



Even lawyers do not like legalese

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Across modern civilization, societal norms and rules are established and communicated largely in the form of written laws. Despite their prevalence and importance, legal documents have long been widely acknowledged to be difficult to understand for those who are required to comply with them (i.e., everyone). Why? Across two preregistered experiments, we evaluated five hypotheses for why lawyers write in a complex manner. Experiment 1 revealed that lawyers, like laypeople, were less able to recall and comprehend legal content drafted in a complex “legalese” register than content of equivalent meaning drafted in a simplified register. Experiment 2 revealed that lawyers rated simplified contracts as equally enforceable as legalese contracts, and rated simplified contracts as preferable to legalese contracts on several dimensions—including overall quality, appropriateness of style, and likelihood of being signed by a client. These results suggest that lawyers who write in a convoluted manner do so as a matter of convenience and tradition as opposed to an outright preference and that simplifying legal documents would be both tractable and beneficial for lawyers and nonlawyers alike.

psycholinguistics | experimental jurisprudence | cognitive science | empirical legal studies | law and psychology

There is a burgeoning psycholinguistics literature documenting the various domains in which efficiency shapes human language, such that successful communication can be achieved with minimal effort on average by the sender and receiver (1–12). Two ways in which this efficiency manifests itself relate to word length and syntax. For example, words that are more frequent (such as “the”) tend to be shorter than less frequent words (such as “accordion”), such that utterances tend not to be longer than necessary given one’s communicative aims (13). With regard to syntax, it has been observed across languages that words that depend on each other tend to be close together in an utterance (14), so as to (by hypothesis) avoid overloading working memory capacity when interpreting an utterance.

However, one domain in which this efficiency has been attested to not apply is in the context of the legal system, as the language in contracts, statutes, and other legal documents is often observed to be notoriously inaccessible to a typical layperson, such that legal content seems to not be understood by a listener with minimal effort, e.g., refs. 15–22. Recent empirical work has supported the longstanding anecdotal observation/intuition that legal language is complex. For example, on a syntactic level, the language in contracts (23) and legislation (24) has been found to be laden with center-embedded clauses (leading to long-distance syntactic dependencies) at a rate several times higher than standard English texts, including academic articles and other texts aimed at an educated audience.

Meanwhile, on a word level, legal documents have also been found to be laden with words that are infrequently used in everyday speech. Previous research had long identified center-embedding (25, 26) and word frequency (27) to be reliable proxies for processing difficulty in normal texts. Recent work confirmed this to be true in legal documents, also, as contracts drafted with these features were recalled and comprehended at a lower rate than legal documents of equivalent meaning drafted without these features (and center-embedding, in particular, was found to inhibit recall to a greater degree than word frequency) (23).

While the above studies have shed insight into the question of how legal language is complicated to understand, it remains an open question why legal language is so complicated to understand—that is, why do lawyers write in such a convoluted manner in the first place? Answering this question is relevant not only to major questions in psycholinguistics but to legal doctrine and public policy as well.

Across modern civilization, societal norms and rules are established and communicated largely in the form of written laws. Because law is encoded in the form of natural language, it follows that an understanding of language is crucial to drafting, interpreting,

Significance

Why do lawyers write in such a convoluted manner? Across two preregistered experiments, we find that lawyers a) like laypeople, were less able to understand and recall “legalese” contracts than content of equivalent meaning drafted in a simplified register; and b) rated simplified contracts as equally enforceable as legalese contracts, and rated simplified contracts as preferable to legalese contracts on several important dimensions. Contrary to previous speculation, these results suggest that lawyers who write in a convoluted manner do so as a matter of convenience and tradition as opposed to an outright preference and that simplifying legal documents would be beneficial for lawyers and nonlawyers alike.

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and enforcing the rules and standards that comprise legal doctrine and underpin modern society. In particular, understanding why lawyers and lawmakers write in such a convoluted manner can help inform policy efforts to make laws more accessible—which have been advocated for decades (28–30), with little to no success (24). Such efforts are crucial to ensuring the comprehension and compliance of societal norms, as well as upholding the legitimacy of legal doctrines that either expressly assert or implicitly assume that legal documents are or ought to be easily interpretable to laypeople, such as *Ordinary Meaning* (31–33) and *Fair Notice* (34).

Here, we conducted two well-powered, preregistered experiments aimed at evaluating five hypotheses presented in the theoretical literature for why lawyers write the way that they do. In Experiment 1, we found that lawyers, like laypeople, were less able to recall and comprehend legal content drafted in a complex “legalese” register than content of equivalent meaning drafted in a simplified register. In Experiment 2, we found that lawyers rated simplified contracts as equally enforceable as legalese contracts, and rated simplified contracts as preferable to legalese contracts on several dimensions—including overall quality, appropriateness of style, and likelihood of being signed by a client. These results suggest that lawyers who write in a convoluted manner do so as a matter of convenience and tradition as opposed to an outright preference and that simplifying legal documents would be beneficial for lawyers and nonlawyers alike.

Hypotheses

In previous literature, scholars proposed several hypotheses for why lawyers write in a complicated manner. Here, we briefly present each of these hypotheses in turn, as well as the associated predictions of these hypotheses that we preregistered for our experiments.

Curse of Knowledge Hypothesis. Some scholars have speculated, in line with what has been dubbed the “curse of knowledge” in other disciplines (35, 36), that the reason legal language is so difficult to understand is because lawyers do not realize that they write in an esoteric manner (37). If this were true, one would predict that lawyers would not show the same degree of difficulty as laypeople in understanding complicated legal texts relative to simplified legal texts and that lawyers would underestimate how difficult legalese texts are for laypeople.

Copy-and-Paste Hypothesis. Some commentators have speculated that lawyers simply write in a complex register out of “habit, laziness” (16) or respect for “tradition” (38), that they “copy and paste” (39) from existing templates with old, complicated terms because that’s the “quickest and cheapest way to produce a contract” (40). If this hypothesis were true, one would expect that lawyers would rate plain-English contracts as of equal quality as legalese contracts and that lawyers would be equally likely to agree to sign off on a contract written in a simpler register written by someone else as they would for a contract written in a legal register.

In-Group Signaling Hypothesis. Some commentators have hypothesized that lawyers write in legalese to be accepted by their peers, to sound more “lawyerly,” to “mark themselves as members of the profession” (16). If so, one would predict that lawyers would rate contracts written in legalese as sounding more appropriate/suitable for a lawyer than those written in plain

English, and would rate the author of that contract as more hireable than the author of a plain-English contract.

It’s Just Business Hypothesis. Some commentators have hypothesized that lawyers write in legalese as a way of “preserving their monopoly” (41) on legal services and “justifying fees” (16). If this hypothesis were true, one would predict that lawyers would rate contracts written in legalese as being more likely to be signed by clients than contracts written in a simple register.

Complexity of Information Hypothesis. Some have speculated that legal language needs to be complex in order to satisfy certain communicative aims, such as conveying complex legal concepts in a way that “is far more precise than ordinary language” (38), to avoid ambiguity, and/or to ensure enforceability. To evaluate this hypothesis, we constructed a question that asked whether a given contract excerpt was enforceable. If this hypothesis were true, one would predict that lawyers would rate simplified contracts as unenforceable or lower quality than complicated contracts.

Results

Experiment 1. In Experiment 1, we evaluated the curse of knowledge hypothesis.*

To evaluate the predictions of this hypothesis, we conducted a preregistered experiment in which we evaluated lawyers’ ($n = 105$) comprehension and recall of two types of legal contracts. The first set, “legalese” contracts, were written in a style containing linguistic features that have been shown to be disproportionately common in legal texts relative to nonlegal texts, and which have also been shown to inhibit recall and comprehension of legal content relative to contracts without these features. The second set, “plain-English” contracts, were of equivalent meaning drafted without these difficult-to-process features. We analyzed lawyers’ performance alongside a reanalysis of Martinez, Mollica and Gibson’s (23) experiment of laypeople ($n = 108$) that used an identical set of materials and procedure.

Results are visualized in Figs. 1 and 2. Contrary to the predictions of the curse of knowledge hypothesis, we observed a main effect of legal training and register on recall ($\beta = 0.353$, $SE = 0.159$, $P = 0.026$) and comprehension ($\beta = 0.808$, $SE = 0.100$, $P < 0.001$), but not an interaction between register and legal training on recall ($P = 0.360$) or comprehension ($P = 0.638$). That is, although lawyers were significantly better than laypeople at comprehending and recalling legal content overall in our materials, both lawyers and laypeople were better at comprehending ($\beta = 0.354$, $SE = 0.088$, $P < 0.001$) and recalling ($\beta = 0.360$, $SE = 0.121$, $P = 0.003$) plain-English texts than legalese texts, and there was no evidence that lawyers were disproportionately better than laypeople at comprehending ($P = 0.638$) or recalling ($P = 0.360$) legal content in legalese texts relative to plain English.

We observed converging results when comparing lawyer and layperson’s subjective difficulty ratings of each text, as lawyer participants’ predictions of how difficult a text would be for the average layperson did not significantly differ from those of lay participants. *SI Appendix* for details.

Experiment 2. In Experiment 2, we sought to evaluate the predictions associated with the four remaining hypotheses: the

*The preregistration for Experiment 1 can be viewed at the following link: <https://osf.io/y8xjd/>.

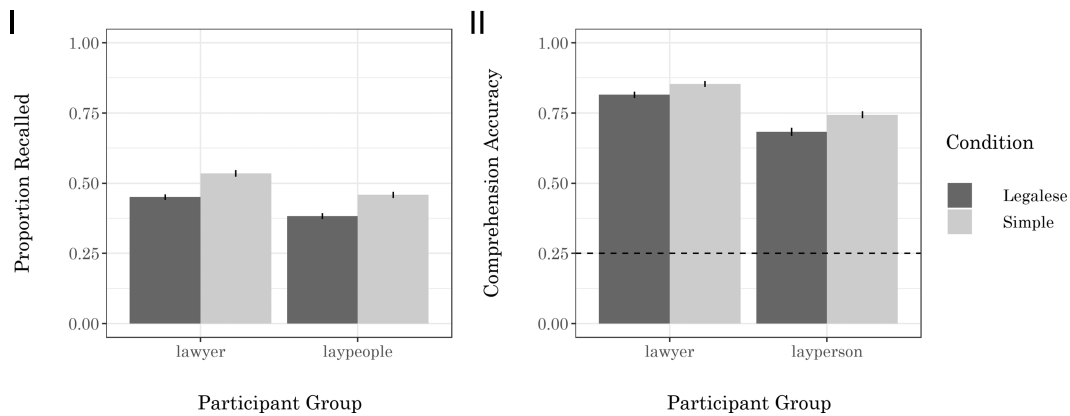


Fig. 1. Proportion of legal content recalled (i) and comprehended (ii) in legalese and simple contracts by lawyer and nonlawyer participants. Error bars represent 95% bootstrapped confidence intervals. The dotted line in (ii) represents chance performance in comprehension task.

in-group signaling hypothesis, the it's just business hypothesis, the complexity of information hypothesis, and the copy-and-paste hypothesis. To do so, we presented lawyers ($n = 102$) with the same set of contracts used in Experiment 1, and asked them to rate the contracts on a variety of dimensions, including overall quality and enforceability of the contract, hireability of the author who wrote the contract, willingness to sign off on the contract as written, and likelihood that a client would agree to the contract's terms.[†]

Results of Experiment 2 are visualized in Fig. 3. In line with all of the preregistered predictions of the copy-and-paste hypothesis and against all of the preregistered predictions of the in-group signaling, it's just business and complexity of information hypotheses, lawyers rated contracts written in plain-English as significantly higher quality ($\beta = 1.705$, $SE = 0.329$, $P < 0.001$) and no less enforceable than legalese contracts ($P = 0.717$); rated the authors of plain-English contracts as significantly more hireable than those of legalese contracts ($\beta = 1.835$, $SE = 0.318$, $P < 0.001$); were significantly more likely to say that they would agree to use the contract as-written ($\beta = 1.432$, $SE = 0.270$, $P < 0.001$); and predicted that clients would be significantly

more likely to sign plain-English contracts than legalese contracts ($\beta = 1.232$, $SE = 0.338$, $P < 0.001$).

The results of both experiments were robust to all measured demographic variables, including race, gender, age, years of practice experience, and “fanciness” of lawyer (see definition in *Methods*). These results are reported and visualized in *SI Appendix*.

Discussion

This study attempts to empirically investigate the long-puzzling question of why lawyers write the way that they do, undermining most prior accounts of the cognitive origins of legalese. For example, some commentators have maintained that lawyers prefer or are otherwise forced to write in a complex manner in order to satisfy certain communicative aims, to sound more lawyerly, or to justify exorbitant fees to clients. Others have speculated that lawyers simply do not realize they are writing in a complicated manner due to how easy it is for them to understand. In contrast, the fact that lawyers in our studies rated plain-English contracts as higher quality, even more likely to be signed by clients and no less enforceable than legalese contracts, and rated the authors of plain-English contracts as more hireable than authors of legalese contracts undermines both of these sets

[†]Preregistration for Experiment 2 can be viewed here: <https://osf.io/b98j5/>.

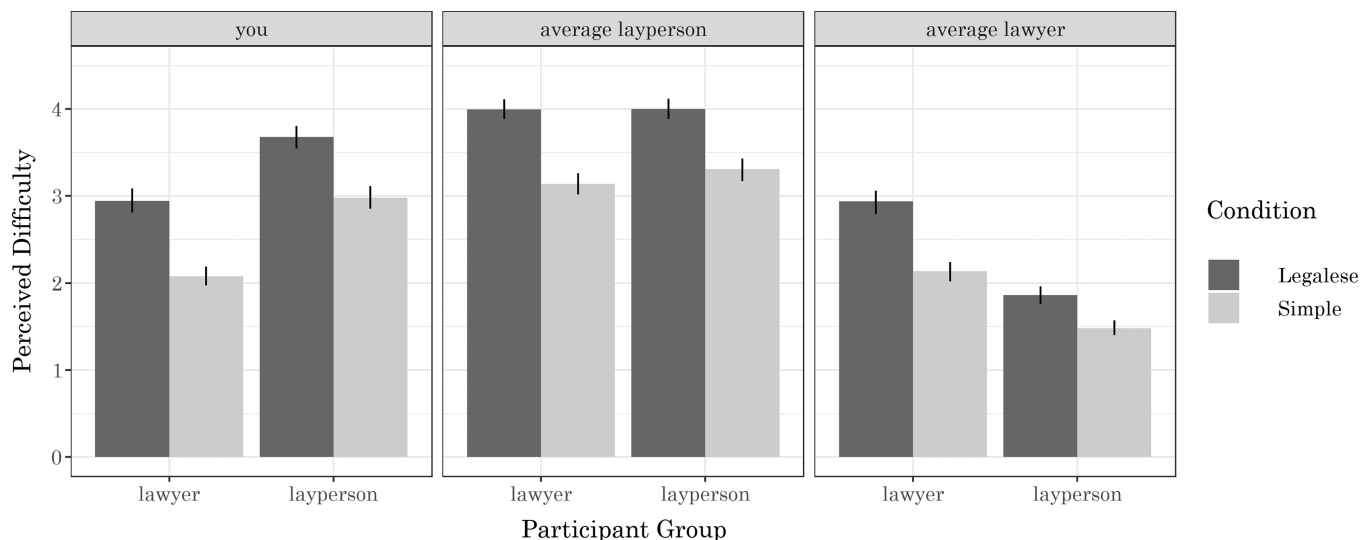


Fig. 2. Subjective difficulty ratings by lawyer and lay participants regarding how difficult participants found a given text (A) for themselves (Left panel); (B) for the average layperson (Middle panel); and (C) the average lawyer (Right panel).

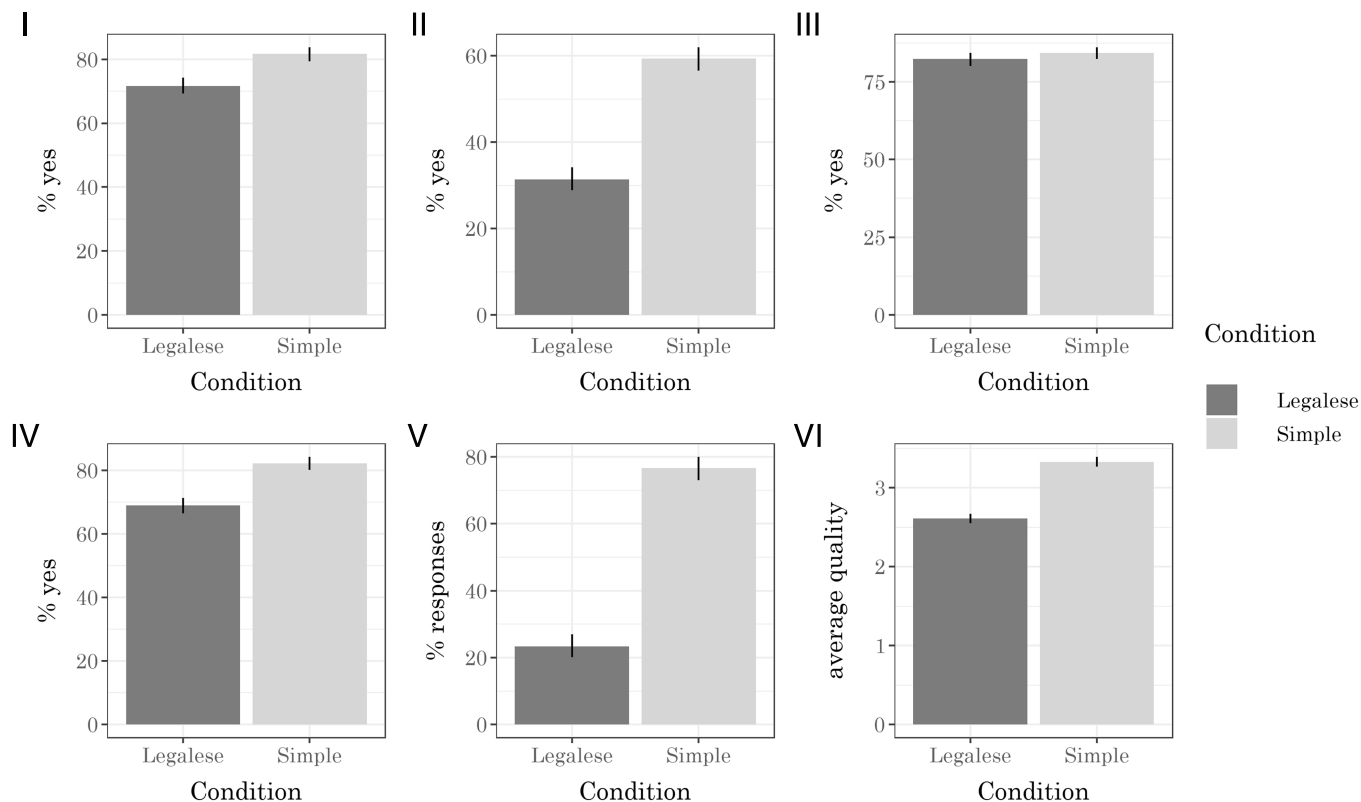


Fig. 3. Results of lawyer responses to questions regarding the quality of legalese and simple contracts according to a series of desiderata, including (i) appropriateness of style, (ii) hireability of author, (iii) enforceability of document, (iv) likelihood of document being signed by client, (v) willingness to use document as written, and (vi) overall quality of document.

of hypotheses, suggesting that in many instances lawyers both can and prefer to write in a more understandable manner as opposed to being bound by the nature of law, or engaging in a “conspiracy of gobbledygook.” This study attempts empirically investigate the long-puzzling question of why lawyers write the way that they do, undermining most prior accounts of the cognitive origins of legalese. For example, some commentators have maintained that lawyers prefer or are otherwise forced to write in a complex manner in order to satisfy certain communicative aims, to sound more lawyerly, or to justify exorbitant fees to clients. Others have speculated that lawyers simply do not realize they are writing in a complicated manner due to how easy it is for them to understand. In contrast, the fact that lawyers in our studies rated plain-English contracts as higher quality, even more likely to be signed by clients and no less enforceable than legalese contracts, and rated the authors of plain-English contracts as more hireable than authors of legalese contracts undermines both of these sets of hypotheses, suggesting that in many instances lawyers both can and prefer to write in a more understandable manner as opposed to being bound by the nature of law, or engaging in a “conspiracy of gobbledygook.”

Meanwhile, the fact that lawyers rated both contracts as enforceable and likely to be signed by clients but preferred plain-language contracts on several dimensions suggests, consistent with what we have dubbed the “copy-and-paste” hypothesis, that lawyers may simply draw from old, preexisting templates laden with arcane and convoluted language due to that being easier and cheaper to produce than drafting a simpler contract from scratch. This finding is consistent with recent empirical work indicating that lawyers rely heavily on templates in drafting contracts, with future agreements only rarely deviating from

previous ones even when deviations would apparently benefit the involved parties(42). In addition to cost, said stickiness may also be borne out of lawyers’ training in the importance of precedent, which overall might lead to an adherence to templates laden with old, archaic language by virtue of the fact (or assumption) that they worked before, and that the specific language may have been “defended in court” previously.

From a policy perspective, our results also provide insight into the longstanding question of how to make legal language more understandable. Although for decades, the US government has engaged in top-down efforts to simplify public legal documents for the benefit of society at large (Plain Language Action Information Network, 2011; USC 301, 2010), recent work has revealed these efforts to have failed, as laws, like contracts, remain laden with difficult to process features such as center-embedding and low-frequency words (24). While this failure may lead some to conclude that simplifying legal language is an intractable affair, our results paint a more optimistic picture, suggesting that lawyers a) believe legal documents can and should be simplified to better serve their communicative aims; and b) like laypeople, struggle to comprehend complex legal language relative to a simpler alternative. Our results further suggest that the processing difficulty of legal texts may be alleviated as lawyers and lawmakers become more aware of both the ways in which public legal documents tend to be complex, as well as the alternatives available to them in order to make them less complex.

It is worth noting that our results do not imply that legal documents can be simplified limitlessly without sacrificing communicative aims, nor do we discount the role of formality in legal writing. Like other professionals, lawyers may use a more formal tone in legal documents in order to, for example: a)

demonstrate their status of members of the legal community, which may require convergence on a style that is identifiable and replicable, and b) signal to a reader that a text should be taken seriously as an official legal document as opposed to a form of casual, nonbinding communication.

Instead, our results indicate that such formality is not necessarily synonymous with complexity. That is, in many cases, lawyers can and should adopt a simpler register in order to achieve a level of formality that best aligns with their communicative aims as opposed to burdening clients and themselves with obfuscatory legalese.

Constraints on Generality. Examining the participant sample, the stimuli, and general experimental design suggests that the results of the present study would likely generalize to a broad array of relevant real-world scenarios.

With regard to participants, our sample included a large number of lawyers that, according to available estimates (43, 44), were broadly representative of the legal profession with regard to a number of demographic factors, including age, ethnicity, gender, years of legal experience, and type of legal employment. Analyses further revealed that our results were the same when controlling for these demographic variables in our analysis, such that we expect the results to generalize to the broader population of United States lawyers. It is unclear whether they would generalize to the legal profession in other countries.

With regard to materials, our stimuli consisted of a diverse array of contract excerpts whose content mirrored the most common types of clauses found in private legal documents in the United States (45, 46), and private legal documents are among the most common types of legal documents that people are exposed to. The linguistic features we looked at have been found to be disproportionately prevalent in both private legal documents (e.g., contracts) and public legal documents (e.g., laws) relative to other forms of written and spoken English (23, 47). Thus, we expect the results to generalize to other types of legal documents beyond those examined in the present study, though it is likely that some types of provisions will be less amenable to simplification than those used in the present study.

Regarding the ecological validity of the design, one might wonder whether lawyers' responses to questions in a hypothetical setting would generalize to real-world behavior. Given that an important role of a lawyer in the real world is to reason about hypothetical scenarios and engage in counterfactual reasoning, the fact that our experimental design asked lawyers to reason about hypothetical scenarios and engage in counterfactual reasoning would seem to imply that our study was well-aligned with the job of a lawyer in the real world. By extension, this would

suggest that our design was an ecologically valid way to test our hypotheses.

A related concern relates to whether there was a performative element—if lawyers know they are subjects in an experiment and are being observed by scientists, maybe they will behave differently than in the real world. Although this is an important concern, we have no reason to expect that lawyers knew what result we were interested in, given that: a) we did not give away the specific research question we were interested in when recruiting lawyers for our study and b) we ensured that lawyers were unaware of register manipulation during the experiment. Supposing that lawyers did not know what result we were interested in, we also have no reason to expect that their behavior was systematically influenced to help the researchers get a desired result. Thus, we have no reason to expect that a potential performative element drove our results.

Experiment 1

Materials. The primary materials consisted of 12 pairs of short contract excerpts of roughly 150 words each (Fig. 4). Each pair contained of a) one excerpt drafted in a legalese register, containing features identified by previous studies to be strikingly more prevalent in legal texts relative to nonlegal texts, including center-embedded clauses, low-frequency jargon, nonstandard capitalization, and passive-voice structures; and b) one excerpt drafted in a simple register, identical in content to the other excerpt but without the above features.

For each contract pair, 12 to 15 comprehension questions were drafted in a “neutral” register. In addition to the main experimental materials, we also implemented the author recognition task [ART; (48, 49)] as a measure of individual differences in experience with language.

Participants and Procedure. US attorneys ($n = 106$) were recruited to participate as subjects in our experiment, through a combination of direct email invitations, word-of-mouth recruitment, and social media posts. Participants received \$100 for their participation in the study. Participants were retained in our analysis as long as they were licensed to practice law in the United States. Participants were required to enter an official law school or law firm email, or provide their official bar number in order to help verify their attorney status. Of the 106 participants, 105 were verified to be attorneys and were retained in the final analysis.

With regard to demographics, the mean age of retained participants was 34 (median: 31). In total, 60.8% of participants identified as male, and 38.2% identified as non-White. Participants had a mean of 5.9 years of practice experience. Of note, 50.9% of the sample were coded as “fancy” lawyers, meaning that they either a) graduated from a top-25 law school according

It is understood by Lessees, standing liable for violating obligations *inter se*, hereinbefore set forth in Clause 3 of this real estate agreement, that Lessors shall be exempt from liability for any damages, to the maximum extent not prohibited by law, unless Lessors knew of the possibility of such damage and acted with scienter. LESSEES' AGGREGATE LIABILITY INTER SE FOR ALL CLAIMS, INCLUDING THOSE BASED ON TORT OR STATUTORY LIABILITY, IS LIMITED TO \$1000 BY THIS AGREEMENT. PERSONAL INJURY DAMAGES, LIMITATIONS OF LIABILITY OF WHICH, EXCEPTING THOSE FOR EMOTIONAL DISTRESS, THIS JURISDICTION PROHIBITS, ARE NOT AFFECTED BY THE FOREGOING PROVISIONS.

Tenants understand that Landlords will be exempt from liability for any damages, to the extent allowed by law, unless Landlords knew of the possibility of such damage and acted willfully. Tenants will be liable for violating their duties to each other, described in Clause 3 of this real estate agreement, above. This agreement limits Tenants' combined liability to each other for all claims to \$1000. This includes claims based off tort or statutory liability. This jurisdiction prohibits limitations of liability of personal injury damages, except for emotional distress damages. The above section does not affect personal injury damages.

Fig. 4. An example stimulus pair in legalese (Left) and simple (Right) register. The differences in surface properties across registers are depicted by font style. Bold denotes word frequency. Italic denotes embedded clauses. Underlined denotes voice. Unfortunately, we have run out of font styles to make differences in capitalization more apparent. Image reprinted from ref. 23 [SI Appendix](#).

to US News and World Report or b) worked at a top-200 law firm according to American Lawyer (AmLaw) magazine.[‡]

Retained participants were pseudorandomly assigned to six trials (3 legalese; 3 simple). Participants did not see the same contract in both a simple and legal register. Assignment of stimuli to participants was pseudorandom to ensure that across participants, every trial was administered with approximately the same frequency. The order of trials was randomized for each participant.

A trial consisted of a) reading an excerpt, b) a subset of the ART, c) recalling the excerpt, and d) answering comprehension questions. For the reading component, participants were presented with exactly one excerpt, written in either legalese or plain English. They were asked to carefully read the text twice and were given as much time as needed to do so. For the ART component, participants were given the names of 50 individuals and were asked to select which names corresponded to real authors. We expanded the ART task to 300 trials in order to keep the timing of a trial consistent. The original items from the published ART were presented first. For the remaining trials, the participants were administered items that looked virtually the same as authentic materials (half of the names corresponding to real authors, the other half corresponding to high-school track stars). We do not use these items in our analysis as they have not been validated (50). After being shown the ART materials, participants were asked to recall as much of the excerpt they had read as possible. They were told that they could use their own words, but that their version should stay true to the original. Finally, each trial ended with the comprehension questions corresponding to the excerpt.

Analysis Plan. Following Martinez et al. (23), two trained research assistants coded whether a proposition was successfully recalled (*SI Appendix* for details). Coders were unaware of whether a participant had seen or recalled the simple or legalese version of a text. Twenty percent of the retellings were coded by both coders so as to assess interrater reliability using Cohen's kappa coefficient (51, 52). For our regression analyses, we perform both a conservative analysis and an anticonservative analysis, with regard to ties. Our results do not qualitatively change, so we report only the conservative analysis in text (*SI Appendix* for anticonservative analysis).

Experiment 2

Materials. Our primary materials consisted of the same 12 pairs of short contract excerpts as those used in Study 1. In addition, we also constructed a series of questions aimed at testing specific hypotheses for why lawyers write the way that they do. Here, we discuss each of these questions in turn. The full list of questions, as well as the experimental interface, is provided in *SI Appendix*.

Copy-and-paste hypothesis. To test this hypothesis, we constructed a question that asked participants to rate the quality of a given contract excerpt (in plain English or legalese), as well as another question that asked participants whether they would

agree to sign off on a given contract excerpt assuming it were written by someone else.

In-Group membership hypothesis. To test this hypothesis, we constructed two types of questions: one that asks whether the style of a particular excerpt sounds appropriate for a lawyer, and another that asks whether a participant would hire the author of the excerpt.

It's just business hypothesis. To evaluate this hypothesis, we constructed a question that asked participants to rate whether a client would be likely to sign a particular contract excerpt.

Complexity of information hypothesis. To evaluate this hypothesis, we constructed a question that asked whether a given contract excerpt was enforceable. We constructed a question that asked participants to rate the quality of a given contract excerpt (in plain English or legalese)

Participants and procedure.

US attorneys ($n = 105$) were recruited to participate as subjects in our experiment through similar means as Study 1. Participants received \$40 for their participation in the study, and were retained in the analysis using the same criteria as Study 1.

With regard to demographics, the mean age of retained participants was 35.7 (median: 33). In total, 62.7% of participants identified as male, and 38.2% identified as non-White. Participants had a mean of 8.3 y of practice experience (median: 5.5), and 40.2% of the sample were coded as “fancy” lawyers.

With regard to procedure, retained participants were pseudorandomly assigned to six trials. Assignment of stimuli to participants was pseudorandom to ensure that across participants every trial was administered with approximately the same frequency. The order of trials was randomized for each participant. Within each trial, participants were first presented with one version of a contract excerpt in either legalese or plain English, and asked to answer several questions about it. Participants were then presented with the other version of the contract excerpt and asked to answer the same questions about it. Participants were then shown the two versions side-by-side and asked to answer several questions about the two versions in tandem.

Ethics Approval. Both experiments were approved by MIT's Committee on the Use of Humans as Experimental Subjects (COUHES), protocol number: 2107000425. Prior to completing each experiment, participants were shown a consent form, which provided further details about the experiment, including risks, as well as information about COUHES approval.

Data, Materials, and Software Availability. Anonymized data have been deposited in public (<https://osf.io/dmkrx/>).

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[‡]This was determined based on the email participants provided when taking the study.

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