Immortal Souls, First-born Children, and Other Things We're Signing Away

A Comparative Study of the Terms of Service Agreements of Big Tech Companies and the Challenges for Government Regulators

Grace Aronsohn[*]

* Correspondence: garonsohn@middlebury.edu; Tel..: +1-203-952-2457

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Abstract: Consumers are clearly aware of the dangers posed by blindly accepting the terms of a company's privacy policy, pointing to a major contradiction: despite this awareness and near-universal feelings of wariness and suspicion, United States adults continue to agree to terms and conditions when asked without actually reading the terms in question. One likely explanation for this behavior is that privacy policies are not readable in the first place. By using Python to calculate Flesch Reading Ease (FRE) and Flesch-Kincaid (F-K) scores for terms of service and privacy policy agreements published by the "Big Five": Amazon, Apple, Google, Meta, and Microsoft, I determine that users of the products and services offered by these tech giants are being held responsible for the written terms of unreadable contracts.

Keywords: Amazon, Apple, Big Tech, contract, end-user license agreement, Flesch-Kincaid, Flesch Reading Ease, Google, Microsoft, Meta, privacy policy, readability, terms and conditions, terms of service,

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1 United States adults are rarely reading the contracts they sign

According to a 2019 survey of the American Trends Panel conducted by Pew Research Center, 82 percent of United States adults are asked to agree to the terms and conditions of a company's privacy policy at least monthly, with 25 percent of survey respondents reporting that they are asked to do so almost every day. Despite the frequency at which Americans are signing online contracts, survey results also revealed that these contract signers are rarely reading privacy policies in full before agreeing to their terms of service. In fact, 36 percent of survey respondents report that they never read a company's privacy policy before accepting. Another 38 percent report that they only read before accepting "sometimes", meaning only 1 in 4 United States adults regularly read a company's privacy policy when asked to agree to its terms of service[1].

The writers of these contracts, which often take the form of end-user license agreements (EULA), are under no misconception that their privacy policies and community guidelines

[1] Brooke Auxier, Lee Rainie, Monica Anderson, Andrew Perrin, Madhu Kumar And Erica Turner, "4. Americans' attitudes and experiences with privacy policies and laws," *Pew Research Center,* November 15, 2019.

are being read in full before their users agree to their terms. In 2010, British video game retailer GameStation took advantage of this behavior for an April Fools joke. The company added the following "immortal soul clause" to its website's terms and conditions:

> By placing an order via this Web site…you agree to grant Us a non transferable option to claim, for now and forever more, your immortal soul. Should We wish to exercise this option, you agree to surrender your immortal soul, and any claim you may have on it, within 5 (five) working days of receiving written notification from gamestation.co.uk or one of its duly authorized minions.

Despite the addition of the immortal soul clause, GameStation claimed 88 percent of their customers still accepted the website's terms and conditions[2].

This phenomenon has also been a subject of interest to scholars in the legal space. In 2018, professors Jonathan A. Obar of York University and Anne Oeldorf-Hirsch of the University of Connecticut conducted an experiment that asked participants to join a fictitious social media service called NameDrop, which required users to agree to an end-user license agreement to use the service. NameDrop's terms of service included clauses that would allow the company to share users' data with their employers and with the National Security Agency. Signers would also be giving NameDrop legal ownership of their first-born children:

> In addition to any monetary payment that the user may make to NameDrop, by agreeing to these Terms of Service, and in exchange for service, all users of this site agree to immediately assign their first-born child to NameDrop, Inc. If the user does not yet have children, this agreement will be enforceable until the year 2050. All individuals assigned to NameDrop automatically become the property of NameDrop, Inc. No exceptions.

Obar and Oeldorf-Hirsch found that 98 percent of subjects consented to NameDrop's terms and conditions regardless[3].

2 Major corporations can take advantage of this negligence to read in order to exploit their users

Unfortunately, the knowledge that most people are not reading privacy policies before agreeing to them is not limited to companies playing harmless pranks or academic research–there have been countless instances of powerful corporations taking advantage of

[2] "A case for reading the small print," BBC, November 18, 2013.

[3] Jonathan A. Obar and Anne Oeldorf-Hirsch, "The Biggest Lie on the Internet: Ignoring the Privacy Policies and Terms of Service Policies of Social Networking Services," Information, Communication & Society, pp. 1-20 (2018), accessed December 4, 2022, http://dx.doi.org/10.2139/ssrn.2757465.

this fact to exploit their consumers. In 2019, social media giant Facebook Inc. (now Meta) was blasted for paying hundreds of contract workers to transcribe audio clips of its users. The whistleblowers were the contract workers themselves, who questioned the purpose of the task after hearing audio clips of users' conversations, despite having no information from Facebook on the source of the clips or the purpose for their transcription. In response to public backlash, Facebook admitted to collecting audio clips of its users–but stated that a user's acceptance of the terms of the Messenger app granted the company permission to do so[4].

While practices like Facebook's audio transcription are certainly unsettling to discover, these incidents beg the question of what other troubling clauses of Big Tech's terms of service are going unnoticed. The vast majority of Amazon Web Services users are likely unaware of the following "zombie clause" in the AWS service terms:

> [Our products] are not intended for use with life-critical or safety-critical systems, such as use in operation of medical equipment, automated transportation systems, autonomous vehicles, aircraft or air traffic control, nuclear facilities, manned spacecraft, or military use in connection with live combat. However, this restriction will not apply in the event of the occurrence (certified by the United States Centers for Disease Control or successor body) of a widespread viral infection transmitted via bites or contact with bodily fluids that causes human corpses to reanimate and seek to consume living human flesh, blood, brain or nerve tissue and is likely to result in the fall of organized civilization[5].

Similarly, it may come as a surprise to users of Apple's media player software iTunes that they have explicitly agreed not to use iTunes to develop nuclear weapons, as per the Licensed Application EULA:

> You also agree that you will not use these products for any purposes prohibited by United States law, including, without limitation, the development, design, manufacture, or production of nuclear, missile, or chemical or biological weapons[6].

While these specific excerpts may be far-fetched and harmless, they illustrate the ease with which abusive clauses are able to remain inconspicuous, hidden deep in the terms of service agreements of powerful corporations. Consumers are well aware of this danger and skeptical of the true objectives of these contracts, resulting in widespread distrust of the writers of the companies requiring consent to an EULA to use their services. Returning

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[4] Sarah Frier, "Facebook Paid Contractors to Transcribe Users' Audio Chats," Bloomberg, August 13, 2019.
[5] Eugene Volokh, "Amazon Web Services and the zombie apocalypse," *The Washington Post*, February 10, 2016.
[6] "Licensed Application End User License Agreement", Apple.

to the 2019 Pew Research Center survey findings, only 4 percent of respondents are confident that companies use their personal information in ways they are comfortable with. Furthermore, only 5 percent are confident that companies are actually adhering to the terms of their privacy policies[7].

3 Consumers are burdened with the responsibility of reading the contracts they sign–but these contracts may not be readable

Consumers are clearly aware of the dangers posed by blindly accepting the terms of a company's privacy policy, pointing to a major contradiction: despite this awareness and near-universal feelings of wariness and suspicion, United States adults continue to agree to terms and conditions when asked without actually reading the terms in question. One likely explanation for this behavior is that privacy policies are not readable in the first place. Many companies have adopted the EULA because of its simplicity and efficiency–a company can begin providing its services immediately after a user accepts the agreement, with all users accepting the same standard form agreement. As a result, EULAs can be categorized as contracts of adhesion: agreements constructed in a way that favors one party without giving other parties an opportunity to negotiate[8]. In other words, a contract of adhesion requires signing parties to "take it or leave it", accepting the terms exactly as presented if they wish to use the service. By making their privacy policies unreadable, companies are able to further discourage their users from fully reviewing their terms, knowing that users will feel less inclined to do so when they ultimately will not have the power to negotiate any terms they are opposed to.

3.1 Contract length

One of the most influential factors of contract readability is the length of the contract. Even excluding those survey respondents who say they never read privacy policies before agreeing to their terms, only 22 percent of remaining respondents reported reading all the way through a company's privacy policy before accepting its terms. The other 78 percent either read partway through or glance over the terms[9]. This is a likely result of the excessive length of EULAs, which often use tactics like hyperlinking to covertly increase contract length. In 2008, PhD student Aleecia M. McDonald and Associate Professor Lorrie Faith Crainor of Carnegie Mellon University set out to determine the opportunity cost of reading privacy policies at the reading speed of the average American consumer. They determined that in order to read all of the privacy policies that the average consumer agrees to, it would cost

[7] Brooke Auxier, Lee Rainie, Monica Anderson, Andrew Perrin, Madhu Kumar And Erica Turner, *Pew Research Center*.

[8] Bob Levy, "Big Tech's head-scratching terms of service agreements need simple, specific government regulation," *Business Insider*, March 14, 2021.

[9] Brooke Auxier, Lee Rainie, Monica Anderson, Andrew Perrin, Madhu Kumar And Erica Turner, *Pew Research Center*.

that consumer approximately 201 hours each year, worth about $3,524. On the national scale, this adds up to a cost of $781 billion in time lost every year[10]. These companies do not expect their users to be spending nearly four hours every week reading their terms and conditions–in fact, it is far more likely they expect the opposite, making extending contract length an effective way to ensure that abusive clauses hidden deep in a terms of service agreement go unnoticed.

3.2 Contract language

In addition to length, another important factor of contract readability is the language of the contract. Excluding again the survey respondents who say they never read privacy policies before agreeing to their terms, only 13 percent of the remaining respondents reported understanding "a great deal" of the privacy policies they accept. 32 percent reported understanding very little or not understanding at all[11]. This can be attributed to language that has been intentionally overcomplicated to the point that it becomes incomprehensible to the average user. In 2010, professors Rainer Böhme of the University of California, Berkeley and Stefan Köpsell of Germany's Dresden University of Technology published research into the effect of EULA wording on a user's likelihood of accepting the agreement. Studying the behavior of 80,000 users of an online privacy tool, the researchers examined differences in participation between users receiving language resembling the more coercive wording of a typical EULA–such as button text reading "I accept" or "I decline"–and language that suggested greater user agency–such as button text reading "I take part" and "I do not take part". They found that the users asked to accept terms and conditions using the language of an EULA were 26.8 percent more likely to agree to the exact same terms and conditions as those asked using a more polite dialogue[12]. These findings demonstrate how subtle changes in wording can have a significant impact on consumer behavior, making contract language a potent tool for companies to manipulate consumers who agree to their terms of service.

4 Quantifying readability

To prove that the terms of service and privacy policies of Big Tech companies are unreadable, a quantitative measure of readability must be established. Two of the most widely used measures of readability are the Flesch Reading Ease (FRE) and Flesch-Kincaid

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[10] Aleecia M. McDonald and Lorrie Faith Crainor, "The Cost of Reading Privacy Policies," *I/S: A Journal of Law and Policy for the Information Society*, vol. 4, no. 3 (2008), pp. 543-568, accessed December 4, 2022, http://hdl.handle.net/1811/72839.

[11] Brooke Auxier, Lee Rainie, Monica Anderson, Andrew Perrin, Madhu Kumar And Erica Turner, *Pew Research Center*.

[12] Rainer Böhme and Stefan Köpsell, "Trained to accept?: a field experiment on consent dialogs," *CHI '10: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, pp. 2403–2406 (2010), accessed December 4, 2022, https://doi.org/10.1145/1753326.1753689.

(F-K) metrics. Both scores are calculated using the average sentence length and average number of syllables per word of a given text, varying only by the coefficients used. FRE scores range from 0 to 100, with higher scores indicating greater readability, and are calculated as follows:

206.835 – (1.015 * *average words per sentence*) – (84.6 * *average syllables per word*)

Texts that score below 60 are considered to be unreadable to the average consumer, with a score of 60 or above being required by United States government agencies to ensure documents are readable to the public.

F-K scores are associated with a grade level reading ability. The recommended score is 8.0 or less, indicating an eighth-grade reading level. F-K scores are calculated as follows:

(0.39 * *average words per sentence*) + (11.8 * *average syllables per word*) – 15.59

This score is required for documents published by organizations like the Department of Education, the Food and Drug Administration, and the National Institute of Health.

In 2019, professors Uri Benoliel of the Ramat Gan Law School and Samuel Becher of Victoria University of Wellington performed these tests on the 500 most popular websites in the United States that require users to accept an EULA. They determined that the median FRE score of these agreements to be 34.20, with 498 of the 500 websites scoring below the recommended FRE score of 60. Additionally, they determined the median F-K score to be 14.9, with 498 of the 500 websites scoring above the recommended F-K score of 8.0[13]. These findings support the presumption that privacy policies are generally unreadable to the average consumer.

5 Methodology

By calculating Flesch Reading Ease and Flesch-Kincaid scores, the same measures of readability used by Benoliel and Becher, I will more closely examine the public-facing documents published by Big Tech companies that users are required to accept before using a product or service. By developing a tool using the Python programming language that can determine the FRE and F-K scores of a given text, I will evaluate the terms of service and privacy policy agreements of the "Big Five": Amazon, Apple, Google, Meta, and Microsoft. I calculated the FRE and F-K scores for a total of 74 documents, 14 of which are

[13] Uri Benoliel and Samuel Becher, "The Duty to Read the Unreadable," *Boston College Law Review* 2255 (2019), accessed December 4, 2022, http://dx.doi.org/10.2139/ssrn.3313837.

currently enforced. The remainder were archived past versions of these documents that have since been updated.

6 Results

Of the 14 contracts that govern the use of products and services in the present day, Microsoft's Terms of Use contract is the least readable, with an FRE score of 30.78 and an F-K score of 16.28. Apple's Website Terms of Use comes in a close second, with an FRE score of 36.20 and an F-K score of 17.37–in other words, Apple's Website Terms of Use is written at a graduate degree reading level. The most readable of the contracts was Microsoft's Privacy for Young People policy, which scored 65.21 on the FRE test and 8.03 on the F-K test. Given that texts scoring below 60 on the FRE test are considered unreadable to the average consumer, Microsoft's Privacy for Young People policy was the only document out of the 14 currently enforced contracts that passed this readability test. All 14 documents had F-K scores exceeding the recommended score of 8.0 or less, meaning all 14 documents are considered unreadable according to this metric.

To view the data in more detail, or to interact with the readability calculator I developed for this task, please refer to my interactive web app here.

7 The economic and political climate of the United States makes it especially challenging to regulate these contracts

7.1 Laissez-faire sentiments

Having determined that Big Tech terms of service are unreadable to the average American consumer, the question naturally follows of why companies are able to avoid facing consequences for this behavior. One of the primary reasons, as illustrated by the tighter regulations faced by Big Tech in Europe, is the strength of laissez-faire sentiments in the United States. Americans tend to have greater faith that free market principles will protect consumers without government interference–they believe that a company enforcing abusive terms will drive users away and adjust those terms accordingly. There is also a precedent of leniency when it comes to regulation of the Internet. When the Internet became more widely available in the United States in the 1990s, the Federal Trade Commission chose not to impose strict regulations on its use, arguing that legislation would only hinder its rapid growth. This argument is commonly used to justify the use of EULAs, as the standard form, "take it or leave it" contract minimizes transaction costs and is far more efficient than allowing users to negotiate a terms of service agreement. While regulation of the Internet has become more necessary in recent years, historical policy still poses a notable challenge for legislators.

7.2 Legal loopholes

Likely a result of this historical leniency towards regulation of the Internet, Big Tech companies are able to take advantage of a number of legal loopholes related to the nature of their products. First, because companies have no way of forcing their users to comply with their terms and conditions, there is less of a pressing need for the government to ensure that those terms are not abusive. Companies can prevent users from accessing their services if they violate or decline their terms, but because use of those services is a choice, user consent is seen as purely voluntary[14]. A second major loophole concerns the Uniform Commercial Code, the consumer-protection laws that are enforced in all 50 states. Because most Big Tech companies provide services, not products, they are exempt from the protections detailed in the code[15]. The third loophole is related to the duty to read doctrine, a foundational pillar of contract law in the United States. Under the duty to read doctrine, all participating parties are held responsible for the written terms of a contract, regardless of whether or not they have actually read those terms. However, nowhere in the duty to read doctrine are those contracts required to be readable. Some states have enacted their own "plain language laws", but these laws are often limited and lack an objective standard for readability[16].

8 Conclusion

Having determined that the terms of service and privacy policy agreements of Big Tech companies are unreadable to the average consumer, it is clear that stricter regulation is necessary to close the legal loopholes that allow major corporations to exploit their customers. However, despite a clear need for revised legislation, a lack of consumer awareness diminishes the efficacy of existing protections. Returning again to the 2019 Pew Research Center survey findings, 63 percent of respondents reported having very little or no understanding of the laws and regulations currently in place to protect their data privacy[17]. This challenges the argument that government intervention is the most effective way to prevent Big Tech companies from manipulating their users with unreadable contracts, if the policies meant to protect consumers are just as unreadable.

[14] Bob Levy, *Business Insider*.
[15] Justin Kirkland, *Esquire*.
[16] Uri Benoliel and Samuel Becher, *Boston College Law Review* 2255 (2019).
[17] Brooke Auxier, Lee Rainie, Monica Anderson, Andrew Perrin, Madhu Kumar And Erica Turner, *Pew Research Center*.