

On Making Legal Documents Understandable: Objective and Subjective Measures

Julie E. Howe and Michael S. Wogalter

*Department of Psychology
North Carolina State University
Raleigh, NC 27695-7801*

ABSTRACT

Citizens are often asked to sign a variety of legal documents such as contracts, monetary agreements, and consent forms, but the adequacy of how well informed average citizens become when they sign such documents is unclear. A recent survey indicated that respondents signed a variety of legal documents that they did not fully read or understand (Howe and Wogalter, 1994). Participants in that survey also identified characteristics of legal documents that hinder their understanding and offered suggestions for improving understandability. In the current study, these characteristics and suggestions were used to create two different consent forms: a conventional "legalistic" consent form and an improved consent form. These were compared with each other and with a third, one-line, consent form (a control). Understandability was assessed using an objective comprehension test and measures of participants' subjective perceptions of understandability. Consistent with the hypotheses, objective comprehension and participant's subjective understanding was significantly enhanced by the improved form relative to the conventional form. Comprehension in the control condition was significantly lower than either of the other two consent forms conditions. In addition, even though comprehension was poor with the conventional legalistic consent form, all but one person receiving that form signed it, agreeing to participate in an activity that was described as having some risk of explosion and burn injury (jump starting a dead battery with booster cables). There was also a tendency for more participants with the improved form than the conventional form to take advantage of a stated option of participating in a less risky activity (a card sorting task). The importance of understanding legal documents as well as the implications for additional work in this domain are discussed.

INTRODUCTION

Legal documents are often too long, too complex, full of legal jargon, and comprised of other characteristics that severely undermine comprehension to anyone other than attorneys and other individuals extensively trained in law. In fact, there is a long standing perception by the public that legal documents are unreadable.

Empirical research on the understandability of legal documents is relatively limited. Most has focused on improving consent forms for people deciding whether to participate in medical procedures in order to ensure that they are adequately informed of their rights. In the last few years, research has begun to focus on the understandability of other kinds of legal documents such as contracts, leases, and loan and insurance forms. Recently, there has also been a spark of interest by the legal profession concerning the use of plain-language in legal documents and in training law students how to write more clearly (Gest, 1995).

Most of the research in this area has focused on readability. Readability assessments (e.g., the Flesch index) provides predicted grade levels (or percentages) of individuals

who are likely to understand the material. Readability formulas produce objective scores as a function of sentence length, word length, syllables per word, and word frequency. Gray, Cooke and Tannenbaum (1978) evaluated 1526 consent forms and found that over 77% of these forms had grade-level scores that were beyond the normal levels measured by the Flesch readability scale (in the scholarly/academic range). Morrow (1980) assessed the readability of 60 informed consent forms used by national-trial cancer groups (using Flesch and Frye readability formulas). He found that the consent forms were only slightly more readable than scientific medical journals and considerably less readable than many popular press magazines. Actual comprehension, however, was not assessed in either of these preceding reports.

Young, Hooker, and Freeberg (1990) measured the comprehensibility of two consent forms differing as a function of reading level. Using a multiple-choice comprehension test, they found that people understood more of the lower-reading level consent form than the higher-reading level form. In another study where the reading level was held constant but documents were manipulated with

respect to length, Mann (1994) found that an original medical consent form was understood less well than a shortened, less detailed version.

Whereas, readability formulae are common measures of comprehensibility in this area, these assessments have gained a certain notoriety because research has shown that comprehension is not always predicted by readability (e.g., Duffy and Kabance, 1982; Black, 1981). Thus, other ways to assess the understandability and improve comprehension of legal documents need to be used in research and application. The most basic and most direct measure of comprehension is to test people on the knowledge that they gain after being given the opportunity to read the material.

Masson and Waldron (1994) modified four kinds of standard legal contracts: mortgage, property sale agreement, bank loan, and lease renewal. The documents were redrafted by removing or replacing archaic redundant words, simplifying words and sentence structure, and defining or replacing legal terms with simpler terms. Comprehension was assessed using four yes/no questions and asking participants to paraphrase sections of the document. Correct yes/no responses and paraphrase accuracy increased with the redrafted versions of the documents; however, absolute levels of comprehension across all versions were low.

Howe and Wogalter (1994) took a different approach to the understandability of legal documents. They surveyed citizens' perceptions of the understandability of legal documents and asked survey respondents to list characteristics of legal documents and to suggest ways that they could be improved. This survey indicated that people sign common legal documents (such as tax returns, insurance forms, leases, and loan agreements) that they often do not read or understand. Respondents reported reading legal documents moderately carefully and understanding them moderately well (according to rating-scale anchors). However, reported comprehension levels were not as high as one would expect given the educational level of the participants (who on average completed some college), and the importance and the legal implications associated with these documents.

In describing the characteristics of legal documents, Howe and Wogalter's (1994) participants reported that the documents were too technical, too long, and illegible. When asked whether these documents could be improved, 96% of the respondents agreed. Many of them provided specific suggestions for improvement which included reducing the technical and legal jargon, shortening the length, and increasing the print size. These comments served as a basis for the current study.

One limiting factor of the earlier work is that the survey assessed only the respondents' reported comprehension of legal documents, not actual comprehension. Sometimes what

people report is not always consistent with what actually happens. Thus the present study sought to verify the self reports of the earlier study by exposing potential research participants to a legal document, a consent form, and directly measuring their responses to it (e.g., knowledge on a subsequent comprehension test). Three different versions of an informed consent form were created based on the responses from the survey. It was hypothesized that a consent form conforming to people's suggestions for improvement would be better understood than a consent form fitting the characteristics of most legal documents.

The present study also examined a set of other related issues. Thirty-eight percent of Howe and Wogalter's (1994) respondents reported that they had signed legal documents without reading them. Mann (1994) also found that participants frequently signed consent forms without understanding important aspects of the document. Given these findings, the present study also examined whether participants appeared to read the document, how long they spent reading it, whether the participants agreed to participate in a procedure that had a small risk of injury by signing the document, and whether they choose to do a safer alternative card sorting task. It was hypothesized that participants who received the improved form would be more likely to read the consent form, would be more likely to refuse to sign the form and would be more likely to choose the alternative activity because they better understood the risks involved.

METHOD

Participants

Seventy-one North Carolina State University undergraduates taking an introductory psychology course participated for research credit. Participants included 33 females and 38 males with a mean age of 19.6 ($SD = 2.6$).

Materials

Three different consent forms were created for a car battery/booster cable study in which participants were asked to demonstrate the proper way to jump start an automobile. The use of a consent form was chosen because of its common use in university settings as well as its similarity to other legal agreements. The specific activity that they were told they would be performing involved connecting two batteries with booster cables as if they were jump starting a car. Use of the battery-related procedures was designed to evoke a belief there was some small risk of an injury if not performed properly. Thus, there was a compelling reason to read the consent form.

In all forms they were told that they would be connecting two batteries with jumper cables. The control consent form consisted of only the following one sentence: "My signature below indicates voluntary participation in this study in which

I will be asked to connect two batteries with jumper cables.” The content of the other two experimental consent forms was much more extensive and based on American Psychological Association (APA) guidelines. The following specific pieces of information were included in the two experimental forms:

- a definition of APA
- the names of the researchers
- the risk of explosion and being burned
- an anonymity statement
- the right to refuse participation
- the right to receive credit
- the minimum age requirement
- a grievance procedure
- the availability of alternative card sorting activity

Although the two experimental consent forms contained the same information, the contents were presented quite differently in each of the two forms. On the one hand, the conventional consent form described the potential risks as: “The participant(s) are to understand that if the task is not performed correctly, the participant runs the risk of being burned from a possible explosion” and described the alternative activity as: “If the participant(s) does not want to participate in the experimental study under the specified conditions, there is the option of participating in a card sorting experiment without penalty or loss of benefit.” On the other hand, the improved consent form described the risks as: “You should understand that if not done correctly, the battery may explode and you could be burned” and described the alternative activity as: “If you do not want to participate you may alternatively do a card sorting project for credit.”

Specifically, the two consent forms differed on the following characteristics. The conventional legalistic consent form was based on the attributes of legal documents reported by respondents in the Howe and Wogalter (1994) survey. These features included: small print (10-point Times Roman font), longer length (532 total words in 25 sentences with an average sentence length of 21 words), a formal tone (e.g., written in the third person as opposed to the first person) and used complex, technical, legalistic terms (e.g., it was titled “Authorization Form”). Analysis of the conventional consent form’s readability using the Flesch index (Sensible Grammar for the Macintosh, Long, 1987) indicated that it was readable by 3% of U.S. adults (i.e., 17th grade level education).

The improved consent form was based on subjects’ suggestions for improving legal documents from the Howe and Wogalter (1994) survey. The features included: larger print (12-point font), shorter length (227 total words in 20 sentences with an average sentence length of 11 words), more casual tone (e.g., used the first person), and was less technical (e.g., titled “Consent Form”). The Flesch readability index indicated that it was readable by 45% of U.S. adults (i.e., a

13th grade education). This is a readability level that is comparable to the education level of the participants in this study who were primarily freshman or sophomores.

The control consent form had 26 words. Its short length precluded a readability evaluation, as readability formulae are highly unreliable with samples of less than 100 words.

The comprehension test, consisted of six yes/no questions (e.g. “Were there any options given to you if you decided not to participate), and three short-answer questions (e.g., “What does APA stand for?”). The information content of the test questions reflected the information present in both of the two longer (experimental) consent forms. After the comprehension test, participants were also asked to evaluate (a) the understandability of the consent form, (b) how carefully they read it, and (c) how well it explained their rights as participants in a research study. Each of these assessments were rated on a Likert-type scale anchored numerically and verbally from 1 (not at all) to 9 (extremely). The scores on the comprehension test served as an objective measure of knowledge; whereas rated understandability served as a subjective measure of knowledge.

Procedure

All participants signed up for individual times on a schedule posted on the designated departmental bulletin board for an experiment called “Battery Study.” Upon arrival they were told that the study would begin with a consent form and were given one of the three, randomly assigned, consent forms. The experimenter noted whether the participants appeared to read the form, recorded how long they took to read it, whether they chose to do the optional card sorting task instead of the battery study, and whether they signed the form. The participant was then asked to fill out a demographics questionnaire (e.g., asking gender and age), followed by the comprehension test and the subjective evaluations of the consent forms. The procedure continued with their participation in the original battery study or the card-sorting procedure. Participants who chose to participate in the battery study were then exposed to the apparatus which included two realistic-appearing, but fake, batteries along with a set jumper cables and two simulated car-engines. Exposure to the car battery apparatus did not occur until after the consent form procedure; the consent form and car battery procedures were in two separate rooms. Later, participants were debriefed about the nature of the consent form manipulation, shown how to correctly connect the batteries, and thanked for their participation.

RESULTS

Reading

Only 2 participants did not appear to read any of the document, both of whom were given the conventional legal

form. However, both of these participants signed the consent form agreeing to participate in the battery study. Differences in the time spent reading the three consent forms were significant, $F(2, 68) = 38.28$, $p < .001$. As expected the participants in the one-line control condition spent considerably less time reading ($M = 9.04$ sec) than the other two full-content experimental consent form conditions, conventional ($M = 66.54$ sec) and improved ($M = 53.41$ sec). While the two experimental forms appear to differ, the comparison was not significant ($p > .05$).

Participation

Virtually all (64 of 71) of the participants agreed to take part in the battery study despite the explicitly-stated option of participating in a card sorting task. Of the seven who refused to participate, five were in the improved consent form condition, one in the conventional consent form condition and one in the one-line control form condition. A Chi-Square test was conducted on the frequencies for participation between the two experimental consent forms. The effect bordered on the conventional significance criterion, $\chi^2(1, n = 46) = 3.48$, $p = .06$; people who were given the improved consent form were more likely to refuse to participate than those who were given the conventional consent form.

Objective Comprehension

Responses to each of the nine questions were given a score of 1 for correct and 0 for incorrect answers on the comprehension test. An overall objective comprehension score for each participant was formed by taking a mean across the nine items. An ANOVA on the overall comprehension scores as a function of consent form condition showed a significant effect, $F(2, 68) = 63.05$, $p < .001$. Comparisons among the means using Fisher's Least Significant Difference test ($LSD = .09$) showed that participants in the improved consent form condition ($M = .78$, $n = 22$, $SD = .14$) produced higher comprehension scores than participants in the conventional consent form ($M = .57$, $n = 24$, $SD = .20$) or the one-line control form ($M = .26$, $n = 25$, $SD = .14$) conditions. When comprehension was evaluated without the control condition, the comparison remained significant, $t(44) = 4.24$, $p < .001$. This result confirms participants who were given the improved consent form understood the material better than participants given the conventional consent form.

In addition, each of the nine content items were considered separately. The improved consent form produced higher comprehension scores than the conventional legalistic consent form for every item. In four of the nine, the differences were statistically significant. Comprehension of both experimental conditions was significantly greater than the one-line control condition except for the items referring to the right of refusing to participate, the definition of APA, and the names of the investigators.

Subjective Comprehension

Comparisons were made between the two experimental consent form conditions on the three subjective rating measures: understandability, carefulness in reading the form, and how well the form explained the participant's rights. The one-line control form was not included in these analyses because participants in this condition had been exposed only to a rudimentary-level of information, and as a consequence, this group's ratings would be made on a different basis than the individuals in the other two conditions.

Participants exposed to the conventional consent form ($M = 5.58$) reported it to be significantly less understandable than those exposed to the improved consent form ($M = 7.05$), $t(44) = 2.64$, $p < .05$. Participants given the conventional consent form ($M = 3.13$) reported reading the consent form less carefully than those who were given the improved consent form ($M = 5.72$), $t(44) = 5.82$, $p < .001$. Participants in the conventional consent form condition ($M = 7.00$) reported being significantly less well informed about their rights than participants in the improved consent form condition ($M = 7.95$), $t(43) = 2.49$, $p < .05$.

Correlations

Objective comprehension was positively and significantly correlated to perceived understandability, $r = .35$, $p < .05$, reported care in reading the document, $r = .68$, $p < .05$, and perceptions about how well the consent form explained their rights as research participants, $r = .31$, $p < .05$. In addition, perceived understandability was positively and significantly correlated with reported care in reading the document, $r = .35$, $p < .05$, and how well the consent form explained their rights, $r = .67$, $p < .05$. Also, reported care in reading the document was positively and significantly correlated with how well they believed their rights were explained, $r = .40$, $p < .05$. Finally, reading time did not significantly relate to any of the rating measures.

DISCUSSION

The results show that the form or style of a legal document can influence what people know as well as their impressions about how well the information was communicated to them. Specifically, these results support the suggestions for improving legal forms described in Howe and Wogalter (1994). It appears that consent forms that are shorter, use larger-print, are less formal in tone, and use less technical terms do a better job at communicating the risky nature of the task the participants were agreeing to participate.

Consistent with the hypotheses, the results show that the improved consent form produced greater objective comprehension scores than the more legalistic conventional consent form. Additionally, participants' subjective ratings

indicated that the improved form was more understandable than the conventional form. This better understanding may explain the finding that five of the seven individuals who refused to participate in the battery study were in the improved consent form condition. That is, because they were probably better informed about the risks of the battery task and about the availability of another, safer task, the improved consent form participants more frequently chose the optional task. However, only a few people declined to participate in the battery study, and as a consequence, the difference between conditions was significant only at a marginal level. Had a larger sample been tested, the effect might have been statistically significant at conventional probability levels.

The finding that the participants in the control form condition comprehended less than the other two conditions is not surprising because this form did not contain most of the elements evaluated in the comprehension test. The improved and the conventional consent forms reached average levels of 78% and 57% correct in the comprehension test, respectively, whereas, baseline knowledge of the control condition reached average level of only 26% correct on the test.

Comprehension appears to be related to whether and how carefully people read the document, as well as how well people feel about the information that they have gained from it. Although subjective ratings indicated that the improved consent form was read more carefully and that it better informed participants of their rights, the majority of the participants did agree to a potentially risky procedure when they could have chosen the safer card sorting alternative. Moreover, the two participants who did not read the consent form were in the conventional consent form condition. Together, these results support the notion that people often sign forms that they do not read or fully understand.

Subsequent Research

Subsequent research could more directly determine the most important specific factors that facilitate comprehension of legal documents. For example, the present study used the many comments and suggestions from earlier surveyed participants to produce a conventional legalistic and the improved consent forms. In future research, each of the factors should be manipulated individually, as some are probably more influential than others.

Given their extensive involvement and expertise in research and the development of hazard warnings (Laughery, Wogalter, and Young, 1994), human factors professionals' might be particularly attuned to creating and improving the understandability of legal documents. Many of the factors

that have been found to be relevant for warnings (e.g., familiarity, risk perception, explicitness, noticeability, and various physical characteristics) also appear relevant to legal documents in general. For example, Cohen and Baird (1988) examined environmental factors that might affect people's understanding and willingness to purchase insurance from a rental car company. They stress the importance of taking into account the overall environment in which transactions take place, not just the traditional issues of contract readability and comprehensibility. Example environmental factors include time constraints, the target audience, individual differences, and social pressures. These and other factors should be examined as potential influences for people's willingness to read, understand, and sign legal documents.

REFERENCES

- Black, B. (1981). A model plain language law. *Stanford Law Review*, 33, 255-300.
- Cohen, H. H., and Baird, B. P. (1988). Human factors analysis applied to a consumer fraud case: Elements of a decision support system. *Forensic Reports*, 1, 35-41.
- Duffy, T. M., and Kabance, P. (1982). Testing a readable writing approach to text revision. *Journal of Educational Psychology*, 74, 733-748.
- Gest, T. (March 20, 1995). Combating legalese. *U.S. News & World Report*, 78-82.
- Gray, B. H., Cooke, R. A., and Tannenbaum, A. S. (1978). Research involving human subjects. *Science*, 201, 1094-1101.
- Long, D. (1987). *Sensible Grammar*. Troy, MI: Sensible Software.
- Howe, J. E., and Wogalter, M. S. (1994). The understandability of legal documents: Are they adequate? *Proceedings of the Human Factors and Ergonomics Society*, 38, 439-442.
- Laughery, K. R., Wogalter, M. S., and Young, S. L. (Eds.) (1994). *Human Factors Perspectives on Warnings*. Santa Monica, CA: Human Factors and Ergonomics Society.
- Mann, T. (1994). Informed consent for psychological research: Do subjects comprehend consent forms and understand their legal rights? *Psychological Science*, 5, 140-143.
- Masson, M. E., and Waldron, M. A. (1994). Comprehension of legal contracts by non-experts: Effectiveness of plain language redrafting. *Applied Cognitive Psychology*, 8, 67-85.
- Morrow, G. R. (1980). How readable are subject consent forms? *Journal of the American Medical Association*, 244, 56-58.
- Young, D. R., Hooker, D. T., and Freeberg, F. E. (1990). Informed consent documents: Increasing comprehension by reducing reading levels. *IRB: A Review of Human Subjects Research*, 12, 1-5.