

THE INTERNET AND SYMBOLIC SELF-COMPLETION: A
SOCIAL INFLUENCE PERSPECTIVE

by

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ABSTRACT

The current research examined whether or not the Internet functions as a plane of social reality onto which symbolic self-completion attempts can be directed. Previous research (Borcherding and Schumacher, 2007; Harmon-Jones, Schmeichel, and Harmon-Jones, 2009) suggested that individuals do engage in symbolic self-completion on the Internet, however, this is the first attempt to experimentally capture the effect. The current study was a 2(completeness: incomplete vs. complete) x 2(interruption: interrupted vs. not interrupted) factorial design. We predicted that individuals who were given false feedback designed to elicit feelings of an incomplete self-definition would respond differently than individuals who were not given false feedback to two subsequent opportunities to complete their self-definition. It was also predicted that individuals who were given false feedback in the incomplete condition would respond differently to the second opportunity to complete their self-definition after being interrupted during their first opportunity. A total of 85 (17 male, 68 female) undergraduate students completed the study. Contrary to predictions, there were no main effects for either state of completeness or interruption, nor were there any interaction effects. Suggested modifications in the research design of future related studies are presented and discussed.

LIST OF ABBREVIATIONS AND SYMBOLS

α	Cronbach's index of internal consistency
F	Fisher's <i>F</i> ratio: A ratio of two variances
M	Mean: the sum of a set of measurements divided by the number of measurements in the set
SD	Standard deviation, the average deviation of scores from the mean
N	Sample size for the whole study
n	Sample size for a group or condition within a study
<i>p</i>	Probability of a Type 1 error. Less than .05 is typically acceptable.
<	Less than
=	Equal to

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INTRODUCTION

“It’s nice to feel like an expert, that someone values the knowledge that has become everyday for you...I get a kick out of feeling competent.” (Wasko and Faraj, 2000, p. 166)

Have you ever wondered why some people assume the role of an expert on any given topic as soon as they log into their favorite Internet forum, regardless of whether they are actually an expert or not? One explanation might be that these people are trying to complete their self-definition through the symbols associated with the definition, one of which is the ability to influence others. Wicklund and Gollwitzer (1982) developed the theory of symbolic self-completion, which is defined by Wicklund and Gollwitzer (1982, p. 89) as “a concept which states that people define themselves as musicians, athletes, etc. by use of indicators of attainment in those activity realms, such as possessing a prestigious job, having extensive education, or whatever is recognized by others as indicating progress toward completing the self-definition. The self-completion idea postulates that when important symbols—indicators of self-definition—are lacking, the person will strive after further, alternative symbols of the self-definition.” Wicklund and Gollwitzer (1981, p. 92) further state that “...central here, is that these goals are defined by interacting with others (Mead 1934), and that the sense of progress toward the goal requires social recognition.” The current research project investigated whether or not the Internet suffices as a plane of social reality onto which people can direct their symbolic self-completion efforts via attempted influence. Participants were given the opportunity to display their authority in a particular area of interest by helping people new to the area of interest on the Internet in the form of Frequently Asked Questions (FAQs) and an essay.

Symbolic Self-Completion

Wicklund and Gollwitzer based their theory in part upon Lewin's (1926) work on goal-oriented behavior, which states that people who are making an attempt to achieve a self-definition do not cease their efforts when presented with information regarding their incompleteness in the area of self-definition. Instead, in an attempt to bolster their self-definition, people engage in a behavior referred to as self-symbolizing. Self-symbolizing is defined as an attempt on individuals' parts to engage in activities that substitute for the incomplete aspects of their self-definition. For instance, a young student who aspires to be a successful and wealthy entrepreneur might find the self-definition of "entrepreneur" he or she is striving for to be incomplete when reminded that he or she has yet to complete business school. In an effort to feel more complete in the self-definition of entrepreneur to which he or she aspires, the student may engage in self-symbolizing behavior. This behavior might manifest itself by the student purchasing an expensive watch--a symbol often associated with wealthy entrepreneurs. This example describes the use of a "status symbol" as a symbol of self-completion, but other symbols of self-completion exist, such as diplomas, titles, occupational position, membership in selective groups, and attempts to influence others via one's authority (Wicklund and Gollwitzer, 1981).

A key component to the theory of symbolic self-completion is that the individual who is incomplete in an area of self-definition must be actively pursuing the self-definition in question in order for self-symbolizing to occur (Wicklund and Gollwitzer, 1981; Gollwitzer et al., 1982). In a set of studies, subjects who were no longer seeking to complete a self-definition did not make an attempt to substitute another symbol in place of their lack of educational background.

Thus, it may be inferred that symbolic self-completion does in fact depend upon the finding of Lewin's (1936) studies, which concluded that continued attempts at achieving a self-definition are dependant upon the individual striving toward the goal of self-definition in question.

Wicklund and Gollwitzer (1982) also drew upon Cooley (1902) and Mead's (1934) work on symbolic interactionism. According to the theory of symbolic interactionism, there exists a need for others to acknowledge individuals' attempts at self-definition. For instance, a study conducted by Gollwitzer (1986) gave women the opportunity to express their self-definition of "mother" by writing an essay. Women whose essays were thrown away before they could be shared with others persisted in further self-symbolizing since they were told that nobody was witness to their first attempts at completing a self-definition. Maher (1933) stated that self-definitional goals must exist on the "plane of social reality," in that self-symbolizers do not care to whom their efforts are directed, as long as somebody witnesses these efforts.

Furthermore, Baumeister (1982) has hypothesized that one method of self-presentation is actually "self-constructive" in that it is motivated by a desire to convince others that the individual is indeed achieving their ideal selves. This means that individuals' self-presentation may sometimes involve more than efforts to please an audience. Gollwitzer and Wicklund (1985) demonstrated that male subjects who had been made to feel incomplete in an area of self-definition neglected to follow an attractive female's preference for men who described themselves in a self-deprecating manner. These men rated the female as attractive, yet instead of responding to her preference for self-deprecation, they boasted of their competence in the target area in an attempt to self-symbolize back into a state of completeness. Men undertook this aggrandizing behavior and in the process alienated the attractive female to whom they were

talking. Men who had not been made to feel incomplete responded to cues indicating the female's preference for a self-description that was not boastful in nature. In a similar experiment, Gollwitzer, Wicklund and Hinkle (1982) showed that participants who were interrupted during writing an essay describing their expertise in an area of self-definition were more likely to ignore a future experimenter request to provide negative self-descriptions. Individuals who are made to feel their self-definition is complete will disregard social norms in an attempt to self-symbolize into a state of completeness.

Symbolic self-completion via attempted social influence

Another way individuals may engage in self-symbolizing behavior is by attempting to influence others in the area of self-definition, since convincing others of one's competence in a self-definitional area is an effective method for expanding the social reality of one's self-definition. Wicklund and Gollwitzer (1982) demonstrated that participants who had lower levels of education and training in the areas to which they claimed competence were most likely to attempt to influence others in the area in which they defined themselves. For example, a violinist who lacks formal violin training will take the opportunity to teach a new violin player in an attempt to symbolically self-complete, since being acknowledged by another individual as a being a skilled enough violin player to be a "teacher" provides validation in an attempt to assuage the incompleteness felt due to a lack of formal violin training.

The Self on the Internet

On the Internet, individuals have the option of remaining anonymous during their interactions with others, and may feel that what they say and do on the Internet will be only a blip in the infinite amount of interactions taking place online (McKenna and Bargh, 2000). This anonymity allows for greater levels of identity construction when interacting with others as

opposed to face-to-face interactions. When there is a lack of non-verbal cues for how to proceed in a social interaction, such as is often the case in computer-mediated communication (CMC), individuals' anonymity may lead to behavior that is more self-centered and less regulated than it might be in a comparable face-to-face situation (Sproull and Kiesler, 1986).

Computer-mediated communication is often considered to be an impoverished form of communication (McKenna and Bargh, 2000). Individuals, both heavy and light email users are unable to discern the correct gender of the authors of messages (Savicki, Kelly and Oesterreich, 1999; Guadagno and Cialdini, 2002). Guadagno and Cialdini (2002; 2007) also reported that people have difficulty interacting in computer-mediated communication because they lack cues other's social status (attire, posture, age, etc.). People tend to take advantage of the lack of nonverbal cues and present idealized versions of themselves when interacting with others who they do not know on the Internet. McKenna and Bargh (1999), conducted a study that revealed participants were more successful at presenting idealized versions of their self when interacting with unknown others in a chat room; thus, it may be that the Internet, more so than face-to-face communication, allows individuals to present and be perceived in an idealized manner. Furthermore, Wallace (1999), Vazire and Gosling (2004) and Gosling, Gaddis and Vazire (2007), have found that individuals use both their personal websites and their Facebook profiles to offer to the public both an idealized version of the self, as well as their "true" self.

Helping behavior on the Internet

Offering help, and having your help deemed by others as competent, in Internet interactions can have rewarding psychological effects for individuals (Butler, Sproull, Kiesler and Kraut, 2002). Newsgroups and forums are places on the Internet where users are self-organized and topics relevant to the group are discussed in public for all who visit the website to

see (Wasko and Faraj, 2000). Members of these newsgroups and forums report many beneficial effects of their participation in these Internet communities, to include tangible rewards (more information on the Internet in specific topics), and intangible rewards (satisfaction and self-actualization) (Wasko and Faraj, 2000). Estimates of the number of people who participate in such activities do not take into account the number of “lurkers” who read the discussions but never actually post questions, answers, or comments. It has been demonstrated that Internet health related support groups have a lurker population of approximately 46%, while software-support discussion lists have a lurker population of approximately 82% (Nonnecke and Preece, 2000).

Members of open-source software support groups have also been studied (Lakhani and von Hippel, 2003). Open source software is software that is provided to the public free of charge, and as such, the software has no paid staff to support users who make use of the software. The people who help users who are having difficulty with software are often volunteers who donate their time and expertise to helping others via Internet message boards (Bosu, Carver, Guadagno, Bassett, McCallum, & Hochstein, 2011). Lakhani and von Hippel (2003) found that these volunteer support staff members reported satisfaction at the image and reputation enhancing benefits of being an active member of an Internet support staff, and that posting the individual’s name along with their posts enhanced these feelings.

Social influence on the Internet

In discussion groups on the Internet, authors of posts need to convey authority with their messages. Cialdini (2009) states that individuals may defer to a “believe an expert” heuristic when making decisions. Many of the traditional non-verbal cues that people look for to determine a person’s level of authority and expertise (dress, demeanor, gestures, etc.) are absent

in computer-mediated communication (Galegher, Sproull and Kiesler, 1998; Guadagno & Cialdini, 2005). Thus, when offering advice to others on the Internet, it may be difficult for individuals to convince others that they are a person whose opinion should be believed and given respect. However, in their study, Dubrovsky, Kiesler and Sethna (1991) found that members of a face-to-face group given a negotiation task displayed conventional patterns of influence during a discussion, such that those of higher status were more assertive, possessed higher levels of expertise, and were viewed as being more credible by lower status members. Similarly, Okdie, Guadagno, Petrova, and Shreves (2011, June) found that authority was an ineffective influence appeal when attempting to gain compliance via CMC, however, in computer-mediated communication condition where participants negotiated via email, this patterns' strength was lessened, and reversed in some cases. For instance, Galegher, Sproull and Kislner (1998) found that individuals in discussion forums often cite scientific articles and personal anecdotes to lend their statements authority, but they also found that these appeals to scientific expertise and personal experience were not always sufficient when making an attempt to convince others of an argument.

Symbolic Self-Completion on the Internet

In this research, we intend to determine whether or not the Internet suffices as what Maher (1933) refers to as the “plane of social reality” onto which participants must direct their symbolic self-completing efforts. This study used Internet “frequently asked questions” and an essay as a platform for participants to direct their symbolic self-completion efforts. Frequently asked questions, or FAQs, are a common feature of Internet based discussion groups; they provide direction to a community’s discussions and often times provide ready answers to common questions asked by new members of a group (Sproull, Conley, and Yun Moon, 2005).

McKenna and Bargh (2000) state that the Internet is a realm where individuals may feel more free to try out new identities, and that having these identities recognized by others on the Internet may serve the purpose of making the identity real to the individual (Gollwitzer, 1986).

Previous correlational research has demonstrated that people operate under the same symbolic self-completion goals on the Internet as they do in face-to-face interactions (Borcherding and Schumacher, 2002; Harmon-Jones, Schmeichel, and Harmon-Jones 2009). This study will provide an experimental test of this research. Borcherding and Schumacher (2002) and Harmon-Jones, Schmeichel, and Harmon-Jones (2009) investigated whether or not the Internet works as a plane of social reality for symbolic self-completion efforts. These studies both demonstrated that people do spontaneously engage in symbolic self-completion via the Internet, both on their web pages and in their email signatures. Specifically, Borcherding and Schumacher (2002) demonstrated that social science and philosophy (S&P) majors viewed undergrads majoring computer and math (C&M) as being competent in their studies, but not skilled in interpersonal relations, while the C&M students viewed themselves as adept in both areas. There was no discrepancy between the two groups of students regarding their ratings of the technical and interpersonal skills of the S&P students. The researchers posited that C&M students, as opposed to S&P students, would take the opportunity to engage in symbolic self-completion via their personal websites by posting personal items such as pictures and links to material they found interesting that was unrelated to school. The researchers found that C&M students were significantly more likely than S&P students to post private and personal information on their home websites, to include pictures of funny events or moments with friends and family. If individuals seem to spontaneously engage in symbolic self-completion on the Internet, then the phenomenon might be captured in an experimentally manipulated lab setting.

Harmon-Jones, Schmeichel, and Harmon-Jones (2009) reported similar findings when they investigated university departments' and individual professors' publication records as compared to their home pages and email signatures, respectively. In their first study, the researchers used the National Resource Council (NRC)'s rankings of doctoral degree programs to establish a departments' status. The NRC is a council whose mission is to be "the nation's pre-eminent source of high-quality, objective advice on science, engineering, and health matters" (The National Academies, 2012). This study demonstrated that departments with lower NRC rankings displayed more of their faculty's professional titles on their departmental home pages. In line with the predictions of Symbolic Self-Completion theory, the inverse was true for departments that had a high NRC ranking. In their second and third studies, the researchers compared individual faculty members' research productivity with the signatures attached to their emails gathered through a psychology department and the SPSP list serve. The SPSP list serve is an email based discussion group comprised of members of the Society for Personality and Social Psychology. Their findings were once again consistent with predictions derived from Symbolic Self-Completion theory -- faculty with a higher number of publications/citations were less likely to display professional titles in their email signatures, while the opposite was true for faculty with fewer publications/citations.

THE PRESENT STUDY

The purpose of the current study was to replicate and expand the symbolic self-completion work of Wicklund and Gollwitzer -- specifically their 1981 article that investigated social influence as a method of symbolic self-completion. The results of this study will have practical implications in that it has been demonstrated in the past that those with the least amount of education or training in a given area are also those most likely to attempt to influence people in an attempt at symbolic self-completion (Wicklund and Gollwitzer, 1982). People who possess many enduring symbols of their competence are unlikely to feel the need to engage in self-symbolizing (Wicklund and Gollwitzer, 1981). This is problematic on the Internet, which is a medium that is said to be impoverished (Sproul and Kiesler, 1998), and devoid of many of the non-verbal cues (McKenna and Bargh, 2000) that clue people in to someone's actual level of expertise and trustworthiness. Also, individuals on the Internet are bombarded by a larger and more diverse variety of attempts at persuasion through SPAM, pop-up ads, personal websites, etc., with many of these persuasive messages coming from sources of unknown credibility (Flanagin and Metzger, 2000). Thus, there exists a problem if people who are the most inadequately educated or trained are finding outlets on websites where people may be more apt to believe their claims. On the positive side, if the Internet is a sufficient plane of reality onto which symbolic self-completion efforts can be directed, then it may be that interacting with others on the Internet allows an individual the chance to change and solidify a wished for self-identity, which leads to increased feelings of self worth (McKenna and Bargh, 1998).

Hypotheses

Based on the literature reviewed above, we expect that participants who are made to feel incomplete in their area of self-definition will write longer essays, report more pleasure at having their essay posted on the Internet, and will feel that their essay should be viewed as more helpful and accurate as opposed to those in the complete condition (H1). Next we expect that participants in the incomplete and interrupted condition will write longer essays, report more pleasure at having their essay posted on the Internet, and will feel that their essay should be viewed as more helpful and accurate as opposed to those in the incomplete and uninterrupted condition. However, participants in the complete/interrupted and complete/uninterrupted conditions will not differ significantly in their essay length, pleasure at having their essay posted on the Internet, or opinions of their essay's helpfulness and accuracy (H2).

Table 1

Predictions by Completeness and Interruption

		Completeness	
		Complete (Expert)	Incomplete (Beginner)
Interruption	Interrupted	(-)	(++)
	Not Interrupted	(-)	(+)

**Predictions are in the same direction for all dependent measures, to include essay length, pleasure at FAQ and essay being posted on the Internet, and ratings of helpfulness and accuracy.*

METHODOLOGY

Design

The experimental design of this study was a 2 (completeness: complete vs. incomplete) x 2 (interruption: interrupted vs. not interrupted) between-subjects factorial design. Participants were given false feedback regarding their education and training in their self-nominated area of expertise (expert or beginner), and this feedback constituted the complete and incomplete self-definition variable. Participants were then interrupted or not interrupted during an attempt to complete their self-definition via writing a set of FAQs, which will provide the interrupted and non-interrupted variable. All participants were then given the opportunity to write an essay on their area of expertise. The dependent measures were the length of a follow up essay participants wrote, the content of the essay (i.e. personal pronouns), and participants' reported opinions on how pleased they are at their essay being posted on the Internet. Furthermore, participants were asked to rate how helpful and accurate they thought their essay was, as well as how helpful and accurate they believe others would find their essay. Finally, in order to rule out possible alternative explanations, a set of individual difference measures was gathered prior to participants' arrival in the lab, and then again after his or her in-lab participation was completed.

Participants

Participants were recruited from the University of Alabama subject pool in exchange for partial course credit. A total of 85 (17 men, 68 women) students completed the study. The ethnicity of the sample was as follows: 71.8% Caucasian, 20% African American, 3.5% Asian, 1.2% Native American, 3.5% Other. The mean age was 19.22 years ($SD = 3.05$).

Procedure

Participants logged into the University of Alabama's online participant pool to sign up for the experiment. This study had two parts, the first of which was completed from a computer of the participant's choice, and the second part was conducted in the laboratory. In order to complete part one, participants were given a link to a website where they completed a batch of surveys selected by the researchers to measure individual differences. After the first part of the study was completed, participants had the opportunity to sign up for the second part of the study, which was conducted face to face in a research lab. The research material was presented via two computer programs: a program called Riddle Me This (Loewald, 2009), and a software program that was created for the purposes of the study in order to capture the FAQs and essays participants wrote. The second piece of software that was designed specifically for this study was created in such a way that it would stop working at a particular screen if needed. This "crash" feature was used as to create the interruption in the study's design.

Trained research assistants conducted part two of the study in lab. These research assistants conducted the study as dictated by a script and protocol prepared by the researcher (see Appendix A). Participants were first directed to a screen that informed them of their rights as participants and the risks and benefits of the study. If they chose to participate in the study after reading their rights as participants, then they were then asked to enter the email address they used in signing up for the experiment so that course credit could be awarded to them as outlined by the University of Alabama's psychology department requirements. All participants were treated according to the ethical guidelines set forth by the American Psychological Association (American Psychological Association, 2002) and the University of Alabama Internal Review Board approved this study.

Participants were then instructed to specify an activity in an area in which they are especially competent, (e.g. basketball player, musician, biologist). In keeping with previous research (Wicklund and Gollwitzer, 1981; Gollwitzer, Wicklund and Hilton, 1982; and Gollwitzer and Wicklund, 1985), this spontaneously nominated area of expertise was considered an area in which a participant's self-definition exists, and an area in which participants should be motivated to symbolically self-complete. To assess participants' commitment to this activity, time since their last engagement in the activity was measured. This information was crucial in determining whether or not the motivation to be complete in the area is currently relevant to the participant. Finally, participants were then asked the number of years of formal training or education they have in their area of self-definition. In actuality, participants were randomly assigned to the beginner (incomplete) or expert (complete) condition of the study, however they were told that the computer program used the information they gave about the length of formal training or education in order to assign them to a condition (see Appendix B).

After data about participants' self-nominated area of expertise and their training and experience in this area were assessed, participants were informed that the purpose of this study was to investigate the types of help people who are experts and novices may give on the Internet. At this point, the first manipulation in the study appeared on the computer screen. Participants were told that they either do (complete condition) or do not (incomplete condition) have sufficient training and experience to write the FAQs. Participants in the complete condition were told their FAQs would be assigned to the "expert" section of the alleged study, and participants in the incomplete condition were told their FAQs would be assigned to the "beginner" section of the alleged study. Participants then reached a computer screen where they were instructed to get the researcher so that a website publishing program could be launched on the computer.

At this point, the second manipulation was introduced into the study. Participants were then randomly assigned to one of two conditions: a condition where the researcher finds the website creating software either does not work (interrupted), or a condition where the website creating software does work (uninterrupted). Participants in the uninterrupted condition were then given 20 minutes to complete their FAQs (see Appendix C). Participants in the interrupted condition were taken into another room and given an alternate task where they are asked to sort and count a large batch of colored paper clips. Participants in the interrupted condition were asked to count and sort paperclips in order to keep them occupied for the 20 minutes that participants in the uninterrupted condition spent writing their FAQs. Paperclip counting and sorting was chosen as an alternate task because it kept participants occupied while not allowing a potential confound of them to complete their self-definition. This alternate task was given under the guise of helping another researcher in the department and was purposely benign in nature so that participants would remain in the experimentally induced state. Participants were told to sort and count the paperclips while the researcher attempted to contact someone in order to get help resolving the software issue.

After 20 minutes passed, the researcher stopped the interrupted participants who were sorting and counting paper clips and told them that the software had been fixed. All participants were then presented with instructions stating that they are to write a short, instructional essay for people who are interested in becoming involved in the area in which the participant claimed special competence (see Appendix D). All participants were told that this essay would be posted on the Internet on the same site as the FAQs. After completing the essay, participants were instructed to complete the dependent measures and were then fully debriefed.

Manipulation Checks

Completeness. Participants were given a multiple choice question that asked which completeness condition they were assigned to in order to ensure that participants noticed and remembered the completeness condition to which they were assigned (beginner or expert). The question was multiple choice and read as follows: “Were you assigned to the Beginner or Expert section of AskBama?”

State Self Esteem Scale. The State Self Esteem Scale (Heatherton and Polivy, 1991) (See Appendix E) was included in both parts of the study, at the beginning and at the end of part two of the study. This measure was included to assess whether or not individual differences affected the manipulation, and to assess whether or not the manipulation differentially affected participant’s state self esteem at the conclusion of part two. The scale has three subscales: Performance, e.g. “I feel confident about my abilities”; Appearance, e.g. “I feel satisfied with the way my body looks right now”; and Social, e.g. “I am worried about whether I am regarded as a success or failure.” The subscales had varying amounts of reliability pretest: Performance $\alpha = .82$, Appearance $\alpha = .78$, Social $\alpha = .82$, and post test: Performance $\alpha = .66$, Appearance $\alpha = .67$, Social $\alpha = .75$.

Positive and Negative Affect Schedule. The PANAS (Watson & Clark, 1988) (See Appendix F) was included as a manipulation check to assess whether or not participants who were told they were a beginner or who were interrupted had higher levels of negative affect or lower levels of positive affect. There are two ten item subscales included within the scale, and each had high reliability: Positive Affect, $\alpha = .79$, and Negative Affect $\alpha = .77$.

Research Assistant Coding for Finished Essay. A number of participants (11.8%) stated that they misunderstood the instructions during the essay-writing portion of the study. In order

to determine if any other participants may have had the same confusion but not stated their confusion, two research assistants who were not involved in conducting the study were asked to independently rate whether or not the essays read as if the author finished what he or she intended to say.

Research Assistant Quality Rating. Since the directions given to the participants regarding the essay writing portion of the experiment were unclear, a third method of analyzing the content of the essay was devised in addition to rating it for whether or not it was finished and its word count. The same two research assistants, who were asked to code the essay for whether or not it was complete, were also asked to give the essay a grade of poor, fair, or good. These quality ratings were completed with the intent to use as a potential covariate or dependent measure.

Individual Difference Measures

Big Five Short Measure. The Big Five Short Measure (Gosling, Renfrow and Swann, 2003) (See Appendix G) was included in part one of the study as a measure of individual differences to be used as potential covariates. The Big Five Short Measure consists of five subscales that were moderately reliable: Extraversion $\alpha = .67$, Agreeableness $\alpha = .23$, Conscientiousness $\alpha = .58$, Neuroticism (Emotional Stability) $\alpha = .51$, Openness $\alpha = .39$.

Self Concept Clarity Scale. The Self Concept Clarity Scale (Campbell, Trapnell, Heine, Katz, Lavalley and Lehman, 1996) (See Appendix H) was included in part one of the study to assess whether or not individual levels of self concept clarity affected participants' acceptance or belief in the false feedback provided about their level of expertise in their self nominated area. The scale had high reliability, $\alpha = .89$.

Contingencies of Self-Worth Scale. The Contingencies of Self-Worth Scale (Crocker, Luhtanen, Cooper and Bouvrette, 2003) (See Appendix I) was included as a potential covariate. The subscales had high reliability: Family Support $\alpha = .74$, Competition $\alpha = .77$, Appearance $\alpha = .70$, God's Love $\alpha = .97$, Academic $\alpha = .63$, Virtue $\alpha = .79$, Approval $\alpha = .67$.

Rosenberg Self Esteem Scale. The Rosenberg Self Esteem scale (Rosenberg, 1965) (See Appendix J) was included for use as potential covariate to determine whether or not those with higher or lower levels of trait self esteem responded differently to the manipulations in the study. This scale's reliability was high, $\alpha = .80$.

Ongoing commitment. Previous research (Wicklund and Gollwitzer, 1981; Gollwitzer, Wicklund and Hilton, 1982; and Gollwitzer and Wicklund, 1985) demonstrated that ongoing commitment is essential to the process of symbolic self-completion, in that individuals must have an ongoing commitment to the self-defined goal in order for the manipulation of self-definition completeness to have its intended effect. This variable was measured by the following question: "Have you engaged in this activity or spent time learning about the subject within the LAST 14 DAYS?"

Dependent Measures

Ask Bama Essay Attitudes. A six-item scale was developed to assess participants' attitudes toward Ask Bama (See Appendix K). Participants were asked about the helpfulness and accuracy of their essay (both how helpful and accurate they thought it was and how helpful and accurate others would think it was). Additionally, participants were asked how pleased they were that their essay was going to be published on Ask Bama and whether or not they intended to use Ask Bama.

RESULTS

Manipulation Checks

State Self Esteem. A 2(completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) factorial ANOVA was conducted to test for differences in state self esteem at the conclusion of the study. This analysis tested whether or not the experimental manipulation had an effect on participants' state self-esteem. The State Self Esteem scale (Heatherton and Polivy, 1991) has three subscales: performance, appearance, and social. Analyses were conducted on each individual subscale. For performance, the analysis revealed no significant main effect for completeness $F(1, 81) = .03, p = .87$, nor interruption $F(1, 81) = .82, p = .37$. Nor was there a significant interaction between the two variables, $F(1, 81) = .001, p = .98$. For the subscale of appearance, the analysis revealed no significant main effect for completeness $F(1, 81) = .76, p = .39$, nor interruption $F(1, 81) = .34, p = .56$. There interaction between the two variables was not significant, $F(1, 81) = .13, p = .72$. Finally, for the subscale of social, the analysis revealed a significant main effect for completeness $F(1, 81) = 4.40, p = .04$. Participants in the incomplete condition ($M = 3.83, SD = .79$) had higher scores on the social subscale of the State Self Esteem scale than participants in the complete condition ($M = 3.50, SD = .66$). This effect was not predicted, and not expected based on theory. No significant main effect for interruption was revealed, $F(1, 81) = 2.83, p = .01$. Finally, the interaction between the two variables on the social subscale were not significant, $F(1, 81) = .45, p = .51$.

PANAS. A 2(completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) factorial ANOVA was conducted to test for differences in positive and negative

affect at the conclusion of the study in order to test whether or not the experimental manipulation had an effect on participants' mood. For total positive affect, the analysis revealed no significant main effect for completeness $F(1, 81) = .50, p = .48$, nor interruption $F(1, 81) = .43, p = .51$. There interaction between completion and interruption was not significant $F(1, 81) = .86, p = .36$. For total negative affect, the analysis revealed no significant main effect for completeness, $F(1, 81) = .01, p = .95$, nor interruption $F(1, 81) = .31, p = .58$. The interaction effect of the two variables was not a significant, $F(1, 81) = .01, p = .94$.

Research Assistant Complete Essay Ratings. Due to an issue in the research design, not all participants finished their essays beyond the introductory paragraph. To address this issue, two research assistants were given the task of rating whether or not essays seemed to be complete, in that the author finished what he or she was trying to say. The research assistants' ratings of completeness had an interrater reliability of $r = .96, p < .001$. A 2(completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) factorial ANOVA was conducted to test for differences in research assistant's ratings of whether or not the essay seemed to be finished. The analysis revealed no significant main effect for completeness $F(1, 66) = .61, p = .44$, nor interruption $F(1, 66) = .38, p = .54$. There was not a significant interaction between the two variables, $F(1, 81) = .51, p = .48$.

Research Assistant Quality Ratings. Two research assistants were tasked with rating the essay's quality on a scale of 0 (poor), 1 (fair), 2 (good). The two research assistants' ratings of essay quality had an interrater reliability of $r = .73, p < .001$. A 2(completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) factorial ANOVA was conducted to test for differences in research assistants' ratings of essay quality. The analysis revealed no significant main effect for completeness $F(1, 66) = 2.94, p = .09$, nor interruption $F(1, 66) = .02$

, $p = .88$. There was not a significant interaction between the two variables, $F(1, 81) = .009$, $p = .92$.

Individual Difference Measures.

Individual Difference Measures. Participants were randomly assigned to conditions in the study in order to minimize the impact of individual differences. However, we still included a set of individual difference measures in order to test for any influence they may have had upon the dependant variables of interest. Analyses of the Big Five Short Measure, Self Concept Clarity Scale, Contingencies of Self-Worth Scale, Rosenberg Self Esteem Scale for use as a covariates revealed that these measures had no impact upon the dependent variables of interest, and therefore they were not used as covariates in the main analyses.

Ongoing commitment. The analyses revealed that overall, the variable of ongoing commitment had no impact upon the dependent variables of interest, and therefore it was not used as an independent variable in analysis.

Main Analyses

Essay Length. Exploratory data analysis revealed no effects for gender on the variables of interest; therefore all analyses were conducted collapsed across gender. A 2(completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) factorial ANOVA was conducted to examine the data for differences in essay word counts. The analysis revealed no such differences: there was no significant main effect for completeness $F(1, 81) = .27$, $p = .60$, nor interruption $F(1, 81) = .19$, $p = .66$; nor a significant interaction effect, $F(1, 81) = .04$, $p = .85$. The means by condition are presented in Table 1.

Table 2

Mean essay length by Interruption and Completeness (N = 85)

Condition	Beginner			Expert		
	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Interrupted	177.59	152.50	17	190.29	184.19	14
Not Interrupted	187.00	173.53	21	213.76	157.77	33

Mean numbers represent total number of words written in the essay

Pleasure at essay being posted on the Internet. A 2(completeness: Beginner vs. Expert) x 2(Interruption: Interrupted or Not Interrupted) factorial ANOVA was conducted to test for differences in how pleased participants were to know that their essay was to be posted on Ask Bama. The analysis revealed no significant main effect for completeness $F(1, 81) = .40, p = .78$, nor interruption $F(1, 81) = .08, p = .78$. There was not a significant interaction between the two variables, $F(1, 81) = .14, p = .71$. These means are presented in Table 2.

Table 3

Mean ratings of "How pleased are you that your essay will be published on Ask Bama?" by Interruption and Completeness (N = 85)

Condition	Beginner			Expert		
	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Interrupted	5.59	2.42	17	6.07	2.09	14
Not Interrupted	5.90	2.23	21	6.03	1.86	33

Mean ratings on a scale from 1 (*Extremely un* ___) to 7 (*Extremely* ___)

Participant ratings of essay helpfulness. A 2(completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) factorial ANOVA was conducted to test for differences in how helpful participants thought their essay was and how helpful they thought others would view their essay. For the analysis of how helpful they thought their essay was,

there was no significant main effect for completeness, $F(1, 81) = .06, p = .80$, nor interruption $F(1, 81) = .42, p = .52$. There was not a significant interaction between the two variables, $F(1, 81) = .09, p = .77$. These means are presented in Table 3. For the analysis of how helpful participants thought others would think their essay was, there was no significant main effect for completeness, $F(1, 81) = .47, p = .49$, nor interruption $F(1, 81) = .010, p = .92$. There was not a significant interaction between the two variables, $F(1, 81) = .73, p = .39$. These means are presented in Table 4.

Table 4
Mean ratings of “How helpful do you think your essay is?” by Interruption and Completeness (N = 85)

Condition	Beginner			Expert		
	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Interrupted	4.94	1.20	17	4.93	1.49	14
Not Interrupted	5.05	1.60	21	5.21	1.08	33

Mean ratings on a scale from 1 (*Extremely un* ___) to 7 (*Extremely* ___)

Table 5
Mean ratings of “How helpful do you think others will think your essay is?” by Interruption and Completeness (N = 85)

Condition	Beginner			Expert		
	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Interrupted	4.82	1.47	17	5.29	1.44	14
Not Interrupted	5.05	1.43	21	5.00	1.06	33

Mean ratings on a scale from 1 (*Extremely un* ___) to 7 (*Extremely* ___)

Participant ratings of essay accuracy. A 2(completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) factorial ANOVA was conducted to test for

differences in how accurate participants thought their essay was and how accurate they thought others would view their essay. For the analysis of how accurate they thought their essay was, there was no significant main effect for completeness, $F(1, 81) = .46, p = .50$, nor interruption $F(1, 81) = .46, p = .50$. There was not a significant interaction between the two variables, $F(1, 81) = .58, p = .50$. These means are presented in Table 5. For the analysis of how accurate participants thought others would think their essay was, there was no significant main effect for completeness, $F(1, 81) = .37, p = .54$, nor interruption $F(1, 81) = 2.40, p = .13$. There was not a significant interaction between the two variables, $F(1, 81) = 2.37, p = .13$. These means are presented in Table 6.

Table 6

Mean ratings of “How accurate do you think your essay is?” by Interruption and Completeness (N = 85)

Condition	Beginner			Expert		
	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Interrupted	4.76	1.56	17	5.14	1.09	14
Not Interrupted	5.14	1.20	21	5.12	.86	33

Mean ratings on a scale from 1 (*Extremely un*__) to 7 (*Extremely* __)

Table 7

Mean ratings of “How accurate do you think others will think your essay is?” by Interruption and Completeness (N = 85)

Condition	Beginner			Expert		
	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Interrupted	4.29	1.31	17	4.79	1.05	14
Not Interrupted	5.00	.89	21	4.79	.86	33

Mean ratings on a scale from 1 (*Extremely un* ___) to 7 (*Extremely* ___)

LWIC. The Linguistic Inquiry Word Count (LIWC; Pennebaker, Francis, & Booth, 2001). was used to investigate participants’ levels of focus on the self as displayed by their word choice in their essay. A 2(completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) factorial ANOVA was conducted to test for differences in the percentage of personal pronouns to total number of words participants wrote in their essay. There was no significant main effect for completeness, $F(1, 81) = .40, p = .53$. However, there was a significant main effect for interruption $F(1, 81) = 11.64, p = .001$. Participants in the not interrupted condition used a significantly higher percentage of personal pronouns than those in the interrupted condition, which is surprising since those individuals had already had the opportunity to write about their topic area during the FAQ section. The interaction was not significant between the two variables, $F(1, 81) = .20, p = .66$. These means are presented in

Table 8

Ratio of personal pronouns to total words written in essay by Interruption and Completeness (N = 85)

Condition	Beginner			Expert		
	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Interrupted	4.19	2.96	17	4.32	3.73	14
Not Interrupted	6.30	2.80	21	7.07	3.11	33

Ratings are a ratio of pronouns to total words.

DISCUSSION

Overall, the findings from the study did not support my hypotheses that the Internet might suffice as a plane of social reality onto which symbolic self-completion efforts can be directed. Previous research was successful in manipulating the completeness in one's self-definition, as measured by differences in participants' attempts to compensate for the incompleteness (Wicklund and Gollwitzer, 1981; Gollwitzer, Wicklund and Hilton, 1982; and Gollwitzer and Wicklund, 1985). The current study was unable to replicate this main effect. Participants who were told that they did not have enough training or experience to have their FAQs and essay posted in the Expert (complete) section of the website and would instead have their content placed in the Beginner (incomplete) section did not differ from those who were told they did in fact have enough training to have their content placed in the Expert section of Ask Bama. There were no significant main effects for completeness on either number of words wrote in the essay although it was expected that Beginners (incomplete) would write more in an attempt to complete their self-definition. There were also no main effects for completeness on ratings of pleasure at having one's content posted on the Internet, or of the accuracy and helpfulness of their essays, although Beginners (incomplete) were expected to rate their essays as more helpful and accurate than Experts (complete).

The current study was also unable to replicate interactions between completeness and interruption as demonstrated in previous research (Wicklund and Gollwitzer, 1981; Gollwitzer, Wicklund and Hilton, 1982; and Gollwitzer and Wicklund, 1985). Those who were told they were Beginners (incomplete), and then interrupted during the process of writing their FAQs

should have written more words than any of the four possible conditions. However, this was not the case. It was also expected that participants who were assigned to the Beginner (incomplete) and interrupted condition would be the most pleased that their essay would be posted on the Internet and have the highest ratings of their essay's accuracy and helpfulness. However, there was no significant interaction for completeness and interruption on any of these dependent measures.

The present study was unable to replicate either prior experimentally manipulated studies of symbolic self-completion (Wicklund and Gollwitzer, 1981; Gollwitzer, Wicklund and Hilton, 1982; and Gollwitzer and Wicklund, 1985) or correlational studies of symbolic self-completion on the Internet (Borcherding and Schumacher, 2002; Harmon-Jones, Schmeichel, and Harmon-Jones, 2009). There are many potential reasons why the current study was unsuccessful: perhaps the study's methodology was not designed or executed in a way that the effect could be captured, or it may be that the Internet does not suffice as a plane of social reality onto which symbolic self-completion efforts can be directed. This area of research is too new to draw a conclusion.

Expanding with the ideas presented above, there were several issues with the methodology in the study that may have led to the failure to reject the null hypotheses. For instance, eleven percent of participants indicated to the research assistants or in the follow up questions presented to them on the computer that the essay instructions (Appendix D) were not clear and that they would have written more if they had understood the instructions better. The instructions were as follows: "Please write a general introduction to whatever it is you're writing about." It seems as if participants interpreted these instructions as prompting them to write the introductory paragraph to a five-paragraph essay, which is a common writing style

taught in high school. For example, these are quotes (misspelling left unaltered) from two participants regarding the essay instructions. *“The prompt for the essay could be worded better. I got confused and thought when it said ‘general introduction’ that I was supposed to write an introduction to the essay, and that I would write the rest of the essay after clicking the ‘Next’ button.”* *“When I was writing the essay it said write the introduction so that's all I did. I would've written more, I just thought when I hit next it would take me to where I wrote the body paragraphs.”* Although we were able to determine that 11% of participants misunderstood the instructions, there is no way to know how many additional participants misunderstood but did not state their confusion. Two research assistants were tasked with reading the essays and coding them as either finished or unfinished. These research assistants were not told the purpose of the coding. They were given the following instructions, “Is the essay complete? Does the essay read as if it is "finished," or does it seem that the author had more to say?” The research assistants’ coding indicated that more than the stated 11% of participants misunderstood the instructions. One research assistant coded 35.7% of the essays as unfinished, and the other research assistant coded 24.3% of the essays as unfinished. Therefore, the main dependent measure, the essay word count, was compromised as a measure of participants’ attempts to symbolically self-complete by acting as an authority on their topic area while teaching others.

Another potential issue with the study’s methodology is both the software and the research assistants explicitly told participants that their FAQs and essay were to be published in either the beginner or expert section of AskBama.com. For instance, research assistants told participants specifically, *“Oh, you are in the beginner/expert section. I will need to label your FAQs and essay that way.”* By making a concentrated effort to ensure that participants were aware that their content was to be published in either the beginner or expert sections of

AskBama.com, there may have been an unexpected effect of participants accepting the label of beginner or expert and writing their content in a way that was consistent with that label.

Previous research by Guadagno and Burger (2007), demonstrated that participants who were high in helpful and honest self concept clarity were more receptive to false feedback regarding their helpfulness and honesty, and demonstrated this receptiveness by acting and thinking of themselves as more helpful and honest. By labeling participants as beginners or experts, those who were high in self concept clarity in their self nominated area of competence, relative to those who were low in their area, may have accepted the label and wrote their content accordingly, in the manner of either an expert or beginner. There is no way to test this explanation, however, since a general measure of self-concept clarity was administered prior to participants arrival in the lab, instead of a self-concept clarity measure that asked specifically about the clarity of their self-concept in the self nominated area of competence. Also problematic is that it may have been the case that participants who were told their content would be placed in the expert section of AskBama.com may have been intimidated by the expert audience their content was to have, and may have purposely wrote sub-par content in an attempt to maintain a sense of self competence. This strategy is referred to self-handicapping (Jones and Berglas, 1978) and is another alternate explanation for this studies lack of findings.

It may also be the case that the experimental manipulations were not strong enough to persist throughout the study's duration, or simply did not have the intended effect. As a manipulation check, participants were asked at the conclusion of the study which completeness condition they were assigned to, and given the option of Beginner (incomplete) or Expert (complete). Analysis revealed a correlation of .95 between actual conditions to which participants were assigned at the condition to which they reported being assigned. Therefore, it

may be assumed that almost all participants noted and remembered whether or not they were Beginners or Experts and that the manipulation of completeness should have had an effect. However, this does not seem to be the case since there was no main effect for completeness on any of the dependent measures. There was also no main effect for completeness on any of the measures gathered for use as a manipulation check, to include positive and negative affect or state self esteem. It seems logical to conclude that those who were told they were Beginners (incomplete) should have lower levels of positive affect, higher levels of negative affect, and lower state self esteem (especially on the performance subscale). However, this was not the case. It is also logical to assume that those in the interrupted condition who were given the task of sorting and counting paper clips should have lower levels of positive affect and higher levels of negative affect. However, this was not the case in that there was no main effect for interruption condition on either of these measures.

Also worth noting is that data loss that occurred during the course of the study. A bug in the software used to collect data that made it very easy for data to not be saved unless research assistants closed out of the software in a very particular manner. As a result, many participants were excluded from the final analysis due to a lack of a complete data set for their participation. Unfortunately, this bug was not discovered until the end of the first semester of data collection. Although data were lost, they were equally lost from each condition (see Tables 9 and 10). Since the data were distributed across each condition in the same manner after the data loss as it was before the data loss, it is unlikely that the data loss had an impact on the outcome of the study. However, this cannot be known and is worth taking into consideration.

Table 9

Distribution of data among conditions prior to data loss, N=118

		Completeness	
		Complete	Incomplete
Interruption	Interrupted	n=18 15.3%	n=22 18.6%
	Not Interrupted	n=42 35.6%	n=36 30.5%

Table 10

Distribution of data among conditions after data loss, N=85

		Completeness	
		Complete	Incomplete
Interruption	Interrupted	n=14 16.5%	n=17 20.0%
	Not Interrupted	n=33 38.8%	n=21 24.7%

If we conclude that the effect does exist, but that the study was not designed in such a way that the effect could be captured, or the sample size was too low, then the next task becomes

one of fine-tuning the design and increasing the sample size to increase power. In the future, the study might need to be conducted entirely online since the question is whether or not people take the opportunity given by the Internet to symbolically self-complete via attempted influence by teaching others.

It may be that the manipulation was diluted by the peripheral aspects of the study's design such as the collection of individual difference measures for use as potential covariates. Since none of the individual differences that were assessed during the study turned out to be significant covariates, future research design might be well advised to not collect this information and instead focus on the experimental manipulations. Finally, ancillary analyses were conducted to investigate some of the alternate explanations for the study's lack of findings. These analyses are in Appendix L.

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Appendix A

Research Assistant Script

Before participants arrive:

1. Unlock all individual doors. (First the control rooms, where you can get the keys to rooms A-D.)
2. Log into the computers in each room. The account name is *XXX*, and the password is *xxx*. The computers will only be used for rooms A & B, C & D will be the rooms where paperclips will be counted.
3. Check the participant sign-up website from the control room computer (it will be the homepage in the Safari browser, the password is *science205*) and write down the session ID, crash condition (as determined by the dice roll, see step #4), participant name, and date into the log. (There is also a blank for Level that will be randomly selected during the study. Leave this blank for now; it will be filled in a later point.)
4. You must determine whether or not each participant will be assigned to the crash or no crash condition. To do so, roll the provided dice. If it lands on an *even* number the participant will be in the *crash* condition. If it lands on an *odd* number the participant will be in the *no crash* condition. Fill this information in the space provided in the logbook.

As participants arrive:

Leave the door open and greet participants as they arrive. Ask their name and mark that they showed up for the study in the logbook. Invite participants to have a seat in their assigned rooms. Wait till the study's scheduled start time to shut the door and begin the study.

“Hello. Are you here for the Ask Bama study? What is your name? Please come in to the lab and have a seat in [room X] while we wait for other participants to arrive. I will be with you shortly.”

The study:

One everyone has arrived; you will go into each participant's room and give them the spiel individually.

This study relies in large part upon convincing participants that this is a real website the university is creating, and that participants should feel honored and excited about being able to participate in the website's creation. To that end, you will begin the study by giving students an overview of AskBama.com and the kinds of material that will be on the website.

This part does not need to be memorized. You will need to be familiar with it so it sounds like you've read it before, but it doesn't need to be recited from memory

“The University of Alabama has decided that it wants to create a website of useful information created by University of Alabama students. This website will be called AskBama.com, and it will be linked on the university web site's front page.

The content you are about to write will IMMEDIATELY be published on the website with your REAL NAME! Everyone will know that you wrote the helpful information! Here is an example of what you are about to write. [Hand them the printed examples.] You will see that there are two types of content, FAQs and an essay. You will write four FAQs and one essay.

You are going to be asked to use two different kinds of software. I will start each of the programs for you. We have to use two different programs so that your content can be immediately uploaded on AskBama.com. I will give you directions along the way, and the programs will also provide you with directions.

So, I'm going to launch the first program so that we can get the study started. I will be in the lab at all times if you have any questions.”

After you give participants this speech, launch the RMT form (**RMT_2**), enter their session ID, and say:

“Here you go. Please follow the directions presented on the computer screen. Thank you!”

Repeat this process for each participant.

At this point, all of the participants should be in their individual rooms completing the first part of the study. This part should not take too long, and when they finish, they will open their door and wait for your assistance. When you get in their room, look at their screen. It will either say, **BEGINNER** or **EXPERT** in capital letters. You will comment on this by saying,:

“Oh, you are in the beginner/expert section. I will need to label your FAQs and essay that way.”

Have the binder open, and ask the participant their name by saying:

“What is your name again? And you are in the beginner/expert section.”

Make note of which section they are in, Beginner or Expert, in the space on the log sheet labeled Level. You exit Riddle Me This from the black screen by pressing “command + option + escape” and selecting to force quit Riddle Me This.

The second part of the study will be different depending upon which condition participants are in, no crash or crash.

No Crash (NC)

If they are in the no crash condition, then you will launch the software correctly and you will enter their session ID and say:

“Okay. Here is the program the university gave us for you to write your FAQs and essay so that it can be uploaded on AskBama.com once you finish writing. You will have 35 minutes to write your FAQs and essay. Each of the five screens has a timer to help keep you on track. Instructions will be presented on the screen, and if you have any questions just open your door and I will come help you. When you finish writing, or when time has ran out, open your door and I will come back in here and help you with the next part of the study.”

****It is important to have this next part memorized so that it seems natural.****

Crash (C)

If they are in the crash condition, the software will not work. At this time, you will attempt to launch the software as normal, wait while they type their name and email, and when they click next , it will crash. You should act a little flustered and frustrated when it crashes while saying:

“Oh, no. I thought they had fixed this. The program isn’t working again. This happened last week and they told me to just have participants work on another task so that we could still give you credit for being here and participating in something. Come in here and I will show you what to do.”

It is very important that this part sounds completely natural and unscripted because the software obviously wasn’t supposed to crash. At this point, lead them into room C or D and ask them to have a seat. Then tell them:

“Hang on a minute, I’m going to go grab something from the other room.”

Go get the paperclips, cups, paper and pen from the control room. Then go back to the participant and say:

“I know this is tedious, but it’s a part of another research project with children. They have a ton of paper clips that they need sorted by color and then counted. If you could divide them into these cups by color and then count them, that would be great and we can still give you credit for participation. You can write the totals on this sheet of paper. I’m going to go try to get in touch with the person who’s in charge of the website to see if she can help me fix the program. You can just keep doing this until I either get the program fixed or the study ends. I’m so sorry about this.”

At this point, shut the door and go into the control room and pull the door most of the way shut. After 20 minutes, go launch the (NC) software, and then go back to the crash participant and say:

“Hey! We got the program fixed, but you missed the first part and we don’t have time for you to write your FAQs. You can complete the essay, though, so if you would, please come back to your room and I’ll set the program up for you.”

Walk with them to their original room, wait for them to have a seat, and then say:

“Okay. Here is the program the university gave us for you to write your FAQs and essay so that it can be uploaded on AskBama.com once you finish writing. If you will, please enter your information and I will get you skipped ahead to the essay section since we don’t have time for you to complete the FAQs.”

At this point, allow them to enter in their name and email address. When it gets to the first FAQ screen, say:

“Okay, let me just skip you through this...”

Just enter in some random letters until you can click the “Next” button. Once you get to the Essay screen, say:

“Here we go. You will have up to 15 minutes to write your essay. Please ignore the timer on the bottom of the screen, it works as if you had been in here the entire time. I will let you know if you run out of time. Instructions will be presented on the screen, and if you have any questions just open your door and I will come help you. When you complete your essay, or when time has ran out, open your door and I will come back in here and help you with the next part of the study.”

When each participant is done, close out of the FAQ/text software and launch the RMT form (RMT_3). Enter their session ID on the first screen. The instructions in this part will be the same for all participants, and you will say:

“Alright. We are almost done. This is the last part of the study. It contains a couple of questionnaires and should take you about 10 minutes to complete.” When participants are done, you will exit Riddle Me This from the black screen by pressing “command + option + escape” and selecting to force quit Riddle Me This.

Finally, you will debrief participants with the provided script.

Appendix B

Preface

Thank you for your help in creating AskBama.com! You will now be asked a few questions so that we can figure out what activity or area of interest you are most qualified to help others learn via a set of FAQs and an essay. Once you finish, you will reach a screen instructing you to open your door to get the assistant's attention so that the website creating software can be launched.

Self nominated area of expertise

Please think of an activity, such as a sport or musical talent, that you have pursued for some time, or a special area of knowledge (such as chemistry or a foreign language). Please note, this can be ANYTHING that you feel you know more about than the average person. Type your answer in the space provided below.

Length of experience or education

How much education, experience, or other training do you have in this activity or subject?

Please answer in number of years and months.

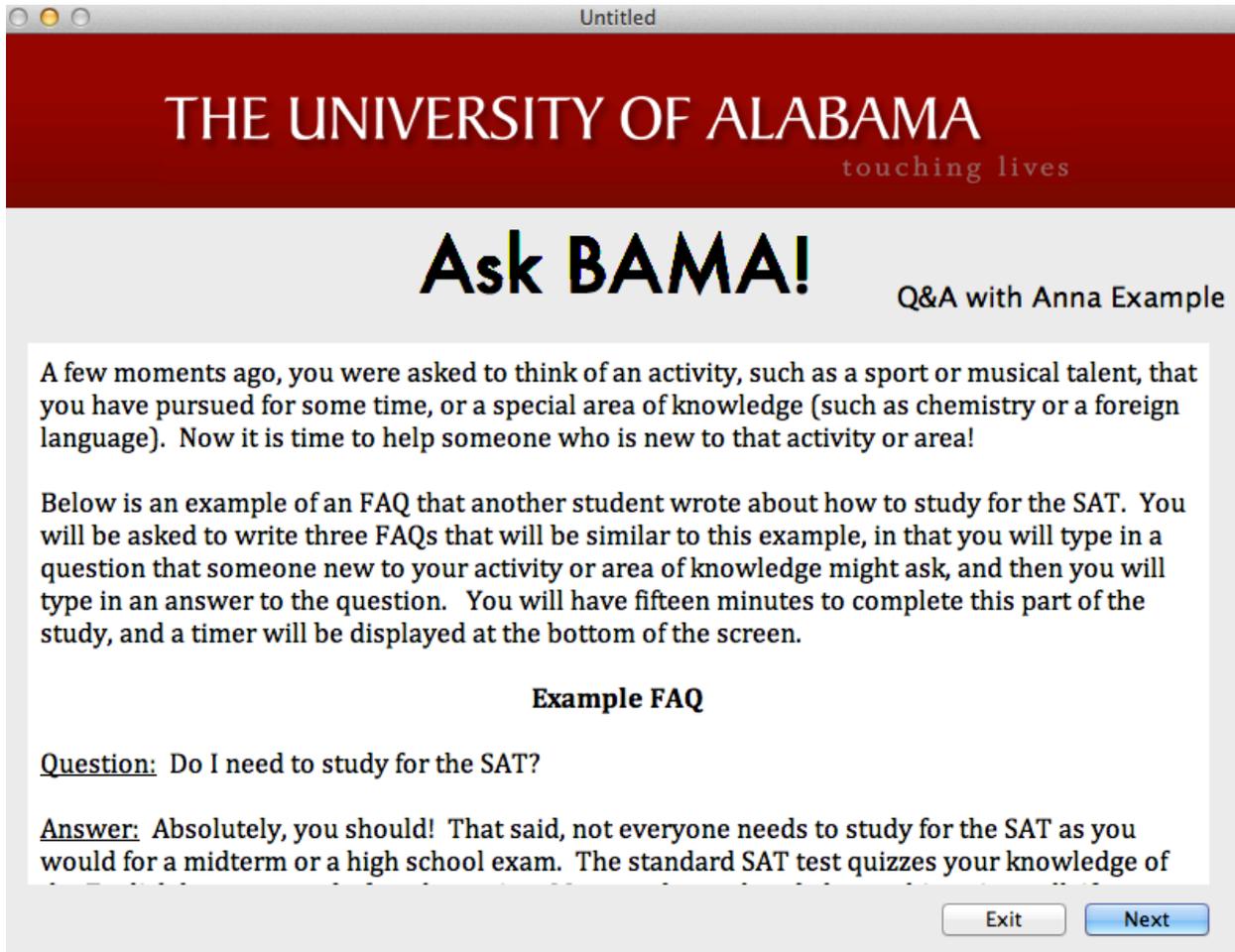
Ongoing commitment

Have you engaged in this activity or spent time learning about the subject in the LAST 14 DAYS?

Appendix C

Ask Bama FAQ Instructions, Example, and Software Screenshots

Screenshot of the instructions and example



Full text of instructions and example

A few moments ago, you were asked to think of an activity, such as a sport or musical talent, that you have pursued for some time, or a special area of knowledge (such as chemistry or a foreign language). Now it is time to help someone who is new to that activity or area!

Below is an example of an FAQ that another student wrote about how to study for the SAT. You will be asked to write three FAQs that will be similar to this example, in that you will type in a question that someone new to your activity or area of knowledge might ask, and then you will type in an answer to the question. You will have fifteen minutes to complete this part of the study, and a timer will be displayed at the bottom of the screen.

Example FAQ

Question: Do I need to study for the SAT?

Answer: Absolutely, you should! That said, not everyone needs to study for the SAT as you would for a midterm or a high school exam. The standard SAT test quizzes your knowledge of the English language and of mathematics. Most students already know this quite well, if you had good teachers. If you paid attention in high school math and English classes, a review of your notes and a few practice SAT tests may be all that you need.

Screenshot of the software

Untitled

THE UNIVERSITY OF ALABAMA
touching lives

Ask BAMA! Q&A with Anna Example

Please enter a question for your FAQ (1/4):

Please enter your answer addressing this question (1/4):

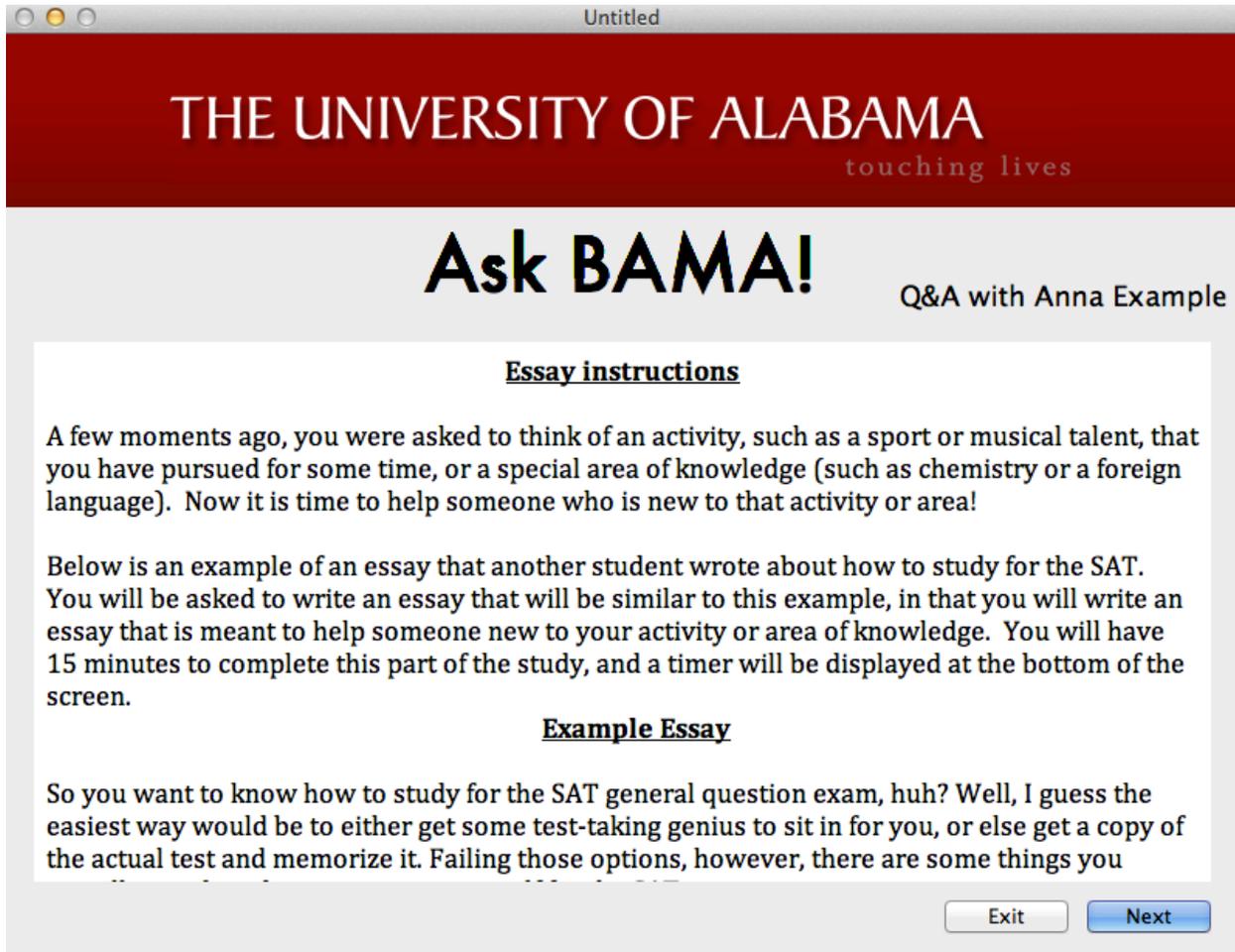
4:45 remaining

Exit Next

Appendix D

Ask Bama Essay Instructions, Example, and Software Screenshot

Screenshot of the instructions and example



Full text of instructions and example

Essay instructions

A few moments ago, you were asked to think of an activity, such as a sport or musical talent, that you have pursued for some time, or a special area of knowledge (such as chemistry or a foreign language). Now it is time to help someone who is new to that activity or area!

Below is an example of an essay that another student wrote about how to study for the SAT. You will be asked to write an essay that will be similar to this example, in that you will write an essay that is meant to help someone new to your activity or area of knowledge. You will have 15 minutes to complete this part of the study, and a timer will be displayed at the bottom of the screen.

Example Essay

So you want to know how to study for the SAT general question exam, huh? Well, I guess the easiest way would be to either get some test-taking genius to sit in for you, or else get a copy of the actual test and memorize it. Failing those options, however, there are some things you actually can do to better prepare yourself for the SAT.

The first trick in studying for the SAT general question exam is to understand that it is NOT a test that adequately measures your IQ. Plenty of kids who have been considered dumb as a sack of hammers have scored surprisingly high on the SATs, and there have been any number of class valedictorians who have been shocked to receive their scores. So no matter what your ultimate score turns out to be, don't take it as any more of an indication of your intelligence than how you do on Jeopardy or Millionaire.

When you prepare to take the SAT general question exam, keep in mind that the SAT and any other standardized test is far more a quiz on your ability to take a test than on any actual knowledge. Of course, it certainly helps if you actually know the material on the test, but independent and completely unscientific experiments have shown that people who train to take a test can do just as good by utilizing their little tricks of the trade as people who are more familiar with the subject of the test. Sad, but true. And remember, standardized tests are the best our leaders can come up with in their plan to unleash a newer, more competitive working class out into the global economy. Be afraid. Be very afraid.

Okay, here we go, teaching you in 2,000 words or less how to study for the SAT general question exam. And, basically, it all comes down to one simple task. Getting yourself a copy of the prep test. Yep, that's all there is to it. Well, not all, but it's the single most important thing you can do.

Untitled

THE UNIVERSITY OF ALABAMA
touching lives

Ask BAMA!

Q&A with Anna Example

Please write a general introduction to whatever it is you're writing about:

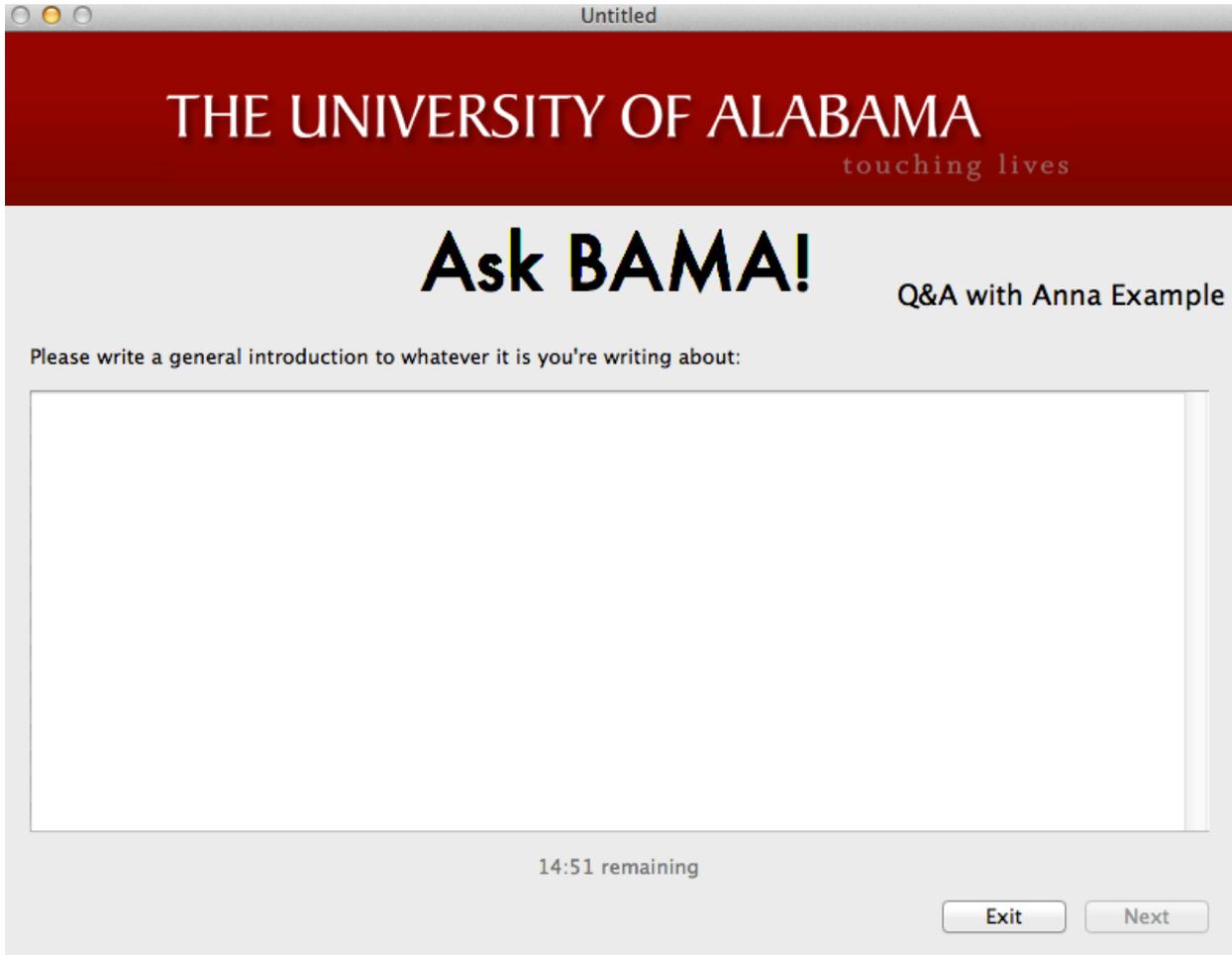
14:19 remaining

Exit Next

Full text of instructions

Please write a general introduction to whatever it is you're writing about:

Screenshot of the software



Appendix E

State Self Esteem Scale, (Heatherton and Polivy, 1991)

This is a questionnaire designed to measure what you are thinking at this moment. There is of course, no right answer for any statement. The best answer is what you feel is true of yourself at the moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you RIGHT NOW.

- 1 = Not At All
- 2 = A Little Bit
- 3 = Somewhat
- 4 = Very Much
- 5 = Extremely

1. I feel confident about my abilities.
2. I am worried about whether I am regarded as a success or failure.
3. I feel satisfied with the way my body looks right now.
4. I feel frustrated or rattled about my performance.
5. I feel that I am having trouble understanding things that I read.
6. I feel that others respect and admire me.
7. I am dissatisfied with my weight.
8. I feel self-conscious.
9. I feel as smart as others.
10. I feel displeased with myself.
11. I feel good about myself.
12. I am pleased with my appearance right now.
13. I am worried about what other people think of me.
14. I feel confident that I understand things.
15. I feel inferior to others at this moment.
16. I feel unattractive.
17. I feel concerned about the impression I am making.
18. I feel that I have less scholastic ability right now than others.
19. I feel like I'm not doing well.
20. I am worried about looking foolish.

Appendix F

Positive and Negative Affect Schedule, (Watson and Clark, 1988)

Below are a list of words that describe feelings and emotions. Read each item and mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment.

0	1	2	3	4	5	6
None						A Lot

- | | |
|---|---|
| <p>_____ bashful</p> <p>_____ sleepy</p> <p>_____ afraid</p> <p>_____ jittery</p> <p>_____ ashamed</p> <p>_____ active</p> <p>_____ scornful</p> <p>_____ determined</p> <p>_____ disgusted at self</p> <p>_____ sluggish</p> <p>_____ excited</p> <p>_____ frightened</p> <p>_____ alert</p> <p>_____ blue</p> <p>_____ scared</p> <p>_____ angry</p> <p>_____ guilty</p> <p>_____ amazed</p> <p>_____ dissatisfied with self</p> <p>_____ astonished</p> <p>_____ irritable</p> <p>_____ embarrassed</p> <p>_____ uncomfortable</p> | <p>_____ hostile</p> <p>_____ lonely</p> <p>_____ sheepish</p> <p>_____ downhearted</p> <p>_____ tired</p> <p>_____ attentive</p> <p>_____ angry at self</p> <p>_____ inspired</p> <p>_____ loathing</p> <p>_____ proud</p> <p>_____ surprised</p> <p>_____ disgusted</p> <p>_____ sad</p> <p>_____ nervous</p> <p>_____ blameworthy</p> <p>_____ interested</p> <p>_____ alone</p> <p>_____ shaky</p> <p>_____ enthusiastic</p> <p>_____ shy</p> <p>_____ strong</p> <p>_____ uneasy</p> <p>_____ distressed</p> |
|---|---|

_____ amused
_____ delighted

_____ relaxed

Appendix G

Big Five Short Form (Gosling, Rentfrow, and Swann, 2003)

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other. (1 = Disagree Strongly, 7 = Agree Strongly)

I see myself as:

1. Extraverted, enthusiastic.
2. Critical, quarrelsome.
3. Dependable, self-disciplined.
4. Anxious, easily upset.
5. Open to new experiences, complex.
6. Reserved, quiet.
7. Sympathetic, warm.
8. Disorganized, careless.
9. Calm, emotionally stable.
10. Conventional, uncreative.

TUPI scale scoring (“R” denotes reverse-scored items): Extraversion: 1, 6R; Agreeableness: 2R, 7; Conscientiousness: 3, 8R; Emotional Stability: 4R, 9; Openness to Experiences: 5, 10R.

Appendix H

Self Concept Clarity Scale (Campbell, Trapnell, Heine, Katz, Lavalley, and Lehman, 1996)

1. My beliefs about myself often conflict with one another.*
2. On one day I might have one opinion of myself and on another day I might have a different opinion.*
3. I spend a lot of time wondering about what kind of person I really am.*
4. Sometimes I feel that I am not really the person that I appear to be.*
5. When I think about the kind of person I have been in the past, I'm not sure what I was really like.*
6. I seldom experience conflict between the different aspects of my personality.
7. Sometimes I think I know other people better than I know myself. *
8. My beliefs about myself seem to change very frequently.*
9. If I were asked to describe my personality, my description might end up being different from one day to another day.*
10. Even if I wanted to, I don't think I could tell someone what I'm really like.*
11. In general, I have a clear sense of who I am and what I am.
12. It is often hard for me to make up my mind about things because I don't really know what I want.*

Scale ranges from 1 (*strongly disagree*) to 5 (*strongly agree*).

* Indicates reverse-keyed item.

Appendix I

Contingencies of Self-Worth Scale (Crocker, Luhtanen, Cooper, and Bouvrette, 2003)

*Item is reverse-scored such that 7=1, 6=2, 5=3, 4=4, 3=5, 2=6, 1=7.

FAMILY SUPPORT: items 7, 10*, 16, 24, and 29.

COMPETITION: items 3, 12, 20, 25, and 32.

APPEARANCE: items 1, 4*, 17, 21, and 30*.

GOD'S LOVE: items 2, 8, 18, 26, and 31.

ACADEMIC COMPETENCE: items 13*, 19, 22, 27, and 33.

VIRTUE: items 5, 11, 14, 28, and 34.

APPROVAL FROM OTHERS: items: 6*, 9, 15*, 23*, and 35.

Scoring

First, reverse-score answers to items 4, 6, 10, 13, 15, 23, and 30, such that (1 = 7), (2 = 6), (3 = 5), (4 = 4), (5 = 3), (6 = 2), (7 = 1).

Then sum the answers to the five items for each respective subscale score, and divide each by 5.

INSTRUCTIONS: Please respond to each of the following statements by circling your answer using the scale from "1 = Strongly disagree" to "7 = Strongly agree." If you haven't experienced the situation described in a particular statement, please answer how you think you would feel if that situation occurred.

1. When I think I look attractive, I feel good about myself.
2. My self-worth is based on God's love.
3. I feel worthwhile when I perform better than others on a task or skill.
4. My self-esteem is unrelated to how I feel about the way my body looks.
5. Doing something I know is wrong makes me lose my self-respect.

6. I don't care if other people have a negative opinion about me.
7. Knowing that my family members love me makes me feel good about myself.
8. I feel worthwhile when I have God's love.
9. I can't respect myself if others don't respect me.
10. My self-worth is not influenced by the quality of my relationships with my family members.
11. Whenever I follow my moral principles, my sense of self-respect gets a boost.
12. Knowing that I am better than others on a task raises my self-esteem.
13. My opinion about myself isn't tied to how well I do in school.
14. I couldn't respect myself if I didn't live up to a moral code.
15. I don't care what other people think of me.
16. When my family members are proud of me, my sense of self-worth increases.
17. My self-esteem is influenced by how attractive I think my face or facial features are.
18. My self-esteem would suffer if I didn't have God's love.
19. Doing well in school gives me a sense of self-respect.
20. Doing better than others gives me a sense of self-respect.
21. My sense of self-worth suffers whenever I think I don't look good.
22. I feel better about myself when I know I'm doing well academically.
23. What others think of me has no effect on what I think about myself.
24. When I don't feel loved by my family, my self-esteem goes down.
25. My self-worth is affected by how well I do when I am competing with others.
26. My self-esteem goes up when I feel that God loves me.
27. My self-esteem is influenced by my academic performance.

28. My self-esteem would suffer if I did something unethical.
29. It is important to my self-respect that I have a family that cares about me.
30. My self-esteem does not depend on whether or not I feel attractive.
31. When I think that I'm disobeying God, I feel bad about myself.
32. My self-worth is influenced by how well I do on competitive tasks.
33. I feel bad about myself whenever my academic performance is lacking.
34. My self-esteem depends on whether or not I follow my moral/ethical principles.
35. My self-esteem depends on the opinions others hold of me.

Appendix J

Rosenberg Self Esteem Scale, (Rosenberg, 1965)

Instructions: Below is a list of statements dealing with your general feelings about yourself. (0 = strongly disagree, 4 = strongly agree).

1. I feel that I am a person of worth, at least on an equal basis with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure. *
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of. *
6. I take a positive attitude towards myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself. *
9. I certainly feel useless at times. *
10. At times I think I am no good at all. *

* indicates reverse scoring

Appendix K

Essay attitudes

- How helpful do you think others will find the information you wrote for Ask Bama? (1: Extremely Unhelpful – 7: Extremely Helpful)
- How helpful do you think the information you wrote for Ask Bama is? (1: Extremely Unhelpful – 7: Extremely Helpful)
- How accurate do you think others will think the information you wrote for Ask Bama is? (1: Extremely Inaccurate – 6: Extremely Accurate)
- How accurate do you think the information you provided for Ask Bama is? (1: Extremely Inaccurate – 6: Extremely Accurate)
- If you were in the EXPERT section, how pleased are you that your information will be published on Ask Bama? If you were in the BEGINNER section, how pleased are you that your content may be published on Ask Bama in the future? (1: Extremely Displeased – 9: Extremely Pleased)
- How likely are you to visit Ask Bama.edu for information in the future? (1: Extremely Likely – 6: Extremely Unlikely)

Appendix L

Ancillary Analyses

Additional analyses were conducted to examine alternate explanations for the lack of support of the predicted hypotheses. Several factorial ANOVAs were conducted to investigate for effects of gender and effects of research assistant. The ANOVA that investigated effects of gender was a 2(completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) x 2 (gender: male or female) factorial design, and the ANOVA that investigated effects of research assistant was a 2(completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) x 4(research assistant: four individual research assistants) factorial design. There were no significant main effects or interactions for either of these variables on the main dependant measures. An ANOVA was also conducted using averaged research assistant ratings of essay quality as a dependant variable, and there were no significant main effects or interactions. Somewhat similarly, the essays were graded using the Flesch-Kincaid Grade Level Test, which is a feature of Microsoft Word that allows users to assess the quality of text using a scale of 1 (first grade) to 12 (twelfth grade) (Microsoft, 2012). ANOVAs were conducted using these grades as a dependant variable, and there were no significant main effects or interaction.

A MANOVA was conducted on the individual items in the PANAS to investigate effects the experimental manipulations may have had upon individual items. The MANOVA and follow up univariate tests were not significant. ANOVAs were also conducted on the PANAS after the items were broken down into alternate subscales instead of the traditional positive and negative affect split. Negative items were divided in a method developed by Gaudreau, Sanchez, and

Blondin (2006), which includes an Afraid subscale (consisting of the following items: “*distressed*,” “*afraid*,” “*nervous*,” “*jittery*,” and “*scared*”) and an Upset subscale (consisting of “*upset*,” “*guilty*,” “*hostile*,” “*irritated*,” and “*ashamed*”). Positive items were divided into three subscales following the method developed by Conversely, Egloff, Schmukle, Burns, Kohlmann, and Hock (2003), which includes subscales of Joy (consisting of “*excited*,” “*proud*,” and “*enthusiastic*”), Interest (consisting of “*interested*,” “*strong*,” and “*determined*”), and Activation (consisting of “*active*,” “*alert*,” “*attentive*,” and “*inspired*”). These ANOVAs returned no significant main effects or interactions.

Several participants (15 of 85) wrote zero words in their essays. The breakdown of these participants by condition was as follows: complete/not interrupted, 6; complete/interrupted, 4; incomplete/not interrupted, 2, incomplete/interrupted, 3. These participants’ data were excluded, and additional analyses were conducted upon the dependant variables, with an additional independent variable, which measured participants’ ongoing commitment to their self-nominated area of interest. With the additional variable included, the design was a 2 (completeness: complete vs. incomplete) x 2(interruption: interrupted or not interrupted) x 2 (ongoing commitment: present or not present) factorial design.

With these participants excluded, there was a significant main effect for the variable of “How accurate will others find your essay?” in that those whose engagement with the activity was not ongoing ($M = 5.00$, $SD = .02$) were significantly more likely than those whose engagement was ongoing ($M = 4.60$, $SD = .94$) in ratings of others’ perceptions of their essay’s accuracy, $F(1, 62) = 7.46$, $p = .008$. This result was contrary to what was expected based on theory. There was also a significant interaction between completeness and interruption, in that the effect of interruption was greater in the incomplete condition than in the complete condition,

$F(1, 62) = 7.06, p = .01$. Participants in the complete, not interrupted condition ($M = 5.31, SE = .26$) reported that others would find their essay more accurate than those in the complete, interrupted condition ($M = 4.27, SE = 2.5$).

With those participants who wrote zero words still excluded, multiple regression analyses were conducted to investigate whether or not the Contingencies of Self-Worth subscale, Approval from Others, was of value as a moderator variable. The original independent variables of completeness and interruption were included on the first step, Approval from Others was added on the second step, and a three-way interaction term was added on the final step. The Approval from Others subscale predicted 11.8% of the variance in “How helpful do you think your essay is?” which was significant, $R^2 = .14, F(1, 65) = 8.95, p = .004$. The Approval from Others subscale predicted 11.5% of the variance in “How accurate will others find your essay?” which was significant, $R^2 = .17, F(1, 65) = 8.99, p = .004$. Finally, the Approval from Others subscale predicted 12.4% of the variance in “How accurate do you think your essay is?” which was significant, $R^2 = .13, F(1, 65) = 9.27, p = .003$. In all three cases, there was a negative correlation between Approval from Others and the dependant measure of interest, however, the moderation step in all three analyses was not significant. These correlations are presented in Table 11.

Table 11

Correlation between dependant measures and Contingencies of Self-Worth: Approval from Others subscale (N = 70)

Dependant Measure	Contingencies of Self-Worth: Approval from Others subscale
<i>“How helpful do you think your essay is?”</i>	-.34*
<i>“How accurate do you think others will think your essay is?”</i>	-.33*
<i>“How accurate do you think your essay is?”</i>	-.35*

*Note: *p < .01*