

\$1.20 The standard of proof in a civil case is that a plaintiff must prove his or her case by a preponderance of the evidence. This is a less stringent standard that is applied in a criminal case, where the prosecution must prove its case beyond a reasonable doubt. By contrast, in a civil case such as this, the plaintiff is not required to prove...

Beyond Undergraduates: Strengthening psycholinguistic studies – and their impact – using MTurk

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“A preponderance of the evidence is such evidence which, when considered and compared with any opposed to it...”*

Abstract When jurors are confused by the opaque jury instructions that they hear before deliberating, they not only disengage but return misinformed verdicts (Charrow & Charrow 1979; Diamond et al. 2012; Benson 1984; Marder 2006). Our earlier studies (Randall et al. 2015) showed that listeners comprehended jury instructions significantly better (1) when they could read while listening and (2) when the instructions were rewritten in **Plain English**, minimizing two linguistic factors: **passive verbs** (Ferreira 2003) and unfamiliar legal expressions, or “**legalese**” (Diana & Reder 2006). These improvements, while significant, were smaller than expected, possibly because the subjects were undergraduates. We would expect larger improvements for jurors, whose education level is lower, on average. The current study tests subjects who are demographically closer to the jury pool, drawn via Amazon’s MTurk. The results confirm our expectation; these subjects show greater gains for both (1) **reading while listening** and (2) **Plain English** instructions with minimized **passive verbs** and **legalese**. This new evidence, both stronger and more relevant, may better convince skeptical judiciaries to implement change.

Study 1: Undergraduate student subjects

Hypotheses

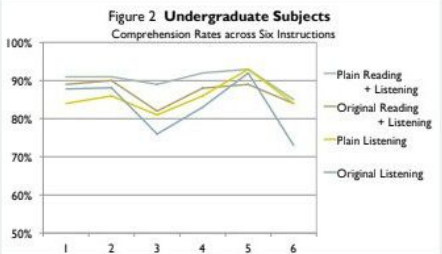
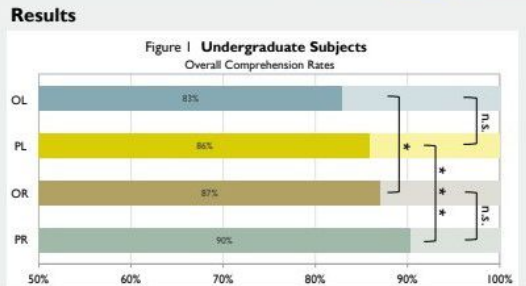
1. **Reading while listening** will improve comprehension over **listening only**.
2. **Plain English** instructions with minimized **passive verbs** & **legalese** will improve comprehension over **Original** instructions.

Subjects + 4 Conditions

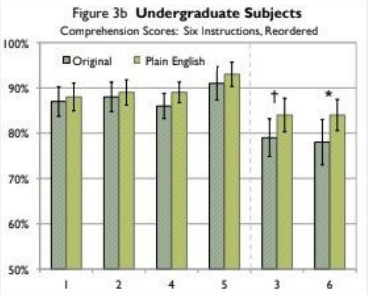
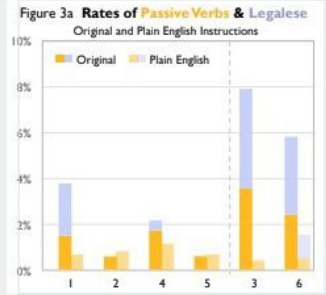
| | Original | Plain English |
|-------------------|----------|---------------|
| Listening-Only | 43 | 86 |
| Reading+Listening | 36 | 49 |

Materials, Design, & Procedure

Four groups of subjects heard recordings of either six **Original (OL&OR)** or six **Plain English (PL&PR)** Massachusetts civil jury instructions. Half of the subjects were in a **Listening-only** condition (OL&PL), half were in a **Reading+Listening (OR&PR)** condition and were supplied with the text of each instruction. After each instruction, all subjects answered true/false questions in a printed test booklet.



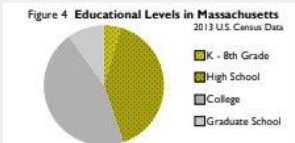
As predicted by **Hypothesis 1**, there was an overall main effect (Figs. 1&2) of **Reading** ($F_{1,197}=10.980, p=.001, \eta^2=.053$): comprehension scores for **Reading+Listening (OR&PR, m=89.0%)** were significantly higher than for **Listening-Only (OL&PL, m=84.5%)**. As predicted by **Hypothesis 2**, there was an overall main effect (Figs. 1&2) of **Plain English** ($F_{1,197}=3.937, p=.049, \eta^2=.020$): comprehension scores for **Plain English** instructions (**PL&PR, m=87.4%**) were significantly higher than those for **Original** instructions (**OL&OR, m=84.90%**). However, further t-tests found that only 2 out of the 6 instructions showed a significant difference (Fig. 2), Instructions 3 & 6.



Original instructions’ (OL&OR) rates of passive verbs & legalese (Fig. 3a, left columns) inversely correlated with comprehension (Fig. 3b, left columns): instructions with lower rates of these linguistic factors (1, 2, 4 & 5) were better understood than those with higher rates (3 & 6). And the **Plain English** instructions (**PL&PR**) that showed significant comprehension boosts (3 & 6, Fig. 3b) were the same two in which these linguistic factors were minimized most (Fig. 3a).

Consider this:

Nearly half of the Massachusetts jury pool (40%+5%) has not gone beyond high school (Fig. 4). In order to more closely mirror this population, Study 2 replicated Study 1 using subjects drawn via Amazon’s MTurk.



Study 2: MTurk subjects

Hypotheses

1. As in Study 1, **Reading while listening** will improve comprehension over **listening only**.
2. As in Study 1, **Plain English** instructions with minimized **passive verbs** & **legalese** will improve comprehension over **Original** instructions.
3. The comprehension boosts for **Reading+Listening** over **Listening-Only** and **Plain English** over **Original** will be greater for MTurk subjects, who more closely mirror the jury pool, than for student subjects.

Subjects + 4 Conditions

Subjects were recruited and paid via MTurk, Amazon’s online crowd-sourcing platform.

MTurk subjects

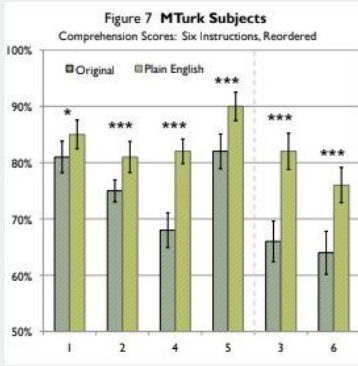
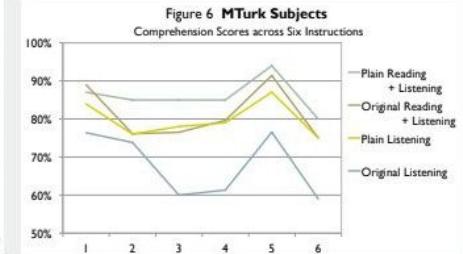
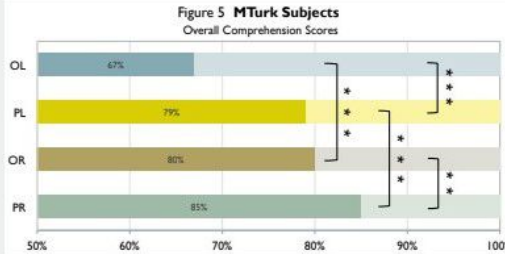
| | Original | Plain English |
|-------------------|----------|---------------|
| Listening-Only | 125 | 99 |
| Reading+Listening | 66 | 99 |

All subjects were U.S. citizens over 18, from a variety of education levels and geographic regions across Massachusetts.

Materials, Design, & Procedure

The design matched Study 1’s, using the same six Massachusetts civil jury instructions and the same four conditions: **Original Listening (OL)**, **Plain English Listening (PL)**, **Original Reading (OR)**, and **Plain English Reading (PR)**. Subjects signed on to the MTurk website, listened to the instructions and answered true/false questions after each one. Subjects in the two **Reading+Listening** conditions (**OR&PR**) had the texts to read along. FluidSurveys (later, SurveyMonkey) recorded their responses.

Results



Discussion & Conclusions

Hypotheses 1 and 2 were both confirmed (Figs. 5&6): **reading while listening (OR&PR)** improved comprehension over **listening only (OL&PL)** ($F_{1,385}=50.246, p<.001, \eta^2=.115$); **Plain English** instructions (**PL&PR**) improved comprehension over **Original** instructions (**OL&OR**) ($F_{1,385}=39.515, p<.001, \eta^2=.093$). As predicted by **Hypothesis 3**, the comprehension boosts for **Reading+Listening** over **Listening-Only** and for **Plain English** over **Original** instructions were greater for MTurk subjects (Figs. 5&6) than for students (Figs. 1&2), as seen in the increases in effect sizes from Study 1 to Study 2. Looking at the instructions individually (Figs. 6&7), all six instructions – not just 3 & 6 as in Study 1 – saw significant gains when they were rewritten in **Plain English (PL&PR > OL&OR)**. Since MTurk subjects are demographically closer to the jury pool, these new results suggest that (1) **reading while listening** and (2) confronting fewer difficult linguistic factors (specifically, **passive verbs** & **legalese**) will boost comprehension, allowing jurors to engage more fully and reach better-informed verdicts. Most importantly, though, this new evidence may present a more compelling argument to skeptical judiciaries that it is time to implement change.

Footnote & References

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