



## Uninformed Consent? The Effect of Participant Characteristics and Delivery Format on Informed Consent

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Although many people choose to sign consent forms and participate in research, how many thoroughly read a consent form before signing it? Across 3 experiments using 348 undergraduate student participants, we examined whether personality characteristics as well as consent form content, format, and delivery method were related to thorough reading. Students repeatedly failed to read the consent forms, although small effects were found favoring electronic delivery methods and traditional format forms. Potential explanations are discussed and include participant apathy, participants trying to save time by not reading the consent form, and participant assumptions about consent forms.

**KEYWORDS:** informed consent, consent forms, reading, comprehension

Undergraduate participation in research is almost universal on university campuses. With few exceptions, the informed consent process is required to give participants “the opportunity to choose what shall or shall not happen to them” (U.S. Department of Health and Human Services, 1979, p. 6). To fulfill this requirement, adequate information must be provided to participants in a format that allows them to make informed choices. Typically, researchers choose to present this information to participants via an informed consent form that contains pertinent information about the research. However, if participants are not carefully considering the information presented in the consent form, are they actually providing their informed consent to participate?

In the current research, we examined how closely participants paid attention to the informed consent forms they read before agreeing to participate in research.

Increasing consent form compliance is important for researchers and their affiliated institutions as well as for the participants in the research. From the perspective of the researchers and institutions, it is important to know that participants are aware of the procedures and risks that they may experience. In addition, participants knowingly consenting to participate will help researchers or institutions uphold their ethical and legal responsibilities regarding the informed consent process. The American Psychological Association (2016) ethical code of conduct states that psychological researchers are required to inform participants about the purpose and procedures involved in the study, their right to decline or withdraw from the study, potential consequences for declining or withdrawing, the study's possible risks and discomforts, all confidentiality risks, participant incentives, and researcher contact information (Section 8.02 [a]). These aspects are required so that participants do not place themselves in harm's way. From the perspective of participants, the informed consent process allows the weighing of the benefits against the procedures and risks so that the participants can make an informed choice about whether they should participate in the study. If a participant chooses not to read the consent form, he or she may not be aware of the potential risks or benefits of the research and thus will not be able to make an informed decision about participation.

Across a series of experiments, we explored four main questions. First, do participants thoroughly read informed consent forms before agreeing to participate in a study? There is some research already suggesting that participants do not carefully read consent forms before participating in research. For example, McNutt and colleagues (2008) found that a majority of participants spent less than 30 seconds reading a consent form, a small and arguably inadequate amount of time for participants to fully process and comprehend the consent information. Even when participants take the time to read consent forms, they may not fully understand the purpose of the research (Falagas, Korbila, Giannopoulou, Kondilis, & Peppas, 2009). This is often due to consent forms being too difficult to understand (Foe & Larson, 2016; Hopper, TenHave, & Hartzel, 1995; Young, Hooker, & Freeberg, 1990) or too long (Beardsley, Jefford, & Mileskin, 2007; Perrault & Nazione, 2016; Stunkel et al., 2010). If consent forms are too long or not written in easily understandable language, participants may not be truly informed about the research in which they are considering participating (Mann, 1994; Ogloff & Otto, 1991). In the current research, we manipulated the ethicality and accuracy of the information contained in the consent form (with our Institutional Review Board's [IRB's] approval) to determine whether participants would consent to unethical and inaccurate information, rather than merely record the amount of time participants took to read the consent forms (e.g., Ghandour, Yasmine, & El-Kak, 2013; McNutt et al., 2008).

Second, we examined whether participants could correctly answer questions about the information in the consent form. Knepp (2014), as well as Theiss, Hobbs, Giordano, and Brunson (2014), embedded instructions in the consent form for how participants should answer questions on the demographics form. If participants answered the questions correctly, they were believed to have read the consent form thoroughly. Other researchers have had participants take a quiz over the consent form material (e.g., Pedersen, Neighbors, Tidwell, & Lostutter, 2011). Despite their attempts to assess correct responses, these researchers found—consistent with previous research—that a significant majority of participants did not carefully read the consent form. Because reading a consent form does not guarantee an understanding of a study's aims and

procedures, in the current research we measured participants' comprehension of consent form material using brief questionnaires. Whereas previous studies have used open-ended questions to assess comprehension (e.g., Perrault & Nazione, 2016), we incorporated a variety of question types to specifically assess whether participants noticed the manipulated information in the consent form.

Because many studies on lack of consent form reading have been conducted on clinical and medical samples, another aim of the present research was to assess consent form reading among a sample of college students taking part in psychological research. Although there exists a small number of studies on informed consent using psychology student samples (e.g., Knepp, 2014; Theiss et al., 2014), the present studies extend this area of research in several ways. In one study (Pedersen et al., 2011), participants were randomly assigned to complete an informed consent form in person or online and then completed a recognition and recall quiz about the consent form. Only a small percentage (26%) of participants were able to recall a phrase from the consent form, and performance dipped further when the consent form was presented online. Similar to Pedersen et al.'s study, the present research compared comprehension across in-person and online formats, but in addition to assessing knowledge with comprehension quizzes, we also asked for participants' suggestions from which we created and assessed the effectiveness of new consent form formats (cf. Perrault & Keating, 2017).

We were interested in a third question: whether participants' personality characteristics were related to their likelihood of reading the consent forms. Specifically, we assessed whether participants high in traits such as methodicalness, competence, and industriousness were more likely to correctly identify the unethical and inaccurate information before consenting than participants low in these traits. Despite a dearth of studies on the relationship between personality traits and consent form reading, the available evidence suggests that participants who are conscientious are more likely to read consent forms than participants who are not conscientious (Theiss et al., 2014). Although Pedersen et al. (2011) did not find a similar association among conscientiousness and consent form recognition and recall, they found that autonomy (i.e., self-regulation based on intrinsic motivation; Ryan & Deci, 2002) was associated with better recall of consent information. In addition, Knepp (2014) found that participants with higher trait worry and lower emotion reappraisal were more likely to read a consent form than other participants. Other research on individuals undergoing a surgical procedure found that patients with higher than average IQs and those who possessed an internal locus of control regarding their health showed greater knowledge of consent form information than patients lower on these variables (Lavelle-Jones, Byrne, Rice, & Cuschieri, 1993). Taken together, these findings suggest that personality traits may play a role in how carefully participants read consent forms.

Finally, we explored the effects of different formats and delivery methods, which researchers might use to increase consent form compliance, on thoroughness of reading. Some studies have revealed performance decrements when consent forms are presented online (Pedersen et al., 2011), whereas others have not shown differences between online and paper forms (Varnhagen et al., 2005; see also Flory & Emanuel, 2004). Using participant-generated suggestions for improving the format and delivery of the consent form from the initial study, we compared the effectiveness of a variety of different informed consent presentation formats (e.g., colors, initial check boxes) with the traditional format on thoroughness of participant reading. Although previous research has used color format consent forms while examining participant knowledge

of the consent form information (Campbell et al., 2008), unlike our studies, this work used only color forms and did not compare them to a control format.

## OVERVIEW OF THE CURRENT RESEARCH

Three studies are considered in the present paper. In Study 1, we tested four separate predictions: First, we predicted that participants in our study, regardless of condition, would agree to participate without carefully reading the consent form, as operationalized by the number of correctly answered questions on a subsequent questionnaire dealing with the content of the consent form. Second, we predicted that participants who received faulty, unethical consent forms would sign the consent form as often as those receiving a correct, ethical consent form. Third, we hypothesized that participants who received faulty consent forms would answer fewer questions about the consent form correctly than participants who received accurate consent forms. If participants were not carefully reading the consent forms, the “correct” answers for the faulty consent forms would not be as intuitive as they would be in the accurate consent form condition. Last, we explored whether participants’ self-reported personality traits (e.g., methodicalness, cautiousness, competence) were positively correlated with a thorough reading of the consent form.

In two subsequent studies, we examined the effect of two delivery methods for the consent information: electronic (Study 2) and paper (Study 3). As in Study 1, we predicted that participants would not thoroughly read the consent forms, but we also hypothesized that alternative format consent forms would elicit more thorough reading than the traditional consent forms, given that these formats were suggested by participants in Study 1.

Finally, we conducted a secondary analysis of the data from Studies 2 and 3 to assess the overall reliability of the effects of delivery method and informed consent form format on participant reading.

## STUDY 1 METHOD

### Participants

One hundred twenty-three students (see Table 1 for detailed demographic information) enrolled in introductory psychology courses at a large southern university participated in exchange for course credit. Participants enrolled in the study via SONA Systems, an online recruitment system.

### Materials

#### *Informed Consent Waiver*

The university’s IRB approved the experiment for waived informed consent because of the nature of the research question. Following completion of the study, participants were given a

TABLE 1  
Demographic Characteristics of Participants in Study 1

<i>Characteristic</i>	<i>Control Condition</i>		<i>Experimental Condition</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Sex				
Male	17	25.8	18	31.6
Female	49	74.2	39	68.4
Classification				
Freshman	35	53	36	63.2
Sophomore	15	22.7	8	14.0
Junior	7	10.6	10	17.5
Senior	8	12.1	3	5.3
Graduate	1	1.5	0	0.0
Race				
American Indian	1	1.5	1	1.8
Asian	2	3.0	0	0.0
Black or African American	12	18.2	15	26.3
White	43	65.2	34	59.6
Unknown/Not Reported	4	6.1	4	7.0
More Than One Race	2	3.0	3	5.3
Ethnicity				
Hispanic or Latino	8	12.1	11	19.3
First Language				
English	59	89.4	53	93.0
Other	7	10.6	4	7.0
Major				
Psychology	10	15.2	14	24.6
Other	56	84.8	43	75.4

*Note:*  $N = 123$ .

debriefing statement, which informed them that some of the consent forms had contained faulty information and that this was necessary for the hypotheses to be tested.

### *Informed Consent Forms*

Two informed consent forms were created for the study, one for the control group ( $n = 66$ ; see [Appendix A](#)) and one for the experimental group ( $n = 57$ ; see [Appendix B](#)). Both informed consent forms were designed to deceive the participants into believing that the study was about correlations among personality traits. The experimental condition consent form included inaccurate and unethical deviations from the control consent form. These changes included statements that the data would not be kept confidential, that dropping out of the study would have an impact on professional relationships with members of the psychology department, that a prominent cartoon character was a lead researcher, and that participants would not receive any compensation for completing the study. The IRB approved these changes, and at the end of the

study the researchers informed all participants about the inaccurate information in the consent form as part of the debriefing process. In all other respects, the two consent forms were identical.

#### *Demographic Questionnaire*

A demographic questionnaire was used to gather participants' sex, academic classification, race, native language, and major.

#### *Personality Inventories*

Six personality inventories were obtained from the International Personality Item Pool (Goldberg et al., 2006) measuring a variety of personality traits: methodicalness (e.g., "I pay attention to details";  $\alpha = .78$ ), cautiousness (e.g., "I avoid mistakes";  $\alpha = .77$ ), competence (e.g., "I know how to apply my knowledge";  $\alpha = .75$ ), recklessness (e.g., "I like to act on a whim";  $\alpha = .72$ ), industriousness (e.g., "I don't get side tracked when I work";  $\alpha = .81$ ), and judgment (e.g., "I make decisions after I have all the facts";  $\alpha = .80$ ). These inventories were presented on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*) and averaged to create composite scores of each trait. These six traits were included given their hypothesized relationship with the process of carefully reading a consent form.

#### *Consent Form Comprehension Questionnaire*

This was a nine-item comprehension questionnaire created for this study. Six of these items were used to assess whether the participants read the consent form and how well they remembered information from the various sections of the consent form. Of these six items, five items were multiple-choice and the sixth item ("According to the informed consent form, how many [research participation] credits will you receive for every 30 minutes of participation in this study?") was short-answer. Example items included "According to the informed consent form, which of the following was a risk of participating in this study?" and "Who was one of the researchers?" The correct answers for the items on the comprehension questionnaire varied by condition, because the information in the consent forms varied by condition. For example, the correct answer for the number of credits participants would receive was 1 in the control condition and 0 in the experimental condition. The three remaining questions were used for soliciting suggestions for consent form improvement and were not included in the analysis of how thoroughly participants read the consent form. These questions were open-ended, and participants were allowed to give as much feedback as they desired. A majority of participants ( $n = 111$ ; 90.2%) were willing to complete the final three questions.

#### **Procedure**

Upon entering the lab, the experimenter greeted the participants and asked them to select and sit at one of four available computers. The participants unknowingly self-selected into either the control or experimental condition based on their choice of computer. Once the participants chose a seat, the experimenter opened the program and instructed the participants to take their time and answer all the questions to the best of their ability.

The informed consent form was displayed on the computer screen, and participants indicated whether they agreed to participate by selecting either the “agree” or “disagree” option at the bottom of the informed consent form. If a participant was assigned to the experimental consent form and chose to decline participation, the computer displayed an ostensible error message instructing the participant to contact an experimenter. When the experimenter was notified of the problem by the participant, the experimenter apologized and explained that an error had occurred. The experimenter advanced the survey to the control consent form, and the participant was instructed to take another look at the consent form. During the study, this situation occurred for only one participant; the participant chose to not sign the consent form due to the material in the form. No participants from the control condition chose to decline participation; however, if any participants had chosen to decline participation, they would have been thanked for their time and dismissed from the experiment.

If participants indicated that they agreed to participate after seeing either consent form, the survey advanced to the demographics questionnaire. Following the demographics questionnaire, the randomized personality inventories were displayed for the participant to answer. Upon completion of the personality inventories, the survey presented the consent form comprehension questionnaire to the participants to assess memory and understanding of the information in the consent form.

Following the consent form comprehension questionnaire, a debriefing statement detailing the true purpose of the study appeared. Participants were given information about counseling services on campus in case the deception was found to be emotionally harmful; however, no participants expressed concern after learning about the deception. The experimenter also gave participants a hard copy of the debriefing statement and requested that they keep the true purpose of the study confidential.

## STUDY 1 RESULTS

To test the hypothesis that most participants would agree to participate in the study without reading the consent form thoroughly, we conducted a frequency analysis for the number of correct responses on the consent form questionnaire. The frequency analysis indicated that 99.2% ( $n = 122$ ) of participants did not read the consent form thoroughly, operationalized as not missing any questions on the consent form comprehension questionnaire. In addition, 82.9% ( $n = 102$ ) did not answer more than 50% of the questions correctly. Because only one participant chose not to sign the consent form, across both conditions, it was unnecessary to test for between-group differences on willingness to sign the consent form.

Our second hypothesis was that participants in the experimental condition would sign the consent form regardless of the presence of faulty information. All participants except one in the experimental condition (98.2%,  $n = 56$ ) accepted the consent form even with the faulty and unethical information present, thus supporting the hypothesis.

To test the hypothesis that participants in the experimental condition would answer fewer questions about the consent form correctly than participants in the control condition, we conducted an independent samples  $t$  test. The results indicated that participants in the experimental condition ( $M = 1.53$ ,  $SD = 0.78$ ) answered significantly fewer questions correctly than participants in the control condition ( $M = 3.00$ ,  $SD = 1.18$ ),  $t(114) = 8.28$ ,  $p < .001$ ,  $d = 1.47$  (see

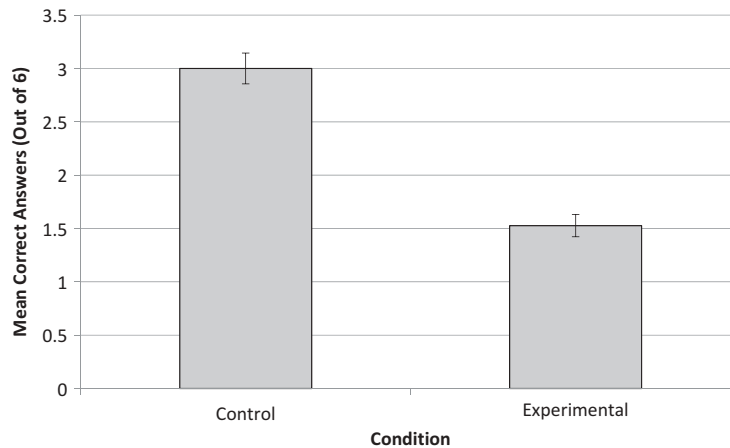


FIGURE 1 The average number of correct answers ( $\pm$  SE) on the comprehension questionnaire by condition in Study 1.

Figure 1). Levene's test indicated unequal variances ( $F = 4.67, p = .03$ ), so degrees of freedom were adjusted from 121 to 114.

Finally, we tested the hypothesis that participants who rated themselves high on traits related to thoroughly reading the consent form would, in fact, be more likely to read the consent form. Results, however, did not support this hypothesis. Participants' scores on the personality inventories were not significantly correlated with the number of questions answered correctly on the consent form comprehension questionnaire (see Table 2). In addition, no significant correlations were found between number of questions answered correctly and sex, race, ethnicity, major (psychology vs. other), or classification ( $r$ s ranged from  $-.04$  to  $.06, p$ s  $> .51$ ).

TABLE 2  
Correlations of Selected Personality Traits and Number of Correctly Answered Comprehension Questionnaire Items

Measure	1	2	3	4	5	6	7
1. Correct Answers	—						
2. Methodicalness	.09 (.37)	—					
3. Cautiousness	.05 (.57)	.63***	—				
4. Competence	-.08 (.40)	.78***	.44***	—			
5. Recklessness	-.01 (.96)	-.69***	-.81***	-.54***	—		
6. Industriousness	-.08 (.41)	.76***	.47***	.82***	-.54***	—	
7. Judgment	< .01 (.99)	.69***	.53***	.70***	-.76***	.62***	—

Note. Nonsignificant  $p$  values are presented in parentheses.  
\*\*\* $p < .001$ .



## STUDY 1 DISCUSSION

Data from Study 1 supported the view that, consistent with prior research, a substantial majority of participants did not thoroughly read the consent form before agreeing to participate. Participants in the experimental condition signed the consent form even though faulty and unethical information was present. It is possible that the use of negatives (i.e., “not”) in the experimental condition consent form was easy for participants to overlook and miss, which might have led to poor performance on the comprehension questionnaire. However, participants in the control condition also performed poorly on the comprehension questionnaire, so it is likely that a lack of reading across conditions was the cause of the poor performance, rather than the use of potentially confusing language. Participants in the experimental condition also answered fewer questions about the consent form correctly than participants in the control condition.

Participants’ self-reported scores on selected personality traits were not associated with correctly answering questions about the consent form. Possible explanations for this lack of association may include a lack of participant attention and a “rush through the study” mind-set. In addition, it is possible that situational variables (e.g., the low risk nature of the study) may have had a stronger influence than personality variables in this instance. Finally, it is possible that the personality traits we chose to measure do not correlate with consent form reading behaviors but that other personality traits not measured in the current study (e.g., need for cognition) would relate in future research.

Although informed consent is a necessary aspect of the ethical conduct of research, our results demonstrated that receiving fully informed consent from participants can be a difficult task. These results also illustrate that individual differences such as personality, classification, race, and sex are not likely the cause of participants’ lack of engagement in the consent process given the overall low base rate of careful reading of the consent form. However, based on participant feedback, it is possible that researchers’ reliance on the popular method of receiving informed consent via traditional forms may be partly to blame because, as one participant wrote, “No one ever reads the consent forms . . . everyone just clicks ‘I agree.’”

## STUDY 2

In Study 2, we aimed to replicate and extend the results of Study 1 and to explore improvements to consent forms suggested by participants in Study 1. Based on participant responses, we created four consent form formats: (a) a traditional consent form (identical to that used in the experimental condition in Study 1), (b) a consent form in which participants were asked to initial after reading each section, (c) a consent form that looked similar to the traditional consent form but added explicit instructions to carefully read the entire consent form, and (d) a consent form presented with a color background.

As in Study 1, we hypothesized that most of the participants, regardless of condition, would not thoroughly read the consent forms. Furthermore, we predicted that the alternative format consent forms, when presented electronically, would elicit more thorough reading than the traditional consent forms. Because the alternative formats were generated from participant suggestions in Study 1, we aimed to examine whether the alternative formats would increase the likelihood that participants would read the consent forms thoroughly.

## STUDY 2 METHOD

## Participants

A sample of 106 undergraduate students (see Table 3 for detailed demographic information) enrolled in introductory psychology courses at a large southern university participated in exchange for course credit. Participants enrolled in the study via the SONA recruitment system; students who had participated in Study 1 were excluded from participating in this study.

## Materials

*Informed Consent Waiver*

As in Study 1, the university's IRB approved the experiment for waived informed consent because of the nature of the research question.

TABLE 3  
Demographic Characteristics of Participants in Study 2

Characteristic	Traditional Condition		Initial Condition		Effort Condition		Color Condition	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Sex								
Male	9	40.9	2	11.1	5	15.2	6	18.2
Female	13	59.1	16	88.9	28	84.8	27	81.8
Classification								
Freshman	12	54.5	8	44.4	19	57.6	15	45.5
Sophomore	5	22.7	5	27.8	7	21.2	9	27.3
Junior	4	18.2	3	16.7	3	9.1	4	12.1
Senior	1	4.5	2	11.1	4	12.1	5	15.2
Race								
Asian	1	4.5	1	5.6	0	0.0	1	3.0
Black or African American	6	27.3	6	33.3	7	21.2	8	24.2
Pacific Islander	1	4.5	0	0.0	0	0.0	0	0.0
White	12	54.5	8	44.4	23	69.7	19	57.6
Unknown/Not Reported	1	4.5	0	0.0	1	3.0	3	9.1
More Than One Race	1	4.5	3	16.7	2	6.1	2	6.1
Ethnicity								
Hispanic or Latino	5	22.7	3	16.7	5	15.2	6	18.2
First Language								
English	19	86.4	16	88.9	31	93.9	26	78.8
Other	3	13.6	2	11.1	2	6.1	7	22.2
Major								
Psychology	5	22.7	4	22.2	5	15.2	7	21.2
Other	17	77.3	14	17.8	28	84.8	26	78.8

Note: *N* = 106.

### *Informed Consent Forms*

We created four distinct consent forms for this study, and all four forms contained the same incorrect and unethical information as the experimental consent form used in Study 1. This information was included in Study 2 due to the overall low amount of reading displayed by participants in Study 1. Despite the presence of the unethical information, no Study 2 participant declined participation after receiving the consent form.

*Traditional format.* The *traditional format* consent form was exactly the same as the experimental consent form used in Study 1 (see [Appendix B](#)), and it presented all the information in paragraph format with different sections labeled by appropriate headings. This consent form was the standard form used at this institution. Except for the indicated changes, the three other formats contained the exact same content as the traditional format.

*Initial format.* The *initial format* consent form (see [Appendix C](#)) included boxes for participants to initial after each section indicating that they read and understood that section.

*Effort format.* The *effort format* consent form (see [Appendix D](#)) was the same as the traditional format but contained the following instructions at the top of the form: “Please read through this **VERY thoroughly** before choosing to agree or disagree to participate in the study.”

*Color format.* The *color format* consent form (see [Appendix E](#)) presented the different sections in individual boxes on a purple background. Purple was chosen because it was the institution’s primary color and one with which participants would be familiar. We avoided colors such as red that have strong associations with other psychological processes (e.g., Elliot & Niesta, 2008), which might introduce an experimental confound.

### *Reading Comprehension Quiz*

The reading comprehension quiz included two short essay passages and five questions about the content of the passages. This quiz tested whether participants could correctly answer questions about a reading passage other than the consent form.

### *Consent Form Comprehension Questionnaire*

The same nine-item questionnaire from Study 1 was used in this study.

## PROCEDURE

Upon entering the lab, the experimenter greeted the participants and asked them to select and sit at one of 16 available computers. The participants unknowingly self-selected one of the four informed consent form conditions based on their choice of computer. The experimenter asked the participants to read the consent form before deciding whether to digitally sign it and proceed with the study. Following the consent form, the participants completed the consent form comprehension questionnaire, which was used to determine how thoroughly participants read the consent form. Participants then completed a short reading comprehension quiz. After

finishing the study, a debriefing statement detailing the true purpose of the study appeared. The debriefing statement informed participants that all the consent forms had contained faulty information and that this was necessary to test the hypotheses. As in Study 1, we ensured that participants understood the rationale for the deception and had an opportunity to express any concerns about the procedure before being dismissed. The experimenter also gave participants a hard copy of the debriefing statement and requested that they keep the true purpose of the study confidential.

## STUDY 2 RESULTS

Consistent with Study 1, there was little evidence that participants were carefully reading the consent form. No participants correctly answered all consent form comprehension questionnaire questions, and all but one (99.1%,  $n = 105$ ) were unable to answer more than 50% of the questions correctly.

We conducted a univariate analysis of variance (ANOVA) to test whether the alternative format consent forms would elicit more thorough reading from the participants compared to the traditional form. Significant differences in the number of correct answers were found across the traditional, initial, effort, and color conditions,  $F(3, 102) = 9.64$ ,  $p < .001$ ,  $\eta^2 = 0.22$  (see Table 4). Tukey's honest significant difference post hoc analyses revealed significant differences between the color condition and the traditional and initial conditions ( $ps < .001$ ), indicating that participants who received the color format consent form performed significantly worse on the consent form comprehension questionnaire than participants in the traditional and initial conditions. In addition, participants who received the effort format consent form performed significantly worse than those who received the traditional and initial formats ( $ps < .05$ ). Traditional and initial consent forms did not significantly differ from each other ( $p = .99$ ).

Similar to the results of Study 1, no significant relationships were found between the total number of correct answers on the comprehension questionnaire and participants' sex, race, ethnicity, and classification ( $rs$  ranging from  $-.06$  to  $.02$ ,  $ps > .56$ ). However, a significant relationship was found for participants' major, such that psychology majors ( $n = 21$ ,  $M = 2.14$ ) answered more questions correctly than other majors ( $n = 85$ ,  $M = 1.66$ ),  $t(104) = 2.54$ ,  $p = .01$ ,  $d = 0.66$ .

Because participants self-selected into conditions by selecting their computer in the lab (i.e., true random assignment was not used in this study), it was possible that participants'

TABLE 4  
Summary Statistics for Number of Questions Correctly Answered in Study 2 by Consent Form Format

<i>Condition</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Traditional	22	2.18	.73
Initial	18	2.22	.81
Effort	33	1.67	.69
Color	33	1.30	.68
Total	106	1.75	.80

comprehension ability differed by condition. To test this possibility, we conducted a one-way ANOVA on participants' reading comprehension quiz scores. The results indicated no significant differences among consent form conditions on reading comprehension ability,  $F(3, 102) = .43$ ,  $p = .73$ ,  $\eta^2 = 0.01$ . Overall, participants performed at an acceptable level on the reading comprehension quiz ( $M = 3.60$ , 72% correct).

## STUDY 2 DISCUSSION

Study 2 again supported the hypothesis that most participants would not thoroughly read the informed consent forms before consenting to participate. Although our sample size in Study 2 was slightly lower than that of Study 1, the results across both studies were consistent: The overwhelming majority of participants were unable to correctly answer questions on the consent form comprehension questionnaire. Furthermore, modifications to the consent form format did not result in any meaningful improvements in participant comprehension of the consent form material. However, the effort and color formats did result in significant decrements in participant consent form comprehension relative to the traditional and initial formats.

One potential explanation for why these alternative consent forms did not improve quiz performance relative to scores on the traditional and initial forms was that participants, regardless of how the consent form was formatted, did not believe that reading the consent form was a worthwhile use of their time. In support of this notion, 19 participants indicated through an open-ended question on the consent form comprehension questionnaire that they believed the information contained in all consent forms (not just those in our study) was unimportant and identical for every experiment. For example, one participant wrote that there was "not much value and very little info I need to know" in consent forms. Other participants reported that they did not read the consent form because they trusted either the researchers or the information contained in the consent form. If participants are putting less effort toward reading the consent forms than they are toward the reading comprehension test (which they believed was the purpose of the study), then it would make sense for their scores on the consent form questionnaire ( $M < 50\%$ ) to be lower than their scores on the comprehension test ( $M > 70\%$ ).

Nevertheless, participants viewing the consent form as unimportant does not account for why the color format consent form led to significant decreases in participant performance on the consent form comprehension questionnaire. One possible explanation is that the coloring of the consent form made it appear less ominous or official than a lengthy page of detailed text, making it easier for participants to gloss over. Another possible explanation is that the color format was more difficult to read than the other formats. Tinker and Paterson (1931) found that black writing on a white background was much easier to read than black writing on other-colored backgrounds.

It was also noteworthy that participants who received the effort version of the informed consent form performed significantly worse on the consent form questionnaire than participants who received the traditional and initial versions. In other words, explicitly instructing participants to thoroughly read the informed consent form had the opposite effect than was intended. This outcome may have resulted for three potential reasons. First, it is possible that participants had already undervalued the importance of the informed consent process, and by explicitly drawing their attention to the instructions, we inadvertently reinforced participants' preexisting

beliefs that the information was unimportant. Second, the instructions may have demanded significantly more cognitive effort compared to the traditional and initial conditions, which participants may have been unable or unwilling to expend. Third, explicitly instructing participants to expend effort reading the consent form may have created psychological reactance (Brehm, 1966), which undermined our intended effect.

### STUDY 3

Building on the results of Study 2, next we altered the delivery method of the study materials from electronic (Studies 1 and 2) to paper. Pedersen et al. (2011) found that participants failed to remember information about paper and online consent forms. However, this study examined only traditional format (e.g., plain text, paragraph format) consent forms. Extending this work, we wanted to determine whether paper alternative format consent forms would have a different effect than the electronic alternative format consent forms. Because our participant sample was college students who typically need to complete a large number of experiments over the course of a semester to earn class credit, it was possible that they had become accustomed to quickly agreeing to electronic consent forms. In Study 3, we examined whether requiring participants to physically sign their names would increase thoroughness of reading for the traditional and alternative format consent forms.

Given the magnitude of the effects from Studies 1 and 2, we again hypothesized that participants would not thoroughly read the consent forms and would perform poorly on the resultant consent form comprehension questionnaire.

### STUDY 3 METHOD

#### Participants

A sample of 119 undergraduate students (see Table 5 for detailed demographic information) enrolled in introductory psychology courses at a large southern university participated in exchange for course credit. Participants were recruited via the SONA online recruitment system. Participants who had previously participated in Studies 1 or 2 were excluded from participating in this study.

#### Materials and Procedure

Study 3 used the same waived consent, materials, and procedure as Study 2, except that participants were presented with all the materials in a paper format instead of electronically. In addition, participants in Study 3 were randomly assigned to conditions as opposed to the self-selection method used in Studies 1 and 2. All participants were required to provide a physical signature to indicate consent, and those in the initial condition additionally were instructed to physically initial each section. After participants signed the consent forms, the consent forms were collected so that participants were not able to refer back to them during the comprehension questionnaire.

TABLE 5  
Demographic Characteristics of Participants in Study 3

Characteristic	Traditional Condition		Initial Condition		Effort Condition		Color Condition	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Sex								
Male	12	35.3	7	22.6	13	43.3	6	25.0
Female	22	64.7	24	77.4	17	56.7	18	75.0
Classification								
Freshman	15	44.1	14	45.2	16	53.3	8	33.3
Sophomore	7	20.6	5	16.1	4	13.3	5	20.8
Junior	10	29.4	5	16.1	7	23.3	5	20.8
Senior	2	5.9	7	22.6	3	10.0	6	25.0
Race								
American Indian	0	0.0	0	0.0	0	0.0	1	4.2
Asian	1	2.9	0	0.0	0	0.0	0	0.0
Black or African American	5	14.7	10	32.3	9	30.0	4	16.7
White	20	58.8	15	48.4	16	53.3	14	58.3
Unknown/Not Reported	4	11.8	3	9.7	4	13.3	2	8.3
More Than One Race	4	11.8	3	9.7	1	3.3	3	12.5
Ethnicity								
Hispanic or Latino	11	32.4	9	29.0	9	30.0	8	33.3
First Language								
English	28	82.4	25	80.6	26	86.7	20	83.3
Other	6	17.6	6	19.4	4	13.3	4	16.7
Major								
Psychology	12	35.3	4	12.9	2	6.7	7	29.2
Other	22	64.7	27	87.1	28	93.3	17	70.8

Note: *N* = 119.

### STUDY 3 RESULTS

A frequency analysis revealed that 100% (*n* = 119) of participants did not correctly answer all informed consent form questions, and 99.2% (*n* = 118) were unable to answer more than 50% of the questions correctly. A univariate ANOVA indicated significant differences between the number of correct answers on the consent form comprehension questionnaire in the traditional, initial, effort, and color conditions,  $F(3, 115) = 8.23$ ,  $p < .001$ ,  $\eta^2 = 0.18$  (see Table 6).

TABLE 6  
Summary Statistics for Number of Questions Correctly Answered in Study 3 by Consent Form Format

Condition	<i>n</i>	<i>M</i>	<i>SD</i>
Traditional	34	2.03	.72
Initial	31	2.00	.73
Effort	30	2.07	.91
Color	24	1.21	.41
Total	119	1.87	.79

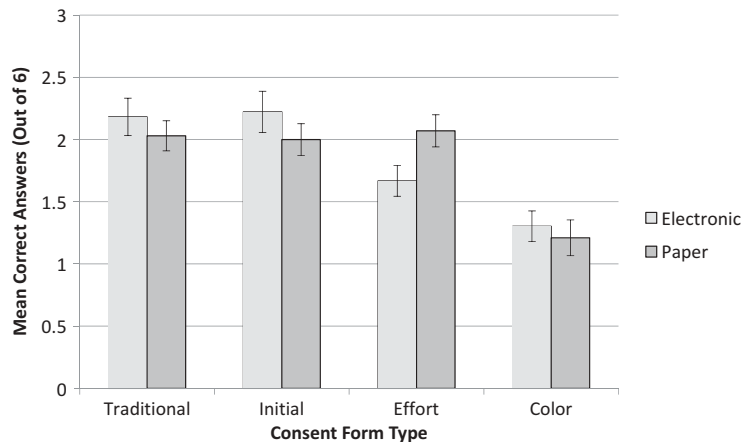


FIGURE 2 The average number of correct answers ( $\pm$  SE) on the comprehension questionnaire by consent form type in Study 2 (electronic) and Study 3 (paper).

Replicating the results from Study 2, Tukey honest significant difference post hoc analyses revealed significant differences between the color condition and all other conditions ( $ps < .001$ ), such that participants in the color condition performed significantly worse on the consent form comprehension questionnaire than participants in all other conditions. The traditional, initial, and effort conditions did not significantly differ from one another ( $ps > .98$ ). (For a comparison of the average number of correct answers on the comprehension questionnaire by consent form type between Studies 2 and 3, see Figure 2.)

Consistent with the results of Study 1, no significant relationships were found between the total number of correct answers on the comprehension questionnaire and participants' sex, race, ethnicity, classification, and major ( $rs$  ranging from  $-.01$  to  $.12$ ,  $ps > .21$ ).

Similar to Study 2, we conducted a one-way ANOVA on participants' reading comprehension quiz scores. The results indicated no significant differences among consent form conditions on reading comprehension ability,  $F(3, 115) = .70$ ,  $p = .55$ ,  $\eta^2 = 0.02$ . Overall, participants performed at an acceptable level on the reading comprehension quiz ( $M = 3.73$ , 75% correct).

### STUDY 3 DISCUSSION

The results of Study 3 supported our hypothesis and the results of the previous two studies, such that most participants did not thoroughly read the informed consent form before choosing to sign it and performed poorly on the subsequent consent form comprehension questionnaire. Consistent with the results of Study 2, participants in the color condition performed the worst among all the informed consent formats. The results suggested that, despite the delivery format of the consent form, participants failed to thoroughly read and respond accurately about the information provided in the consent form.



## SECONDARY ANALYSIS

Because of the similar design of Studies 2 and 3, we conducted a secondary analysis to combine and summarize the results of these two studies, as well as to test the interaction between delivery method and informed consent form format on participants' scores on the consent form comprehension questionnaire. In total, data were analyzed from 225 students (165 female, 60 male). Other than delivery method, all materials were identical across the electronic ( $n = 106$ ; Study 2) and paper ( $n = 119$ ; Study 3) conditions. A frequency analysis was conducted to determine which of the six questions on the comprehension questionnaire were most commonly answered correctly by participants. Most participants correctly identified the purpose of the study (96.4%) and the risks of the study (57.3%). The remaining questions were answered correctly by less than 14% of participants.

Delivery method (electronic and paper) and the informed consent format (traditional, initial, effort, and color) were entered into a factorial ANOVA as independent variables, and score on the consent form comprehension questionnaire was entered as the dependent variable. The ANOVA, which was adjusted to account for outliers and a nonnormal distribution, indicated a main effect for consent form type,  $F(3, 202) = 19.24, p < .001, \eta^2 = 0.22$ , such that participants who received the color format performed significantly worse than participants who received the traditional ( $p < .001$ ), initial ( $p < .001$ ), and effort ( $p < .001$ ) formats. Moreover, participants who received the effort format performed significantly worse than participants who received the traditional format ( $p = .01$ ). A second main effect was found for delivery method,  $F(1, 202) = 5.38, p = .02, \eta^2 = 0.03$ . Participants who received the electronic consent forms (Study 2) performed significantly better than participants who received the paper consent forms (Study 3). No significant interaction between consent form type and delivery method was found,  $F(3, 202) = 1.29, p = .28, \eta^2 = 0.02$ .

Although participants from Study 1 suggested formats they thought would elicit more thorough reading of informed consent forms, we did not find that these alternative formats significantly improved consent form reading behaviors in subsequent studies. In fact, in some cases these forms actually significantly hindered performance on the consent form comprehension questionnaire. In addition, requiring participants to physically sign their name, as opposed to clicking an "agree" box on a computer, did not elicit more careful and thorough reading. In sum, participants were more likely to read an electronic consent form than a paper consent form and were especially unlikely to read a consent form in color.

## GENERAL DISCUSSION

Across three studies, we found that participants overwhelmingly chose not to read the informed consent forms before choosing to agree to participate in research studies. Furthermore, even when we created alternative consent form formats based on participants' own suggestions on how to increase adherence, participants still were reluctant to thoroughly read the consent forms. Taken together, our results support previous research suggesting that participants largely do not follow the intended protocol regarding informed consent (Ghandour et al., 2013; Knepp, 2014; McNutt et al., 2008; Perrault & Nazione, 2016; Theiss et al., 2014).

## LIMITATIONS AND FUTURE DIRECTIONS

Contrary to past research (Knepp, 2014; Pedersen et al., 2011; Theiss et al., 2014), we found that participants' personality traits did not have an effect on whether participants read consent forms before choosing to participate in research. In addition, we found no effects for sex, race, or classification. We found an effect for participants' major in Study 2; however, this result did not emerge in Study 1, Study 3, or the secondary analysis. It is possible that participants' low scores on the comprehension questionnaire produced a floor effect, which masked the relationship between personality traits and consent form reading. Overall, however, these results seem to indicate that participants' lack of reading was not due to their inability to read and comprehend passages in general, but rather to the design of the consent forms, the participants' lack of concern for the consent process, or the perceived low stakes and low risks of participation in the study.

Our findings further suggested that delivery method had an effect on the likelihood of participants reading the informed consent form before agreeing to it, such that participants were more likely to read an electronic consent form than a paper one. This could possibly be due to the sample consisting of college students, who may be more accustomed to consenting to these types of documents (e.g., end-user license agreements) in an electronic format rather than a paper format. However, it is important to note that these studies took place in a research laboratory setting. The finding of electronic format consent forms being more effective may not generalize to online studies that take place outside of a laboratory setting due to possible effects that accompany laboratory settings and the presence of experimenters (Edlund, Hartnett, Heider, Perez, & Lusk, 2014). Specifically, the presence of an experimenter may elicit demand characteristics or put pressure on participants to spend more time looking at the consent form. It could also be the case that this finding was driven by floor effects, given how low the average participant scored on the comprehension questionnaire. This effect might disappear, or even reverse, if participants had more thoroughly read the consent forms.

Because participants were likely aware of the low risks of the study, it is possible that they read the consent form less carefully than they would have had they believed the study involved high risks or substantial incentives. Future research should investigate these phenomena in higher risk studies (e.g., medical procedures or experiments that involve sensitive material such as sexual history questionnaires) in order to more accurately determine how participants will behave in such situations. The level of risk associated with a study (low vs. high) may moderate the relationship between participant characteristics and consent form reading. Testing the effectiveness of various consent form formats in higher risk studies would also provide better insight into the practical significance of these effects. Although the effect sizes we obtained across our three studies indicated strong effects, the contrived and low-risk nature of the studies raises the possibility that the effects we observed would be less practically significant in different contexts. In Study 2, for example, the difference between the traditional and initial formats and the color format was roughly one correct answer out of a possible six correct answers. What is the practical significance of one correct answer (i.e., comprehending a section of the consent form) more on one format than another format in a low-risk study compared to a high-risk clinical trial? Future research is needed to address how the perceived or actual level of risk associated with a study affects participants' reading of consent forms.

Previous research (Perrault & Nazione, 2016) examined ways that participants believe informed consent forms could be improved by offering closed-ended questions. Building on this research, in the current study we used open-ended questions to solicit feedback from participants on ways to improve the consent protocol. The logic was that participants might possess unique insight into their own motivations for attending to the study details and that their suggestions for improving the consent process would reflect their reasons for disengagement. However, informed consent form formats created from participant suggestions through open-ended questions did not lead to any significant improvements in reading. In fact, the color format, which was created from the most frequent participant suggestions (e.g., “Use color, highlight, bold letters,” “. . . I read better when things are in color”), resulted in significant *decreases* in participant performance on the comprehension questionnaire, which attests to participants’ lack of insight into their own cognitive processes (Kruger & Dunning, 1999). Some participants who received the color format suggested that removing the color would make the consent form better (e.g., “Make it less busy—too much color, separation, etc.”). Future research should attempt to further examine the role of color on consent form adherence. For instance, in Studies 2 and 3, it is possible that participants were overly familiar with the color purple because purple was the institution’s primary school color. Alternatively, it is possible that the purple background made the black text more difficult to read (Tinker & Paterson, 1931). A neutral color choice may be advisable in future studies.

There is also some recent research that corresponds with the findings from our studies. Recently, Perrault and Keating (2017) conducted a similar study to ours in which they exposed participants to one of seven different consent form versions (e.g., bullets, diagrams) and tested participants’ reading and comprehension. They found no significant differences in reading or comprehension across the consent forms. Consistent with our design, they solicited feedback through open-ended questions on how to get participants invested in reading the consent forms and offered suggestions for future research based on this feedback (e.g., highlighting important information). Whereas Perrault and Keating designed their consent forms from previous research, we designed our consent forms (Studies 2 and 3) from participants’ own suggestions. In both cases, the consent form format did not have a strong influence on improving participants’ reading and comprehension of consent forms. Moreover, Duvall-Antonacopoulos and Serin (2016) found that a modified consent form (i.e., bullet points, color) led to greater comprehension only when it was paginated and participants needed to initial each page before continuing. These studies on the whole suggest that, in the end, there may be no single consent form format that will interest and engage all research participants. Future research might assess the effectiveness of a multifaceted approach consisting of a consent form, a comprehension quiz with feedback, and a “debriefing” interview to ensure that participants fully understand the consent form before beginning a study.

A final set of limitations concerns potential sources of error or bias in our measurements. Participants in Studies 1 and 2 unknowingly self-selected into their experimental conditions, as opposed to being randomly assigned, which may have led to inflated effect sizes in our results. The participant groups were not significantly different from each other in the experiments, but we cannot account for differences in any other unmeasured confounding variables. However, participants were randomly assigned to conditions in Study 3, and the results supported those found in the two earlier studies. In addition, due to the nature of null hypothesis significance testing, it is possible that the number of analyses we conducted may have inflated the Type I

error rate. Despite these potential limitations, the main results (e.g., participants not reading consent forms, alternative format forms not eliciting better performance than traditional forms) appear to be stable across the three studies and support previous findings on the lack of careful consent form reading by participants (McNutt et al., 2008; Perrault & Nazione, 2016).

### Implications

The results of these studies may indicate that participants were forgoing reading consent forms due to an apathetic attitude toward the material in consent forms, not because the consent forms were poorly constructed. This was evidenced by some participants reporting that they found consent forms “readable” or at least “as readable as they should be.” It is possible that not reading the consent form may be a tactic employed by participants to save time and finish the experiment quickly. In support of this notion, when we retrospectively asked participants whether they read the consent forms and to explain their decision, approximately 10% of participants cited wanting to finish quickly as their reason for not reading the consent form. This is consistent with participant suggestions from Perrault and Keating’s (2017) study that shortening consent forms and highlighting essential information may improve consent form reading. Some participants were more optimistic in their reasons for hurrying (e.g., “I wanted to get immediately to the task at hand”) than others (e.g., “In a hurry and just ready to leave”). To combat this possible apathetic attitude, researchers and practitioners may consider reiterating the importance of the information in the consent form and possibly asking the participant questions about the material to ensure that it was read carefully (Festinger, Dugosh, Croft, Arabia, & Marlowe, 2010).

Likewise, researchers and practitioners may want to consider emphasizing important information in the debriefing portion of the procedure. Unfortunately, this may be difficult to accomplish in studies that are conducted online, especially if participants are not carefully reading the information in the informed consent form. It may be beneficial for researchers and practitioners to implement additional protocols into their study procedures in order to assess whether participants have carefully considered the information in the consent form and debriefing documents. These procedures could include a brief multiple-choice quiz about the content in the documents, an open-ended question asking participants to summarize the study in their own words, or the addition of a time stamp to record how long participants spend reading the documents. Such post hoc assessments could allow researchers and practitioners to discern how carefully participants have read the documents.

The findings of the current research may generalize to other research areas or situations in which participants view the potential risks as minimal or inconsequential, such as with same-day, outpatient surgery. Similarly, our results have important implications for a variety of real-world situations. Almost all major economic transactions—securing a bank loan, buying a car, securing a mortgage, agreeing to software terms and conditions, and so on—require that individuals read and sign a legal contract between a buyer and seller. Whether in research or the real world, choosing to ignore or skim a consent form (or any other contract) before signing causes the signer to be uninformed about the conditions to which they are agreeing. In addition, as legally binding documents, these contracts may contain clauses that remove the signer’s ability to legally address any grievances that may arise.

## CONCLUSIONS

Across multiple studies, we found that an overwhelming majority of participants chose to forgo reading consent forms before agreeing to participate in research. This decision was not related to participants' sex, race, academic classification, or personality, which suggests that this choice is made by a wide range of participants. In addition, various formats of consent forms generated from participants' own suggestions did not elicit improved reading from participants. Because some participants tend to not read consent forms, researchers and practitioners may want to implement tactics (e.g., asking questions about the form, reviewing the form with the participant) to ensure that participants have read the consent form before proceeding with the protocol. It is imperative that researchers and practitioners be aware of this phenomenon so that they can ensure the validity and legitimacy of their participants' consent.

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## APPENDIX A: INFORMED CONSENT FORM

**Investigator's statement**

**PURPOSE:** We are interested in how personality traits either suppress or bolster other traits. Past studies have suggested links between certain personality traits, and we hope to be able to show correlational, if not causal, links between certain traits.

**DURATION:** The length of time you will be involved with this study is approximately 15–30 minutes.

**PROCEDURES:** If you agree to participate in this study, you will be asked to complete certain tasks: demographic form, personality trait assessments, a short questionnaire.

**RISKS:** There are no risks with this study.

**CONFIDENTIALITY:** The records of this study will be kept private. Your name will not be attached to answers you provide. The investigators will have access to the raw data. In any sort of report that is published or presentation that is given, we will not include any information that will make it possible to identify a participant. This number will not be tied to any type of identifying information about you. Once collected, all data will be kept in secured files, in accord with the standards of [REDACTED], federal regulations, and the American Psychological Association. In addition, please remember that the researchers are not interested in any individual person's responses. We are interested in how people in general respond to the measures.

**VOLUNTARY NATURE OF THE STUDY:** Your participation in this study is voluntary. In addition, you may choose to not respond to individual items in the survey. Your decision whether or not to participate will not affect your current or future relations with [REDACTED] or any of its representatives. If you decide to participate in this study, you are free to withdraw from the study at any time without affecting those relationships.

**CONTACTS AND QUESTIONS:**

[REDACTED]

If you have questions or concerns regarding this study and would like to speak with someone other than the researchers, you may contact The Office of Research and Sponsored Programs at [REDACTED].

**BENEFITS:** Students recruited from participating introductory psychology classes will receive 1 credit for every 30 minutes of research participation. This study is worth 1 credit. Students from other classes will receive credit in that class in an amount that is considered appropriate by the course instructor (e.g., 5 points extra credit or 1–2% of the overall points possible in the class).

**STATEMENT OF CONSENT**

The procedures of this study have been explained to me and my questions have been addressed. The information that I provide is confidential and will be used for research purposes only. I am at least 18 years of age and I understand that my participation is voluntary and that I may withdraw at anytime without penalty. I have read the information in this consent form and I agree to be in the study.

**Signature of Participant:** \_\_\_\_\_

**Date:** \_\_\_\_\_







#### APPENDIX D: INFORMED CONSENT FORM

Please read through this **VERY thoroughly** before choosing to agree or disagree to participate in the study.

##### **Investigator's statement**

**PURPOSE:** We are interested in how personality traits either suppress or bolster other traits. Past studies have suggested links between certain personality traits, and we hope to be able to show correlational, if not causal, links between certain traits.

**DURATION:** The length of time that you will be involved with this study is approximately 15–30 minutes.

**PROCEDURES:** If you agree to participate in this study, you will be asked to complete certain tasks: demographic form, personality trait assessments, a short questionnaire.

**RISKS:** There are no risks with this study.

**CONFIDENTIALITY:** The records of this study will be kept private. Your name will not be attached to answers you provide. The investigators will have access to the raw data. In any sort of report that is published or presentation that is given, we will not include any information that will make it possible to identify a participant. This number will not be tied to any type of identifying information about you. Once collected, all data will not be kept in secured files, in accord with the standards of [REDACTED], federal regulations, and the American Psychological Association. In addition, please remember that the researchers are not interested in any individual person's responses. We are interested in how people in general respond to the measures.

**VOLUNTARY NATURE OF THE STUDY:** Your participation in this study is voluntary. In addition, you may choose to not respond to individual items in the survey. Your decision whether or not to participate will affect your current or future relations with [REDACTED] or any of its representatives. If you decide to participate in this study, you are free to withdraw from the study at any time without affecting those relationships.

##### **CONTACTS AND QUESTIONS:**

[REDACTED]

Dr. Donald Duck: duckdd@[REDACTED]

If you have questions or concerns regarding this study and would like to speak with someone other than the researchers, you may contact The Office of Research and Sponsored Programs at [REDACTED].

**BENEFITS:** Students recruited from participating introductory psychology classes will not receive 1 credit for every 30 minutes of research participation. Students from other classes will receive credit in that class in an amount that is considered appropriate by the course instructor (e.g., 5 points extra credit or 1–2% of the overall points possible in the class).

##### **STATEMENT OF CONSENT**

The procedures of this study have been explained to me and my questions have been addressed. The information that I provide is confidential and will be used for research purposes only. I am at least 18 years of age and I understand that my participation is voluntary and that I may withdraw at anytime without penalty. I have read the information in this consent form and I agree to be in the study.

**Signature of Participant:** \_\_\_\_\_

**Date:** \_\_\_\_\_

