

GAMES OF TERMS

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ABSTRACT

Recognizing peoples' reluctance to read a long and complex legal document and their limited attention, this Article suggests a novel and interdisciplinary approach to tackle the no-reading problem by utilizing insights from the field of gamification. Online platforms rely extensively on long perplexing legal documents to control and govern users' online activities (e.g., Terms of Use). However, most users will not even glance at these documents. Instead, they will click "I Agree" and move on with their lives. Thus, instead of promoting informed users, these documents perpetuate the no-reading problem. But there are many clauses in these click-to-agree contracts that would alarm people if they knew about them. Building on the vast literature pertaining to games and gamification we demonstrate how gamifying legal documents in an online environment could apply the advantages of gamification to advance other means—chiefly, meaningful information disclosure. This innovative approach implements insights from the study of games and gamification to change the system of click-to-agree contracts for a system that better informs users. Further, we emphasize the advantages of gamification to major online platforms, as it could reduce the resources they would need to fight the proliferation of unwanted content.

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INTRODUCTION

Most people would agree that playing games is an enjoyable activity. In fact, according to the 2019 report of the Entertainment Software Association, 65% of American adults play video games, and the average gamer is 33 years of age, with a record of playing for 14 years on average.¹ In contrast, many people are likely to describe the act of reading a long legal document, studying for the bar exam, or construing laws and regulations as tedious and unexciting. Typically, the people who do take pleasure in reading legal documents already have a vested interest in them. Hence the question arises: What if we could utilize certain game-like

1. 2019 *Essential Facts About the Computer and Video Game Industry*, ENTERTAINMENT SOFTWARE ASS'N, <https://www.theesa.com/esa-research/2019-essential-facts-about-the-computer-and-video-game-industry/> (last visited May 5, 2021).

elements to motivate people to engage in less enjoyable tasks? Or, have them learn more about the terms and conditions of their agreements?

Gamification works because it taps into psychological and emotional drivers. The implementation of game-like elements in, for example, learning activities addresses people's cognitive biases and behavioral habits, such as loss aversion, social comparison, framing, and love for winning. Games provide immediate and continuous feedback. Games could reward progress; thus, push people to surpass their own expectations.

In this Article, we argue that *gamification*—or the incorporation of game elements into non-game settings—provides an opportunity to help to mitigate some of the problems that have concerned legal scholars. Specifically, individuals' failure to read the numerous online agreements that they reflexively accept, also known as the *no-reading problem*.

In recent years, scholars and policymakers have come to realize that people neglect to read or tend to ignore online contracts, including terms of service, privacy policies, and, in general, Terms of Use (ToU). In fact, when confronted by a lengthy, complex, and abstruse standard-form contract, most users will not give it the necessary consideration. Instead, they will choose to click "I Agree," seemingly indifferent to the fact that these contracts govern almost every transaction and interaction online, including purchasing a new product, posting content, "liking" and sharing, and even merely browsing favorite websites.²

Legal scholars have recently emphasized the advantages of personalized disclosure as a means to ameliorate many of the problems associated with the no-reading problem.³ Building on those studies as well as the vast literature pertaining to gamification,⁴ this Article argues that online platforms and apps, that already digitally engage their users with online content, could apply the advantages of gamification to advance additional objectives—mainly enhancing users' familiarity and comprehension of key contract terms.

Over the past few years, scholars and businesses alike have begun to appreciate the potential of gamification as a tool to incentivize engagement and elicit behavioral change.⁵ In fact, gamification has been utilized

2. Rustad et al. pointed out that there are billions of people that are engaged in social media such as LinkedIn, Facebook, Twitter, Renren (China), and therefore had to sign up to the service. See Michael L. Rustad et al., *Destined to Collide? Social Media Contracts in the U.S.*, 37 U. PA. J. INT'L L. 647, 648–49 (2015).

3. See *infra* Part II.B.5.

4. See *infra* Part III.

5. See *infra* notes 36–51 and accompanying text.

successfully in various contexts, including education⁶ and health.⁷ But so far there has been (to the best of our knowledge) limited, if any, research on gamification applied to legal settings. We propose the no-reading problem as the first test case to demonstrate the potential of gamification in mitigating a known problem in the legal context.

We suggest using a well-crafted, fun game that will highlight the main terms as well as the unique ones. By doing so, we believe the no-reading problem can be mitigated. Since the length will be shortened and the language will be understood, there will be no need for background knowledge to understand the ToU. In addition, there will not be information overload because the game will either provide the user with highlights only or break down the task into several smaller tasks. Thus, the no-reading problem will not be entirely solved, but it can be significantly mitigated.

The Article proceeds as follows. Part I sets out the general background. First, it dives into the vast literature addressing games, serious games, and gamification, mapping out their history, major advantages, and characteristics. Second, it suggests that gamification may serve as a policy tool designed to influence people's behavior. Namely, gamification offers major advantages as a technological means to inform people and educate them about significant issues. Part II presents the no-reading problem and its ramifications with regards to the understanding and knowledge of online contracts, ToU, and community guidelines. Moreover, it discusses some of the most prominent solutions in the legal literature to the no-reading problem and their limitations to mitigate the no-reading problem. Part III ties together Part I and Part II, detailing the advantages of gamification as a solution to the no-reading problem. This Part also sets the stage for a wider implementation of gamification techniques as a strategy to convey important legal information. Part IV sketches out some of the legal and ethical challenges posed by gamification. This Article then concludes in Part V with a summary of its argument and suggests further research and empirical data collection.

6. See, e.g., Cristina Ioana Muntean, *Raising Engagement in E-Learning Through Gamification*, in 6TH INTERNATIONAL CONFERENCE ON VIRTUAL LEARNING 323, 323, 325, 328 (2011) (explaining that gamification helps students engage with their education).

7. See, e.g., Cameron Lister et al., *Just a Fad? Gamification in Health and Fitness Apps*, 2 JMIR SERIOUS GAMES 1, 2 (2014) (describing the increased use of *gamification* for mobile health and fitness apps).

I. GAMIFICATION: LET THE GAMES BEGIN?

Knowledge is power. This is especially true in the legal field. Many legal issues are related to the transfer of legal knowledge to the general public, among them the recognition of human rights, the acknowledgment of traffic laws, and the no-reading problem. Usually, when researchers try to find a solution to these problems, they turn to the legal field.⁸ We however, decided to adopt a more interdisciplinary approach to tackle the no-reading problem.

Games and gamification are useful in many fields including education, health, business, and environmental resource management. The common use of gamification in these fields is usually for knowledge transfer, user engagement, and competition (such as employee selection).⁹ Therefore, it seems to us a good option for mitigating the legal problems mentioned above. Hence, we will look at the phenomenon of gamification and its benefits.

A. Games, Serious Games, and Gamification

Evidence suggests games have played a significant role in people's everyday life since ancient times.¹⁰ In fact, although commonly associated

8. See, e.g., Ian Ayres & Alan Schwartz, *The No-Reading Problem in Consumer Contract Law*, 66 STAN. L. REV. 545, 555–62 (2014) (surveying prior academic theories and legal responses to the no-reading problem); Tess Wilkinson-Ryan, *The Perverse Consequences of Disclosing Standard Terms*, 103 CORNELL L. REV. 117, 124–26 (2017) (discussing the common law approach to the no-reading problem); Oren Bar-Gill & Ryan Bubb, *Credit Card Pricing: The CARD Act and Beyond*, 97 CORNELL L. REV. 967, 1003 (2012) (advocating for the improvement of disclosure regimes); Oren Bar-Gill, *Seduction by Plastic*, 98 NW. U. L. REV. 1373, 1417–20 (2004) (advocating for consumer-friendly modifications to credit card fee disclosure policies). See also, Omri Ben-Shahar & Carl E. Schneider, *The Failure of Mandated Disclosure*, 159 U. PA. L. REV. 647, 704–11 (2011) (using the hypothetical example of Chris Consumer to illustrate the knowledge gap that can still exist even for those consumers like Chris who are willing to read the mandated disclosures they encounter in their daily lives); Oren Bar-Gill & Kevin Davis, *Empty Promises*, 84 S. CAL. L. REV. 1, 19–26 (2010) (examining how post contractual modifications make it hard for consumers to stay informed about ramifications of the changes).

9. See Juho Hamari et al., *Does Gamification Work?—A Literature Review of Empirical Studies on Gamification.*, 47 HAW. INT'L CONF. ON SYS. SCI. 3025, 3025 (2014) (discussing the increase in gamification as a means to increase user engagement, user activity, and customer engagement).

10. See Lloyd P. Rieber, *Seriously Considering Play: Designing Interactive Learning Environments Based on the Blending of Microworlds, Simulations, and Games*, 44 EDUC. TECH. RSCH. & DEV. 43, 53 (1996) (explaining that games have historically contributed to the development of most cultures in society).

with children, millions of people worldwide spend hours playing video and online games daily.¹¹

Young or old, people enjoy playing games.¹² Games are a central medium for entertainment, social commentary, and creative expression.¹³ Owing to widespread access to the internet, smartphones, and other devices, people are able to stay connected and play games everywhere at any time.¹⁴ The gaming industry has become a massive global business. It has grown over the years into a multi-billion-dollar industry.¹⁵ Nevertheless, games are not merely a component of the activities that people engage in during their leisure time.

Games contribute to cognitive development and serve an important social and emotional function.¹⁶ Furthermore, there is a difference between

11. See *Average weekly Time Spent Playing Video Games Worldwide as of January 2020, by age*, STATISTA (2021), <https://www.statista.com/statistics/261264/time-spent-playing-online-games-worldwide-by-region/> (showing age group breakdowns of average time spent playing video games); see also, Julian Dibbell, *Invisible Labor, Invisible Play: Online Gold Farming and the Boundary Between Jobs and Games*, 18 VAND. J. ENT. & TECH. L. 419, 423 (2016) (noting some online games can have thousands of players interacting with each other); Sal Humphreys & Melissa de Zwart, *Griefing, Massacres, Discrimination, and Art: The Limits of Overlapping Rule Sets in Online Games*, 2 UC IRVINE L. REV. 507, 514 (2012) (stating that players in World of Warcraft “may spend upwards of twenty hours a week inside the gamespace”).

12. JOHAN HUIZINGA, *HOMO LUDENS: A STUDY OF THE PLAY-ELEMENT IN CULTURE* 1 (1949); See also, ROGER CAILLOIS, *MAN, PLAY, AND GAMES* 14–17 (Meyer Barash trans., The Free Press of Glencoe, Inc. 1961) (describing the different types of games that people will engage in and the behavioral response elicited by each).

13. John M. Roberts et al., *Games in Culture*, 61 AM. ANTHROPOLOGIST 597, 598–99 (1959); Rieber, *supra* note 10, at 45, 51; see Edward Castronova, *On Virtual Economies*, 2–3, 6–7 (CESifo, Working Paper No. 752, 2002) (providing examples of creative expression and socialization through gaming)

14. See, e.g., Cheng-Chieh Hsiao & Jyh-Shen Chiou, *The Effects of a Player’s Network Centrality on Resource Accessibility, Game Enjoyment, and Continuance Intention: A Study on Online Gaming Communities*, 11 ELEC. COM. RSCH. & APPLICATIONS 75, 75 (2011) (studying the social relationships built by players who play Massive Multiplayer Online Games).

15. See, e.g., Katie Jones, *Online Gaming: The Rise of a Multi-Billion Dollar Industry*, VISUAL CAPITALIST (July 15, 2020), <https://www.visualcapitalist.com/online-gaming-the-rise-of-a-multi-billion-dollar-industry/> (explaining that gaming is one of the most lucrative industries in the world); Field Level Media, *Report: Gaming Revenue to Top \$159B in 2020*, REUTERS (May 11, 2020), <https://www.reuters.com/article/esports-business-gaming-revenues-idUSFLM8jkJMI> (predicting that revenue would reach \$159.3 billion in 2020).

16. Indeed, scholars have demonstrated how important games are to child development. Through playful interaction with her surrounding, a child can learn about social norms and create social interactions. See, e.g., Greta G. Fein, *Skill and Intelligence: The Functions of Play*, 5 BEHAV. BRAIN SCI. 163, 164 (1982) (discussing how children engaging in types of play, like games, can allow them to become more comfortable and have more control over their environment); Anthony D. Pellegrini, *The Relationship Between Kindergartners’ Play and Achievement in Prereading, Language, and Writing*, 17 PSYCH. IN THE SCHS. 530, 531, 535 (1980) (demonstrating through a study that “kindergartners’ ability

playing and *gaming*. While playing is a free-form and open-ended process, gaming on the other hand, is a structured process that is oriented towards a clearly defined goal.¹⁷ Thus, it is not surprising to learn that scholars began investigating games “as a source of heuristics for [designing] enjoyable user interfaces” back in the 1980s.¹⁸ From this initial intuition, the “serious games” movement developed at the beginning of the 2000s.¹⁹ The main purpose of the serious games movement was to utilize games to educate, instruct, train, and motivate people in various areas of life.²⁰

Nevertheless, there is little consensus in the academic literature on the definition of, and which elements characterize, better games. Some scholars emphasize competition, payoffs, rules, and consequences.²¹ Others add voluntary aspects such as leisure, pleasure, and the ability to liberate the mind to engage in an activity.²² Generally, most researchers seem to agree that games, including serious games, are goal-oriented,²³ voluntary, incorporate competitive comparative elements, and require players to follow specific rules. In addition, games are interactive, meaning that they provide continuous feedback to players, which incentivizes players to discover patterns, develop strategies, and improve their decision-making process in an enjoyable manner.²⁴

That being said, the term *serious games* might seem like an oxymoron. Still, what distinguishes serious games from other games is that they have

to play” promotes certain cognitive functions and can be predictive of future achievement); JEAN PIAGET, *PLAY, DREAMS AND IMITATION IN CHILDHOOD* (2013) 1–23.

17. See Sebastian Deterding et al., *Gamification: Using Game Design Elements in Non-Gaming Contexts*, in CHI 2011 CONFERENCE 2425, 2426 (2011) [hereinafter Deterding, *Using Game Design Elements*] (noting that, in recent years, researchers have looked into using game play to as means for completing targeted tasks).

18. See Sebastian Deterding, *Gamification: Designing for Motivation*, 19 INTERACTIONS 14, 14 (2012) [hereinafter Deterding, *Designing for Motivation*] (referring to the work of Thomas Malone, *Heuristics for Designing Enjoyable User Interfaces: Lessons from Computer Games*, in 1982 PROCEEDINGS OF THE 1982 CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS 63, 65 (1982)).

19. *Id.* The concept of *serious game* was first introduced by Clark Abt in his book *Serious Games*. Abt suggested simulations and games used to improve education, both in and outside of the classroom. See CLARK C. ABT, *SERIOUS GAMES* 4–14 (1987).

20. Rieber, *supra* note 10, at 50; Deterding, *Designing for Motivation*, *supra* note 18.

21. HENNY LEEMKUIL ET AL., *REVIEW OF EDUCATIONAL USE OF GAMES AND SIMULATIONS*, KITS CONSORTIUM 1, 3, 6 (2000).

22. See JESPER JUUL, *HALF-REAL: VIDEO GAMES BETWEEN REAL RULES AND FICTIONAL WORLDS* 29–32 (2005).

23. CAILLOIS, *supra* note 12, at 29; HUIZINGA, *supra* note 12, at 27; Leemkuil et al., *supra* note 21, at 2, 4, 6.

24. See Ganit Richter et al., *Studying Gamification: The Effect of Rewards and Incentives on Motivation*, in GAMIFICATION IN EDUCATION AND BUSINESS 21 (2015) [hereinafter Richter et al., *Studying Gamification Effects*] (explaining the intersection between game playing and motivation).

an external, specific, and non-entertaining purpose.²⁵ For example, learning a new trait or a new skill. This external purpose is incorporated into the design of the game.²⁶ For instance, to reinforce one's problem-solving skills or incentivize the acquisition of knowledge, the designer could incorporate educational concepts into the game. To date, serious games have been implemented in many fields, including education, scientific exploration, health care, management, marketing, communication, and politics²⁷—giving rise to the concept of gamification.

The term *gamification* has gained popularity in the past decade. Drawing inspiration from the fun and motivational aspects of serious games,²⁸ gamification does not require the utilization of full-fledged games to elicit the desired behavior. But rather, it requires only the application and the use of specific game elements—such as progress bars, badges, points, levels, and rewards—in a nongame context.

25. Alice H. Aubert et al., *A Review of Water-Related Serious Games to Specify Use in Environmental Multi-Criteria Decision Analysis*, 105 ENVTL. MODELLING & SOFTWARE 64, 68 (2018). Ritterfeld et al. define serious games as “any form of interactive computer-based game software for one or multiple players to be used on any platform and that has been developed with the intention to be more than entertainment.” UTE RITTERFELD ET AL., *SERIOUS GAMES: MECHANISMS AND EFFECTS* 6 (Ute Ritterfeld et al. eds., 2009) [hereinafter RITTERFELD, *SERIOUS GAMES*]. See also Ben Sawyer & Peter Smith, *Serious Games Taxonomy*, *SERIOUS GAMES INITIATIVE* 11 (2008), <https://thedigitalentertainmentalliance.files.wordpress.com/2011/08/serious-games-taxonomy.pdf> (providing a taxonomy on the different uses for serious games); Damien Djaouti et al., *Classifying Serious Games: The G/P/S Model*, in *HANDBOOK OF RESEARCH ON IMPROVING LEARNING AND MOTIVATION THROUGH EDUCATION GAMES: MULTIDISCIPLINARY APPROACHES* 118, 119–22 (2011). However, according to Corti, a serious game “is all about leveraging the power of computer games to captivate and engage end-users for a specific purpose, such as to develop new knowledge and skills.” Kevin Corti, *Games-Based Learning: A Serious Business Application*, *PIXELEARNING LTD.*, at 1 (Feb. 2006). In fact, these two definitions are almost similar. Both definitions talk about an interactive computer game. The only difference is in the goal of the game. While Corti emphasizes that the game should lead to a new and certain specific result, Ritterfeld et al. just requires an added value to the game—not just for fun.

26. Corti, *supra* note 25. Mendler de Suarez et al. define serious games as “games with an explicit and carefully thought-out educational purpose—not intended to be played primarily for amusement.” JANOT MENDLER DE SUAREZ ET AL., *GAMES FOR A NEW CLIMATE: EXPERIENCING THE COMPLEXITY OF FUTURE RISKS*, viii (2012), <https://www.climatecentre.org/downloads/files/Games/Gamesrelated%20publications/Pardee%20report.pdf>.

27. Debra A. Lieberman, *Designing Serious Games for Learning and Health in Informal and Formal Settings*, in *SERIOUS GAMES: MECHANISMS AND EFFECTS*, 117, 118–20 (Ute Ritterfeld et al. eds., 2009) [hereinafter Lieberman, *Designing Serious Games*]; Rabindra Ratan & Ute Ritterfeld, *Classifying Serious Games*, in *SERIOUS GAMES: MECHANISMS AND EFFECTS* 14–20 (Ute Ritterfeld et al. eds., 2009).

28. See Stephanie Kimbro, *What We Know and Need to Know About Gamification and Online Engagement*, 67 S. C. L. REV. 345, 361 (2016) [hereinafter Kimbro, *What We Know About Gamification*].

The concept of gamification has encouraged a growing number of studies in diverse fields of application. Still, some researchers suggest that serious games are a subset of gamification;²⁹ others use the term to describe the addition of games into existing non-game systems,³⁰ or converting a system into a game.³¹ Thus, “the [border line] between [a] game and [an] artifact [containing] game elements is blurry, personal, subjective and social.”³²

Notwithstanding the above, throughout this Article, we refer to gamification as denoting the practice of embedding or harnessing game-like elements into existing non-gaming scenarios for the sake of affecting people’s behavior including the ability to comprehend complicated information and to gain knowledge.³³

29. KARL M. KAPP, *THE GAMIFICATION OF LEARNING AND INSTRUCTION: GAME-BASED METHODS AND STRATEGIES FOR TRAINING AND EDUCATION* 15–18 (Rebecca Taff ed., 2012).

30. Ganit Richter et al., *Re-Playing and Quality Contribution: The Role of the Score Mechanism Design as Motivator*, in *MEANINGFUL PLAY PROCEEDINGS 2018* 237, 237–38 (2018).

31. Katie Seaborn & Deborah I. Fels, *Gamification in Theory and Action: A Survey*, 74 *INTER. J. OF HUMAN-COMPUT. STUDIES* 14, 17–18 (2015).

32. See Richter et al., *Studying Gamification Effects*, *supra* note 24, at 21–22. To illustrate, take Fold-it, a revolutionary crowdsourcing computer game enabling users to contribute to important scientific research. Some referred to Fold-it as a successful example of gamification in science, while others view it as a serious game in which players use a graphical interface to predict protein structures, a problem that computers cannot solve yet. *The Science Behind Foldit*, FOLDIT, <https://fold.it/portal/info/about> (last visited May 5, 2021).

33. This definition of gamification is shared by several academics in the field. See, e.g., Juho Hamari et al., *Does Gamification Work?—A Literature Review of Empirical Studies on Gamification*, in *PROC. OF THE 47TH HAW. INT’L CONF. ON SYS. SCI.* 3025, 3026 (2014) (defining gamification as “a process of enhancing services with (motivational) affordance in order to invoke gameful experiences and further behavioral outcomes.”); Daniel M. Ferguson, *The Gamification of Legal Education: Why Games Transcend the Langdellian Model and How They Can Revolutionize Law School*, 19 *CHAP. L. REV.* 629, 630–31, 643 (2016) (explaining gamification as “the use of game thinking and game mechanics to engage audiences and solve problems” and studying the application of gamification to the law-school setting). In addition to discussing the meaning of gamification and its history, other authors have also explored the expected future of gamification. See, e.g., JUDITH ANDERSON KOENIG, *ASSESSING 21ST CENTURY SKILLS: SUMMARY OF A WORKSHOP* 33–37 (2011) (discussing the use of ARIES, a tutoring program for high school students that uses a “game environment” to engage student); F. JAMES RUTHERFORD & ANDREW AHLGREN, *SCIENCE FOR ALL AMERICANS* 121–22 (1991) (analyzing the role computers have in processing complex information and communicating it to users); PRESIDENT’S COUNCIL OF ADVISORS ON SCI. AND TECH. (PCAST), *PREPARE AND INSPIRE: K-12 EDUC. IN SCI., TECH., ENG’G, AND MATH (STEM) FOR AMERICA’S FUTURE: EXEC. REP.* 7–8 (2010) (forecasting STEM-based school programs as an opportunity for gamification); Deterding, *Designing for Motivation*, *supra* note 18, at 14 (explaining that gamification will be used in non-game contexts to motivate behaviours); Miriam A. Cherry, *The Gamification of Work*, 40 *HOFSTRA L. REV.* 851, 852–53 (2012) (discussing the use of gamification in virtual work). As will be shown later, there are also legal difficulties of using gamification at the workplace. See *infra* note 243 and accompanying text.

B. Implementing Gamification in Various Domains

In recent years, gamification techniques and game-like elements have been used in diverse domains and to advance various purposes.³⁴ For instance, in healthcare industries, gamification is used to support health behavior change, lifestyle change, and treatment compliance.³⁵ In the workplace, gamification is often linked to improvement of performance, social relations, on-boarding, and employee training.³⁶ In education, gamification is broadly implemented and generally associated with improving student engagement and learning outcomes. This includes problem-solving, collaboration, and communication.³⁷ For instance, in a study conducted in Spain, researchers demonstrated that students who study using game-design elements had higher initial motivation and achieved better overall scores than students who followed traditional exercises.³⁸

34. See *supra* notes 26–30.

35. Brooke A. Jones et al., *The FIT Game: Preliminary Evaluation of a Gamification Approach to Increasing Fruit and Vegetable Consumption in School*, 68 PREVENTATIVE MED. 76, 79 (2014); Debra A. Lieberman, *Video Games for Diabetes Self-Management: Examples and Design Strategies*, 6 J. OF DIABETES SCI. & TECH. 802, 803 (2012); Lieberman, *Designing Serious Games*, *supra* note 27, at 117.

36. See, e.g., Ana Teresa Ferreira et al., *Gamification in the Workplace: A Systematic Literature Review*, Conference Paper in ADVANCES IN INTELLIGENT SYSTEMS AND COMPUTING 283, 284 (2017) (finding that gamification in the workplace can increase satisfaction, improve performance, and bolster training and recruitment); Lydia DePillis, *Flights of Fancy: Inside the Intense World of Virtual Pilots*, WASH. POST (Dec. 20, 2013), <https://www.washingtonpost.com/news/wonk/wp/2013/12/20/flights-of-fancy-inside-the-intense-world-of-virtual-pilots/> (illustrating how pilots and flight simulator enthusiasts use gamification in flight simulators competitions); Rachel Emma Silverman, *Latest Game Theory: Mixing Work and Play*, WALL ST. J. (Oct. 10, 2011), <http://www.wsj.com/articles/SB10001424052970204294504576615371783795248> (discussing the use of gamification at the workplace for employee training and other tasks by large companies such as IBM).

37. See, e.g., Jihan Rabah et al., *Gamification in Education: Real Benefits or Edutainment?* in PROCEEDINGS OF EUROPEAN CONFERENCE ON E-LEARNING 1, 1 (2008); Rachel Garman, *Game Changers: The Educational Gaming Commons Promotes Learning Through Games*, PENN STATE NEWS (Jan. 15, 2016), <https://news.psu.edu/story/387656/2016/01/15/academics/game-changers>; Michael, *Ananth Pai: Engaging Students Through Scalable Game Based Curriculum*, INSPIRED TO EDUCATE (Aug. 27, 2012), <http://inspiredtoeducate.net/inspiredtoeducate/ananth-pai-engaging-students-through-scalable-game-based-curriculum/>.

38. Adrian Domínguez et al., *Gamifying Learning Experiences: Practical Implications and Outcomes*, 63 COMPUT. & EDUC. 380, 386 (2013). However, it is important to note, that although these students earned better scores in practical assignments and in overall scores, they also performed poorly on written assignments and participated less on class activities. *Id.*

In the private sector, gamification aides in increasing “customer loyalty and retention”³⁹ In the public sector, it supports public engagement.⁴⁰ Gamification also promotes changes in environmental behavior.⁴¹ Although these applications are diverse, they all work by creating a challenge for the individual, providing feedback on her performance, and rewarding her for accomplishments,⁴² thus motivating her to participate or engage more fully in the task at hand.⁴³

One of the most famous examples of facilitating behavioral change using gamification elements is MOBI, “a 36 months project that sought to encourage employers and their employees to use more energy efficient transport modes for their commuter journeys.”⁴⁴ Points were allocated to participants for using an energy-efficient mode of transport (e.g., walking, cycling, public transport, car sharing) and avoiding trips (e.g., working from home).⁴⁵ These points were converted into virtual prizes and rewards for the personalized MOBI avatar.⁴⁶ The project sought to encourage people to use more energy-efficient transportation modes through the implementation of an online mobile game.⁴⁷ Over 2,000 employees across 39 organizations around Europe participated.⁴⁸ MOBI was designed to

39. Kimbro, *What We Know About Gamification*, *supra* note 28, at 360; *see also* Seaborn & Fels, *supra* note 31, at 19 (comparing different theoretical foundations on how *gamification* impacts peoples’ motivations and behaviors).

40. Sanat Kumar Bista et al., *Gamification for Online Communities: A Case Study for Delivering Government Services*, 23 INT’L. J. OF COOP. INFO. SYS. 1441002-1, 1441002-3 (2014); Peter Tolmie et al. *Designing for Reportability: Sustainable Gamification, Public Engagement, and Promoting Environmental Debate*, 18 PERS. & UBIQUITOUS COMPUTING 1763, 1763–65, 1768–70, 1773 (2014) (overviewing benefits and challenges of games aimed at public participation).

41. Joey J. Lee et al., *GREENIFY: A Real-World Action Game for Climate Change Education*, 44 SIMULATION & GAMING 349, 350 (2013); Stavros Lounis et. al., *Gamification is all about Fun: The Role of Incentive Type and Community Collaboration*, TWENTY SECOND EUR. CONF.E ON INFO. SYS., TEL AVIV 2014 at 5 (studying the impact of gamification on participants’ consideration of eco-friendly products).

42. KAPP, *supra* note 29, at 6–7; Ferguson, *supra* note 33, at 633–34.

43. *See, e.g.*, JANE MCGONIGAL, REALITY IS BROKEN: WHY GAMES MAKE US BETTER AND HOW THEY CAN CHANGE THE WORLD 22–23 (2011) (explaining the motivation to play games, like golf and Scrabble, come from our “voluntary attempt to overcome unnecessary obstacles” to achieve goals we create); Ferguson, *supra* note 33, at 631.

44. MOBI, PROMOTING SMART MOBILITY TO EMPLOYEES—MOBI, INTELLIGENT ENERGY EUROPE, at 1–2, [hereinafter MOBI, REPORT], (on file with *Vermont Law Review*).

45. *See id.* (“In addition to walking, cycling, public transport and car sharing, employees can also be incentivised to use e-modes (bikes, scooters and cars).”).

46. MOBI, MOBI—MOBI REPORT: INTRODUCTION TO THE MOBI PROJECT, INTELLIGENT ENERGY EUROPE, at 4, 7 (Apr. 2016), http://www.mobi-project.eu/site/assets/files/1071/d1_3_mobi_final_report_-_results_and_lessons.pdf.

47. MOBI, REPORT, *supra* note 44, at 1.

48. *Id.*; *About*, MOBI, <http://www.mobi-project.eu/> (last visited May 5, 2021).

make smart commuting fun for the participant, but it also enabled them to compete with other teams.⁴⁹

In terms of pushing people towards more energy-efficient commuting, results show the MOBI project succeeded in changing the behavior of employees. In fact, “[t]he share of sustainable modes [of transportation] increased from 58% to 80%”⁵⁰ Interestingly, the change in behavior continued even after the end of the project.⁵¹ This project undoubtedly demonstrates the potential benefits and practical application of gamification.

C. Gamification in the Legal Field

Games and law are not strangers. Law-related quizzes can be found on general trivia websites including quizzes on criminal law, divorce law, environmental law, famous trials, legal ethics, and so on.⁵² Also, the websites of legal television shows such as *Suits* offer trivia quizzes on the show.⁵³ But these quizzes are generally very limited in scope and are intertwined with questions such as “what kind of a lawyer would you be . . . [?]”⁵⁴ Thus, they fall short of truly utilizing the benefits of game-like elements to educate the public and support a more profound and meaningful understanding of legal content.

More sophisticated interactive games such as the Swedish Speed Camera Lottery aim to normalize behavior in accordance with the law, in this case, by entering speed-compliant drivers into a lottery.⁵⁵ Yet even here, it seems as if the purpose of the game was not to educate drivers about

49. MOBI REPORT, *supra* note 44, at 1.

50. *Id.* at 1–2.

51. *Id.* (“In response to a questionnaire sent to 250 players over one month after the end of the game show, 39% of the respondents stated that their opinion on cycling had improved, and 43% stated they were more likely to use this mode in the future. 49% of respondents said their opinion on walking had improved and were more likely to use this mode in the future. Carpooling also became more highly regarded, with 38% of the respondents improving their opinion and 28% stating they would use it in the future. On the other hand, the opinion on car got worsened for 18% of the respondents.”).

52. Hornsby reported on “quizzes [that] are text-based . . . and fall short of the interactive capabilities offered in more sophisticated games.” William E. Hornsby Jr., *Gaming the System: Approaching 100% Access to Legal Services through Online Games*, 88 CHI.-KENT L. REV. 917, 937 (2013).

53. *Id.*

54. *Id.*

55. Mattia Thibault, *Towards a Typology of Urban Gamification*, PROC. 52 HAW. INT’L CONF. SYS. SCI. 1476, 1477, 1483 (2019); The Medical Futurist, *The Swedish Speed Camera Lottery and Healthy Living* (June 7, 2018), <https://medicalfuturist.com/swedish-speed-camera-lottery-healthy-living/>.

the law (of which they were already aware), but mainly to change people's behavior.⁵⁶

The attempts to develop games and embed game-like elements into law-related ventures can be roughly divided into the following categories: (a) efforts to harness the benefits of games to facilitate legal education or raise awareness to a certain legal issue for school-aged children, students, continuing education for lawyers, and bar-exam examinees;⁵⁷ (b) smartphone applications that have been developed with the aim of addressing a specific legal issue;⁵⁸ (c) tools developed to assist members of the general public complete certain forms or navigate specific legal processes (such as the A2J Author initiative);⁵⁹ (d) experimental games designed to address specific areas of the law;⁶⁰ and lastly, (e) a commercial initiative to create a gamified version of the company's privacy policy.⁶¹

56. See Thibault, *supra* note 55, at 1476–77, 1479 (asserting urban gamification influences citizen's behavior by changing the way they interact with their urban environment).

57. See, e.g., ICIVICS, <http://www.icivics.org/games> (last visited Apr. 19, 2021); LAW DOJO <http://www.lawschooldojo.com/> (last visited May 5, 2021); *Intellectual Property Simulation*, BDC, https://www.bdc.ca/en/resources/cipo/story_html5.html (last visited May 5, 2021). See also Kimbro, *What We Know About Gamification*, *supra* note 28, at 372; Ferguson, *supra* note 33, at 644 (providing an example of using game mechanics in the classroom setting); *2021 Games for Change Festival*, <http://www.gamesforchange.org> (last visited May 5, 2021).

58. Such as the Navigator, which helps people required to register after a conviction determine how to comply with Illinois law; Legal Aid Society of Hawaii's Community Navigator Issue Spotting Tool which helps community navigators in Hawaii identify legal issues in their communities; The Health Justice Alliance's Legal Check Up, which helps identify potential legal concerns for cancer patients in an attempt to provide a more comprehensive approach to healthcare. These initiatives and many other were developed by participants of the Iron Tech Lawyer Competition, at Georgetown Law School. *Georgetown's Iron Tech Lawyer Competition 2019*, GEO. L. INST. FOR TECH. L. & POL'Y (Apr. 24, 2019), <https://www.georgetowntech.org/2019-competition>. See also Kimbro, *What We Know About Gamification*, *supra* note 28, at 372.

59. "A2J Author® is an expert system and user interface co-developed by Chicago-Kent and the Center for Computer-Assisted Legal Instruction (CALI), for helping self-represented litigants complete court forms or navigate a legal process." *A2J Author*, CHI.-KENT C. L., <https://www.kentlaw.iit.edu/institutes-centers/center-for-access-to-justice-and-technology/a2j-author> (last visited May 5, 2021). See also the NuLawLab, an innovation laboratory at Northeastern University School of Law, which focuses on "transforming legal education, the legal profession, and the delivery of legal services." *Mission*, NULAWLAB, <https://nulawlab.org/> (last visited May 5, 2021).

60. Kimbro attests that she experimented with two games related to specific areas of the law. The first game was focused on the subject of estate planning law. The second game the author worked on was developed for Illinois Legal Aid Online and covered the topic of eviction. Kimbro, *What We Know About Gamification*, *supra* note 28, at 373–75.

61. See, e.g., *PrivacyVille*, FACEBOOK, <https://www.facebook.com/PrivacyVille/> (last visited May 5, 2021) (using offers such as "[g]o to PrivacyVille . . . and Earn 200 zPoints in every Zynga Game" to incentivize game play); see also, Ben Parr, *PrivacyVille: Zynga Turns Its Privacy Policy into a Game*, MASHABLE (July 7, 2011) <https://mashable.com/2011/07/07/privacyville-zynga/>.

Notwithstanding the above, the use of gamification in the legal field (to the best of our knowledge) remains limited to date. More than that, in contrast to the proliferation of literature pertaining to gamification in other fields, there is, as of now, little scholarly discussion on the use of gamification in the legal arena. Even questions pertaining to how gamification could help to advance legal education have received modest attention.⁶²

Back in 2013, William E. Jr. Hornsby called for greater engagement of the general public in legal matters and increased access to legal materials by using gamification techniques.⁶³ In 2015, Kai Erenli addresses some common aspects of laws related to gamification, such as unfair competition, liabilities cases, copyright law, and so forth.⁶⁴ While, Stephanie L. Kimbro considers the benefits of law firm productivity through the gamification of internal processes.⁶⁵

In recent years, scholars and companies alike have begun exploring more creative ways of communicating the content of privacy policies to the general public. Using, among other things, notices, color coding, icons, and animation.⁶⁶

For instance, as stated above, in 2011, game developer Zynga released an animated game-version of its privacy policy—known as

62. See Vassiliki Bouki et al., “Gamification” and Legal Education: A Game Based Application for Teaching University Law Students, in PROCEEDINGS OF 2014 INTERNATIONAL CONFERENCE ON INTERACTIVE MOBILE COMMUNICATION TECHNOLOGIES AND LEARNING 213, 213 (2014) (providing background on why introducing gamification to legal education is valuable to law students).

63. Hornsby presented several reasons why the public needs access to law without intermediates. See Hornsby, *supra* note 52, at 917–19, 921–23. These include the list of reasons for not getting a lawyer’s help based on a survey conducted in eight states in the United States. *Id.* One of the reasons is the high prices that the legal service costs. *Id.* The funding for legal aid and the pro-bono services are grossly insufficient to meet the legal needs. *Id.* at 944 (“Within new games, we ought to be able to help people make those connections that enable them to address their problems with legal solutions in the real world and perhaps contribute to the solutions of more global problems at the same time. Games are a resource to enhance engagement and bring the legal profession one step closer to its goal of 100 percent access to legal services.”).

64. Kai Erenli, *Gamification and Law*, in GAMIFICATION IN EDUCATION AND BUSINESS 535, 542–43, 547 (2015).

65. Stephanie L. Kimbro, *Gamification for Law Firms 3–5* (SSRN, Working Paper, 2015), https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2578110_code1691139.pdf?abstractid=2578110&mirid=1&type=2.

66. Helena Haapio et al., *Legal Design Patterns for Privacy*, in DATA PROTECTION/LEGALTECH PROCEEDINGS OF THE 21ST INTERNATIONAL LEGAL INFORMATICS SYMPOSIUM IRIS, 445, 446 (2018), https://jusletter-it.weblaw.ch/en/dam/publicationssystem/articles/Jusletter-IT/2018/IRIS/legal-design-pattern_cec7cc7007/Jusletter-IT_legal-design-pattern_cec7cc7007_de.pdf.

“PrivacyVille.”⁶⁷ Players of PrivacyVille travel among different topics (e.g., advertising, sharing, and storage).⁶⁸ Each topic presents the player with the corresponding part of Zynga’s privacy policy.⁶⁹ PrivacyVille turns online privacy concepts, like targeted advertising, into a game tutorial using incentive mechanisms based on Zynga’s currency (zPoints).⁷⁰ The game consists of two parts: first, users click through the town of PrivacyVille and read about various concepts (for example, how Zynga uses players’ email addresses). Second, users take a five-question quiz vaguely based on the content they read.⁷¹

Additionally, in October 2011, the European Union—within the framework of the Europ’Act program—officially launched a game, which was primarily intended for multimedia animators and digital mediators, named “Droit et EPN, le Jeu!”⁷² The game resembles an interactive comic and aims to teach basic legal concepts linked to the use of the Internet and multimedia.⁷³ It is organized around modules (topics), such as: freedom of expression, copyright, reuse of digital content, and privacy.⁷⁴ Each of the modules consists of: a presentation explaining the subject dealt within the module; a case study, built as a comic strip, which offers a problem solving situation (the player must make a selection from the choices making it possible to resolve the question asked); and a quiz to test the knowledge acquired on the module.⁷⁵

Beyond that, there have been several additional attempts to engage users with concepts of information privacy and consent in online interactions. These initiatives look to raise awareness of data collection and how it is used.

67. See *supra* note 61; see also, Kashmir Hill, *Zynga’s PrivacyVille—It’s Not Fun, But It Gets the Job Done*, FORBES (July 8, 2011), <https://www.forbes.com/sites/kashmirhill/2011/07/08/zyngas-privacyville-its-not-fun-but-it-gets-the-job-done/#7c0c934a1d7f>.

68. Privacy Ville, InternetWayBackMachine, <https://web.archive.org/web/20140322095717/http://company.zynga.com/privacy/privacyville> [hereinafter PrivacyVille Archive] (last visited May 5, 2021); Hill, *supra* note 67.

69. PrivacyVille Archive, *supra* note 68.

70. *Id.*; Erica Ogg, *Zynga Makes Privacy a Game with PrivacyVille*, CNET, <https://www.cnet.com/news/zynga-makes-privacy-a-game-with-privacyville/> (July 7, 2011).

71. Hill, *supra* note 67.

72. Marie-Hélène Feron, *Droit et EPN le Jeu! [Law and EPN the Game!]*, A-BREST (Oct. 28, 2011), <https://www.a-brest.net/article8650.html>.

73. See *id.*

74. See *id.*

75. In addition, the “find out more” section offers extra resources and links to go deeper into the subject. *Id.*

One such initiative is Data Dealer. Data Dealer is an online game (BETA) about collecting and selling personal data.⁷⁶ In the game the user stores a cache of fictional private information, and then sells that data to corporations, insurance companies, human-resources departments, or governmental agencies.⁷⁷ The game aims to educate users regarding the quantity and the value of different types of personal information being collected today and the potential commercial use of such data.⁷⁸

Other examples include, DataK and Data Defenders. DataK, is an online game that aims to “rais[e] [public] awareness of the implications of [data protection] and [B]ig [D]ata.”⁷⁹ Players are faced with various daily dilemmas, while every decision has an impact on a player’s progress, on her avatar’s life, and on the organization.⁸⁰ In contrast, Data Defenders shows children and pre-teens (grades 4–6) how ad brokers try to collect their personal information; teaches the concept of personal information and its economic value; and offers strategies to keep that information private.⁸¹ The game lasts two rounds.⁸² The core gameplay is built around a “match-three” game and introduces players to key concepts of the information economy, particularly the idea that we pay for many online services and activities with our personal information.⁸³ “In the first round, players try to get the highest possible score by matching tiles (which stand for different types of personal information) before they run out of moves.”⁸⁴ The users are

76. See generally DATADEALER, *Data Dealer, The Gleeefully Sarcastic Game About Data Privacy*, <https://datadealer.com/about> (last visited May 5, 2021) (providing background information on Data Dealer). Data Dealer is a non-profit project published under Creative Commons. *Id.* “It has been created by a small group of developers, game designers and digital rights activists mainly from Vienna, Austria.” *Id.* The game has received several awards. These awards include: Jury Prize at the Austrian National Multimedia Award 2013, Educational Interactive Award 2012, serious game award 2013 (France) and the Games for Change Award 2013 (New York City). *Id.*

77. See generally DATADEALER, *Data Dealer, The Gleeefully Sarcastic Game About Data Privacy*, <https://datadealer.com/about> (last visited May 5, 2021) (providing background information on Data Dealer). Data Dealer is a non-profit project published under Creative Commons. *Id.* “It has been created by a small group of developers, game designers and digital rights activists mainly from Vienna, Austria.” *Id.* The game has received several awards. These awards include: Jury Prize at the Austrian National Multimedia Award 2013, Educational Interactive Award 2012, serious game award 2013 (France) and the Games for Change Award 2013 (New York City). *Id.*

78. <https://mediasmarts.ca/digital-media-literacy/educational-games/data-defenders-grades-4-6> (last visited May 5, 2021). For access to game see also *Data Defenders*, MEDIASMARTS, [hereinafter *Data Defenders Game Play Through*], <https://mediasmarts.ca/sites/mediasmarts/files/games/data-defenders/> (last visited May 5, 2021).

82. Data Defenders Game Design, *supra* note 81.

83. *Id.*

84. *Id.*

offered the opportunity to earn more moves and improve their game score by answering questions about themselves—a common tactic of *free* games and services that make money by collecting and selling user data.⁸⁵ Yet, by providing this information, users are lowering their hidden privacy scores.⁸⁶ The goal of the second round is to keep their privacy scores as high as possible.⁸⁷ Players are encouraged to protect their privacy scores by completing quizzes about various privacy tools.⁸⁸

During 2017, Google launched the “Be Internet Awesome Program” in order to teach youth (best suited for grades 2nd–6th) the “fundamentals of digital citizenship and safety”⁸⁹ The Be Internet Awesome Program includes a curriculum for teachers, resources for parents, and an online game.⁹⁰ In the game, players explore four floating islands, each featuring a different mini game with a different Internet lesson such as: privacy-related concerns, information sharing, building strong passwords, fake profiles, and phishing. However, according to Seale & Schoenberger’s analysis, although the Be Internet Awesome Program is well designed and addresses common Internet safety themes, “the program’s conceptualization of Internet safety omits key considerations.”⁹¹ Specifically, they claim that the program fails to consider deeper aspects, “ignores elements outside of the user’s control; and . . . portrays Google as a benevolent and authoritative Internet expert.”⁹² Moreover, as the researchers claim, “gameplay is often only tangentially related” to the program’s tenets.⁹³ For example, in “Tower of Treasure” the player collects boxes containing lowercase, uppercase, and special characters. That game teaches players how to create a strong password.⁹⁴

Other attempts for teaching privacy online include King GAFA, and the mobile application TechSafe Privacy. King GAFA (Google, Apple, Facebook, and Amazon) is a series of short videos created by design

85. Data Defenders Game Play Through, *supra* note 81.

86. Data Defenders Game Design, *supra* note 81.

87. *Id.*

88. *Id.*; see also *Data Defenders Game Play Through*, *supra* note 81.

89. Jim Seale & Nicole Schoenberger, *Be Internet Awesome: A Critical Analysis of Google’s Child-Focused Internet Safety Program*, 1 EMERGING LIBR. & INFO. PERSP. 34, 35, 48 (2018), <https://ojs.lib.uwo.ca/index.php/elip/article/view/366/1361>.

90. *Smart Internet Explorers*, GOOGLE, <http://www.scholastic.com/beinternetawesome/index.html> (last visited May 5, 2021).

91. Seale & Schoenberger, *supra* note 89, at 52.

92. *Id.* at 46.

93. *Id.* at 44.

94. *Id.*

students at Vienna’s University for Applied Arts (released in 2017).⁹⁵ The game is meant to represent how people—through their use of digital devices and services—generate valuable data (and profit) for major Internet companies; however, research found that the storylines in King GAFA videos produced more confusion than learning.⁹⁶

Excite-ed CIC’s⁹⁷ “TechSafe–Privacy” is an Internet safety-information app (available on both the App Store and Google’s Play Store) that includes tips related to online reputation, privacy, and identity theft.⁹⁸ Users first swipe through screens that define each concept and offer general guidelines, and then they take a ten-question multiple-choice quiz that addresses the concepts discussed in the app.⁹⁹ Findings from design research have shown that, although users found the app educational and useful (identified specific facts they learned from the app), they did not find it exciting; but rather boring and not much fun.

These initiatives are few and too scattered to truly make an impact or revolutionize the way the public is being informed of the content of legally binding documents. Additionally, some of them did not really check a user’s conceptual understanding (e.g., the previously discussed PrivacyVille game).¹⁰⁰ Nevertheless, these initiatives are a first step forward because they embark on a new and creative way to ease the tension between user-friendly interfaces and legal literacy.

In 2018, Talib et al., examined the level of awareness and knowledge of Twitter’s privacy policy among undergraduate students.¹⁰¹ Their results indicate that the content of the policy makes users disinterested in reading it,¹⁰² mainly because it is very long and complicated.¹⁰³ As a consequence, the “majority of the Internet users are subtly aware that their data [is]

95. *Id.*; Priya Kumar, et al., *Co-Designing Online Privacy-Related Games and Stories with Children*, in PROCEEDINGS OF THE 17TH ACM CONFERENCE ON INTERACTION DESIGN AND CHILDREN 67, 70 (2018), <https://doi.org/10.1145/3202185.3202735>.

96. Kumar, *supra* note 95, at 72.

97. Excite-ed CIC is a U.K.-based educational technology company. *Techsafe-Privacy*, GOOGLE PLAY, https://play.google.com/store/apps/details?id=air.com.exciteed.techsafeprivacy&hl=en_US&gl=US (last visited May 5, 2021); *see also*, Kumar, *supra* note 95, at 70.

98. Kumar, *supra* note 95, at 67, 70.

99. *Id.*

100. The short test at the end of PrivacyVille does not measure user’s conceptual understanding. *See supra* note 71 and accompanying text.

101. Shuhaili Talib et al., *Social Networks Privacy Policy Awareness among Undergraduate Students: The Case of Twitter*, in THE 5TH INTERNATIONAL CONFERENCE ON INFORMATION AND COMMUNICATION TECHNOLOGY FOR THE MUSLIM WORLD (ICT4M), 1, 1 (2014).

102. *Id.* at 4.

103. *Id.*

shared with third party marketers;[and]are unsure as to the actual implications of how their information [is] collected¹⁰⁴ And so, they recommend social networking sites, such as Twitter, to find a better way of ensuring that users read and understand privacy policies as Zynga has done in PrivacyVille.

Haapio et al.,¹⁰⁵ and Rossi et al.,¹⁰⁶ likewise suggested, among other design patterns, the use of gamified experience (i.e., PrivacyVille) in the context of privacy policy.

We, too, argue that gamification techniques can and should be used to inform people, improve their engagement, and make a tedious task—such as reading legal documents—more fun.¹⁰⁷ Although, to the best of our knowledge, there has been almost no discussion of gamification in the legal arena, we believe it holds great promise as a means to elicit better information exchange and mitigate some of the reasons causing the no-reading problem, as Part III will discuss in detail.

II. THE NO-READING PROBLEM AND CURRENT SOLUTIONS

A. Four Sources of the Problem

When installing a new app on a mobile device, joining a new social network, or subscribing to a favorite website, users are required to agree to multiple terms and conditions. Most terms and conditions appear under the title *Terms of Use*, *Privacy Policy*, or *Community Guidelines*.¹⁰⁸ These are all essentially standardized contracts that set forth the terms and conditions to which the user agrees when accessing or using a specific website or mobile app (collectively “ToU”). Thus, the ToU can be regarded as a form of self-regulation that is an essential part of many online activities.¹⁰⁹

104. *Id.* at 5.

105. Haapio et al., *supra* note 66, at 446–47.

106. Arianna Rossi et al., *When Design Met Law: Design Patterns for Information Transparency*, 1 DROIT DE LA CONSOMMATION 79, 79, 90, 118 (2019).

107. *See, e.g.*, Cherry, *supra* note 33, at 853–54 (arguing that gamification has the potential to benefit people’s daily lives and work, as well as their long-term well-being).

108. Although there are differences between these documents, for the sake of simplicity throughout this paper we will use the terms “standard online contracts” or “Terms of Use” (“ToU”) collectively when discussing such legal documents. For a general discussion of these different labels see Eliza Mik, *Terms of Use: Reflections on a Theme*, in ASLI CONFERENCE, UNIV. OF MALAYA, KUALA LUMPUR 1, 1 (May 2014), https://www.academia.edu/11837455/Terms_of_Use_Reflections_on_a_Theme.

109. *See* Niva Elkin-Koren, *Governing Access to User-Generated-Content: The Changing Nature of Private Ordering in Digital Networks*, in GOVERNANCE, REGULATIONS, AND POWERS ON THE INTERNET, 1, 6, 14 (Meryem Marzouki & Cecile Meadel eds., 2009) [hereinafter Elkin-Koren,

These documents can only serve their purpose of informing users so long as the targeted individual has the necessary resources to obtain, process, and understand the provisions of these documents in a meaningful way.¹¹⁰ However, due to their prevalence and the legalization of the free internet space, ToU have become longer and more complicated. ToU now require the common user to invest time and resources in her attempt to comprehend the gist of these contracts.¹¹¹

For instance, to demonstrate what reading the terms of service and the privacy policy for apps that you could find on an *average* mobile phone entails, the Norwegian Consumer Council invited guests to read them out—word by word.¹¹² All in all, it took the volunteers more than 24 hours, and they had to read more than 250,000 words out loud, making it almost impossible for an *average user* to make herself familiar with what she is

Governing Access] (giving examples of companies changing their ToU after public outcry and arguing that user interests will force ToUs to comply with market desires).

110. See, e.g., J. H. Verkerke, *Legal Ignorance and Information-Forcing Rules*, 56 WM. & MARY L. REV. 899, 938–39 (2015) (noting that the proponents of providing contracting parties with copious amounts of legal information, presume that the target party will actually receive and understand the information presented); Ben-Shahar & Schneider, *supra* note 8, at 647, 665, 671–72 (illustrating through an experiment done by PCpitstop, that consumers tend not to thoroughly read through the terms of a contract); Cass R. Sunstein, *Switching the Default Rule*, 77 N.Y.U. L. REV. 106, 110 (2002) (suggesting that in the context of employment contracts, having default rules that favor the employee might be beneficial—especially in instances where employees lack the information needed to understand their legal rights); Cynthia L. Estlund, *How Wrong Are Employees About Their Rights, and Why Does It Matter?*, 77 N.Y.U. L. REV. 6, 23–26 (2002) [hereinafter Estlund, *Employee Rights*], (arguing for employers to be required to disclose a certain amount of information to employees about their employment contracts, so they can actually make informed decisions about their work); Samuel Issacharoff, *Disclosure, Agents, and Consumer Protection*, 167 J. INST. & THEORETICAL ECON. 56, 60 (2011) (describing how overly technical information can go over people’s heads, and thus fail to meaningfully inform them before they make decisions).

111. Florencia Marotta-Wurgler & Robert Taylor, *Set in Stone? Change and Innovation in Consumer Standard-Form Contracts*, 88 N.Y.U. L. REV. 240, 253 (2013) (tracking the increase in the number of words in standard form contracts, and how this has made those contracts more difficult to read); Aleccia M. McDonald & Lorrie Faith Cranor, *The Cost of Reading Privacy Policies*, 4 I/S: J. L. & POL’Y FOR INFO. SOC’Y 543, 549 (2008) (explaining that gross expenditures of time can be a barrier to consumers actually reading a company’s privacy policy); Nicholas LePan, *Visualizing the Length of the Fine Print, for 14 Popular Apps*, VISUAL CAPITALIST (Apr. 18, 2020), <https://www.visualcapitalist.com/terms-of-service-visualizing-the-length-of-internet-agreements/> (sharing the significant amount of time it takes to read the ToU for several popular websites); see also *This Guy Printed out the Terms of Service for the World’s Most Popular Apps*, TWISTED SIFTER (May 22, 2018) [hereinafter TWISTED SIFTER, *Print of ToUs for Popular Apps*], <https://twistedifter.com/2018/05/i-agree-by-dima-yarovinsky/> (using an art exhibition to represent the inordinate length of terms of service agreements for popular sites).

112. *250,000 Words of App Terms and Conditions*, FORBRUKERRÅDET (May 24, 2016), <https://www.forbrukerradet.no/side/250000-words-of-app-terms-and-conditions/>.

actually agreeing to when installing a new app.¹¹³ For this reason, the majority of users either ignore the ToU, generally fail to read them, or are unable to comprehend the terms and services to which they routinely agree online.¹¹⁴

In fact, numerous studies have found that people regularly enter into binding contracts without reading the terms and conditions.¹¹⁵ For instance, recent research conducted by Jonathan A. Obar and Anne Oeldorf-Hirsch investigated the extent to which individuals are aware of or oblivious to

113. *Id.*

114. *See, e.g.*, Ben-Shahar & Schneider, *supra* note 8, at 652–64 (emphasizing mandated disclosure’s wide use in the contexts of terms of credit, contract boilerplate, financial transactions, insurance, healthcare, Miranda warnings, etc. by legislatures, courts, and administrative agencies); Timothy F. Malloy, *Disclosure Stories*, 32 FLA. ST. U. L. REV. 617, 628–29 (2005) (comparing the different elements of mandatory disclosure and the types of disclosure that arise from it); David Weil et al., *The Effectiveness of Regulatory Disclosure Policies*, 25 J. POL’Y ANALYSIS & MGMT. 155, 157 (2006) (noting that individuals may ignore information that is too costly or lacking salience); Matthew A. Edwards, *Empirical and Behavioral Critiques of Mandatory Disclosure: Socio-Economics and the Quest for Truth in Lending*, 14 CORNELL J.L. & PUB. POL’Y 199, 248–49 (2005) (discussing two potential factors for the ineffectiveness of mandatory disclosure regimes: (1) flawed disclosure and (2) the inability of consumers to utilize disclosures effectively); Geoffrey A. Manne, *The Hydraulic Theory of Disclosure Regulation and Other Costs of Disclosure*, 58 ALA. L. REV. 473, 511 (2007) (noting that mandatory disclosure regimes impose costs on the users and the market itself); Daniel E. Ho, *Fudging the Nudge: Information Disclosure and Restaurant Grading*, 122 YALE L.J. 574 *passim* (2012) (identifying the effectiveness of mandatory simplified disclosures upon the public’s capacity to comprehend information, in the context of restaurant grading).

115. *See, e.g.*, Debra Pogrud Stark & Jessica M. Choplin, *A License to Deceive: Enforcing Contractual Myths Despite Consumer Psychological Realities*, 5 N.Y.U. J. L. & BUS. 617, 628 (2009) (claiming that “a sizeable number of consumers fail to read the contracts that they sign”); Robert A. Hillman, *Online Boilerplate: Would Mandatory Website Disclosure of E-Standard Terms Backfire?*, 104 MICH. L. REV. 837, 839–40 (2006) (noting that most consumers “have ample rational reasons for not reading” the terms of a contract in addition to cognitive deterrence factors); Robert A. Hillman, *Rolling Contracts*, 71 FORDHAM L. REV. 743, 747 n.18 (2002) (stating the results of a survey he performed indicate that “[o]nly 24 out of 100 respondents (24%) indicated that they read the terms of rolling contracts.”); *see also* Warren Mueller, *Residential Tenants and Their Leases: An Empirical Study*, 69 MICH. L. REV. 247, 256 n.32 (1970) (providing results from a University of Michigan study which showed that 43% of respondents said they hadn’t read their leases thoroughly, with a notable drop from the renter’s first and subsequent leases); John E. Murray, Jr., *The Standardized Agreement Phenomena in the Restatement (Second) of Contracts*, 67 CORNELL L. REV. 735, 778–79, 778 n.207 (1982) (discussing the no-reading problem in the context of purchasing agents); Alan Schwartz & Louis L. Wilde, *Imperfect Information in Markets for Contract Terms: The Examples of Warranties and Security Interests*, 69 VA. L. REV. 1387, 1389 (1983) (stating imperfect information effecting contract terms arise in three ways; one of which is not reading the contract’s terms and conditions); Shmuel I. Becher, *Asymmetric Information in Consumer Contracts: The Challenge That Is Yet to Be Met*, 45 AM. BUS. L. J. 723, 724 (2008) (noting the typical consumer’s inability to read or negotiate standard-form contracts and the effects that has on the “assumption of informed consent as a prerequisite for contract formation.”).

ToU and privacy policies when joining social-networking services.¹¹⁶ Research results indicate that most participants viewed the ToU as a nuisance, ignoring them to pursue the ends of joining the fictitious social-networking service.¹¹⁷ Participants missed important *gotcha clauses*—clauses deliberately implemented by the researchers—including one stating that the platform will be sharing data with the NSA and with employers, and another clause stating that users agree to provide their first-born child as payment for social-network access.¹¹⁸

Becher and Zarsky claimed that most of the consumers read the ToU only after the fact, when something went wrong or when the vendor's actions did not meet the user's expectations.¹¹⁹ Likewise, Ben-Shahar and Schneider reported that in PCpitstop's experiment, the software developer added a clause to the end-user license agreement, offering \$1,000 to the users; the only requirement for receiving the money was for the consumer to ask for it.¹²⁰ After four months and 3,000 downloads, someone finally contacted the company to ask for the money.¹²¹

These examples demonstrate that the majority of individuals do not read standard-form contracts. Such behavior could leave them open to exploitation.¹²²

Nevertheless, some scholars argue that for the most part, not reading websites' ToU or other standard online contract terms is perfectly rational

116. Jonathan A. Obar & Anne Oeldorf-Hirsch, *The Biggest Lie on the Internet: Ignoring the Privacy Policies and Terms of Service Policies of Social Networking Services*, in TPRC 44: THE 44TH RSCH. CONF. ON COMM'N, INFO. & INTERNET POL'Y 2, 6, 9 (2016).

117. *See id.* at 2 (“97% to PP and 93% to TOS, with decliners reading PP 30 seconds longer and TOS 90 seconds longer. A regression analysis identifies information overload as a significant negative predictor of reading TOS upon signup, when TOS changes, and when PP changes.”).

118. *Id.*

119. Shmuel I. Becher & Tal Z. Zarsky, *E-Contract Doctrine 2.0: Standard Form Contracting in the Age of Online User Participation*, 14 MICH. TELECOMM. TECH. L. REV. 303, 315–16 (2008). Moreover, they emphasized that despite the fact that reviewing the standard contract *ex-post* is in contrast to the basic concept of contract law—that “identify the moment of contract formation as the crucial juncture at which the parties establish their respective rights and obligations” and the terms will not be changed between the parties. *Id.*

120. Ben-Shahar & Schneider, *supra* note 8, at 671; *see also*, Mark Lemley, *Terms of Use*, 91 MINN. L. REV. 459, 463 n.10 (2006) (discussing the case of PC Pitstop).

121. Ben-Shahar & Schneider, *supra* note 8, at 671.

122. *See, e.g.*, Meirav Furth-Matzkin & Roseanna Sommers, *Consumer Psychology and the Problem of Fine-Print Fraud*, 72 STAN. L. REV. 503, 504, 512 (2020) (explaining how consumers unwittingly enter contracts that fail to benefit them—and in some instances—make them worse off); Russell Korobkin, *The Borat Problem in Negotiation: Fraud, Assent, and the Behavioral Law and Economics of Standard Form Contracts*, 101 CALIF. L. REV. 51, 57 (2013) (discussing contract clauses that “create inconsistencies between the signed writing and alleged prior representations” between the two parties).

behavior.¹²³ That is because individuals are weighing the costs and benefits of reading before deciding whether or not to invest the time in reading the text. Rational users will not read the provisions of the contract when the expected benefits are lower than the perceived costs.¹²⁴

This argument fits well with the common notion of the individual as a rational actor making choices to maximize her preferences.¹²⁵ However, insights from behavioral law and economics suggest that this assumption does not fully correspond to observations made in everyday scenarios.¹²⁶ Meaning that, often, people do not behave as rational actors and do not make rational choices designed to maximize their preferences. Moreover, evidence suggests that readership remains low even in situations where the potential risk is high.¹²⁷

Some jurisdictions require online platforms and websites to make their privacy statement readily accessible to the public.¹²⁸ For example, the

123. See generally Avery Katz, *Your Terms or Mine? The Duty to Read the Fine Print in Contracts*, 21 RAND J. ECON. 518, 520 (1990) (“This is individually rational, since the cost of reading and considering each term is high, and many of the terms deal with improbable contingencies. Few consumers attempt to read all the terms of their leases, insurance policies, or automobile loan contracts, for instance, although they may occasionally make a show of doing so in order not to appear unsophisticated.”).

124. Lucian A. Bebchuk & Richard A. Posner, *One-Sided Contracts in Competitive Consumer Markets*, 104 MICH. L. REV. 827, 832 (2006).

125. Sam Hickey, *The Politics of Social Protection: What Do We Get from a ‘Social Contract’ Approach?*, 32 CANADIAN J. DEVELOP. STUD. /REVUE CANADIENNE D’ÉTUDES DU DÉVELOPPEMENT 426, 429–31 (2011); Stephen Bainbridge, *The Board of Directors as Nexus of Contracts*, 88 IOWA L. REV. 1, 3 n.1 (2002) (citing Roy Radner, *Bounded Rationality, Indeterminacy, and the Theory of the Firm*, 106 ECON. J. 1360, 1362–68 (1996)) (“According to the theory of bounded rationality, economic actors seek to maximize their expected utility, but the limitations of human cognition often result in decisions that fail to maximize utility. Decisionmakers inherently have limited memories, computational skills, and other mental tools, which in turn limit their ability to gather and process information.”).

126. See Bainbridge, *supra* note 125; Hickey, *supra* note 125.

127. Omri Ben-Shahar & Adam Chilton, *Simplification of Privacy Disclosures: An Experimental Test*, 45 J. L. STUD. 41, 42, 53 (2016) (noting that respondents in an empirical study consistently spent far less time on disclosure screens than what would be expected to read the entire disclosure); Ben-Shahar & Schneider, *supra* note 8, at 671, 711; cf. W. David Slawson, *Standard Form Contracts and Democratic Control of Lawmaking Power*, 84 HARV. L. REV. 529, 529–32, 540–44 (1971) (arguing consumers cannot reasonably read, understand, and consent to contract terms because companies use their disproportionate bargaining power to leverage consumers and intentionally diminish the quality of its contracts).

128. For instance, privacy policy agreements are mandatory when collecting data that can be used to identify an individual. See, e.g., Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (General Data Protection Regulation); The California Online Privacy Protection Act 2003, CAL. BUS. & PROF. CODE §§ 22575–22579 (West 2008). For further discussion see Mike Hintze, *In Defense of the Long Privacy Statement*, 76 MD. L. REV. 1044, 1046–48 (2017).

Children's Online Privacy Protection Act (COPPA) requires every platform or website directed at children under the age of thirteen, or that knowingly collects personal information from such children, to post a privacy statement.¹²⁹

The underlying assumption is that people are better situated to make decisions serving their best interests when they are well informed.¹³⁰ Indeed, in this context, one can argue that a person is more likely to be able to decide whether a certain platform or app serves the person's interest if she is aware of the platform's ToU or community guidelines. Nevertheless, the mere existence or accessibility of these documents (i.e., information) is not necessarily a panacea.

One of the costs of the growth in online activities is the proliferation of ToU, privacy policies, and other online standard form contracts.¹³¹ Indeed, one cannot join a social network, make an online purchase, attend an online course, or participate in many other activities without "agreeing" to abide by all of them.¹³² It is hard to imagine what the future holds if the current course is maintained. The rapid growth of the Internet of Things could plausibly mean that soon it may be impossible for users to avoid being bound by multiple ToUs and online standard-form contracts.¹³³

Usually, the no-reading problem is discussed as a single component. However, users have difficulty in understanding and grasping the meaning of the contract provisions and their practical consequences for the following reasons: (1) document length; (2) legal literacy; (3) lack of background knowledge; and (4) information overload. These elements can occasionally converge but represent different aspects of the no-reading problem. Thus, to understand the problem in-depth, in the next Subparts of this Article we will carefully examine all four elements.

129. Children's Online Privacy Protection Act of 1998, 15 U.S.C. §§ 6501, 6502.

130. Ben-Shahar & Schneider, *supra* note 8, at 650, 681.

131. Lemley, *supra* note 120, at 463.

132. *Id.*; see e.g., *Amazon Services Terms of Use*, AMAZON, <https://www.amazon.com/gp/help/customer/display.html?nodeId=202140280>

(last updated Sept. 4, 2019); *Amazon.com Privacy Notice*, AMAZON,

<https://www.amazon.com/gp/help/customer/display.html?nodeId=GX7NJQ4ZB8MHFRNJ> (last updated Feb. 12, 2021); *Condition of Use*, AMAZON,

<https://www.amazon.com/gp/help/customer/display.html/?nodeId=508088> (last updated May 21, 2018).

133. Joshua A.T. Fairfield, *Mixed Reality: How the Laws of Virtual Worlds Govern Everyday Life*, 27 BERKELEY TECH. L. J. 55, 96 (2012).

1. Document Length

To illustrate, take John, who is eager to interact with his friends and thus decides to join a new social-media network. When registering and creating a new user account, John must agree to the network's ToU, privacy policy, and community guidelines. Unlike many users, he actually opens the links to these documents. He cares about his privacy and wants to ensure that he abides by the platform's terms of service. He then sees pages and pages of dense prose littered with subparagraphs and numbered lists. He estimates that a careful study of these documents would take a long time. Seeing that, it takes roughly about 23.6 minutes to read Twitter's terms of service, 31.4 minutes to read TikTok's and well over an hour to read Microsoft's service agreement,¹³⁴ John concludes, arguably in a rational manner, the cost in terms of time outweighs the benefit of reading these documents—particularly since he cannot change a single word in the agreements. The vast majority of internet users reach the same conclusion, hitting “I Agree” rather than even glancing at these lengthy agreements. It is plausible for platforms to take advantage of users' failure to read by incorporating unfair or overly one-sided contract clauses, which ought to be a cause for concern.

2. Literacy

Numerous researchers have found that many adults lack the legal or financial literacy necessary to comprehend information presented to them in a complex contract.¹³⁵ This problem is worse when the gist of the material

134. McDonald & Cranor, *supra* note 111, at 549; *see also* LePan, *supra* note 111 (providing a visual comparison of several commonly used websites and apps); TWISTED SIFTER, *Print of ToUs for Popular Apps*, *supra* note 111 (explaining the average ToU contains 11,972 words and takes about 60 minutes to read).

135. *See* Michael I. Meyerson, *The Efficient Consumer Form Contract: Law and Economics Meets the Real World*, 24 GA. L. REV. 583, 598–99 (1990) (claiming the cost ordinary consumers pay to understand legal terms outweighs the benefit of being informed); Jacob Hale Russell, *The Separation of Intelligence and Control: Retirement Savings and the Limits of Soft Paternalism*, 6 WM. & MARY BUS. L. REV. 35, 59 (2015) (“Financial literacy is especially low among young people and among minority populations.”); Alan M. White & Cathy Lesser Mansfield, *Literacy and Contract*, 13 STAN. L. & POL’Y REV. 233, 234 (2002) (“New research measuring the literacy of the U.S. population demonstrates that even consumers who might take the time and trouble to ‘read’ contemporary consumer contract documents are unlikely to understand them.”); Ben-Shahar & Schneider, *supra* note 8, at 711 (defining illiteracy as: “(1) not knowing what word a combination of letters represents, (2) not knowing what a word means, (3) not knowing what words combined in a sentence mean, or (4) not knowing how to extract information from a combination of sentences.”).

is conveyed in technical jargon or with a high level of complexity.¹³⁶ To illustrate, consider recent studies showing that “[m]any patients misunderstand common clinical terms like *acute*, *stable*, and *progressive*.”¹³⁷ Another example is the requirement of restaurateurs to display detailed facts concerning food content; these displays confused and frustrated many consumers who were unable to fully grasp the implication of such labeling.¹³⁸ Thus, it might not be surprising that users encountering lengthy ToU or community guidelines are struggling to make sense of them.

3. Lack of Legal Background

Another impediment to understanding ToU is the lack of background knowledge that gives context to the information.¹³⁹ For instance, studies of employment contracts found that most employees lack the background needed to understand their legal rights.¹⁴⁰ As a consequence, they misjudge

136. Ben-Shahar & Schneider, *supra* note 8, at 712; *see also* Claire A. Hill, *Why Contracts Are Written in “Legalese”*, 77 CHI. KENT L. REV. 59, 63 (2001) (explaining that contracts tend to be so linguistically complex because of the drafting process employed by law firms that advise businesses).

137. Ben-Shahar & Schneider, *supra* note 8, at 711 (citing Michele Heisler, *Helping Your Patients with Chronic Disease: Effective Physician Approaches to Support Self-Management*, 8 SEMINARS MED. PRAC. 43, 49 (2005)) (emphasis added) (quotation marks omitted).

138. Rebecca A. Krukowski et al., *Consumers May Not Use or Understand Calorie Labeling in Restaurants*, 106 J. AM. DIETETIC ASS’N 917, 917–18 (2006); *cf.* Patrick Meyer, *The Crazy Maze of Food Labeling and Food Claims Laws*, 92 ST. JOHN’S L. REV. 233, 256–57 (2018). For a discussion of literacy and other comprehensive barriers to healthcare information, *see* William M. Sage, *Regulating Through Information: Disclosure Laws and American Health Care*, 99 COLUM. L. REV. 1701, 1728 (1999). *See also* Ben-Shahar & Schneider, *supra* note 8, at 712–14, where Ben-Shahar and Schneider point out similar results in studies focusing on mandatory disclosures in areas such as Miranda rights, home lending, and privacy of medical information.

139. Ben-Shahar & Schneider, *supra* note 8, at 717; *see also* Charlotte Villiers, *Disclosure Obligations in Company Law: Bringing Communication Theory into the Fold*, 1 J. CORP. L. STUD. 181, 195–96 (2001) (describing the impact of background knowledge on a person’s ability to comprehend new information).

140. *See* Estlund, *Employee Rights*, *supra* note 110, at 8, 26 (calling for “more than a one-sentence unilateral disclaimer by the employer in order to return to employment at will,” in addition to a more-informed waiver by the employee); Cynthia L. Estlund, *Just the Facts: The Case for Workplace Transparency*, 63 STAN. L. REV. 351, 363–69 (2011); (discussing the elements of mandatory disclosure regimes in the workplace); J. H. Verkerke, *supra* note 110, at 938 (explaining the common assumption that a targeted audience will understand the information conveyed, including in the setting of employment contracts); *see also* Eileen Silverstein, *From Statute to Contract: The Law of The Employment Relationship Reconsidered*, 18 HOFSTRA LAB. & EMP. L. J. 479, 504–11 (2001) (“[I]t appears that the law will find a prospective waiver voluntary if individual employees or applicants had constructive notice of the waiver. This applies even if they did not have the incentive or background knowledge to understand the real world consequences of the waiver and regardless of whether they were unable to negotiate adjustments to employers’ take-it-or-leave-it offers.”).

their legal protections against termination to such a degree that they are unable to determine the actual bearing of the terms and conditions of the employment contract on their interests.¹⁴¹ Likewise, Omri Ben-Shahar and Carl Schneider have examined eBay's user agreement. The contract is drafted in lay language and some provisions are relatively comprehensible (e.g., fees and taxes).¹⁴² Nevertheless, other parts are confusing. For instance, § 9 of eBay's user agreement, titled *Content*, requires specialized knowledge of terms such as: *content, non-exclusive, perpetual, irrevocable, royalty-free, sub-licensable, copyright, publicity, rights, and media*.¹⁴³ Most eBay users lack the background knowledge necessary to understand these terms in this particular context.¹⁴⁴

Websites' ToU or community guidelines often require familiarity with terms related to *copyright protection, privacy, or hate speech*—a familiarity most laypeople do not hold. In fact, the literature addressing readability and comprehensibility suggests that one of the most important factors affecting an individual's comprehension and ability to take in new information is the knowledge the individual already has.¹⁴⁵ These findings confirm that standard contracts used by online platforms, social-media networks, and other websites are often too complex for the average user to understand.

4. Information Overload

Last, but not least, we must note that lengthy information can cause confusion and frustration on account of the difficulty involved in processing large quantities of information.¹⁴⁶ When too much information competes for one's attention, one is forced to choose which portion or aspect to focus

141. Pauline T. Kim, *Bargaining with Imperfect Information: A Study of Worker Perceptions of Legal Protection in an At-Will Worlds*, 83 CORNELL L. REV. 105, 112 (1997).

142. Your User Agreement, EBAY, http://pages.ebay.com/help/policies/user-agreement.html?_trksid=m40 (last visited May 5, 2021).

143. *Id.*; Ben-Shahar & Schneider, *supra* note 8, at 714 (“When you give us content, you grant us a non-exclusive, worldwide, perpetual, irrevocable, royalty-free, sublicensable (through multiple tiers) right to exercise any and all copyright, trademark, publicity, and database rights (but no other rights) you have in the content, in any media known now or in the future.”).

144. Ben-Shahar & Schneider, *supra* note 8, at 714; *see also* Victoria C. Plaut & Robert P. Bartlett, III, *Blind Consent? A Social Psychological Investigation of Non-Readership of Click-Through Agreements*, 36 L. & HUM. BEHAV. 293, 297 (2012).

145. Peter Dewitz, *Reading Law Three Suggestions for Legal Education*, 27 U. TOL. L. REV. 657, 657–58 (1996) (discussing reading comprehension problems affecting beginning students of law); *see also* Bernard Black, *Note, A Model Plain Language Law* 33 STAN. L. REV. 255, 258 (1981).

146. Human limitations of information processing are often referred to as information overload. Ben-Shahar & Schneider, *supra* note 8, at 687–90 (discussing both the overload effect and accumulation problem).

on.¹⁴⁷ In addition to increasing information processing costs, excess information may divert the attention of actors away from relevant information and towards irrelevant information, thereby leading to bad choices.¹⁴⁸ Furthermore, individuals often focus on what they consider salient bits of information, while ignoring all others.¹⁴⁹ This, too, suggests that long, complex ToU and community guidelines can sometimes deter people instead of informing them.

B. *The Failure of Current Solutions*

Throughout the years, academics and policymakers have suggested a number of strategies to tackle the no-reading problem. These strategies all have their advantages but, in our opinion, cannot completely mitigate the no-reading problem on their own or ensure a change in users' behavior in the digital environment.

1. Shorter and Simplified Contract

The typical response to the no-reading problem is to present the information in a shorter, simpler way.¹⁵⁰ As stated by Omri Ben-Shahar and

147. This is sometimes referred to as the "information overload" problem. See, e.g., Troy A. Paredes, *Blinded by the Light Information Overload and Its Consequences for Securities Regulation*, 81 WASH. U. L. Q. 417, 419 (2003) (explaining that when faced with tasks involving great quantities of information, people adopt strategies to use less cognitive effort); Herbert A. Simon, *Rational Decision Making in Business Organizations*, 69 AM. ECON. REV. 493, 507 (1979) (arguing that people often reach decisions based on a "search of only a tiny part of the total" available information).

148. See, e.g., Erik F. Gerding, *Disclosure 2.0: Can Technology Solve Overload, Complexity, and Other Information Failures?*, 90 TUL. L. REV. 1143, 1149–51 (2016) (explaining the argument that mandatory securities disclosure has overwhelmed investors with information and in turn has weakened their investment choices); Ben-Shahar & Schneider, *supra* note 8, at 721 (citing a study involving predicting horse races which showed that the "reliability of decisions" decreased as users were given more information to consider); see also Yaniv Hanoch & Thomas Rice, *Can Limiting Choice Increase Social Welfare? The Elderly and Health Insurance*, 84 MILBANK Q. 37, 39–41 (2006) (arguing elderly individuals are more susceptible to information overload because of declining cognitive functions).

149. Oren Bar-Gill & Rebecca Stone, *Mobile Misperceptions*, 23 HARV. J. L. & TECH. 49, 53 (2009); Lauren E. Willis, *Decision Making and the Limits of Disclosure: The Problem of Predatory Lending*, 65 MD. L. REV. 707, 780–81 (2006). See Xavier Gabaix & David Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q. J. ECON. 505, 506–09 (2006) (providing examples of how the market profits off of uneducated consumers due to their errors of judgment on which information is important); Adi Ayal, *Coming Full Circle: Will 'New Economics' Require Old Solutions in Cellular Market Regulation?* 26–27 (Bar Ilan Univ. Pub Law Working Paper No. 17-09, 2009), <https://ssrn.com/abstract=1503503>.

150. Florencia Marotta-Wurgler, *Will Increased Disclosure Help? Evaluating the Recommendations of the ALI's "Principles of the Law of Software Contracts,"* 78 U. CHI. L. REV. 165, 169 (2011); see Michael S. Wogalter et al., *On the Adequacy of Legal Documents: Factors That*

Adam Chilton “[i]f a disclosure is too long, shorten it. If it is too technical, make it more user friendly. If it is poorly presented, improve the formatting.”¹⁵¹

In other words, the solution to the no-reading problem seems plain: drafting parties should be required to use plain language and keep technical jargon to a minimum.¹⁵² Presumably, this approach remedies some of the reader’s disadvantages. However, sometimes even making the text simpler will not solve the problem, mainly because, as stated earlier, people do not read online contracts such as ToU and community guidelines. Alternatively, shorter and oversimplified versions could deprive the users of important bits of information. Thus, preventing them from truly informing themselves.

2. Standardization of Contract Terms

Another approach that could help mitigate some of the issues that stem from the no-reading problem is standardization in contracting. One way to achieve standardization is to require all major platforms to use identical language.

Open-source licensing or Creative Commons licenses (CC) are a good example for the standardization of contracts and the use of unified forms. The Creative Commons organization was founded in 2001¹⁵³ as a nonprofit organization dedicated to building a globally accessible public commons of knowledge and culture.¹⁵⁴ The organization offers six “simple, and standardized” variations of copyright licenses free of charge and open to use.¹⁵⁵

Influence Informed Consent, 42 *ERGONOMICS* 593, 609, 611 (1999) (analyzing studies of healthy subjects’ understanding of consent documents).

151. Ben-Shahar & Chilton, *supra* note 127, at 42.

152. Michael E. J. Masson & Mary Ann Waldron, *Comprehension of Legal Contracts by Non-Experts: Effectiveness of Plain Language Redrafting*, 8 *APPLIED COGNITIVE PSYCHOL.* 67, 67–79 (1994) (discussing empirical evidence regarding the effectiveness of three kinds of simplifications of standard legal contracts that were implemented in an attempt to increase comprehension among naïve readers). The authors found that although simplified words and sentences enhance comprehension, non-experts still have difficulty understanding complex legal concepts. *Id.* This is particularly true when such concepts conflict with their background knowledge. *Id.*

153. Niva Elkin-Koren *What Contracts Cannot Do: The Limits of Private Ordering in Facilitating a Creative Commons*, 74 *FORDHAM L. REV.* 375, 378 (2005).

154. *What We Do*, CREATIVE COMMONS, <https://creativecommons.org/about/> (last visited May 5, 2021).

155. *Id.*; *About CC Licenses*, CREATIVE COMMONS, <https://creativecommons.org/about/cclicenses/> (last visited May 5, 2021).

The CC licenses are written in legal language, but their content is consistent and meant to assure certainty as to the standard terms and conditions that CC licenses offer.¹⁵⁶ Rather than having to read the license agreement each and every time, users need only to make themselves acquainted with the terms of the contract once. Later on, users can rely on their prior knowledge and one of the five icons CC uses to denote the different license types: BY, SA, ND, NC, and Zero.¹⁵⁷ Supposedly, this standardization of contract terms cannot only simplify the licensing process, but also contribute to users' understanding of the terms and conditions of the license.

In fact, in accordance with Creative Commons' license-modification policy, if one makes a change to the text of any CC license, he or she may no longer refer to it as a Creative Commons or CC license. Consequently, that person cannot use any of the Creative Commons trademarks.¹⁵⁸

In addition to the standardized format, the Creative Commons website offers users a very short explanation in reference to the six different license types.¹⁵⁹ These explanations present users with a simplified version of the legal text, and presumptively, can help users understand what they can do with a specific work in plain language.

The allure of the Creative Commons method lies in its ability to provide clarity and consistency as well as to reduce words into symbols.¹⁶⁰ It is not, however, able to overcome the issues discussed earlier. Particularly, the issue of individuals' reluctance to read, for example, the initial copy of the standardized contract. Or, the over-simplicity of the short

156. See *Modifying the CC Licenses*, CREATIVE COMMONS, https://wiki.creativecommons.org/wiki/Modifying_the_CC_licenses (last updated Apr. 17, 2015) (explaining the CC policy of applying the same standard terms and conditions to each licensing contract to reduce conflicts).

157. In the past, CC licenses were not completely unified because every country adapted the licenses to its own legal system. However, when version 4.0 of CC licenses was released in 2013, the organization decided to have just one international version. *Frequently Asked Questions*, CREATIVE COMMONS, <https://creativecommons.org/faq/#general-license-information> (last visited May 5, 2021).

158. See *Modifying the CC Licenses*, CC WIKI, https://wiki.creativecommons.org/wiki/Modifying_the_CC_licenses (last updated Apr. 17, 2015) (explaining that adjusting license text interferes with CC's main goal of conveying uniform licensing agreements, and it therefore prohibited).

159. The types of CC licenses are listed from the most to the least permissive and alongside their corresponding icon. *About CC Licenses*, CREATIVE COMMONS, <https://creativecommons.org/about/licenses/> (last visited May 5, 2021).

160. See also Elkin-Koren, *Governing Access*, *supra* note 109, at 376–79 (explaining Creative Commons' use of terms to classify different licensing options for users and make it easier to decipher which materials are licensed for use).

explanation, which could potentially be used to withhold important information from the users.

Moreover, if a regulator were to demand the standardization of legal documents, it might undermine the basic principles of fair competition and freedom of contract. Therefore, this solution, as appealing as it may be, cannot be the solution to the no-reading problem.

3. Highlighting Certain Terms

A third strategy to deal with the complexity and amount of information, is to require the drafter of the contract to focus on what really matters.¹⁶¹ That is, to disclose or emphasize only some terms and conditions to reduce the *noise* and the amount of information the reader must evaluate. By doing so, the legislature is decreasing the amount of information the individual needs to read and understand, while signaling what bits of information the reader should focus on. For instance, Ayres & Schwartz suggested legislatures require commercial entities to disclose unexpected terms in a standardized *warning box* with an FTC-provided standardized border.¹⁶² This solution combines the advantages of standardized contract terms with the idea of highlighting certain contract's terms. Due to the standardized form of the warning boxes, users will arguably be able to quickly learn what these warning boxes are all about.¹⁶³ In addition, it will accentuate certain terms and conditions.

This solution, although having several advantages in comparison to the solutions discussed previously is quite limited. First, it can only be implemented with regards to a few contractual terms. Second, one size does not fit all. Different people are likely to have varying preferences. Consequently, each person will perceive different bits of information as important. When the legislature or a commercial company is forced to decide what are the most important bits of information, they could effectively be blocking users from informing themselves about the most relevant bits of information for them. Lastly, although Ayres and Schwartz

161. Villiers, *supra* note 139, at 198–99; *see also* Ariel Porat & Lior Jacob Strahilevitz, *Personalizing Default Rules and Disclosure with Big Data*, 112 MICH. L. REV. 1417, 1434 (2014) (arguing for personalized default rules to mitigate information overload); Anne-Lise Sibony & Geneviève Helleringer, *EU Consumer Protection and Behavioral Sciences: Revolution or Reform?*, in NUDGE AND THE LAW: A EUROPEAN PERSPECTIVE 209, 224–26 (Alberto Alemanno & Anne-Lise Sibony eds., 2015) (arguing that the EU should narrow down the information provided in disclosures to only that which is necessary to each individual).

162. Ayres & Schwartz, *supra* note 8, at 553.

163. *Id.*

argue that these warning boxes could “efficiently correct the most serious forms of consumer optimism,”¹⁶⁴ it is questionable whether this strategy can promote an actual behavioral change. In fact, in 2016, Omri Ben-Shahar and Adam Chilton showed that none of the techniques of simplifying information disclosure (e.g., best practices or warnings boxes) changed the respondents’ comprehension of the disclosure, willingness to disclose information, or expectations with regards to their privacy rights.¹⁶⁵ In addition, their results indicated that although warning boxes made respondents spend more time reviewing the warning labels, they had no meaningful effects on respondents’ behavior.¹⁶⁶ In fact, respondents proceeded to behave similarly to the respondents who were presented with other forms of disclosures.¹⁶⁷

4. Use of Algorithms

The advancements of new technologies and the large volume of data available online allow for an additional embodiment of the previous solution. Especially, the use of an algorithm or artificial intelligence to review, highlight, and flag unacceptable or other terms and conditions that should be read carefully in a particular document.¹⁶⁸ With further advances in technology, it is highly plausible that AI-based contract-terms flagging systems will become more sophisticated and, therefore, more widely implemented.

The use of algorithms can decrease the information-overload problem by just giving users highlights of the main problematic clauses. It can also overcome—to a certain extent—the individual-preferences problem. However, algorithmic flagging systems alone cannot solve the literacy and

164. *Id.* at 605.

165. Ben-Shahar & Chilton, *supra* note 129, at 43–44.

166. *Id.* at 44.

167. *Id.* at 44.

168. *See, e.g., Automate Your Contract Review*, LAWGEEX, <https://www.lawgeex.com> (last visited May 5, 2021). Lawgeex is a private company that offers the comparison service regularly for a certain fee. The company offers services for rental agreements, workplace agreements, term sheets, loan agreements, and software licenses. *See also* LEGAL ROBOT, <https://legalrobot.com/> (last visited May 5, 2021) (providing contract analysis, translation services for unwieldy legal texts, and checks for compliance, using artificial intelligence); CRUXIQ, <https://www.f6s.com/surukamalyticsprivatelimited> (last visited May 5, 2021) (developing a legal-tech startup in the area of contract law that will use artificial intelligence to serve people); LEGALSIFTER, <https://www.legalsifter.com/> (last visited May 5, 2021) (providing legal analysis and assistance for contracts using artificial intelligence).

the lack of legal-background problems. Perhaps, a combination of the algorithmic solution and gamification will be able to reduce these problems.

5. Mandatory and Tailored Disclosures

Mandated disclosures are one of the most common regulatory tools used worldwide—particularly in consumer law and privacy law.¹⁶⁹ In principle, this could curtail the problem of information overload. But, in practice, it remains unclear whether this strategy alone is sufficient to overcome people's tendency to avoid reading an online contract or inability to understand the major provisions.

Finally, implementing mandatory disclosures will not necessarily shorten the length of these documents. The most important bits of information could still be buried anywhere in a long and complicated document.¹⁷⁰ As a result, a user could easily overlook what is important. Therefore, several scholars have called for abandoning the whole idea of mandatory disclosures.¹⁷¹ Others have suggested focusing not only on making the principal terms more salient, but also on considering the individual consumer's informational needs, which may increase the disclosure's effectiveness.¹⁷²

As stated previously, human information-processing capacity is limited.¹⁷³ From this perspective, tailoring disclosure to a specific individual characteristic could improve the readability and comprehensibility of information. Moreover, a tailored disclosure could

169. Ben-Shahar & Chilton, *supra* note 127, at 41 (“Mandated disclosure is the most commonly used regulatory device in privacy protection.”).

170. *See id.* at 45 (noting that presenting simplified disclosures did not affect participants' behavior when reading the disclosures, as compared to standard disclosures).

171. *See* Ricardo Pazos, *Mandated Disclosures in the Information Age and the Information Overload Problem*, in SECURITY AS THE PURPOSE OF LAW. CONFERENCE PAPERS, VILNIUS U. 168, 173–74 (2015), <https://ssrn.com/abstract=2605449> (explaining that mandatory disclosures can provide too much information which can overload the reader; therefore, it would be better to limit and/or abandon mandatory disclosures, in place of another model).

172. *See* Porat & Strahilevitz, *supra* note 161, at 1452 (suggesting that soliciting personal information from individuals could lead to tailored default rules); *see also* Gil Seigal et al., *Personalized Disclosure by Information-on-Demand: Attending to Patients' Needs in the Informed Consent Process*, 40 J. L. MED. & ETHICS 359, 360 (2012) (arguing that disclosing information to patients can be more effective if it has been tailored to the patient's very specific circumstances, rather than being general advice).

173. *See* Christoph Busch, *Implementing Personalized Law: Personalized Disclosures in Consumer Law and Data Privacy Law*, 86 U. CHI. L. REV. 309, 314 (2019) (stating that the full complexity and optimal network of legal rules are held back by limitations in human processing).

plausibly reduce the risk of information overload,¹⁷⁴ particularly in this era of mass digitization and Big Data.¹⁷⁵ For instance, in their seminal paper, Ariel Porat and Lior Jacob Strahilevitz showed how companies could disclose information to consumers that is tailored to the consumer's individual preferences and choices, thereby improving the efficacy of disclosure in various scenarios, including the health sector.¹⁷⁶ Further, Porat and Strahilevitz stressed that, nowadays, companies can easily decide what particular disclosures consumers see.¹⁷⁷ Showing only disclosures that are relevant to the consumer would improve their efficacy.¹⁷⁸ To illustrate this last point, Porat and Strahilevitz note that male consumers purchasing prescription medication online are generally shown warnings about the effect that medication may have on pregnant women;¹⁷⁹ for the most part, this warning is irrelevant to this specific consumer. Moreover, this warning—when combined with other irrelevant notices and warnings—contributes to the lengthening of disclosures, subsequently increasing the chances that consumers will ignore or fail to read the warnings most relevant for them.¹⁸⁰ To overcome these adverse consequences of generalized—but irrelevant—disclosures, Porat and Strahilevitz advance the idea of personalized disclosure. They argue such a strategy could “reduce the time that is wasted when people have to see irrelevant disclosures and reduce the frequency with which people fail to notice a key disclosure that is buried amid many irrelevant disclosures.”¹⁸¹

Indeed, personalized disclosure could make certain bits of information more salient, not based on some predetermined notion of what the most important provisions are, but rather on the consumer's past behavior.¹⁸² This could incentivize the consumer to inform herself, and thereby improve her familiarity with the terms of the contract she enters.¹⁸³

Social-media networks and mobile-app developers could easily implement the idea of personalized disclosure in the area of ToU. Building

174. See Porat & Strahilevitz, *supra* note 161, at 1472 (explaining that personalized disclosures could help mitigate information overload).

175. *Id.*

176. See *id.* at 1444 (applying personalized disclosure theory to medical malpractice, and how physicians could tailor medical disclosures to their patients).

177. *Id.* at 1472.

178. *Id.*

179. *Id.* at 1471.

180. *Id.* at 1471–72.

181. *Id.* at 1472.

182. Philipp Hacker, *Personalizing EU Private Law: From Disclosures to Nudges and Mandates*, 25 EUR. REV. PRIV. L. 651, 655–56, 670 (2017); Busch, *supra* note 173, at 316.

183. Busch, *supra* note 173, at 314–15.

on the notion of personalized disclosure as a means to advance an individual's readership and understanding, we suggest that harnessing the advantages of games could help raise people's awareness and understanding of the conditions they signed almost daily without reading. This will be further elaborated below.

It is important to notice that, in contrast to our model—which emphasizes an individual's engagement with the information and content, as well as dynamicity in order to continuously improve the relevance of the information provided to users—Porat and Strahilevitz's model is based on the idea of segmenting the population into different types.¹⁸⁴ They suggest adopting personalized default rules and disclosures based on five essential personality characteristics—extraversion, agreeableness, conscientiousness, neuroticism or emotional stability, and openness to experience.¹⁸⁵ Under this model, a subset of the population—*guinea pigs* according to the writers—is presented with a large quantity of information pertaining to the contract's terms, and they are required to evaluate the desirability of such terms.¹⁸⁶ Later, the choices and preferences of these guinea pigs are used to form a personalized disclosure for a larger group of *similarly situated* people.¹⁸⁷

III. GAMIFICATION AS A SOLUTION TO THE NO-READING PROBLEM

Previous Parts emphasized individuals' reluctance to read long and complex legal documents as well as the difficulties they encounter when attempting to understand these documents and their practical consequences. This Part accentuates another feature of human behavior seldom discussed in the area of standard contracts and online ToU: that is, human fascination and connection with playful activities (i.e., games).

The idea of using a game to educate adults and inform them about otherwise bland information has been around for a few years now. As stated earlier, numerous studies have emphasized the advantages of an online game as an educational tool.¹⁸⁸ More recently, University of Cambridge researchers conducted a study that showed exposing people to a weak dose of methods normally used to create and spread misinformation and *fake*

184. Porat & Strahilevitz, *supra* note 161, at 1434.

185. *Id.* at 1436–37.

186. *Id.* at 1450.

187. *Id.* at 1460.

188. *See e.g.*, *supra* notes 6, 9, 32, 62 and accompanying text.

news through games could help them better identify instances of real-world misinformation.¹⁸⁹

In this Article, we argue this is not the only way platforms can utilize the power of games to better inform users and influence their online behavior. We are of the view that, if platforms and websites were to gamify reading tasks by offering users some non-monetary rewards for completing a task (e.g., badges, points, and feedback) or answering a series of questions pertaining to the terms of the contract, this might help make the task less tedious, and thus, mitigate the no-reading problem. In other words, exposing a user to game elements could, in fact, help communicate to the user the gist of ToU or community guidelines. These elements could serve as an interactive, fun, and tailored way to convey information to users, and thus benefiting users, platforms, and society as a whole.

Some scholars have already begun exploring the possibility of implementing some game-like elements in online scenarios involving legal documents.¹⁹⁰ They, however, have yet to fully and profoundly discuss the potential benefits (and drawbacks) of gamification in the context of the no-reading problem.

189. *Fake News ‘Vaccine’ Works: ‘Pre-bunk’ Game Reduces Susceptibility to Disinformation*, UNIV. OF CAMBRIDGE (June 25, 2019), <https://www.cam.ac.uk/research/news/fake-news-vaccine-works-pre-bunk-game-reduces-susceptibility-to-disinformation>.

190. See Haapio et al., *supra* note 66, at 447–48. For instance, Haapio et. al. suggested in 2018 that gamification should be one of the patterns that must be included in the design patterns. They have tested some promising leads in the field of privacy policy explanations including gamification on a qualitative focus group and received promising results.

As stated earlier, literature offers several solutions that can mitigate the no-reading problem, among them include:

	Document Length	Legal Literacy	Lack of Legal Background	Information Overload
Shorter and Simplified	Not enough – no-reading problem persists ✓	Plain language; keeps technical jargon to a minimum ✓	Not necessarily ✗	Not enough – no-reading problem persists ✓
Standardization of Contracts	Not necessarily no-reading problem persists ✗	Not necessarily ✗	Not necessarily ✗	Could mitigate the problem ✓
Highlighting	Could mitigate the problem – to a certain degree ✓	Not enough – The problem persists ✓	Not enough – The problem persists ✓	Could mitigate the problem ✓
Use of Algorithms	Could mitigate the problem – to a certain degree ✓	No ✗	No ✗	Could mitigate the problem – to a certain degree ✓
Tailored Disclosure	Not enough – no-reading problem persists ✓	Plain language; keeps technical jargon to a minimum ✓	Not necessarily ✗	Could mitigate the problem – to a certain degree ✓

However, as the previous discussion explains, these solutions address only parts of the problem; whereas a gamification-based approach can offer a more comprehensive solution to the no-reading problem.

A game will not solve the no-reading problem completely, but rather reduce it. In the following pages we highlight some core principles of games and gamification that can mitigate the no-reading problem in various ways.

A. *The Length Problem*

Instead of requiring users to read long and exhaustive documents, games often employ visual or verbal representations to inform their users of what they need to do next. Moreover, games often guide the users intuitively throughout the game mechanics (i.e., the rules and procedures that guide the player and the game response to the player's moves or actions). In other words, the onboarding and the scaffolding processes of the game make it easy in just a few minutes for anyone to figure out the rules and procedures to get to the point where they can go to the next level of complexity. In fact, Zheng demonstrated that the use of game elements

can reduce the amount of time invested in teaching a certain topic.¹⁹¹ In addition, helping a user quickly learn the game when using game elements maintains the user's willingness to play and the user is likely to continue the activity.¹⁹²

Drawing on these insights, we argue that games and game elements can be used to create a game that informs users as to the gist of ToU without requiring long and complex documents that the user should read.¹⁹³ Thus, game elements mitigate—at least to a certain degree—the length problem while maintaining user engagement.

B. *The Literacy Problem*

As previously stated, one of the major reasons people are unable to comprehend long and complex legal documents is the lack of legal or financial literacy necessary to comprehend information presented in these documents.¹⁹⁴

Games reinforce learning outcomes by explicitly and repeatedly connecting them to the game environment and complexity.¹⁹⁵ Thus, games, as an experience in which the player is actively involved in making decisions, may also provide deeper understandings of concepts or terms (i.e., situate meanings through experience).¹⁹⁶ Moreover, games can teach

191. Yue Zheng, *3D Course Teaching Based on Educational Game Development Theory—Case Study of Game Design Course*, 14 IJET 54, 57–58 (2019), <https://online-journals.org/index.php/i-jet/article/download/9985/5425>.

192. Juho Hamari & Jonna Koivisto, *Social Motivations to Use Gamification: An Empirical Study of Gamifying Exercise*, PROC. OF THE 21ST EUR. CONF. ON INFO. SYS. 1, 5 (2013).

193. Karen Robson et al., *Game on: Engaging Customers and Employees Through Gamification*, 59 BUS. HORIZONS (published 2016) (manuscript at 8) (pre-published version can be found here: https://www.researchgate.net/publication/281350026_Game_on_Engaging_customers_and_employees_through_gamification#fullTextFileContent).

194. See *supra* note 137.

195. Justin Marquis, *Building Social Skills and Literacy Through Gaming*, ONLINE UNIVERSITIES 24, (Apr. 2012), <https://web.archive.org/web/20200811041259/https://www.onlineuniversities.com/blog/2012/04/building-social-skills-and-literacy-through-gaming/>; Ashley Brooks, *Video Games Are Being Embraced as Literacy Tools*, PERSPECTIVES ON READING (Jun. 2018) <https://perspectivesonreading.com/video-games-support-literacy/> (discussing the distinct ways in which video games encourage and motivate children to read and learn); see also, RITTERFELD, SERIOUS GAMES, *supra* note 25, at 120.

196. Scott Nicholson, *A User-Centered Theoretical Framework for Meaningful Gamification*, GAMES+LEARNING+SOCIETY 8.0 (2012), <http://scottnicholson.com/pubs/meaningfulframework.pdf>; see James Paul Gee, *What Video Games Have to Teach Us About Learning and Literacy*, 1 ACM COMPUTERS ENT. (CIER) 20, 20, (2003) (describing how a good game design will encourage learning

the user about the terms that she is not familiar with in a way that provides opportunities and encouragement to fail-and-reflect,¹⁹⁷ by moderately increasing the difficulty of the game, among other things.¹⁹⁸ Therefore, a game as a learning and assessment tool can also mitigate the legal literacy problem by informing the users of the relevant terms in a fun and engaging way.

Lastly, data shows that video games can help improve writing and reading skills.¹⁹⁹ Games can, therefore, help mitigate the legal literacy problem as well as the background-knowledge problem.²⁰⁰

C. *The Lack of Background Knowledge Problem*

The lack of background knowledge that gives context to the information can be an impediment to understanding ToU.²⁰¹ While playing a game, a user may face unknown ideas or terms. To overcome this problem, games often offer a personalized experience (i.e., tailored triggers and incentives).²⁰² In other words, to overcome the user's lack of background knowledge, the game is designed around the concept of well-

through challenging but do-able tasks that engage and stimulate players to make thoughtful decisions that increase their understanding).

197. See, e.g., *supra* note 129.

198. Anna-Lise Smith & Lesli Baker, *Getting a Clue: Creating Student Detectives and Dragon Slayers in Your Library*, 39 REFERENCE SERVS. REV. 628, 630–35 (2011); James Paul Gee, *Learning by Design: Good Video Games as Learning Machines*, 2 E-LEARNING & DIGIT. MEDIA, no.1, 2001, at 5, 10; see also, Thomas W. Malone, *Chapter VI: Heuristics for Designing Instructional Computer Games*, in WHAT MAKES THINGS FUN TO LEARN? A STUDY OF INTRINSICALLY MOTIVATING COMPUTER GAMES 65, 66 (1980) (laying out steps to focus serious, educational games on what makes them fun); Thomas W. Malone, *Toward a Theory of Intrinsically Motivating Instruction*, 4 COGNITIVE SCI. 333, 359 (1981) (including scorekeeping and speeded responses help users learn); Edwin A. Locke et al., *Goal Setting and Task Performance*, 90 PSYCH. BULLETIN 125, 138 (1981) (noting the superiority of participative learning in helping educate loggers).

¹⁹⁹ Clive Thompson, *How Videogames Like Minecraft Actually Help Kids Learn to Read*, WIRED, (Oct. 9, 2014), <https://www.wired.com/2014/10/video-game-literacy/>.

200. See Smith & Baker, *supra* note 198, at 632, 634–35 (describing games' effectiveness in fostering literacy and providing background information in other areas of interest).

201. See Ben-Shahar & Schneider, *supra* note 8, at 717 (relating misunderstanding mandated disclosures to the lack of background information); see also Villiers, *supra* note 139, at 195–96 (2001) (explaining the importance of background information for a person's comprehension of new information).

202. Nicholson, *supra* note 196; see Gee, *supra* note 196, at 22 (describing how effective game designs allow players to co-create the game, thus tailoring the game to fit their own "levels of ability and style of learning").

ordered problems where problems naturally lead into one another.²⁰³ Thus, allowing players to grow and evolve and gain the background necessary for the next level.²⁰⁴

The same idea can be duplicated in the area of ToU. For instance, a company could utilize a personalized ToU game, which lets the user progress slowly while gaining the needed knowledge to comprehend the terms and conditions presented to her. Additionally, if the user needs to gain knowledge regarding the meaning of specific professional or legal jargon, to understand a term or an idea of a game, she will be offered a short explanation (e.g., by microcopy) before moving to the next level. The term *microcopy* describes small groups of words that motivate a user to action. The microcopy helps guide the user and provides feedback on the actions taken. A good microcopy is short and simple.²⁰⁵ Microcopy supplies unambiguous language and helps provide context to user's actions.²⁰⁶ In doing so, it considers the audience and ensures that the message is relevant and easy to understand.²⁰⁷ Accordingly, it could not only help mitigate the lack of background knowledge, but also replace, to some extent, the content of a long and complex legal document.

203. Alberto Mora et al., *A Literature Review of Gamification Design Frameworks*, in 7TH INTERNATIONAL CONFERENCE ON GAMES AND VIRTUAL WORLDS FOR SERIOUS APPLICATIONS 1-8 (VS-GAMES) 100, 101, (2015).

204. This is true considering the self-paced game approach. See Smith & Baker, *supra* note 198, at 631–32 (noting the use of games to give students a basic acquaintance with campus layout and facilities during orientation). Microcopy is also an example for the same element. It enables interactions for progression. See e.g., Stranton Roberts, *Microcopy: A Taxonomy and Synthesis of Best Practices*, (June 7, 2017), [hereinafter Roberts, *Microcopy: Taxonomy & Best Practices*] <http://www.stratonroberts.com/projects/microcopy/Microcopy.pdf> (explaining Microcopy discussing its benefits and noting it is a powerful part of effective user experience).

205. Roberts, *Microcopy: Taxonomy & Best Practices*, *supra* note 204, at 1, 8 n.10 (citing Donna Talarico, *Microcopy Matters*, 19 RECRUITING & RETAINING ADULT LEARNERS, at 1–3 (2017)).

206. See e.g., DAN SAFFER, MICROINTERACTIONS: DESIGNING WITH DETAILS 76 (2013) (providing examples of unambiguous microcopy, like a store's "Sorry, we're closed" sign); Janaki Kumar, *Gamification at Work: Designing Engaging Business Software* 528, 535 (2013) (providing the benefits of humor microcopy to deflect negative user experience); Parya Saberi et al., *We are Family: Designing and Developing a Mobile Health Application for the San Francisco Bay Area House Ball and Gay Family Communities*, 6 MHEALTH 1, 8 (2020) <https://mhealth.amegroups.com/article/view/42303/pdf> (applying user context and feedback to develop microcopy for a prospective app). See also Donna Talarico, *Tell Your Institution's Story Through Commencement Communications*, 19(7) RECRUITING & RETAINING ADULT LEARNERS 1 (2017) (discussing the use of humorous microcopy).

207. Roberts, *Microcopy: Taxonomy & Best Practices*, *supra* note 204, at 4–5.

D. The Information-Overload Problem

The last problem is information overload. That is, the idea that lengthy and complex documents can cause confusion and frustration on account of the difficulty individuals face when trying to process large quantities of information.²⁰⁸ As noted earlier, when too much information competes for one's attention, one is forced to choose which portion or aspect to focus on.²⁰⁹ However, a game can break down complexity into simpler parts (also known as *fish tank* in gamification literature),²¹⁰ thereby reducing the information-overload problem.

Thus, instead of large quantities of information without context or obvious application, the game system offers the right amount at the right time. Information is effective when it is given at the point where it can best be understood and used in practice.²¹¹ The same idea is reflected in structured goals.²¹² Games do not just present goals; they ensure a combination of structured goals from the long-term goal to medium-term and short-term goals. Players can also choose their own sub-goals within the larger task if the game is moderated.²¹³ Games also use microcopy to reduce information overload by providing specific information about interaction and what actions can be taken next.²¹⁴ Furthermore, the principle

208. Human limitations of information processing are often referred to as information overload. See Ben-Shahar & Schneider, *supra* note 8, at 687–90 (discussing both the overload effect and accumulation problem).

209. This is sometimes referred to as the “information overload” problem. See, e.g., Troy A. Paredes, *Blinded by the Light: Information Overload and Its Consequences for Securities Regulation*, 81 WASH. U. L.Q. 417, 419 (2003) (arguing as information increases, market securities participants “tend to adopt simplifying decision strategies that require less cognitive effort, but that are less accurate than more complex decision strategies”); Robert A. Hillman & Jeffrey J. Rachlinski, *Standard-Form Contracting in the Electronic Age*, 77 N.Y.U. L. REV. 429, 451–52 (2002) (weighing the simplicity of rolling contracts’ factual nature versus what information consumers realize are within or outside those contracts); cf. Simon, *supra* note 147, at 507 (arguing that people often reach decisions based on a “search of only a tiny part” of the total available information).

210. See Gee, *supra* note 196, at 22 (noting how good game designs will use beginner levels to introduce and familiarize the player with concepts that they will later be needed to tackle more complex tasks in later levels).





211. *Id.*

212. JESPER JUUL THE ART OF FAILURE: AN ESSAY ON THE PAIN OF PLAYING VIDEO GAMES 85–86 (Geoffrey Long & William Uricchio eds., 2013).

213. Locke et al., *supra* note 198, at 129–31; see also, Joey J. Lee & Jessica Hammer, *Gamification in Education: What, How, Why Bother?*, 15 ACAD. EXCH. Q. 1, 3 (2011) (describing the benefit of sub-goals in regards to educational games and user motivation).

214. Roberts, *Microcopy: Taxonomy & Best Practices*, *supra* note 204, at 5.

of *engagement loop* keeps the game simple and fun in order to keep the players engaged in the game.²¹⁵

	Document Length	Legal Literacy	Lack of Legal Background	Information Overload
Gamification - Game Elements	 mitigate—at least to a certain degree—the length problem while maintaining user engagement	 mitigate the legal literacy problem	 mitigate—at least to a certain degree—the background-knowledge problem	 can break down complexity into simpler parts, thereby reducing the information-overload problem.

As illustrated by the above figure, a well-crafted game can highlight particularly salient information, and therefore, serve as a guide for users.²¹⁶ It can mitigate the no-reading problem. Specifically, the game will be shorter (i.e., the game that the user will play should be kept short); the game will use simple, everyday language (not long and complicated sentences) and the legal terms will be explained in common language; and finally, there will not be information overload because the game will give only highlights (and, therefore, can be based upon the algorithm solution). The game can also be personalized by showing the user the most relevant and important conditions based on either the user's in-game responses or the user's answers to a pre-game survey. A game may also be useful in conveying information in a palatable way, for example, by displaying images and film clips, using statistics, or data-visualization tools. The problem that remains is whether a game can inform the user about the legal conditions to which she is about to agree.

Dawn Watkins et al. used a game to explore children's legal knowledge and understanding in their everyday life.²¹⁷ The game was based on daily situations such as school trips to the zoo, and involved questions about recognizing human and other legal rights.²¹⁸ In addition, the children were also asked about their recognition of legal responsibilities and

215. Robson, *supra* note 193, at 29–36.

216. LEANDER D. LOCKER, INFORMED INSURANCE CHOICE?: THE INSURER'S PRE-CONTRACTUAL INFORMATION DUTIES IN GENERAL CONSUMER INSURANCE 50–51 (Edward Elgar ed. 2015).

217. Dawn Watkins et al., *Exploring Children's Understanding of Law in Their Everyday Lives*, 38 LEGAL STUD. 59, 62 (2018).

218. *Id.* at 67.

liabilities.²¹⁹ For example, in order to scrutinize children's knowledge of discrimination, the children were asked if it was right that only boys could go on the school trip to the zoo.²²⁰ The goal of this explorative research was to assess the children's legal understanding. Using digital gaming tools, the researchers identified areas of particular competency and areas in which children demonstrated considerable uncertainty or lack of awareness for their rights.²²¹

Thus, by using a game, game-like elements, or techniques from the world of gamification, one can learn about people's level of comprehension and understanding of the law or legal norms that apply to a certain situation. This conclusion supports the idea that gamification can help companies to mitigate—at the very least—people's unfamiliarity with the terms and conditions of online contracts. This is because identifying which areas or provisions are most problematic is the first step in enhancing people's understanding of the terms and conditions they are agreeing to.²²²

The second step must incorporate a mechanism to inform the individual regarding the legal rule or the terms and conditions of the contract. Important lessons can be drawn based on existing initiatives in the field of education. Studies designed to improve people's engagement with, and knowledge of specific areas are evidence of the potential of gamification as an informative tool.²²³ In other fields, there are positive results in engaging people and motivating them to achieve certain goals by using games or gamification techniques. Additional research is needed in this field.

Stephanie Kimbro reports the development of a game designed to teach people about estate planning.²²⁴ In this game, the player is a detective who uses a time machine to travel to different dates to learn about the dead

219. *See id.* at 72–74 (describing an experiment in which children were asked about their understanding of legal responsibilities).

220. *Id.* at 67–69.

221. Areas of strength include gender equality, while areas in which children have shown uncertainty pertain to the level of force adults are permitted to exercise. *See id.* at 76–77.

222. Important to note however that unlike our suggestion, Watkins et al.'s experiment did not attempt to explain to the participant whether, when, or why their reaction or answer is inconsistent with the law. *See id.*

223. *See, e.g.,* Muntean, *supra* note 6, at 323, 325, 328 (discussing why gamification helps students study better and provides more avenues for positive reinforcement); Cameron Lister et al., *Just a Fad? Gamification in Health and Fitness Apps*, 2 JMIR SERIOUS GAMES 1, 1–2 (2014) (examining the use of gamification in fitness and health apps to gather information about how effective these apps are at changing behavior in mobile users).

224. Kimbro, *What We Know About Gamification*, *supra* note 28, at 373–75.

person who failed to prepare her estate.²²⁵ Through the game, the user learns the basic concepts of estate planning.²²⁶ Based on her experience, Kimbro concluded that there are some challenges inherent to the task of developing a law-related game.²²⁷ These challenges include: (1) *ex-ante* costs; (2) the need to manage the game development process, continuously testing and improving the game based on feedback; (3) publication and marketing costs, and strategy; and (4) building in outcomes reporting and usage data to inform both the further development of the game and the improvement of the relevant legal resources.²²⁸ These challenges should not deter online platforms, which, in contrast to Kimbro, routinely deal with such challenges and have at their disposal greater financial and technological resources.

During COVID-19 (the new Corona Virus of 2019) pandemic, many academic institutions and schools were forced to conduct online courses using various technological platforms.²²⁹ In response, new guides were published on the issue of how lecturers can perform better in online classes. One of those guidelines is Kohn's "Teaching Law Online: A Guide for Faculty."²³⁰ In this guideline Kohn is referring to several game elements that can be implemented during the virtual course—such as the use of quizzing applications, engagement of students, etc.²³¹ However, Kohn did not classify those elements as games or serious games. In our opinion, legal scholars should not be afraid to start using the terms of game elements and gamification.

Our recommendation is to employ the advantages of gamification to overcome some of the hurdles presented by lengthy, complex, and

225. *Id.* at 374.

226. *Id.*

227. *Id.*

228. *Id.* at 374–75.

229. See e.g., Andrew Smalley, *Higher Education Responses to Coronavirus (COVID-19)*, NCSL (Dec. 28, 2020) <https://www.ncsl.org/research/education/higher-education-responses-to-coronavirus-covid-19.aspx> (reporting that due to the spread of the coronavirus, during the spring semester of 2020, more than 1,300 colleges and universities in all 50 states canceled in-person classes or shifted to online only instruction). See also, *The College Crisis Initiative*, DAVIDSON COLLEGE <https://collegecrisis.shinyapps.io/dashboard/> (last visited May 5, 2020) (mapping secondary institutions fall semester Covid-19 plans in an interactive format); Cathy Li & Farah Lalani, *The Covid-19 Pandemic has Changed Education Forever. This is How*, WORLD ECON. F. (Apr. 29, 2020) <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning> (listing multiple countries' educational responses to the Covid-19 pandemic).

230. Nina A. Kohn, *Teaching Law Online: A Guide for Faculty*, J. LEGAL EDU. (July 2020) (forthcoming publication) (manuscript at 3), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3648536.

231. *Id.* at 10.

complicated ToU and community guidelines, but that cannot, of course, solve all problems. Sometimes the need for legal precision can make this simply impossible.²³² Ben Shahaar and Schneider note, “complexity cannot be explained simply. Sophisticated vocabularies and professional languages encapsulate complex thoughts.”²³³ Furthermore, users are a heterogeneous group.²³⁴ What distinguishes them from one another, among other things, is their literacy level, knowledge, and expertise. In other words, their capacity to handle and apprehend information differs dramatically. Some will be versed in the legal language or experienced enough to make sense of it all, and others will not.²³⁵ Thus, not all users will be able to derive the same gains from the game. Nevertheless, we argue that using a game, which rests not only on text but also on visual aids and interactivity, could at the very least improve an individual’s understanding and comprehension of social-media platforms’ ToU and community guidelines. Furthermore, gamification could offer users an ongoing reminder of the ToU, such as a specific guidance when posting content online and interacting with other users and could prevent the user from uploading unwanted or improper content.

The advantage of our suggestion is also in its ability to adjust to the individual user while protecting his privacy, as will be explained in Part IV. While most ToU and community guidelines are structured and composed using a one-size-fits-all approach, a game could have various versions, designed for personalized understanding and ability to correctly answer a question. Thus, if a particular user is sophisticated and able to grasp simple legal ideas, the questions’ complexity will increase in accordance and in response to the user’s own performance. Games and gamification have been met with criticism and obstacles.²³⁶ For example, if the game is personalized, we should provide a solution to ethical and privacy concerns.

232. Ben-Shahaar & Schneider, *supra* note 8, at 713.

233. *Id.*

234. Members of this group range from first-time to experienced authors, young and old writers, novices and professionals, and so on. *Id.* at 745.

235. As stated by Ben-Shahaar and Schneider in their recent comprehensive critique of mandated disclosure, in many situations, what an individual really needs to make a better decision is not merely more information, but also knowledge and experience. These cannot be overcome through mandated disclosure. This is not to claim that novices never understand information. It is more difficult for them to interpret information in comparison to the expert author. More than that, it affects the quantity of information an author can handle. While experts or even experienced authors can handle large quantities of information, new and unsophisticated authors might have problems. *See id.* at 725–26.

236. *See, e.g.,* Kai Erenli, *supra* note 64, at 539 (evaluating the ethical ramifications of the terms of use for the game “Second Life”); *see also, supra* Part IV.

Next, we briefly discuss some of the main concerns that might arise and that are already known in the professional literature.

IV. CONCERNS RELATING TO GAMIFICATION AS A SOLUTION

Gamification is neutral. As such, it can be controversial or misused. The first generation of gamification was subject to several crucial mistakes. These mistakes included privacy invasion, inducement of addictive behavior, and turning the player into a zombie (i.e., a player that does not need to think). Some have even dubbed this in the field of gamification as *zombification*, *pointsification*, and *exploitification*.²³⁷

Gamifying ToU could also be misused by platforms to hide problematic clauses, like any other tool. This problem can be addressed by legal actions and by using other tools such as the algorithmic tool that was mentioned before.²³⁸ There also may be a need to add a disclaimer that the game represents just a small portion of the document and that the obligating form is the full legal document.

The following subpart will briefly discuss some of the weaknesses of gamification, including privacy invasion, property concerns, and ethical issues. We will explain why these weaknesses are irrelevant or can be avoided when gamifying ToU.

A. Privacy Concerns

Gamification was introduced by several studies as a tool to increase employees' motivation.²³⁹ According to Cherry, there are four types of games that can be used in a workplace: a game to get more attention or

237. See, e.g., Carli Spina, *Gamification: Is It Right for Your Library? The Rewards, Risks, and Implications of Gamification*, 17 AALL SPECTRUM 7, 7 (2013) (noting that game designs which incentivize players engagement through an excessive reliance on points, badges, and leaderboards can lead to "pointsification" whereby the game experience is made no more meaningful with additional rewards and players slowly lose motivation). Ganit Richter, Daphne R. Raban & Sheizaf Rafaeli, *Studying Gamification: The Effect of Rewards and Incentives on Motivation*, in GAMIFICATION IN EDUCATION AND BUSINESS 21, 22 (Torsten Reiners & Lincoln C. Woods eds., 2015).

238. See *supra* Part. II.B.4 (discussing information overload as an aspect of the *No-Reading Problem*).

239. See Robson et al., *supra* note 193, at 29 (recommending gamification as an effective managerial tool for increasing customer and employee engagement); Jennifer Thom et al., *Removing Gamification from an Enterprise SNS* in PROCEEDINGS OF THE ACM2012 CONFERENCE ON COMPUTER SUPPORTED COOPERATIVE WORK 1067, 1067 (2012) (removing gamification techniques decreased motivation in employees according to study); Nick Yee, *The Labor of Fun: How Video Games Blur the Boundaries of Work and Play* 1 GAMES & CULTURE 68, 70–71 (2006) (analogizing playing video games to work to illustrate how effective video games make users enjoy performing work).

raise the number of users; a game to increase employees' engagement; a game to perform a work assignment without the feeling of working; and a game that is viewed as a leisurely activity but is actually work that has to be done.²⁴⁰ However, as Cherry also mentions, there are also many legal problems in using games in a workplace.²⁴¹

Adopting gamification features in the workplace raises difficult legal questions. An example of this problematic situation of gamification in a workplace is when Disneyland and Paradise Pier hotels in Anaheim used big flat-screen scoreboard monitors to display employees' work speeds.²⁴² The scoreboard caused the low-paid laundry workers to feel nervous under constant control and persistent monitoring.²⁴³ They worried that the normal pace of work was not enough anymore.²⁴⁴ To race to the top of the list would require a dizzying pace of work that could not be sustained.²⁴⁵ The constant surveillance of the workers also raises privacy concerns. Lotem Perry-Hazan and Michael Birnhack dealt with similar questions of invasion-of-privacy and its implications in their research about teacher surveillance at schools.²⁴⁶

Another aspect of invasion-of-privacy might occur because the gamer's activity has to be monitored in order to grant her points or rewards. The ability to follow a player might lead the game's creators to collect information about the gamer—whether it was relevant to the game or not—and to sell or use it for another purpose that was not declared in advance.²⁴⁷

A workplace is a unique environment in which the employees cannot really choose their behavior in a free manner. Not following the workplace code of conduct may lead to disciplinary action or even layoff. Therefore, the implementation of a game into the workplace should be done carefully.

Our suggestion about the gamification of ToU does not necessarily include ongoing surveillance. For one thing, background or personal user information is not necessarily relevant and needed for the successful

240. Cherry, *supra* note 33, at 852–53.

241. *Id.* at 855–88.

242. Steve Lopez, *Steve Lopez: Disneyland Workers Answer to the 'Electric Whip'*, L.A. TIMES (Oct. 19, 2011), <https://www.latimes.com/health/la-xpm-2011-oct-19-la-me-1019-lopez-disney-20111018-story.html>.

243. *Id.*

244. *Id.*

245. *Id.*

246. See generally Lotem Perry-Hazan & Michael Birnhack, *Caught on Camera: Teachers' Surveillance in Schools*, 78 TEACHING & TCHR. EDUC. 193, 195 (2019) (noting “that one third of teachers felt that school CCTVs was an invasion of their professional privacy . . .”).

247. See Spina, *supra* note 237, at 8 (explaining that the University of Huddesfield collects information on the activities of its patrons).

implementation of a playful learning activity. The user who played the game (i.e., read the terms of use or any other contract) will be monitored just during the game. For the sake of adjusting the game to the players' knowledge level, there is a need to gather information about the gaps between players' knowledge and the content of the contract or any other ToU document. Such data does not need to be linked to the user's ID or other means of identification.

Due to the General Data Protection Regulation (GDPR)²⁴⁸ and other similar privacy laws, the owner of the game should also have detailed ToU for the game itself, which is, in some ways, ironic. There is, however, no legal way to avoid that loop, unless no information will be gathered or saved while playing the game. We suggest minimizing privacy issues by informing the user at the beginning of the game either by two short sentences or by the game itself about the information that is gathered during the game and its use. Transparency about the game's purpose and the information it uses or gathers is of the utmost importance. It is also recommended, if possible, to ensure that the information will go through an anonymization process. Julie Cohen phrased it correctly: "We are playing, but we are also being played."²⁴⁹ The game's owner can follow all the players on an individual basis.²⁵⁰

In addition, the game can still be quasi-personalized and suggest information that is more relevant to the player while still maintaining privacy. The latter can be achieved, for example, by monitoring questions' level of difficulty (Beginner, Intermediate, Advanced). Players can move from one level to the next by passing a threshold of correct answers. In this scenario, the players do not need to register or identify in any way when entering the game. They start at the Beginner level and when they pass the threshold, they continue to the Intermediate level. Upon providing an erroneous reply, similar questions appear until resolution. Gamification may be anonymized for the platform in order to respect privacy and ethics by having a trusted third party (not the platform itself) administer the game.

248. Commission Regulation 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

249. Julie E. Cohen, *The Surveillance-Innovation Complex: The Irony of the Participatory Turn*, in *THE PARTICIPATORY CONDITION IN THE DIGITAL AGE* 208 (Darin Barney et al. eds., 2015).

250. Most of the articles that dealt with privacy problems in the workplace concluded that those risks can be minimized or eliminated by taking privacy concerns into consideration in the design phase. See e.g., Paul Cowie & Jessica Fairbairn, *Gamification in the Workplace and Its Impact on Employee Privacy*, 28 No. 6 WESTLAW J. EMP. 1, 5 (2013).

Upon successful completion of the game, a player will receive a key for usage in the relevant platforms.

Therefore, building a game to inform people about ToU can be done while minimizing privacy invasion by, for example, collecting just the necessary user data, using anonymization techniques, and deleting data after a certain period. No doubt, further discussion on the subject must follow in future papers.

B. Incentives for Adopting Gamification

Why should platforms use a game? Should small companies use a game as well? These questions are just the tip of the iceberg. We believe the platform has a triple incentive: build a reputation by gaining users' trust, avoiding regulations, and reducing the costs of manually checking contract breaches.

If the platform uses a game in order to inform the users about their privacy policy, ToU, or any other legal form, and makes a real effort to make it more accessible, the platform could improve its reputation among users.²⁵¹ Moreover, by making users better informed, platforms can achieve higher transparency.²⁵² This is likely to benefit platforms and websites, particularly given the steady rise in criticism of social-media platforms' lack of transparency, accountability, and public scrutiny.²⁵³ Also, if the game can better inform and explain to the users what is not acceptable in the platform, fewer violations would likely occur, and the platform would incur fewer costs in enforcing rules.

251. Gaining trust from the user is not a new topic. Facebook attempted to repair users trust for several years already. See MICHAEL NYCYK, FACEBOOK: EXPLORING THE SOCIAL NETWORK AND ITS CHALLENGES 77, 100–02 (2020).

252. See, e.g., Nicholas Diakopoulos and Michael Koliska, *Algorithmic Transparency in the News Media*, 5.7 DIGITAL JOURNALISM 809, 826 (2017); Nava Tintarev & Judith Masthoff, *A Survey of Explanations in Recommender Systems*, IEEE 23rd INT'L CONFERENCE ON DATA ENGINEERING WORKSHOP 1, 2 (2007) (indicating there is a strong link between transparency and trust among users); Kirsten Swearingen and Rashmi Sinha, *Interaction Design for Recommender Systems*, DESIGNING INTERACTIVE SYSTEMS, at 3–5 (2002).

253. See e.g., Thomas N. Hale, *Transparency, Accountability, and Global Governance*, 14 GLOB. GOVERNANCE 73, 77–78 (2008) (discussing how the power of market pressure can empower people to take action against companies and governments); Andrew D. Selbst & Solon Barocas, *The Intuitive Appeal of Explainable Machines*, 87 FORDHAM L. REV. 1085, 1129 (2018) (noting transparency “is a particularly pronounced problem in the case of machine learning, as its value lies largely in finding patterns that go well beyond human intuition.”); Yifat Nahmias & Maayan Perel, *The Oversight of Content Moderation by AI: Impact Assessments and Their Limitations*, 58 HARV. J. ON LEG. 1, 30–31 (forthcoming 2021).

Further, information sharing could plausibly prompt a broader public discussion and greater collaboration between platforms, government officials, and citizens' interest groups.²⁵⁴ For instance, government officials and citizens' groups could highlight certain weaknesses that the platform might not have considered before. For the platforms, this could also translate into an enhanced corporate reputation, which may be important for them to maintain users' loyalty and engagement.

The costs of developing and maintaining a complicated and sophisticated game might raise concerns. But as long as the user enjoys playing the game and it truly examines one's understanding, the game can be kept plain and simple. For example, the platform can use ready open tools to create a trivia game. It does not need to be too complicated or expensive to achieve the goal.

The game is also a voluntary option for the user. If the user is not interested in playing a game due to time constraints or disliking games, they can use alternatives such as a shorter and more understandable version of the document. At any rate, the binding content will still remain in the full document.

No doubt, the game should be fast, educational, and fun. For that reason, and to mitigate the time-consuming problem of playing different games on different websites and platforms, it is possible to think about a unified game. Put differently, one can imagine a future where users are playing one game for different platforms or apps that have similar conditions. In this way, the user will be able to play just once and gain information about the conditions of many platforms or apps. She will not need to play her way through again; rather she will have a key to access and to start using all these platforms and apps with similar conditions.

In this scenario, the user could potentially gain a badge or a certificate for playing the game. This badge will incentivize her to play the game but could also signal to platforms and apps that the user has acquired some knowledge about the ToU, and therefore, she will not be asked to play all over again. The platform will just need to clarify if there is a substantial difference between the game and their ToU.

Finally, global platforms try to avoid local legislation. Put into an economic framework, the no-reading problem can be seen to create a classic market failure of asymmetric information.²⁵⁵ This market failure

254. Michael Froomkin, *Regulating Mass Surveillance as Privacy Pollution: Learning from Environmental Impact Statements*, 2015 U. ILL. L. REV. 1713, 1748–49 (2015) (discussing the plausible benefits of disclosure in the context of privacy).

255. Shmuel I. Becher & Tal Z. Zarsky, *Minding the Gap*, 51 CONN. L. REV. 69, 80 (2019).

might lead to legislative interference. If the no-reading problem, for instance, will eventually lead to the abolishment of the requirement to read the contract, as Ayres and Schwartz suggested in 2014,²⁵⁶ could create a problem for most multi-national platforms. Therefore, platforms should try to avoid legislation on the no-reading issue. Adopting a game-case solution could plausibly prevent legislators from interfering in this area.

C. Ethical Concerns

Using gamification might raise ethical concerns. Among other things, the user might be manipulated by the creator of the game, exploited, and be excluded from the real purpose of the game.²⁵⁷

For instance, Alimohammad Shahri et al. showed that gamification might be a source of tension and pressure in a workplace which can harm social and mental well-being of the employees.²⁵⁸ In order to avoid such problematic incidents, Andrzej Marczewski calls for a comprehensive code of ethics in the field of gamification. One of the basic elements in the code of ethics in his opinion is transparency and honesty with the user about the real purpose of the system, and avoiding manipulating the user in a harmful way.²⁵⁹ This code of ethics might curtail many of the ethical problems with gaming. These problems include the addictive effect of random rewards; the sharing of personal information without informed consent; and the exploitation of the user by the game's creators.²⁶⁰ In addition, Scott C. Rigby claimed that rewards might have a paradoxical effect—instead of increasing interest in the main activity, the rewards become the focus.²⁶¹ Careful design of rewards is called for. As mentioned before, these issues must be elaborated in further papers.

256. Ayres & Schwartz, *supra* note 8, at 605.

257. Tae Wan Kim, *Gamification Ethics: Exploitation and Manipulation* (2015), in CONFERENCE: ACM SIGCHI (CHI 2015) GAMIFYING RESEARCH WORKSHOP POSITION PAPERS, at 1–5, <https://www.researchgate.net/publication/281283917>.

258. Alimohammad Shahri, et al., *Towards a Code of Ethics for Gamification at Enterprise*, in PRACTICE OF ENTERPRISE MODELING 235, 235 (Ulrich Frank et al. eds., 2014).

259. Andrzej Marczewski, *The Ethics of Gamification*, 24 XRDS 56, 59 (2017).

260. *Id.*

261. Scott C. Rigby, *Gamification and Motivation*, in THE GAMEFUL WORLD: APPROACHES, ISSUES, APPLICATIONS 113, 121–25 (Steffen P. Walz & Sebastian Deterding eds., 2015).

CONCLUSION

Remember John who moved to a new city and joined a new social-media network in order to be in touch with his friends? Now imagine the length of the ToU he was forced to read. Think about the legal terms and language of the ToU. As we show, it is more than possible that John would prefer not to read the ToU, ignore it, or would be unable to comprehend the terms and services similarly to most of the users. He probably would not be able to benefit from platforms' and websites' information disclosures.

Although many jurisdictions require online platforms and websites to make their terms of services and community guidelines readily accessible to the public, this does not solve the no-reading problem. The no-reading problem is becoming larger as new services and apps appear online and as the Internet of Things becomes a reality. Even if people do try to read the legal document, it is likely that most of them lack the literacy and the financial, technical, or legal skills necessary to comprehend the information presented in the ToU or lack the background knowledge that gives context to the information.

The no-reading problem has received much attention in recent legal research. A few suggested solutions have been given in the professional literature, including requiring the drafting party to use plain language and keeping technical jargon to a minimum. This is a partial solution that we suggest extending and by implementing serious games by using gamification techniques.

We examined another popular solution to the problem—legislatures requiring contracts to focus on a few most important subjects. In practice, as discussed earlier, studies showed that it is unclear whether the mandatory requirement to disclose certain information overcomes people's tendency to avoid reading an online contract or their inability to understand its terms.

In addition, we claimed that unified disclosures do not take into account the different preferences that individuals have that may lead to them to focus on different bits of information.

Most people do not like to read legal documents. But they do like to play games. Games are part of leisure time and have had a significant role in everyday life since ancient times. As was explained earlier, games are: (1) goal-oriented; (2) players have to follow specific rules while playing; (3) there is in-game feedback, often there is a competitive element; and (4) usually, games are voluntary, meaning that the player decides whether to play. Serious games have become an essential part of education, training,

and simulation. We suggest looking at the reading of ToU as an educational process of the written document.

We have explored the relations between gamification, games, and law on several levels. These include: (1) the use of games elements and gamification as a tool to inform the public about legal issues or relevant information; (2) the use of games and gamification as a tool to teach in the classroom; and (3) the legal problems and ethical issues that games and gamification might create. In addition, we saw that although the literature about the use of gamification in legal documents and rules is limited, games and law are not strangers.

Our suggestion is that users will play their way through the ToU. This way they will enjoy their game and will learn at least some portion of the legal contract that they are about to sign. As stated above, our suggestion does not necessarily require on-going surveillance nor the collection of personally identifiable information. The appeal of this framework is that it should enable platforms to minimize privacy risks and at the same time harness the advantages of gamification.

Our suggestion will not completely solve the no-reading problem, but it can reduce it. Users will probably not read the boring, complicated, and long ToU. They are more likely to play their way around the documents. Admittedly, these users will not be aware of all the terms and conditions, but only those that were presented to them. However, the game will give users more information about the ToU than they have now.

Moreover, platforms should at least consider our offer mainly because, instead of wasting money and efforts on different ways to solve the reading problem, it gives them a useful tool to inform the users about the ToU. This will help them to enforce terms more easily. We do not argue that gamification is a panacea. But rather, it is a tool that could bring the platform-user interaction into the next level. Thus, it could be part of the platforms' toolbox and help improve users' knowledge and understanding of ToU. The main advantage of our suggestion is also in its ability to adapt itself to the individual user.

