* that are restated.
- Underline the Reasons.
- Highlight in blue any Elaborations.

p. 154

Replace what's in ***Information Box 1*** with the following:

A qualifying thesis statement is one that satisfies ALL of the following requirements:

- **is in the introduction of the essay (introduction = FIRST TWO sentences of essay); AND**
- **is a complete sentence; AND**
- **names a consequence of thinking about personality; AND**
- **includes at least one of these phrases: "thinking about personality" "viewing personality" "thinking that personality" "thinking of personality" "seeing personality"**

"Yes" Examples (the *qualifying phrases* are italicized; the named consequence is underlined; the thesis statement is highlighted yellow.):

- The consequence of *thinking about personality* in this way are confusion and being taken advantage of.
- *Thinking about personality* as only existing in relation [sic] other people – or as a social construct-can lead to loss of consideration for the individual.
- By *thinking of personality* as a social construct, the environment has a lot more sway on traits and the way someone acts.

- If a therapist were to give a patient treatment based on *looking at personality* as a social construct, their patient may not be getting the correct treatment.
- The consequences of *thinking about personality* in this way would be, that you have no way of understanding what the real issue may be with a person.
- If personality only exists in relation to other people, then who exactly is a person? A consequence of thinking that personality only exists in relation to others may be that nobody has their own true personality. [The 2nd sentence is the thesis statement—it's still in the beginning, even though it isn't the first sentence.]
- If a therapist were to *view m personality* solely as a social construct and not as a characteristic inside of me, he or she may tRy [sic] to help me solve my problem in a way that is only halfway beneficial to me.

"No" Examples:

- *Thinking about personality* in this way can bring a lot of consequences. [This fulfills the first three requirements, including having a qualifying phrase, but does not name a consequence, so is a No.]
- *Thinking that personality* is a social construct can have some negative effects. [This fulfills the first three requirements, including having a qualifying phrase, but does not name a consequence, so is a No.]
- *Viewing personality* as a social construct can bring about negative consequences. [This fulfills the first three requirements, including having a qualifying phrase, but does not name a consequence, so is a No.]
- Personality is a social construct, in that, we can not have characteristics to describe ourselves if we have no one to interact with us.
- I agree to some extent that personality is a social construct, only in the sense that much of the people you hang around with, such as our friends and family have a major if not then moderate effect on the way you would act.
- I would not use the word consequence. Consequence implies that it is a bad result of something boched [sic] or done wrong. I [sic] would be better to phrase it as 'difference.' As there is no real consequence between the philosophy of believing personality is a social construct vs. an inner development. There is only a difference. [This almost applies (this is the whole first paragraph), but it is not a complete sentence, and does not appear in first two sentences of essay.]
- There are many consequences in dealing with personality as a social construct. The idea that personality exists only in relation to other people raises questions concerning individuality, multiple personalities, and thoughts. [This does not include any of the qualifying phrases, so is a No. (S/he's not talking about thinking about personality, s/he's talking about dealing with it.)]
- When being told by a therapist that they *view personality* as a social construct rather than as a characteristic that exists inside the individual, consequences might occur. [Does not name a consequence.]

- Personality is a unique characteristic that every individual holds. There are many ways to interpret on how an individual obtains their personality; either by social construct or each individual having their own characteristics from birth.
- Personality can be defined in many ways. Some people believe that personality is a social construct. This means that personality traits can only exist in relation to other people. For example, you can only say that you are smart if you compare your level of intellect with another person. You can only say you are outgoing if you are thinking of people who are more passive than you are. The consequences of thinking that personality is a social construct are that the methods of therapy and psychoanalysis would be quite different. Psychologists might be more inclined to ask their patients only questions related to other people in their life. *This would be a qualifying thesis statement if it were in the beginning. Here it appears about 2/3 of the way through the essay.*
- A social construction is what society as a whole thinks. If personality was [sic] to be looked at as only a social construction, it would only be about what other people think.

p. 155

A1. Replace "body of essay" with **"anywhere other than introduction"** for this part.

Note that **ALL** of the reasons stated in the Conclusion must be restated in body of essay to get credit.

Replace examples in ***Information Box 2*** with the following examples ("**Introduction"** bolded; reasons in Intro underlined; *restated key words* italicized):

"Yes" Examples (to be a Yes, ALL of the reasons stated in the introduction must be restated in the body of the essay, using one or more of the key words):

- **Thinking about personality as only existing in relation [sic] other people – or as a social construct-can lead to *loss* of consideration for the *individual*. Social constructs are created by society commonly accepting specific morals, beliefs, and norms.** Therefore, when a society labels a specific personality trait, they are labeling it in regards to themselves as a whole, and losing the individual qualities that they lump together to label the outward behaviors.

In addition, labeling personality as a social construct undermines the internal presence of an i*ndividuals* [sic] traits. This is similar to: "if a tree falls in a forest and no one is around to hear it, does it make a sound?", in the sense that even when not interacting with people an individual does not become devoid of personality. When solitary, an individual's thought process, mood, and attitude reflects their personality, showing that personality is not purely social. The fact that viewing personality as a social construct can lead to *loss of* recognition of this internal presence could effect [sic] treatment techniques as well as research designs in regards to personality and social interaction.

Answer to A1: This is the closest to a Yes that I can find, but it's still rather gray. The "reason" that we're looking to be restated is that thinking about personality as a social construct "can lead to loss of consideration for the individual." "Loss of consideration for the individual" does not appear in toto in the body. and "consideration" does not appear again, but "undermines the internal presence of an individuals traits" and "can lead to a loss of recognition of this internal presence" seem to be restating the original reason—they have almost the same meaning as the original reason—and they restate the reason using AT LEAST ONE of the same key words ("loss" and "individual), so I'm going to count this is a Yes.

"No" Examples:

- **The consequence [sic] of thinking about personality in this way are ***confusion and being taken advantage of*****. For an example if one knew that personality was defined in a social context, one may feel confused and upset as to who they really are.** In Dr Faubers [sic] lecture, Dr. Fauber talked about a movie called case away. In this movie, a guy created a friend by drawling [sic] a face and talking to it. This man was lonely in the dessert and had no one to talk to. In this sense the man acted out his personality, or what he is used to hearing from ppl [sic] in description of his personality, to the ball. The ball was his closest friend, but when he got washed away, he felt so sad, depressed & [sic] lonely because his friend was no longer with him.

The second consequence in knowing that personality is defined as a social context it *being taken advantage of.* For an example if there are a group of friend [sic] that been friends for a long time and in highschool [sic], two of the "best friends" want to run for student body president. In knowing that personality is a social context one may destroy the others personality through jealously [sic]. One may say to the other you know I use to think your [sic]smart but I dont [sic] any more [sic]. I dont [sic] think you're adequate but for the position of being the student body president, you shouldnt [sic] run. The friend may or may not comply w/ [sic] her friends belief. If she does, she being taken advantage of her personality [sic].

Answer to A1: No. ("taken advantage of" appears in body, but "confusion" does not.) (Score for Introduction: 1 point.)

- **Viewing personality as a social construct can bring about negative consequences. Personality as a social construct leas to the *idea that people can not [sic] be viewed as individuals*.** The *idea* of *individualism can not* [sic] exist, if there is no such thing as individual personality. If

personality is based on the socal [sic] influences of others than the idea of individualism is out weighed by the concept of socialism. An individual can not [sic] present individualistic ideas without the influences of others. This idea of psychology as a social construct will force psychologist to [sic]

Answer to A1: This is a No because the consequence named in the Intro-- that people can't be viewed as individual--isn't restated, even though key words "idea" "individualism" are.

- **If a therapist were to give a patient treatment based on looking at personality as a social construct, their *patient may not be getting the correct treatment*. For example, if a therapist were to come their patients or compare them to anyone the [sic] have came [sic] in contact with recently it might not be an accurate description of who they really are.** If a therapist were to compare someone who is mean compared to someone who was not so pleasant might have had a bad day & [sic] does not want to talk to anyone. However, the person who is happy/kind might be having one of the best days & wants to talk to everyone. This is just one example of how seeing personality as a social construct might be an issue.

Answer to A1: No.
Score for Introduction: 1 point.

p. 156

Replace what's in ***Information Box 3*** with the following:

A qualifying thesis statement is one that satisfies ALL of the following requirements:

- **is in the conclusion of the essay (conclusion = LAST TWO sentences of essay); AND**
- **is a complete sentence; AND**
- **names a consequence of thinking about personality; AND**
- **includes at least one of these phrases: "thinking about personality" "viewing personality" "thinking that personality" "thinking of personality" "seeing personality"**

"Yes" Examples (the *qualifying phrases* are italicized; the named consequence is underlined; the thesis statement is highlighted yellow.):

- ... In addition, labeling personality as a social construct undermines the internal presence of an individuals [sic] traits. This is similar to: "if a tree falls in a forest and no one is around to hear it, does it make a sound?", in the sense that even when not interacting with people an individual does not become devoid of personality. **When solitary, an individual's thought process, mood, and attitude reflects their personality, showing that personality is not purely social. The fact that *viewing personality* as a social construct can lead to loss of recognition of this internal presence could effect [sic] treatment techniques as well as research designs in regards to personality and social interaction.**

- **...This would be different from the group sessions because the therapist would be able to see how the patient acts when his/her close family or friends is [sic] present. *Thinking of personality* as a social construct would completely change the way therapists evaluate their patients.**

- The consequences of thinking about personality in this way would be, that you have no way of understanding what the real issue may be with a person. Like the example given with the therapist and their patient, if they viewed personality as a social construct then their diagnosis of their patient would be flawed, because they could just attribute any emotional needs or problems to their environment or society. **This being flawed because instead of realizing that they may have a real emotional issue going on inside of them and it is not just do [sic] to society.**

Consequently if you were to *think of personality* as a social construct you are almost allowing yourself to become close-minded to other avenues to understanding a persons personality.

"No" Examples:

- **... However, the person who is happy/kind might be having one of the best days & wants to talk to everyone. This is just one example of how *seeing personality* as a social construct might be an issue.** [No consequence named.]

- Personality is a unique characteristic that every individual holds. There are many ways to interpret on how an individual obtains their personality; either by social construct or each individual having their own characteristics from birth. I believe that a therapist telling their client that personality is a social construct may have lasting affects [sic] on the client and those close to them. **I believe that this thought of social construct may cause an individual to doubt or be confused about their past and relationships with people. Also I believe that it may make the [sic] behave differently and take away from their individuality, and may make them skeptical of whom they associated with.**

- **...An individual can not [sic] present individualistic ideas without the influences of others. This idea of psychology as a social construct will force psychologist to [sic]**

- **In conclusion, we must look at personality from a broader perspective than simply a social construct. Although we are in some ways influenced by the outside world, there is also that component on the inside which makes us who we are. [sic]**

- A social construction is what society as a whole thinks. If personality was [sic] to be looked at as only a social construction, it would only be about what other people think.

Personality is indeed somewhat of a social construction, but it also defines who a person is and what they are like alone. Personality doesn't only exist around people, it exists when a person is by theirself [sic] too. As in the example in the writing prompt with the therapist and the patient, if the therapist treated the patient like their personality [sic] only as a social construction, I think it would be wrong. Personality deals with how the person thinks and feels about themself [sic], not only when they are around people.

The consequences of just looking at personality only as a social construction would be that you're missing the part of the personality of the person when they are alone**. When you are around certain people your personality changes depending on who the person is. For example [sic] you would act differently when your [sic] around a stranger, rather than your close friend.**

p. 157

A1. **Replace "body of essay" with "anywhere other than conclusion" for this part (i.e. anywhere but last two sentences).**

Note that **ALL** of the reasons stated in the Conclusion must be restated in body of essay to get credit.

Replace examples in ***Information Box 4*** with the following examples ("**Conclusion"** bolded; reasons <u>underlined</u>; *restated key words* italicized):

"Yes" Examples:

Haven't found one yet...

"No" Examples:

- Thinking about personality as only existing in relation [sic] other people – or as a social construct-can lead to loss of consideration for the individual. Social constructs are created by society commonly accepting specific morals, beliefs, and norms. Therefore, when a society labels a specific personality trait, they are labeling it in regards to themselves as a whole, and losing the individual qualities that they lump together to label the outward behaviors.

In addition, labeling personality as a social construct <u>undermines *the internal presence* of an individuals [sic] traits</u>. This is similar to: "if a tree falls in a forest and no one is around to hear it, does it make a sound?", in the sense that even when not interacting with people an individual does not become devoid of personality. **When solitary, an individual's thought process, mood, and attitude reflects their personality, showing that personality is not purely social. The fact that viewing personality as a social construct <u>can lead to loss of recognition of this internal presence</u> could <u>effect [sic] treatment techniques as well as research designs</u> in regards to personality and social interaction.**

Answer to A1: No (One reason was restated (loss of recognition of internal presence", but the other reason(s)--"treatment techniques" and "research design"—were not. "Conclusion" Score: 1 pt

- The consequences of thinking about personality in this way would be, that you have no way of understanding what the real issue may be with a person. Like the example given with the therapist and their patient, if they viewed personality as a social construct then their diagnosis of their patient would be flawed, because they could just attribute any emotional needs or problems to their environment or society. **This being flawed because instead of realizing that they may have a real emotional issue going on inside of them and it is not just do [sic] to society.**

Consequently if you were to think of personality as a social construct you are almost <u>allowing yourself to become close-minded to other avenues to understanding a persons personality.</u>

Answer to A1: No

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Here is an example of Transitions scoring (qualifying transitions underlined):

- The consequence [sic] of thinking about personality in this way are confusion and being taken advantage of. <u>For an example</u> if one knew that personality was defined in a social context, one may feel confused and upset as to who they really are. In Dr Faubers [sic] lecture, Dr. Fauber talked about a movie called case away. In this movie, a guy created a friend by drawling [sic] a face and talking to it. This man was lonely in the dessert and had no one to talk to. In this sense the man acted out his personality, or what he is used to hearing from ppl [sic] in description of his personality, to the ball. The ball was his closest friend, but when he got washed away, he felt so sad, depressed & [sic] lonely because his friend was no longer with him.

<u>The second consequence</u> in knowing that personality is defined as a social context it being taken advantage of. <u>For an example</u> if there are a group of friend [sic] that been friends for a long time and in highschool [sic], two of the "best friends" want to run for student body president. In knowing that personality is a social context one may destroy the others personality through jealously [sic]. One may say to the other you know I use to think your [sic]smart but I dont [sic] any more [sic]. I dont [sic] think you're adequate but for the position of being the student body president, you shouldnt [sic] run. The friend may or may not comply w/ [sic] her friends belief. If she does, she being taken advantage of her personality [sic].

Transitions Score = 3.

p. 162.

Where the scoring guide says "How many independent clauses in the body of the essay include key words that are restated in the introduction and/or conclusion?" If there were no consequences named in the introduction or conclusion, this part is a 0, so move to question B.

p. 163

Examples credit for restatement of key words for ***Information Box 10*** (Reasons are underlined; *key words* italicized. **Introduction** and **conclusion** in bold.)

Examples of credit for restatement of key words:

- **Thinking about personality as only existing in relation [sic] other people – or as a social construct-can lead to *loss of consideration for the individual.* Social constructs are created by society commonly accepting specific morals, beliefs, and norms.** Therefore, when a society labels a specific personality trait, they are labeling it in regards to themselves as a whole, and losing the individual qualities that they lump together to label the outward behaviors.

In addition, labeling personality as a social construct undermines the *internal presence* of an *individuals* [sic] traits. This is similar to: "if a tree falls in a forest and no one is around to hear it, does it make a sound?", in the sense that even when not interacting with people an individual does not become devoid of personality. **When solitary, an individual's thought process, mood, and attitude reflects their personality, showing that personality is not purely social. The fact that viewing personality as a social construct can lead to loss of recognition of this *internal presence* could effect [sic] *treatment techniques* as well as *research designs* in regards to personality and social interaction.**

[For (A), this is a 1, so underline the reason, as done above, then record a "1" in the Reasons Why score. But this "1" score may change—so go to A1, then to B, C, etc. until you get to "Quit the Scoring Guide."]

p. 164

Examples of qualifying topic sentences for in ***Information Box 12*** (qualifying topic sentence underlined)***:***

"Yes" Example:

- The therapist may suggest removal, addition or replacement of certain people, situations, or environments. He may suggest that I stop speaking with certain people, avoid situations and places that include people like that. He may also suggest adding more people, places and situations that have a more positive outcome on my feelings. This is similar to what we learned a few weeks ago in psychology about positive and negative reinforcement. When something good occurs you can reward that behavior with something good to promote that behavior. Similarly if something negative occuRs [sic] you can remove that person, activity or whatever the case may be in order to relieve the previously persistant [sic] emotion. An example of this could be having an itch as the negative sensation and by scratching this itch you have removed the sensation and as a result are relieved. This applies directly to the way a therapist may treat my problems at this point in time. *Although the sentence does not fulfill the requirements of being a qualifying thesis statement, it is a qualifying topic sentence.*

"No" Example:

- I think the concept of you not having a personality without people, relates more to being a leader and a follower. If you are a leader you are your own person you do things because you want to do them. A follower will do things because they think they need to do what other people are doing, and that does reflect in your personality**.** *No qualifying topic sentence here—the first sentence does not summarize the information presented in the paragraph.*

p. 170

Change (E) to read: "**Does the essay include one or more independent clauses that include the word ~~"reason"~~ "consequence" or ~~"reasons"~~ "consequences" ?"**

Change (E1) to read: "How many of the statements that include the word ~~"reason(s)"~~ "consequence(s)" clearly identify an independent clause as a reason?"

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Change (E2) to read: "Are statements that use the word ~~reason(s)~~ "consequence(s)" used effectively as the only means of presenting the student's reasons?
Yes: Continue to the next question (E3).
No: Move to question **H** (not F).

p. 172-174

Delete completely F, F1, Information Box 20, G, G1

p. 175
For (H1), if 0, move to question **K** (since I and J are deleted).

P. 176

Delete I, I1, I2, I3, and J.

Amendments to WIAT-III Scoring Guide--for SOC (Social) Essays

In general:
Look at p. 87 (or 89, 91—any of the pages with the examples of scores) of the Scoring Workbook just to familiarize yourself with the scoring structure. You do not need to write down the theses and reasons why in the Excel spreadsheet, but make these marks on the essays themselves:

- Highlight in yellow any THESIS STATEMENT you find in the Introduction or Conclusion. (The Introduction for us is the first two sentences of the essay; the Conclusion is the last two sentences of the essay.)
- Italicize the *key words* that are restated.
- Underline the Reasons.
- Highlight in blue any Elaborations.

p. 154

Replace what's in ***Information Box 1*** with the following:
A qualifying thesis statement is one that satisfies ALL of the following three requirements:

- **is in the introduction of the essay (introduction = FIRST TWO sentences of essay); AND**
- **is one complete sentence; AND**
- **names a consequence of changing attitudes to match behavior (i.e. a consequence of acting to reduce cognitive dissonance) OR/AND names one reason why the drive to reduce cognitive dissonance is or is not beneficial.**
    - **Note: Qualifying thesis statements *usually* include one of the following phrases: "consequence(s)" + "changing our attitudes" or "drive to reduce cognitive dissonance... beneficial/not beneficial... because"**

"Yes" Examples (the thesis statement is highlighted. The consequence or reason named is underlined. The *phrases that usually appear in qualifying thesis statements* are italicized.):

- *Changing our attitudes* to match our behaviors can lead to a few *consequences*, such as having a lack of inconsistency. If we are changing our attitudes to match our behaviors then what is are [sic] behaviors saying about us.
- There are many consequences when it comes to the idea of change. *Changing our attitude* creates a change in personality, and ultimately changes who we are.
- Some of the *consequences* of such behavior include that one would run the risk of engaging in the self-serving bias way of approaching new findings. This means

that one would look for information that supports this new way of thinking, even if the information is not entirely true.

- We may change who we are if we *change our attitude* to match our behavior.We are probably acting a certain way bechuse of the environment that we are in so we may not actually believe in what we are doing.
- *Changing your attitude* based on behavior can cause a person to really change the way they actually feel about things. This could be both a good thing or a bad thing depending on the environment someone is in.
- I feel that the *drive to reduce cognitive dissonance* is *beneficial because* you want your behavior to be consistent. No one wants you to act completely different all of a sudden.
- The *drive to reduce cognitive dissonance* is very *beneficial because* this way attitudes and behaviors are balanced. It is shown in psychology that a good sense of balance most often promotes a healthy mind.

"No" Examples:

- Cognitive dissonance theory states that when our behavior does not match our thoughts, we try to change our attitude to "alleviate the feeling of dissonance caused by the inconsistency." This drive however, seems to be more detrimental than anything else. [Does not give a reason.]
- There are many *consequences* to *changing our attitudes* to match our behaviors. One of which is you risk the chance of not staying true to yourself. [Gives a reason, but is not one complete sentence, so does not count as a thesis statement.]
- The *drive to reduce cognitive dissonance* is a potentially dangerous attribute. As a result of this drive, we often fail to do some of the necessary introspection that challenges our behavioral inconsistencies; potentially pushing us into a psychological acceptance of what could be destructive thought and behavioral patterns. [Again, gives a reason, but is not one complete sentence.]
- When I feel that what is in my heart does not match my actions, I do not feel at ease. For instance, I grew up in a Mennonite family in Lancaster, PA. if ever you have traveled here you would know just how simplistic and conservative the area is. [Does not explicitly state consequence.]
- The abiding need to be consistent in thought and behavior is real. People strive to have their thoughts reflect their actions flawlessly; most people.
- By *changing our attitudes* to match our behaviors we sort of do a self check on ourselves. Instead of having someone else look upon our actions and criticize them cognitive dissonance will sometimes do that for us and make us feel uneasy about what we are doing contrary to our own beliefs and being them into consciousness. [Does not name a consequence or reason explicitly.A hint that this

is a “No” is that it doesn’t contain the right combination of the qualifying phrases...it includes “changing our attitudes” but not “consequence]

- In order to alleviate the feeling of cognitive dissonance, we often times choose to *change our attitudes* to match our behavior. This drive can be immediately beneficial, but it can also have its *consequences*. [Does not name a reason for it being beneficial; does not name a consequence. Is also not in one complete sentence.]
- Humans are known for having a strong desire for abiding consistency between thought and behavior. When there is an inconsistency between our specific thoughts and behaviors, we attempt to change one of the components to alleviate any feelings of dissonance.

However, changing these components to match the other can create some serious problems of identity. Changing a behavior to match societies [sic] attitude towards that behavior keeps you from being an individual. There are always reasons for carrying out certain behaviors, they may not live up to society’s moral standards, but you do them for personal reasons. *Gives a reason, but it’s not in the first two sentences, so this is a No.*

- When changing our attitudes to match our behaviors there are going to be some consequences. In most situations the behavior of someone ends up having bad effects. *Not one complete sentence. Also, no reason/consequence named.*

p. 155

A1. Replace "body of essay" with "anywhere other than introduction" for this part.
Replace examples in ***Information Box 2*** with the following examples ("**Introduction"** bolded; reasons in Intro <u>underlined</u>; *restated key words* italicized):

"Yes" Examples (to be a Yes, ALL of the reasons stated in the introduction must be restated in the body of the essay, using one or more of the key words):

- **There are many consequences of changing our attitudes to match our behavior. The leading one would be the <u>resulting danger *to* ourselves or *others*</u>.** For example: even though people know smoking is bad, they still smoke; they change their thoughts and attitudes towards smoking in order to reflect their behavior, which puts their lives at risk. Another example is that it <u>could be harmful *to others*</u>*:* A man is a party and has been drinking, but he needs to get home so he changes his attitude toward the action to match his action. In doing so he is putting himself and everyone he comes into contact with in danger. There is cases where such drive to reduce cognitive dissonance is beneficial, but it does not go to the extreme as the negatives go. Ultimately, the drive is detrimental because you are trying to reason with yourself that something is the opposite of what it is and even though it could be positives, the dangers and negativity out weigh [sic] that.

Answer to A1: Yes. The reason in the introduction—that the leading consequence is danger to ourselves or others—is restated using at least one of the same key words ("to others")
(Score for Introduction: 2 points.)

"No" Examples:

- **Some of the consequences of such behavior include that one would <u>run the risk of engaging in the self-serving bias way of approaching new findings.</u> This means that one would look for information that supports this new way of thinking, even if the information is not entirely true.**

I think that the drive to reduce this feeling of dissonance is not beneficial because it prioritize our emotions ahead of our logic. This kind of behavior causes one to deny the reality of both the situation and of the <u>truth</u>, this of course would mean that we are lying to ourselves. In engaging in such behavior may cause for a question of other truths of beliefs that the individual might have. If one faces reality, it may hurt their feelings, but they are within atoly? ? the need to reduce dissonance by not feeling it at all.

- **There are many consequences when it comes to the idea of change. Changing our attitude creates a change in personality, and ultimately changes who we are.** Sometimes people behave in different ways when placed in different situations, yet changing our attitudes creates a shift in our identity. This drive to reduce cognitive dissonance is not beneficial, for it may lead to negative changes in attitude and well-being. People may begin to think that negative behavior may be acceptable in society.

Although we do have a constant need to be consistent in thought and behavior, constantly changing ourselves when we feel a sense of unbalance leads to instability and may lead to a loose [sic] of identity.

- **There are many *consequences* to *changing our attitudes* to match our behaviors. One of which is you risk the chance of not staying true to yourself.** By the previous statement I mean, in some cases changing your attitude about something would make things easier and seem less complicated, but in reality we seem less complicated, but in reality we as people have to face challenges to end up on top. Changing your attitude is not your gut feeling and it is something you think you should do based mainly upon what the societal norm is. Also, attitudes are how you feel about something and behavior is how you react. When you look at the two terms: behavior and attitude it is not necessary for the two to always be the same.

p. 156

Replace what's in ***Information Box 3*** with the following:

A qualifying thesis statement is one that satisfies ALL of the following three requirements:

- **is in the conclusion of the essay (conclusion = LAST TWO sentences of essay); AND**
- **is one complete sentence; AND**
- **names a consequence of changing attitudes to match behavior (i.e. a consequence of acting to reduce cognitive dissonance) OR/AND names one reason why the drive to reduce cognitive dissonance is or is not beneficial.**
    - **Note: Qualifying thesis statements *usually* include one of the following phrases: "consequence(s)" + "changing our attitudes" or "drive to reduce cognitive dissonance... beneficial/not beneficial... because"**

"Yes" Examples (the thesis statement is highlighted. The consequence or reason named is underlined. The *phrases that usually appear in qualifying thesis statements* are italicized.):

- Cognitive dissonance arises when there is an inconsistency between an attitude we have and a behavior. When this occurs we have two options: change the attitude or change the behavior. Often times, people choose to alter their attitudes because they find that to be an easier solution for their dissonance; or are unwilling or reluctant to give up the behavior for whatever reasons. This is true in the case of smokers, who continue to engage in that behavior with the knowledge, that smoking is detrimental to their health. Rather than quit smoking, they justify or rationalize the behavior by making changes to their attitude. **They may tell themselves excuses such as, smoking helps them to reduce daily stress in their lives or they have no history of smoking related illnesses in their family so they have a less of a chance of getting cancer, etc. under these circumstances *the drive to reduce cognitive dissonance* is *not beneficial because* it is encouraging the continuation of a negative behavior.**

- This *drive to reduce cognitive dissonance* is *not beneficial because* the behavior part is the part that is wrong. Actions always speak louder than words.

"No" Examples:

- **The smoker should quit smoking. The discomfort achieved from cognitive dissonance will act as a drive to quit smoking.**

- **Therefore, ultimately this drive to reduce cognitive dissonance is detrimental. That is <u>because in this effort, you are trying to reason with yourself that something is the opposites it is,</u> and even though that could be positive, the dangers and negativity weigh out the positives.** [This is a No because it spans across 2 sentences. If it had read "Therefore, ultimately this drive to reduce cognitive dissonance is detrimental because in this effort, you are trying to reason with yourself that something is the opposites it is, and even though that could be positive, the dangers and negativity weigh out the positives." then it would be a Yes.]

- **It is not likely that someone would have positive attitude and negative behaviors in which case changing their attitude would be a disadvantage for themselves and others. Generally having balanced attitudes + [sic] behaviors promotes a psychologically healthy person. similar to the id, ego and superego which all help to balance our desires with our morals so we can make good decisions.** [No consequence or reason explicitly named.]

- **The change in behavior would lead us to constantly change our attitudes for better or for worse. This *drive to reduce cognitive dissonance* may be *beneficial* in a way to alleviate the feeling of dissonance caused by inconsistency.** [The last sentence is structured almost as if it provides a reason ("to alleviate the feeling of dissonance caused by the inconsistency") but the reason is simply a restatement of part of the question. Also, a hint is that there is no "because".]

p. 157

A1. **Replace "body of essay" with "anywhere other than conclusion" for this part (i.e. anywhere but last two sentences).**
Replace examples in ***Information Box 4*** with the following examples ("**Conclusion"** bolded; reasons in Conclusion underlined; *restated key words* italicized):

"Yes" Examples:

Haven't found one yet...

"No" Examples:

- There are many consequences of changing our attitudes to match our behavior. The leading one would be the resulting danger to ourselves or others. For example: even though people know smoking is bad, they still smoke; they change their thoughts and attitudes towards smoking in order to reflect their behavior, which puts their lives at risk. Another example is that it could be harmful to others: A man is a party and has been drinking, but he needs to get home so he changes his attitude toward the action to match his action. In doing so he is putting himself and everyone he comes into contact with in danger. **There is cases where such drive to reduce cognitive dissonance is beneficial, but it does not go to the extreme as the negatives go. Ultimately, the drive is detrimental because you are trying to reason with yourself that something is the opposite of what it is and even though it could be positives, the dangers and negativity out weigh [sic] that.**

- Cognitive dissonance arises when there is an inconsistency between an attitude we have and a behavior. When this occurs we have two options: change the attitude or change the behavior. Often times, people choose to alter their attitudes because they find that to be an easier solution for their dissonance; or are unwilling or reluctant to give up the behavior for whatever reasons. This is true in the case of smokers, who continue to engage in that behavior with the knowledge, that smoking is detrimental to their health. Rather than quit smoking, they justify or rationalize the behavior by making changes to their attitude. **They may tell themselves excuses such as, smoking helps them to reduce daily stress in their lives or they have no history of smoking related illnesses in their family so they have a less of a chance of getting cancer, etc. under these circumstances the drive to reduce cognitive dissonance is not beneficial because it is encouraging the continuation of a negative behavior.**

p. 159

Here is an example of Transitions scoring (qualifying transitions underlined):

In order to alleviate the feeling of cognitive dissonance, we often times choose to change our attitudes to match our behavior. This drive can be immediately beneficial, but it can also have its consequences. The feeling of dissonance is not necessarily a bad thing, because it can help to keep a person responsible for his or her actions and to stay true to their general opinion or belief about something. When dissonance is relieved by a change in attitude, inconsistency can become more common which causes an even greater internal conflict.

Another consequence of changing our attitude to match our behavior is the act of justifying our partaking in behaviors we accept and believe to be negative or unhealthy. For example, if a person chooses to smoke a cigarette but knows it is unhealthy, after the fact they may decide to change their attitude towards smoking and chooses to justify their actions and continue to do it.

The drive to reduce cognitive dissonance can often be immediately beneficial in order to prevent the feelings that arise from inconsistent behavior, but ultimately had negative consequences.

Transitions Score = 3.

The drive to reduce cognitive dissonance is very beneficial because this way attitudes and behaviors are balanced. It is shown in psychology that a good sense of balance most often promotes a healthy mind. If someone has a negative attitude and positive behavior, they should change their attitude to be in line with their behaviors in turn creating benefits for themselves and people around them. It is not likely that someone would have positive attitude and negative behaviors in which case changing their attitude would be a disadvantage for themselves and others. Generally having balanced attitudes + [sic] behaviors promotes a psychologically healthy person. similar to the id, ego and superego which all help to balance our desires with our morals so we can make good decisions.

Transitions Score = 1.

p. 162.

Where the scoring guide says "How many independent clauses in the body of the essay include key words that are restated in the introduction and/or conclusion?" If there were no consequences/reasons named in the introduction or conclusion, this part is a 0, so move to question B.

p. 163

Examples credit for restatement of key words for ***Information Box 10*** **.**

Examples of credit for restatement of key words (Reasons are underlined; *key words* italicized. **Introduction** and **conclusion** are in bold.

- **Sometimes in life, we put on a facade to try to please others and by doing so, we lose sight of who we really are. If we try to change our attitudes to match our behavior, in many situations, we lose sight of who we are, therefore, pleasing *others* for their *benefit* and not being happy in the process.** Why should I put on a facade to please my attitude? For example, my friend is friend's with a person whom I really don't get along with. My attitude towards that person is set, that I cannot get along with them because there is something about them I just cannot stand. My friend asks me for his/her sake if I could behave in a way that will show I like their friend. Who am I benefitting? By doing so, I am losing my purpose of setting things straight and letting the friend know I don't like them, therefore, the friend will have this misconception that everything they are doing is fine because my behaviors [word illegible] so.

  Therefore, the desire to reduce cognitive dissonance is not beneficial in this situation because you should not try to change yourself to *benefit others*. **You attitude, in this situation, should match your behavior. Of course there are some situations for which you have to not match your attitude and behavior, maybe a job interview or for a family member, but overall you should not lose essence of who you are.**

[For (A), this is a 1, so underline the reason, as done above, then record a "1" in the Reasons Why score. But this "1" score may change—so go to A1, then to B, C, etc. until you get to "Quit the Scoring Guide."]

p. 164

Examples of qualifying topic sentences for in ***Information Box 12*** (qualifying topic sentence underlined)***:***

"Yes" Example:

Sometimes in life, we put on a facade to try to please others and by doing so, we lose sight of who we really are. If we try to change our attitudes to match our behavior, in many situations, we lose sight of who we are, therefore, pleasing others for their benefit and not being happy in the process. Why should I put on a facade to please my attitude? For example, my friend is friend's with a person whom I really don't get along with. My attitude towards that person is set, that I cannot get along with them because there is something about them I just cannot stand. My friend asks me for his/her sake if I could behave in a way that will show I like their friend. Who am I benefitting? By doing so, I am losing my purpose of setting things straight and letting the friend know I don't like them, therefore, the friend will have this misconception that everything they are doing is fine because my behaviors [word illegible] so.

Therefore, the desire to reduce cognitive dissonance is not beneficial in this situation because you should not try to change yourself to benefit others. You attitude, in this situation, should match your behavior. Of course there are some situations for which you have to not match your attitude and behavior, maybe a job interview or for a family member, but overall you should not lose essence of who you are.

"No" Example:

Cognitive dissonance is defined as a person's behavior and attitude not matching on a particular situation. The question to be explored on this topic is whether or not it is beneficial for people to strive to reduce their cognitive dissonance and what are some consequences of changing our attitude to match our behavior?

I believe the act of reducing cognitive dissonance is beneficial. Cognitive dissonance seems to only cause unneeded stress to an individual so reducing the dissonance is helpful. The important thing to keep in mind is that when reducing the cognitive dissonance it is important to not give in to a harmful situation and compromise an individuals [sic] morals. *[First sentence of paragraph does not summarize information presented in paragraph.]*

A perfect example of compromising oneself is when talking about smoking. Smokers know that smoking causes lung cancer and the possibility of an early death and yet they still continue to feed their addiction. In this case changing the attitude and keeping with the behavior would not be beneficial. The smoker would still continue smoking and harming their bodies which is a negative effect. I firmly agree that removing the dissonance is essential but as long as the behavior is negative the individual should not change their attitude to match. *[First sentence of paragraph does not summarize information presented in paragraph.]*

p. 170

Change (E) to read: "**Does the essay include one or more independent clauses that include the word "reason" or "consequence" or "reasons" or "consequences" ?"**

Change (E1) to read: "How many of the statements that include the word "reason(s)" or"consequence(s)" clearly identify an independent clause as a reason?"

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Change (E2) to read: "Are statements that use the word "reason(s)" or "consequence(s)" used effectively as the only means of presenting the student's reasons?
Yes: Continue to the next question (E3).
No: Move to question F, as the Scoring Guide says (not H as you would for the CLN essays).

p. 171

After F1, move to question **H** (Not G as it says in the Guide; G is deleted).

p. 173

Delete completely G, G1

Amendments to WIAT-III Scoring Guide--for DEV (Developmental) Essays

In general:
Look at p. 87 (or 89, 91—any of the pages with the examples of scores) of the Scoring Workbook just to familiarize yourself with the scoring structure. You do not need to write down the theses and reasons why in the Excel spreadsheet, but make these marks on the essays themselves:

- Highlight in yellow any THESIS STATEMENT you find in the Introduction or Conclusion. (The Introduction for us is the first two sentences of the essay; the Conclusion is the last two sentences of the essay, unless it says "In conclusion," in which case the conclusion is whatever comes after that phrase.)
- Italicize the *key words* that are restated.
- Underline the Reasons.
- Highlight in blue any Elaborations.

p. 154

Replace what's in ***Information Box 1*** with the following:
A qualifying thesis statement is one that satisfies ALL 5 of the following requirements:

- **is in the introduction of the essay (w/in FIRST TWO sentences of essay); AND**
- **is one complete sentence; AND**
- **mentions a specific trait (such as shyness or aggressiveness, or whatever), or "behavioral inhibition" or mentions a trait(s) in general—just "trait(s) or "characteristic(s)"; AND**
- **includes one of the following phrases:**
  - **the/my environment**
  - **nurture**
  - **when I was a child/toddler**
  - **as a child/toddler**
  - **growing up**
  - **my parents/siblings/relatives/teachers (or other people in a child's life); AND**
- **states a way or manner, OR an extent or degree, OR a quality or condition to answer the question:**
  - **way or manner: usually include phrases such as: "contributes... BY" "influences... BY" "played a role... BY" "shaped.. BY" any *transitive action verb* (e.g. "helped ___, encouraged ___) followed by "BY." The "by" usually indicates it's a qualifying way or manner.**

- **extent or degree: usually include phrases such as "increase ___," " decrease ___" "magnify ___ "better" "worse"**

- **describes quality or condition of environment: will include phrases such as "fun environment," "an environment filled with people"**

"Yes" Examples (the thesis statement is highlighted. The way/extent/condition named is underlined. The trait is in purple. The *phrases that usually appear in qualifying thesis statements* are italicized.):

- *An environment* which is filled with people a child's age can *decrease* shyness later in life if provided by a toddler's parents. The more practice the toddler has at meeting new people and making friends can influence the child. One great way to provide this is daycare, and preschool. It gives the child practice to the new environment of people their own age and social skills. As the child is practicing these skills he/she will feel more comfortable socially decreasing shyness.
- I think *the environment* of a child could *greatly affect their traits*. If a toddler already has shy traits to him, and his parents are constantly scolding him, he will most likely be more intimidated to speak. [Extent/degree]
- Nature and Nurture [sic] tend to work seamlessly together to produce an individuals unique traits. In the case of behavioral inhibition, although a child may be born with a tendency towards shyness, the child's upringing [sic], or *nurture*, can either *foster or discourage* the behavior.
- The *environment* might *influence* a genetically influenced trait *so that* it may make the problem *better* or perhaps even *worse*. It is truly dependent on what their inhibitive problem is (such as fear or something). [extent or degree]
- *Environment* might *influence* a genetically-influenced trait *by* the level of comfort in the place the person is interracting [sic] in. If a shy child is put into a situation with one other person, they might be more likely to be outgoing than if they were placed into a room full of other children.
- Genetically influenced traits can be stimulated by an *environment* that *causes one to act out said traits*. Someone with behavioral inhibition, when placed in a threatening environment, has that genetically influenced trait enforced by experience brought about by life situations and their environment.
- The *environment* of an individual has a *great influence on an individual's ability to express* certain traits. For example, if the individual lives in an environment where he/she were constantly being hunted, the individuals' gene for muscle development would be more active in order to help them survive, which truly is the ultimate goal of having these genetically influenced traits available. [Extent, degree; and way, manner]
- I think that the *environment* in which a child is brought up has tremendous *influence* on his or her behavioral inhibitions. First of all people are all different, and we can aim for the best and think to bring up a child with good manners. [Extent, degree]

An *environment* which is filled with people a child's age can decrease shyness later in life if provided by a toddler's parents. The more practice the toddler has at meeting new people and making friends can influence the child.

Environment plays a big role in shaping one's behavior. I think a loud environment where the toddler is always being spoken for or always being catered to will cause inhibition. [The first sentence would fulfill the requirements except it does not mention a trait specifically or in general. "Behavior" is too broad. But the second sentence qualifies.] If there ever are two qualifying thesis statements, highlight the first as the thesis statement.]

"No" Examples:

- I was tyically [sic] a [sic] outspoken person at home and shy in public. From a you [sic] age these characteristics were influenced by my environment, changing my personality.

- Nature and nurture are both credited with shaping the personalities' of and behavioris [sic] of individual people. They work co-currently in order to accomplish this.

- There are a couple of ways in which a parents or teachers of an inhibited toddler try to do to decrease later shyness. Since shyness could be considered as an abnormal behavior, parents or teachers can try to get the inhibited toddler to do more creative activities in which he/or she is interested in.

- I would consider myself as not very shy. This might have been a result of being involved in many sports and group activities starting at a young age.

- The arguement [sic] of nature vs. nurture is a long standing disagreement among psychologist. In general it has been agreed that both play a vital role in our development.

- The environment that influence our traits includes behavioral inhibition, personal experiences, and society. These three components influence the way we are and how we react to certain situations in life.

- The environment in which one grows up is just as powerful a tool for sculpting what a person will become, as the genes that they were born with. Although nature may hand someone, say a predisposition to drugs, with conditioning, [sic] their propensity for a drug addiction will never come out.

- An environment will influence a genetically-influenced trait because the two coincide. Behavioral inhibition does have more than one factor contributing to it. [This says WHY, not HOW.]

- I believe the environment can easily influence behavour [sic] and reactions. If a child was raised in a quiet environment without much visual or audio stimulation his reactions may

be withdrawn when he is faced with excitable situations. [Does not state a way/manner, condition/quality, or extent/degree.]

- If there is a shy toddler, one of the parents of [sic] teachers might get the toddler to be involved in more activities. For an example the teacher could have the toddler do tasks for him or her, like a teachers [sic] pet.
- The environment someone grows up in might influence genetically-influenced traits, such as behavarial [sic] inhibition. There are several reasons and examples to examples to explain why such things occur. [Does not state a way/manner, condition/quality, or extent/degree. (Seems to want to answer the question Why, not How.)]
- Environment plays a huge role in all of our lives. **<--Does not mention the effect on a specific TRAIT, or TRAITS in general.** For example behavioral inhibition is a genetically-influenced trait that is influenced by one's environment. **<--Does not mention way/manner, extent/degree.**
- Environment can influence development as well as genetically-influenced traits in a number of ways. A toddler who grows up in fear because of a violent or negative environment may tend to react to unfamiliar situations with fear and avoidance because that is the only way they have ever reacted to any situation. [Not one sentence.]
- When someone is born with a genetically influenced trait (nature), it is possible to use the environment (nurture) to try to change it.

p. 155

A1. Replace "body of essay" with "anywhere other than introduction" for this part.
Replace examples in ***Information Box 2*** with the following examples ("**Introduction"** bolded; reasons in Intro <u>underlined</u>; *restated key words* italicized):

p. 156

Replace what's in ***Information Box 3*** with the following:

A qualifying thesis statement is one that satisfies ALL of the following requirements:

- **is in the introduction of the essay (w/in FIRST TWO sentences of essay); AND**
- **is one complete sentence; AND**
- **includes the phrase "the/my environment" or "nurture"; AND**
- **mentions a specific trait (such as shyness or aggressiveness, or whatever), or "behavioral inhibition" or mentions a trait(s) in general—just "trait(s) or "characteristic(s)""**
- **states a <u>way or manner</u>, OR an <u>extent or degree</u>, OR a <u>quality or condtion</u> to answer the question.**
  - **<u>way or manner</u>: usually include phrases such as: "contributes... BY" "influences... BY" "played a role... BY" "shaped.. BY" any *transitive action verb* (e.g. "helped ___, encouraged ___) followed by "BY." The "by" usually indicates it's a qualifying way or manner.**
  - **<u>extent or degree</u>: usually include phrases such as "increase ___," " decrease ___" "magnify ___ "better" "worse"**
  - **describes <u>quality or condition of environment:</u> will include phrases such as "fun environment," "an environment filled with people"**

"Yes" Examples (the thesis statement is highlighted. The <u>way/extent/condition named</u> is underlined. The trait is in purple. The *phrases that usually appear in qualifying thesis statements* are italicized. Conclusion is bolded):

- ... **In conclusion, the *environment* might i*nfluence* a genetically-influenced trait *<u>by</u>* <u>causing that child to turn on the gene of fear or avoidance</u> because of how he or she was nurtured.**

"No" Examples:
These children can also become exposed to enjoyable activities and have a chance to freely interact with others in a more relaxed setting. Shyness is a trait that I believe is definitley [sic] reversible.

p. 157

A1. **Replace "body of essay" with "anywhere other than conclusion" for this part (i.e. anywhere but last two sentences).**
Replace examples in ***Information Box 4*** with the following examples ("**Conclusion"** bolded; reasons in Conclusion underlined; *restated key words* italicized):

"Yes" Examples:

Haven't found one yet...

"No" Examples:

- An *environment* which is filled with people a child's age can *decrease shyness* later in life if provided by a toddler's parents. The more practice the toddler has at meeting new people and making friends can influence the child. One great way to provide this is daycare, and preschool. It gives the child practice to the new environment of people their own age and social skills. As the child is practicing these skills he/she will feel more comfortable socially *decreasing shyness*.

Teachers can provide group work and randomly assign groups to get every student to know each other. This will allow every child to be forced to meet new people in their class. **By the time they are in college group work with strangers will seem easy and comfortable to them. With more experience children will feel more comfortable in social settings.** [Way/manner/extent/degree/quality/condition is not restated.]

- I believe the environment might influence a genetically-influenced trait, such as behavioral inhibition, because of the cooccurrence [sic] of nature and nurture. Using the example above with the level of shyness with a toddler, if a parent does not expose their child to play-dates with other children or sports where that child will learn a social behavior to become more outgoing it would increase the amount of shyness the child displays later. This child is then conditioned to be more independent rather than dependent for another's company.

As a result, when the situation or environment changes from that the child is accustomed to, it would then be in his or her nature to be fearful and having the urge to avoid uncomfortable situations, which may be with interacting with others of his or her own age.

In conclusion, the environment might influence a genetically-influenced trait <u>by causing that child to turn on the gene of fear or avoidance because of how he or she was nurtured</u>. [Way/manner/extent/degree/quality/condition is not restated (genes not mentioned.]

p. 159

Here is an example of Transitions scoring (qualifying transitions underlined):

- **I believe the environment might influence a genetically-influenced trait, such as behavioral inhibition, because of the cooccurrence [sic] of nature and nurture. Using the example above with the level of shyness with a toddler, if a parent does not expose their child to play-dates with other children or sports where that child will learn a social behavior to become more outgoing it would increase the amount of shyness the child displays later.** This child is then conditioned to be more independent rather than dependent for another's company.

As a result, when the situation or environment changes from that the child is accustomed to, it would then be in his or her nature to be fearful and having the urge to avoid uncomfortable situations, which may be with interacting with others of his or her own age.

In conclusion, the environment might influence a genetically-influenced trait by causing that child to turn on the gene of fear or avoidance because of how he or she was nurtured.

Transitions Score = 2.

- **Environment plays a big role in shaping one's behavior. I think a loud environment where the toddler is always being spoken for or always being catered to will cause inhibition.** For example [sic] if the toddler has a 5 [sic] year old sister that is pushy and never lets him speak, the toddler may become inhibited. Another example is if the toddler is always with their mother and isn't exposed to many things or people he may become afraid when he is exposed to something unfamiliar.

In order to decrease shyness a parent or teacher may give the toddler interactive things to do that may cause him to be outspoken. The support of the childs [sic] peers may also influence the child to become less inhibited. **For example [sic] if the toddler doesn't want to play with other kids, the teacher may have another toddler consistently keep going to them and trying to play. Eventually I believe that the toddler will start to become less and less afraid of unfamiliar situations.**

Transitions Score = 4.

~~p. 162.~~

Where the scoring guide says "How many independent clauses in the body of the essay include key words that are restated in the introduction and/or conclusion?" If there were no ways/manners/condition/quality/extent/degree named in the introduction or conclusion, this part is a 0, so move to question B.

p. 163

Examples credit for restatement of key words for ***Information Box 10*** **.**

Examples of credit for restatement of key words (Reasons are underlined; *key words* italicized. **Introduction** and **conclusion** are in bold. (Thesis statement highlighted yellow.)

"Yes" Examples:

Have not found any yet.

"No" Examples:

- **An environment which is filled with people a child's age can decrease shyness later in life if provided by a toddler's parents. The more practice the toddler has at meeting new people and making friends can influence the child.** One great way to provide this is daycare, and preschool. It gives the child practice to the new environment of people their own age and social skills. As the child is practicing these skills he/she will feel more comfortable socially decreasing shyness.

Teachers can provide group work and randomly assign groups to get every student to know each other. This will allow every child to be forced to meet new people in their class. **By the time they are in college group work with strangers will seem easy and comfortable to them. With more experience children will feel more comfortable in social settings.**

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Examples of qualifying topic sentences for in ***Information Box 12*** (qualifying topic sentence underlined)***:***

"Yes" Example:

Environment plays a big role in shaping one's behavior. I think a loud environment where the toddler is always being spoken for or always being catered to will cause inhibition. For example [sic] if the toddler has a 5 [sic] year old sister that is pushy and never lets him speak, the toddler may become inhibited. Another example is if the toddler is always with their mother and isn't exposed to many things or people he may become afraid when he is exposed to something unfamiliar.

In order to decrease shyness a parent or teacher may give the toddler interactive things to do that may cause him to be outspoken. The support of the childs [sic] peers may also influence the child to become less inhibited. **For example [sic] if the toddler doesn't want to play with other kids, the teacher may have another toddler consistently keep going to them and trying to play. Eventually I believe that the toddler will start to become less and less afraid of unfamiliar situations.**

"No" Example:

An *environment* which is filled with people a child's age can *decrease shyness* later in life if provided by a toddler's parents. The more practice the toddler has at meeting new people and making friends can influence the child. One great way to provide this is daycare, and preschool. It gives the child practice to the new environment of people their own age and social skills. As the child is practicing these skills he/she will feel more comfortable socially *decreasing shyness*.

Teachers can provide group work and randomly assign groups to get every student to know each other. This will allow every child to be forced to meet new people in their class. **By the time they are in college group work with strangers will seem easy and comfortable to them. With more experience children will feel more comfortable in social settings.**

I believe the environment might influence a genetically-influenced trait, such as behavioral inhibition, because of the cooccurrence [sic] of nature and nurture. Using the example above with the level of shyness with a toddler, if a parent does not expose their child to play-dates with other children or sports where that child will learn a social behavior to become more outgoing it would increase the amount of shyness the child displays later. This child is then conditioned to be more independent rather than dependent for another's company.

As a result, when the situation or environment changes from that the child is accustomed to, it would then be in his or her nature to be fearful and having the urge to avoid uncomfortable situations, which may be with interacting with others of his or her own age.

In conclusion, the environment might influence a genetically-influenced trait by causing that child to turn on the gene of fear or avoidance because of how he or she was nurtured.

p. 168

(D1) Replace D1 with: "How many independent clauses with an enumerative word/phrase give an example of a way/manner/extent/degree/quality/condition?"
Yes: "One great way to provide this is daycare, and preschool. "

p. 169

(D2)
Yes: Continue to the next question (D3).
No: Move to question **F**

p. 170

Delete E, E1, E2, E3.

p. 172
Change F to read "Does the essay include one or more independent clauses that include the phrase "that is (that's) ~~why~~ **how**" or "this is ~~why~~ **how" or "this/that's a way"** or "**example" or "instance"?**

Change F1 to read "How many independent clauses that include the phrase "that is (that's) ~~why~~ **how**" or "this is ~~why~~ **how" or "this/that's a way"** or "**example" or "instance"?** are clearly identified as a Way/manner/extent/degree/quality/condition**?**

I.e. How many independent clauses referred to by "that's a way" or "for example" have the following characteristics?

- **mentions a specific trait (such as shyness or aggressiveness, or whatever), or "behavioral inhibition" or mentions a trait(s) in general—just "trait(s) or "characteristic(s)" OR**
- **states a way or manner, OR an extent or degree, OR a quality to answer the question**

(F1) Move to question **H** (Not G as it says in the Guide; G is deleted).

p. 173

Delete completely G, G1

p. 175

(H1)
After H1, move to question **J (skip I).**

p. 176

Delete completely I, I1, I2, I3

p. 177

There is a typo in J. It should say "Add the number of ~~reasons~~ **elaborations** identified to the Elaborations score..."

p. 178

Add (L):

How many other way/manner/extent/degree/quality/condition are named as influencing a trait? It's OK if it spans across sentences.

- **mentions a specific trait (such as shyness or aggressiveness, or whatever), or "behavioral inhibition" or mentions a trait(s) in general—just "trait(s) or "characteristic(s)"" OR**
- **states a <u>way or manner</u>, OR an <u>extent or degree</u>, OR a <u>quality or condition</u> to answer the question.**
  - **<u>way or manner</u>: usually include phrases such as: "contributes... BY" "influences... BY" "played a role... BY" "shaped.. BY" any *transitive action verb* (e.g. "helped ___, encouraged ___) followed by "BY." The "by" usually indicates it's a qualifying way or manner.**
  - **<u>extent or degree</u>: usually include phrases such as "increase ___," " decrease ___" "magnify ___ "better" "worse"**
  - **describes <u>quality or condition of environment:</u> will include phrases such as "fun environment," "an environment filled with people"**

Example of a scored essay: The red highlights indicate reasons that are added at this point (L). (L) is meant to capture answers that sound like they are correct but have not been counted by any previous section. I'm counting the red highlights as a reason, even though it doesn't explicitly mention a trait, because it fits with the thesis statement (about decreasing level of shyness).

***As a toddler my parents* did a lot of things that I believe ultimately <u>helped *decrease*</u> my current level of *shyness*. My parents never used "baby language" with me.** They always referred to things by their proper name and pronunciation. At functions with friends or family, they always had me sit with the adults instead of with just the kids. This helped me become more comfortable interacting with other people. <u>I also lived in a house where agreeing to disagree was encouraged.</u> As long as I was respectful, I was encouraged to voice my opionion [sic] even if I had no chance at winning the argument. **This helped me become more comfortable in later years speaking out about my**

feelings even if there wasn't anyone else on my side. They taught me to never be ashamed of who I am and this taught me confidence.

***As a toddler my parents* did a lot of things that I believe ultimately helped *decrease* my current level of *shyness*. My parents never used "baby language" with me.** They always referred to things by their proper name and pronunciation. At functions with friends or family, they always had me sit with the adults instead of with just the kids. This helped me become more comfortable interacting with other people. I also lived in a house where agreeing to disagree was encouraged. As long as I was respectful, I was encouraged to voice my opionion [sic] even if I had no chance at winning the argument. **This helped me become more comfortable in later years speaking out about my feelings even if there wasn't anyone else on my side. They taught me to never be ashamed of who I am and this taught me confidence.**

Sentences highlighted in red have not been previously counted as a "reason."

APPENDIX D
PART A: DEMOGRAPHICS

Table 6
Demographic Characteristics of Sample used in Part A (N = 260)

Mean age (*SD*)	19.08 (2.36)
Sex	
Female	172 (66.2%)
Male	88 (33.8%)
Year	
Senior	9 (3.5%)
Junior	40 (15.4%)
Sophomore	90 (34.6%)
Freshman	121 (45.6%)
Race	
Caucasian	147 (56.5%)
African American	41 (15.8%)
Asian	28 (10.8%)
Hispanic	9 (3.5%)
Other	6 (2.3%)
Missing	1 (.3%)
Mother's Education	
Professional	3 (1.2%)
Doctorate	3 (1.2%)
Master's degree	45 (17.3%)
Bachelor's degree	64 (24.6%)
Associate degree (junior college)	23 (8.8%)
High school diploma or equivalency	98 (37.7%)
Less than high school	11 (4.2%)
Missing or Other	13 (5.0%)
SAT-V (*SD*)	511.70 (75.34)
SAT-Q (*SD*)	519.95 (75.75)
SAT-W (*SD*)	506.76 (79.83)
WIAT-III Riddles (max 35)	24.42 (4.72)
Cumulative GPA (*SD*)	2.94 (.82)
Average English course GPA (*SD*)	3.09 (.59)
FW Experience	
Yes	205 (78.8%)
No	55 (21.2%)
Missing	0
Teaching Assistant	
TA1	83 (31.9%)
TA2	96 (36.9%)
TA3	81 (31.2%)

Note: *SD* = standard deviation

APPENDIX E
PART A ADDITIONAL ANALYSES

Proportion of Big Words

Table 7
Proportion of Big Words (6 or more letters): The Effects of Drafting Condition

	Model 1 (Main effects)			Model 2 (Main effects + Interaction effects)		
	Coeff.	t-Ratio		Coeff.	t-Ratio	
Essay Level						
Personal Focus	-2.65	-6.50	**	-1.99	-2.47	*
Final Draft	1.19	5.90	**	1.00	3.18	**
Student Level						
Intercept	24.08	21.26	**	23.84	19.68	**
Freewriting	-1.18	-2.03	*	-1.29	-1.15	
Polished Draft	.77	1.38		1.51	1.93	
English 25th percentile	-.06	-.09		-.11	-.15	
English 50th percentile	.39	.47		.31	.37	
English 75th percentile	.16	.22		.11	.16	
Missing on English	.20	.30		.22	.33	
SAT-W 25th percentile	-.73	-.98		-.61	-.81	
SAT-W 50th percentile	-.37	-.49		-.30	-.39	
SAT-W 75th percentile	-.26	-.38		-.19	-.28	
Missing on SAT-W	.25	.36		.35	.51	
V-IQ 25th percentile	-.75	-1.17		-.76	-1.19	
V-IQ 50th percentile	-.27	-.42		-.26	-.40	
V-IQ 75th percentile	-.94	-1.41		-.94	-1.42	
Course grade[a]	1.13	3.88	**	1.13	3.86	**
Number of essays written[a]	-.34	-.70		-.31	-.65	
FW experience	-.06	-.10		-.09	-.16	
Female	.16	.32		.16	.32	
Minority	-.26	-.52		-.26	-.53	
Missing on Race	-.07	-.07		-.06	-.06	
Mother college degree	.70	1.54		.69	1.52	
Missing on Mother ed.	.28	.20		.23	.16	
Teaching Assistant 2	.34	.59		.32	.56	
Teaching Assistant 3	-.09	-.15		-.07	-.12	

Table 7, continued

FW X Personal Focus				-.71	-.65
PD X Personal Focus				-1.18	-.17
FW X Final Draft				.92	1.75
PD X Final DRaft				-.28	-.66
Personal Focus Random effect					
Level 1 Variance R	13.93			13.85	
Level 2 Variance U0	9.65	**		9.75	**
Proportion Reduction in Variance (Baseline = Model 1)					

Notes: M = 909 essays and N = *270* participants.
All variables uncentered unless otherwise noted.
a. Variable centered on grand mean.
*p<.05; **p<.01

Proportion of "Cause" Words

Table 8
Proportion of "Cause" Words: The Effects of Drafting Condition

	Model 1 (Main effects)			Model 2 (Main effects + Interaction effects)		
	Coeff.	t-Ratio		Coeff.	t-Ratio	
Essay Level						
Personal Focus	-.24	-1.26		.02	.07	
Final Draft	.13	1.45		.07	.46	
Student Level						
Intercept						
Freewriting	-.61	-2.96	**	-.73	-2.24	*
Polished Draft	-.06	-.29		.33	.96	
English 25th percentile	-.40	-1.36		-.41	1.38	
English 50th percentile	-.27	-.97		-.31	-1.09	
English 75th percentile	-.34	-1.21		-.36	-1.28	
Missing on English	-.11	-.46		-.10	-.41	
SAT-W 25th percentile	-.22	-.68		-.15	-.49	
SAT-W 50th percentile	-.78	-2.69	**	-.75	-2.59	*
SAT-W 75th percentile	-.55	-1.90		-.52	-1.80	
Missing on SAT-W	-.61	-2.12	*	-.55	-1.94	
V-IQ 25th percentile	.31	1.21		.30	1.18	
V-IQ 50th percentile	.06	.25		.06	.26	
V-IQ 75th percentile	.43	1.71		.43	1.73	
Course grade[a]	-.34	-2.95	**	-.34	-2.95	**
Number of essays written[a]	.16	.83		.18	.91	
FW experience	-.52	-2.16	*	-.53	-2.18	*
Female	.22	1.12		.22	1.10	
Minority	-.11	-.59		-.11	-.58	
Missing on Race	-.51	-1.44		-.51	-1.45	
Mother college degree	.37	2.08	*	.37	2.08	*
Missing on Mother ed.	.00	.00		-.02	-.04	
Teaching Assistant 2	.31	1.44		.30	1.42	
Teaching Assistant 3	.09	.39		.10	.42	
FW X Personal Focus				-.18	-.39	
PD X Personal Focus				-.58	-1.19	
FW X Final Draft				.40	1.78	
PD X Final DRaft				-.21	-1.01	
Level 1 Variance R	3.76					
Level 2 Variance U0	.94	**				

Table 8, continued

Proportion Reduction in Variance (Baseline = Model 1)

Notes: *M* = 909 essays and N = *270* participants.
All variables uncentered unless otherwise noted.
a. Variable centered on grand mean.
*p<.05; **p<.01

Table 9.
Ratio of Past Tense Verbs to All Verbs: The Effects of Drafting Condition

	Model 1		
	Coeff.	t-Ratio	
Essay Level			
Personal Focus	.06	4.58	**
Final Draft	.00	.25	
Student Level			
Intercept	.14	4.54	**
Freewriting	-.02	-1.81	
Polished Draft	-.01	-.44	
English 25th percentile	.02	.74	
English 50th percentile	.01	.56	
English 75th percentile	.01	.53	
Missing on English	-.00	-.33	
SAT-W 25th percentile	-.03	-1.43	
SAT-W 50th percentile	-.04	-2.19	*
SAT-W 75th percentile	-.02	-1.32	
Missing on SAT-W	-.03	-1.71	
V-IQ 25th percentile	.02	1.09	
V-IQ 50th percentile	-.01	-.35	
V-IQ 75th percentile	-.01	-.35	
Course grade[a]	.00	.57	
Number of essays written[a]	-.00	-.36	
FW experience	-.02	-1.09	
Female	-.01	-1.03	
Minority	-.01	-.59	
Missing on Race	.01	.30	
Mother college degree	-.01	-.85	
Missing on Mother ed.	.02	.51	
Teaching Assistant 2	.01	.69	
Teaching Assistant 3	.00	.16	
Level 1 Variance R	.010		
Level 2 Variance U0	.006	**	

Notes: *M* = 909 essays and N = *270* participants.
All variables uncentered unless otherwise noted.
a. Variable centered on grand mean.
*p<.05; **p<.01

Table 10.
Ratio of Present Tense Verbs to All Verbs: The Effects of Drafting Condition

	Model 1		
	Coeff.	t-Ratio	
Essay Level			
Personal Focus	-.05	-2.86	**
Final Draft	-.01	-1.46	
Student Level			
Intercept	.69	17.3	
Freewriting	.05	3.05	**
Polished Draft	-.01	-.45	
English 25th percentile	-.04	-1.44	
English 50th percentile	.00	.00	
English 75th percentile	-.02	-.74	
Missing on English	.00	.07	
SAT-W 25th percentile	.03	1.23	
SAT-W 50th percentile	.04	1.68	
SAT-W 75th percentile	.01	.49	
Missing on SAT-W	.06	2.30	*
V-IQ 25th percentile	-.02	-1.02	
V-IQ 50th percentile	.00	.03	
V-IQ 75th percentile	.01	.54	
Course grade[a]	-.01	-1.56	
Number of essays written[a]	.00	.39	
FW experience	.01	.52	
Female	.01	.47	
Minority	-.01	-.71	
Missing on Race	-.01	-.41	
Mother college degree	-.00	-.05	
Missing on Mother ed.	-.03	-.75	
Teaching Assistant 2	-.00	-.19	
Teaching Assistant 3	.02	.97	
Level 1 Variance R	.019		
Level 2 Variance U0	.009	**	

Notes: *M* = 909 essays and N = *270* participants.
All variables uncentered unless otherwise noted.
Variable centered on grand mean.
*p<.05; **p<.01

Table 11. *Ratio of Future Tense Verbs to All Verbs: The Effects of Drafting Condition*

	Model 1		
	Coeff.	t-Ratio	
Essay Level			
Personal Focus	-.01	-.87	
Final Draft	.01	1.69	
Student Level			
Intercept	.16	6.95	
Freewriting	-.03	-2.36	*
Polished Draft	.01	1.13	
English 25th percentile	.02	1.33	
English 50th percentile	-.01	-.71	
English 75th percentile	.01	.44	
Missing on English	.00	.28	
SAT-W 25th percentile	-.01	-.27	
SAT-W 50th percentile	-.00	-.17	
SAT-W 75th percentile	.01	.64	
Missing on SAT-W	-.03	-1.53	
V-IQ 25th percentile	.00	.20	
V-IQ 50th percentile	.01	.36	
V-IQ 75th percentile	-.01	-.35	
Course grade[a]	.01	1.59	
Number of essays written[a]	-.00	-.11	
FW experience	.01	.69	
Female	.01	.56	
Minority	.02	1.66	
Missing on Race	.00	.11	
Mother college degree	.01	1.05	
Missing on Mother ed.	.01	.41	
Teaching Assistant 2	-.01	-.53	
Teaching Assistant 3	-.02	1.55	
Level 1 Variance R	.011		
Level 2 Variance U0	.004	**	

Notes: M = 909 essays and N = *270* participants.
All variables uncentered unless otherwise noted.
a. Variable centered on grand mean.
*p<.05; **p<.01

Table 12
Proportion of Positive Emotion Words: The Effects of Drafting Condition

	Model 1		
	Coeff.	t-Ratio	
Essay Level			
Personal Focus	.05	2.27	*
Final Draft	.00	.09	
Student Level			
Intercept	.42	7.56	
Freewriting	-.01	-.44	
Polished Draft	-.01	-.52	
English 25th percentile	.04	1.21	
English 50th percentile	.03	.71	
English 75th percentile	.03	.91	
Missing on English	.04	1.24	
SAT-W 25th percentile	.10	2.44	*
SAT-W 50th percentile	.07	1.70	
SAT-W 75th percentile	.08	2.03	*
Missing on SAT-W	.07	2.19	*
V-IQ 25th percentile	.04	1.51	
V-IQ 50th percentile	.08	2.86	**
V-IQ 75th percentile	.04	1.04	
Course grade[a]	.01	.42	
Number of essays written[a]	-.00	-.05	
FW experience	.03	.90	
Female	-.01	-.26	
Minority	-.02	-.70	
Missing on Race	.04	1.06	
Mother college degree	-.00	-.19	
Missing on Mother ed.	.05	.89	
Teaching Assistant 2	.01	.50	
Teaching Assistant 3	-.00	-.95	
Level 1 Variance R	.056		
Level 2 Variance U0	.015	**	

Notes: *M* = 909 essays and N = *270* participants.
All variables uncentered unless otherwise noted.
a. Variable centered on grand mean.
*p<.05; **p<.01

Table 13.
Proportion of Negative Emotion Words: The Effects of Drafting Condition

	Model 1		
	Coeff.	t-Ratio	
Essay Level			
Personal Focus	-.07	-3.09	**
Final Draft	-.16	-1.41	
Student Level			
Intercept	.57	10.37	
Freewriting	.01	.50	
Polished Draft	.01	.50	
English 25th percentile	-.06	-1.67	
English 50th percentile	-.05	-1.38	
English 75th percentile	-.05	-1.44	
Missing on English	-.06	-1.97	
SAT-W 25th percentile	-.11	-2.64	**
SAT-W 50th percentile	-.07	-1.87	
SAT-W 75th percentile	-.09	-2.23	*
Missing on SAT-W	-.07	-2.14	*
V-IQ 25th percentile	-.03	-1.04	
V-IQ 50th percentile	-.07	-2.43	*
V-IQ 75th percentile	-.04	-1.15	
Course grade[a]	-.00	-.02	
Number of essays written[a]	.01	.48	
FW experience	-.03	-1.13	
Female	.01	.56	
Minority	.02	.70	
Missing on Race	-.04	-1.05	
Mother college degree	.02	.76	
Missing on Mother ed.	-.02	-.28	
Teaching Assistant 2	-.02	-.65	
Teaching Assistant 3	-.00	-.19	
Level 1 Variance R	.051		
Level 2 Variance U0	.016	**	

Notes: *M* = 909 essays and N = *270* participants.
All variables uncentered unless otherwise noted.
a. Variable centered on grand mean.
*p<.05; **p<.01

Proportion of "I" words

Table 14
Proportion of First Person Singular Pronouns ("I" words): The Effects of Drafting Condition

	Model 1		
	Coeff.	t-Ratio	
Essay Level			
Personal Focus	7.61	21.65	**
Final Draft	-.53	-3.73	**
Student Level			
Intercept	-.68	-.92	
Freewriting	.12	.28	
Polished Draft	.19	.48	
English 25th percentile	.66	1.3	
English 50th percentile	.72	1.32	
English 75th percentile	.79	1.31	
Missing on English	.62	1.27	
SAT-W 25th percentile	-.15	-.26	
SAT-W 50th percentile	-.49	-.90	
SAT-W 75th percentile	-.69	-1.32	
Missing on SAT-W	-.37	-.71	
V-IQ 25th percentile	.93	1.96	
V-IQ 50th percentile	.25	.59	
V-IQ 75th percentile	.18	.37	
Course grade[a]	-.13	-.58	
Number of essays written[a]	.53	1.27	
FW experience	.79	1.79	
Female	.40	1.00	
Minority	.48	1.34	
Missing on Race	.21	.28	
Mother college degree	-.32	-.88	
Missing on Mother ed.	-.29	-.41	
Teaching Assistant 2	.13	.31	
Teaching Assistant 3	.40	.95	
Level 1 Variance R	9.22		
Level 2 Variance U0	4.76	**	

Notes: *M* = 909 essays and N = *270* participants.
All variables uncentered unless otherwise noted.
a. Variable centered on grand mean.
*p<.05; **p<.01

Proportion of "We" Words

Table 15
Proportion of First Person Plural Pronouns ("We" words): The Effects of Drafting Condition

	Model 1		
	Coeff.	t-Ratio	
Essay Level			
Personal Focus	-1.13	-5.38	**
Final Draft	.16	1.59	
Student Level			
Intercept	1.56	2.91	**
Freewriting	.48	1.58	
Polished Draft	.12	.46	
English 25th percentile	-.12	-.37	
English 50th percentile	-.45	-1.38	
English 75th percentile	.13	.33	
Missing on English	.12	.37	
SAT-W 25th percentile	.51	1.22	
SAT-W 50th percentile	.55	1.69	
SAT-W 75th percentile	.37	.88	
Missing on SAT-W	.70	1.85	
V-IQ 25th percentile	-.42	-1.07	
V-IQ 50th percentile	-.36	-1.14	
V-IQ 75th percentile	.06	.15	
Course grade[a]	-.13	-.72	
Number of essays written[a]	-.40	-1.24	
FW experience	-.10	-.33	
Female	.44	1.90	
Minority	-.20	-.69	
Missing on Race	-.26	-.60	
Mother college degree	.47	1.81	
Missing on Mother ed.	-.31	-1.03	
Teaching Assistant 2	-.79	-3.05	
Teaching Assistant 3	.10	.31	
Level 1 Variance R	4.67		
Level 2 Variance U0	2.45	**	

Notes: *M* = 909 essays and N = *270* participants.
All variables uncentered unless otherwise noted.
a. Variable centered on grand mean.
*p<.05; **p<.01

APPENDIX F
PART B: DEMOGRAPHICS

Table 16

Demographic Characteristics of Sample used in Part B (N=77)

Mean age (*SD*)	19.04 (1.29)
Sex	
Female	51(66.2%)
Male	26 (33.8%)
Year	
Senior	2 (2.6%)
Junior	14 (18.2%)
Sophomore	30 (39.0%)
Freshman	28 (36.4%)
Race	
Caucasian	35 (45.5%)
African American	14 (18.2%)
Asian	12 (15.6%)
Hispanic	3 (3.9%)
Other	3 (3.9%)
Missing	10 (13.0%)
Mother's Education	
Professional	1 (1.3%)
Doctorate	1 (1.3%)
Master's degree	15 (19.5%)
Bachelor's degree	16 (20.8%)
Associate degree (junior college)	5 (6.5%)
High school diploma or equivalency	31 (40.3%)
Less than high school	1 (1.3%)
SAT-V (*SD*)	503.40 (73.59)
SAT-Q (*SD*)	510.40 (62.53)
SAT-W (*SD*)	503.80 (65.24)
WIAT-III Riddles (max 35)	24.01 (4.90)
Course grade *(SD)*	2.40 (.92)
Cumulative GPA (*SD*)	2.83 (.69)
FW Experience	
Yes	54 (70.1%)
No	18 (23.4%)
Missing	5 (.06%)
Teaching Assistant	
TA1	28 (36.4%)
TA2	26 (33.8%)

TA3	23 (29.9%)

APPENDIX G
PART B ADDITIONAL ANALYSES

Main effects – PD-C is reference category

Table 17
Overall Essay Quality: Main Effects of Condition (Reference Group is Polished Draft-Control)

	Model 1 (Main effects)		
	Coeff.	t-Ratio	
Essay Level			
Freewriting-Control (F-C)	-.03	-.11	
Freewriting-Treatment (F-T)	-.33	-1.56	
Polished Draft-Treatment (P-T)	-.09	-.43	
Personal Focus	-.38	-3.02	**
Student Level			
Intercept	.12	.71	
English 25th percentile	-.87	-3.38	**
English 50th percentile	-.71	-2.48	*
English 75th percentile	-.26	-.96	
Missing on English	-.53	-2.52	*
SAT-W 25th percentile	-.34	-1.10	
SAT-W 50th percentile	-.29	-.91	
SAT-W 75th percentile	.19	.67	
Missing on SAT-W	-.45	-1.87	
V-IQ 25th percentile	.11	.52	
V-IQ 50th percentile	.24	1.11	
V-IQ 75th percentile	.20	.90	
Missing on V-IQ	-.14	-.35	
Course grade[a]	-.03	-.28	
Number of essays written[a]	.01	.08	
FW experience	.15	.83	
Missing on FW experience	-.51	-1.81	
Female	-.06	-.44	
Minority	.20	1.21	
Missing on Race	.01	.04	

Table 17, continued

Mother college degree	.07	.49	
Missing on Mother ed.	.17	.71	
Teaching Assistant 2	.36	1.95	
Teaching Assistant 3	.70	3.02	**
Level 1 Variance R	.68		
Level 2 Variance U0	.15	.03	

Notes: *M* = 178 essays and N = *77* participants.
All variables uncentered unless otherwise noted.
a. Variable centered on grand mean.
*p<.05; **p<.01

Non-significant Interaction Effects

Table 18. FW X Experience Interaction. The effect of freewriting did not differ depending on whether or not the student had had prior experience freewriting.

Table 18.
Overall Essay Quality: The Effects of Condition x FW-Experience

	Model 1 (Interaction effects)	
	Coeff.	t-Ratio
Essay Level		
Freewriting-Treatment (F-T)	-.13	-.38
Polished Draft-Control (P-C)	.06	.21
Polished Draft-Treatment (P-T)	-.04	-.16
Personal Focus	-.39	-3.08
Student Level		
Intercept	.33	.72
English 25th percentile	-.88	-3.33
English 50th percentile	-.73	-2.48
English 75th percentile	-.29	-1.02
Missing on English	-.55	-2.43
SAT-W 25th percentile	-.35	-1.11
SAT-W 50th percentile	-.29	-.93
SAT-W 75th percentile	.19	.66
Missing on SAT-W	-.45	-1.86
V-IQ 25th percentile	.11	.49

Table 18, continued

V-IQ 50th percentile	.23	1.08
V-IQ 75th percentile	.20	.90
Missing on V-IQ	-.10	-.26
Course grade[a]	-.04	-.34
Number of essays written[a]	.01	.12
FW experience	.19	.81
Missing on FW experience	-.33	-.94
Female	-.05	-.38
Minority	.21	1.23
Missing on Race	.00	.00
Mother college degree	.08	.51
Missing on Mother ed.	.15	.62
Teaching Assistant 2	.36	1.95
Teaching Assistant 3	.70	3.00
F-T X FWexper	-.16	-.47
F-T X Missing FW experience	-.39	-.88
Level 1 Variance R	.69	
Level 2 Variance U0	.15	*

Notes: *M* = 178 essays and N = *77* participants.
All variables uncentered unless otherwise noted.
a. Variable centered on grand mean.
*p<.05; **p<.01

Condition x Essay Focus. Table 19 shows no effect of a Condition x Essay Focus interaction on essay quality. Thus, the disadvantage experienced by a student writing an essay with a personal focus does not differ depending on which condition the student is in. These results can also be interpreted as indicating that the effects of FW and PD are the same regardless of essay focus.

Table 19
Overall Essay Quality: The Effects of Condition x Focus (Reference group is Freewriting-Control group)

	Model 1 (Interaction effects)	
	Coeff.	t-Ratio
Essay Level		
Freewriting-Treatment (F-T)[a]	-.30	-1.21
Polished Draft-Control (P-C)[a]	.00	.31
Polished Draft-Treatment (P-T)[a]	-.20	-.62
Personal Focus[a]	-.43	.18

Table 19, continued

Table 19, continued

Student Level			
Intercept	.46	.90	
English 25th percentile	-.86	-3.35	**
English 50th percentile	-.71	-2.51	*
English 75th percentile	-.29	-1.10	
Missing on English	-.55	-2.59	*
SAT-W 25th percentile	-.40	-1.18	
SAT-W 50th percentile	-.32	-1.01	
SAT-W 75th percentile	.18	.65	
Missing on SAT-W	-.49	-2.06	*
V-IQ 25th percentile	.11	.51	
V-IQ 50th percentile	.23	1.09	
V-IQ 75th percentile	.19	.89	
Missing on V-IQ	-.14	-.31	
Course grade	-.05	-.42	
Number of essays written	-.01	-.09	
FW experience	.12	.64	
Missing on FW experience	-.53	-1.65	
Female	-.06	-.39	
Minority	.18	1.08	
Missing on Race	-.04	-.21	
Mother college degree	.07	.44	
Missing on Mother ed.	.16	.60	
Teaching Assistant 2	.37	1.92	
Teaching Assistant 3	.72	3.05	**
F-T X Personal Focus	.01	.02	
P-C X Personal Focus	-.22	-.48	
P-T X Personal Focus	.31	.70	
FW Treatment Random Effect			
Level 1 Variance R	.69		
Level 2 Variance U0	.15	*	

Notes: *M* = 178 essays and N = *77* participants.
All variables centered on grand mean unless otherwise noted.
a. Variable uncentered.
*p<.05; **p<.01