Plain Language in the US Gains Momentum: 1940–2015

Karen A. Schriver, PhD KSA Communication Design & Research kschriver@earthlink.net

Author's note: The attached is a pre-publication draft. Please cite the published version.

Citation:

Schriver, K. A. (2017, Dec.). Plain language in the US gains momentum: 1940–2015. *IEEE Transactions in Professional Communication, 60*(4), 343–383. Retrieved from http://ieeexplore.ieee.org/document/8115322/. **DOI:** 10.1109/TPC.2017.2765118

Integrative Literature Review Plain Language in the US Gains Momentum: 1940–2015

-KAREN A. SCHRIVER

Abstract

Research problem. Interest in plain-language communication has been growing in many sectors of business and government, but knowledge about its development is scattered and in need of synthesis.

Research questions. How did plain language in the US evolve to gain acceptance by industry, government, and the public? In whatways have advocates changed their vision of plain language?

Literature review. My review identified a corpus of more than 100 publications relevant to the history of plain language from 1940 to 2015.

Methodology. I evaluated the literature on plain language to identify milestones, events, and trends between 1940 and 2015. I focused on the evolution of plain language and on ways that practitioners altered their perspective of the field.

Results. Between 1940 and 1970, plain language focused mainly on readability. During the 1970s, some practitioners began to employ usability testing. Bythe mid-1980s, there was a widespread sense that plain-language advocates had shifted priorities from readability to usability. Between 1980 and 2000, advocates broadened their vision—beyond word- and sentence-level concerns to include discourse-level issues, information design, and accessibility. Between 2000 and 2015, advocates continued to worry over their old questions ("Can people understand and use the content?"), but also asked, "Will people believe the content? Do they trust the message?" By 2015, plain language had gained significant momentum in business, government, medicine, and education.

Conclusions. Plain language evolved over the past 75 years from a sentence-based activity focused on readability of paper documents to a whole-text-based activity, emphasizing evidence-based principles of writing and visual design for paper, multimedia, and electronic artifacts. Plain-language practitioners expanded their concerns from how people understand the content—to the usability and accessibility of the content—to whether people trust the content. In addition to a narrative about the field's evolution, I offer a Timelineof Plain Language from 1940–2015, which chronicles the field's highlights. Together, the narrative and timeline offer a fairly comprehensive view of the current state of plain language and allow those with an interest to digdeeper.

Index Terms

Plain English, professional writing, text quality, readability, accessibility, business communication, information design, usability, evidence-based writing, visual design, clarity.

PRACTITIONER TAKEAWAYS

- Plain language has evolved significantly over the past 75 years—from a focus on crafting clear sentences to creating effective multimedia, electronic, or paper communications.
- Research tells us that most readability formulas are outdated methods for assessing text quality. Usability testing is the best benchmark for assessing text quality and plain language.
- The growing empirical evidence suggests that plain language works for everyone young and old, experts and novices, first-language readers and second-language readers.

Introduction

Plain language is often viewed as a quaint idea concerning the activities of persnickety writing teachers who act as grammar police—slicing and dicing sentences while enforcing pedestrian rules of readability and style. This characterization of plain language is not only antiquated, it is wrong. Today plain-language activity burgeons across the globe, particularly in business and government, where clear communication has often been impeded by texts and images that confuse instead of clarify.

Although interest in plain language has been on the rise, the literature about its development is scattered across books, magazine and journal articles, blogs, listservs, conference proceedings, and organizational websites. The paucity of publications that integrate the field leave us with many conversations, but no synthesis [1]. That also makes it hard to track the trajectory of plain language as a communication activity and as a movement for clear communication. Put differently, it's difficult to discern what we have learned and what we still need to know. Moreover, the lack of an integrated view has led to overly narrow interpretations of plain language, enabled the proliferation of outdated practices, hampered productive dialog among groups who have a stake in plain language, and hindered opportunities for plain language professionals to demonstrate their expertise in corporate and government settings.

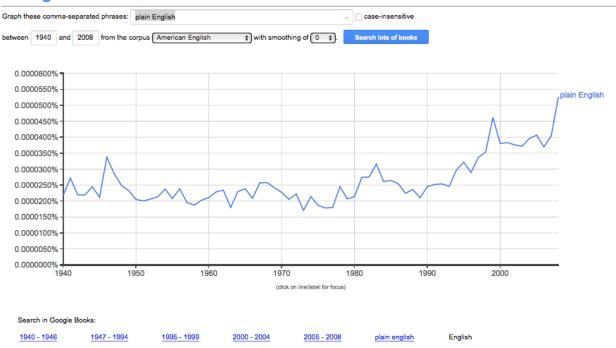
Goals. In this article I tell the story of plain language between 1940 and 2015 with a focus on the United States. Though there are some striking similarities in the conditions that enabled plain language activity to blossom internationally, the unique perspective of any given country is better described by native experts who understand their country's cultural imperatives. Here I characterize the field in the US, examining why plain language has not only persisted but gained momentum. I explore how business and government gradually altered their perception of the value of plain language, especially its benefits relative to its costs. I detail how the field advanced (and backslid) due to presidential action and congressional legislation. I also track how advocates for plain language redefined their work over the last 75 years and suggest ways that this redefinition may influence the field in years to come.

Background. To obtain a rough index of the salience of plain language in the US in printed texts, I used Google Books Ngram Viewer, which provides a crude benchmark for the frequency of any comma-delimited search string between 1500 and 2008. I used Ngram Viewer to search its huge corpus of scanned books written in English and published in the United States on the frequency of

"plain English" from 1940 to 2015. (I searched on "plain English" and "plain language"; both showed the same trend, but here I present only the results for plain English because it has been the more frequently used term in popular American discourse.)

Unfortunately, Ngram Viewer has not been updated since 2009 and cannot account for publications between 2010 and 2015. Still, the resulting graph plotting the frequency of "plain English" over almost 70 years provides rather striking visual evidence of its momentum in printed books.

As shown in Fig. 1, the number of publications in which "plain English" is mentioned practically doubled between the mid-1940s and the 2000s. This trend is consistent with changes I identified in my review.



Google Books Ngram Viewer

Fig. 1. Frequency of the phrase "plain English" from 1940 to 2008 in publications within the Google Ngram American English database (employing no smoothing of the data).

Before discussing this literature, a word about the structure of this article. First, I set the stage with a working definition of plain language. Next, I describe how the literature review was conducted, the methods employed, and the limitations of the approach. Then I discuss the results, detailing how plain language evolved between 1940 and 2015. Finally, I conclude with implications and offer a summary of plain language history and its milestones as a timeline.

What is plain language?

Defining plain language is a tricky enterprise. Early characterizations emphasized a simple and direct writing style that was adapted for an audience. Stylists such as Mark Twain, E. B. White, and Ernest Hemmingway served as exemplars. But definitions of plain language that focused only on writing proved too narrow, neglecting the crucial role of clear graphic and typographic design. These limitations opened a space for broader conceptions of the field to include document design and information design [2]. Plain-language pioneer Janice (Ginny) Redish argued that good information design has to do with content that works for the people who need to use it. Plain-language advocates seek to create communications that enable people to

find what they need, understand what they find, and use what they understand appropriately [3, p. 163].

Redish's ideas were implemented by an advocacy group of US federal-government employees, who for the last several decades provided in-house training in plain language for hundreds of employees of federal agencies; see the Plain Language Action and Information Network: http://www.plainlanguage.gov/index.cfm.

Between 2008 and 2014, three prominent plain language groups (the Center for Plain Language, Clarity International, and Plain Language Association International) collaborated to specify Redish's definition further:

A communication is in plain language if its wording, structure, and design are so clear that the intended audience can easily find what they need, understand what they find, and use that information. [4]

This phrasing puts clear structure and clear design into focus as well as good writing. As Australian plain-language expert Neil James pointed out, defining and branding plain language has been a struggle for advocates from around the world [5].

Nonetheless, advocates agree that plain language communications are results-oriented, explicitly designed to help people negotiate situations in which communications can help them achieve a goal. Advocates recognize that engaging with communications from business or government is usually carried out not for pleasure, but for pragmatic goals—such as understanding, decision-making, learning, analyzing, following procedures, assessing risk, and taking action.

Advocates understand that plain language is not a panacea for good communications from business and government. Indeed, organizations may intentionally deceive, lie and manipulate people's thinking using plain language [6, 7]. For this reason, taking a plain-language approach means more than clear writing and design; it means ethically-motivated communications [8], striving for honest conversation through clarity, accuracy, usefulness, and truthfulness.

Plain language as process and product. The field of plain language concerns both the process of creating people-friendly communications and the products that result. The process involves shaping content iteratively, with each version successively refining the communication to better meet peoples'

needs. Like other communication professionals, plain-language advocates draw on both their expertise in communication and on the feedback of those who may have a stake in their work (readers, viewers, listeners, users, bosses, colleagues, lawyers).

Feedback as fundamental. Ideally, plain-language practitioners collect feedback on the quality of their writing and design early in the process and as often as possible. Research shows that even highly-experienced writers and designers do not accurately predict the problems people may have with their communications, making usability testing crucial [9–13]. Professionals determine that their communication is "plain enough," not based on personal opinion or the use of the latest writing and design techniques, but on the assessment of the resulting product in the eyes of the intended audience.

Although testing every printed or electronic communication can be impractical, reader-focused testing represents the gold standard for knowing what is plain [14]. With reader-focused testing, people are asked to carry out a goal, such as understanding instructions for voting. Testing tells plain-language practitioners what will be clear, usable, useful, and accessible. Indeed, usability testing is especially important for assessing those high-volume public communications (such as tax documents) and those low-volume, but critical documents (such as instructions for emergency responders or legal contracts). Research reminds us that even small-scale informal testing can prove beneficial in identifying what to revise [15], and that as we increase the number of tasks people engage in, the results from small studies become more reliable [16]. Research also suggests that extensive practice in diagnosing users' problems can improve professional's ability to anticipate people's needs on communications they cannot test [17].

Expertise and research needed. The practice of plain language—as in its sister fields of information design, technical and professional communication—calls on sophisticated knowledge of the conventions of clear writing and design, on the ability to empathize with and engage diverse and often marginalized audiences, and on a keen sensitivity for nuance in writing and visual design [18]. Like their colleagues in information design, plain-language professionals spend a lot of time thinking about strategies for orchestrating word, image, and typography. Like their colleagues in technical communication and engineering, plain-language professionals worry about helping people deal with complex content by making it accessible, easy to understand, and easy to use.

When they can, plain-language advocates draw on the findings of empirical research to guide their writing and design, striving to make evidence-based decision making fundamental to their process. In fact, identifying and integrating the empirical research that could guide plain language practice is among advocates' top priorities.

Research questions

My review of the literature on plain language in the US between 1940 and 2015 was motivated by two questions:

RQ 1. How did plain language evolve, eventually gaining momentum and acceptance by industry, government, and the American public?

RQ 2. In what ways did advocates change their vision of plain language activity over time?

Methodology

Approach. After an exhaustive search of the literature using Google Scholar, ResearchGate, ERIC, and other online and print bibliographic resources, I identified a corpus of over 100 publications relevant to the history of plain language in the US from 1940 to 2015. I selected publications for representing a US perspective and for depth and breadth in exploring key issues. I sought out events, trends in practice, legislative acts, laws, criticisms of plain language, and organizations advocating plain language.

I biased my final selection toward publications that can be retrieved, because they allow readers to go to the original sources and examine them for themselves. (Regrettably, much of plain-language history was never documented.) I chose 1940 as a starting point because it was the decade when the US Congress began passing its first legislation relevant to plain language. I used 2015 as a stopping point because it represents the midpoint for the current decade.

I evaluated the corpus to identify milestones over the last 75 years, looking for clues about why the field has evolved as it has. Because the history of plain language is more than the ebb and flow of congressional and legislative activity, I placed equal emphasis on how plain-language practitioners changed their vision of their activity over time.

Strengths and limitations. I cannot confirm that another researcher looking at the same literature would draw identical conclusions, but I received extensive feedback on my interpretation of the literature from seven influential plain-language experts: Janice (Ginny) Redish, Annetta Cheek, Joseph Kimble, Neil James, Joanne Locke, Reva Daniel, and Cheryl Stephens. I asked these experts to assess the details of my narrative and timeline. Since these experts played a central role in the evolution of plain language, their feedback helped enormously in improving the accuracy and reliability of the claims presented here.

Plain language in the US develops roots: 1940–1979

Plain language in the US got its start in government in late 1942 when Congress passed the Federal Reports Act [19]. It was the first attempt to regulate the information the government collected from business and industry. The idea was to cut excessive complexity imposed on business by government, such as asking the same question on multiple forms. The Act aimed to eliminate the duplication of information, reduce the cost of gathering information, and minimize the burden of furnishing information to federal agencies. Though well intended, the Act did little to stem the avalanche of information the government collected from federal agencies, businesses, and private citizens.

Impenetrable language became known as "gobbledygook," a term coined by Texas congressman Maury Maverick in 1944. A plainspoken man, Maverick was "appalled by the fog of stuffy, obfuscatory, bureaucratic language that permeated Washington" [20]. He penned a memo to his colleagues urging them to speak and write in plain English: Stay off the gobbledygook language. It only fouls people up. For Lord's sake, be short and say what you are talking about... Anyone using the words 'activation' and 'implementation' will be shot! [21]

While Maverick's call for the end of stuffy words and Washington redtape was clear, it would take almost forty years before the Paperwork Reduction Act of 1980 [22] would pass—enacting more rigorous legislation designed to reduce the amount of paperwork collected by the federal government, for example, by the Internal Revenue Service and the Bureau of the Census.

Social critics, linguists, lawyers, and rhetoricians help plain English gain recognition. Plain English captured public attention in the 1940s when prominent authors began to urge the public to notice the pervasiveness of wretched writing. Social critics such as English novelist George Orwell challenged politicians to fight against "bad English." In his 1946 "Politics and the English Language," Orwell railed against the decline of English by attacking the use of pretentious diction, jargon, wornout metaphors, long-winded sentences, weasel words, and the like [23]. For Orwell, clear language was not just a concern for professional writers, but for anyone who wanted to think more clearly. He worried that writing often concealed thought and was consciously dishonest. Orwell argued that much political language, by means of circumlocution and euphemism, was designed "to make lies sound truthful and murder respectable, and to give the appearance of solidity to pure wind" [23]. In his book 1984, Orwell reiterated his impassioned plea against the dangers of authoritarian societies in which facts had been eliminated—a chilling foreshadowing of today's alternative facts.

Also in 1946, Austrian-born author Rudolph Flesch put the spotlight on issues of clarity with his bestselling, *The Art of Plain Talk* [24]. Flesch became a prolific writer and advocate for plain writing, arguing that it was possible to predict the difficulty of reading material through a mathematical readability formula based on sentence and word length. Like other readability experts—such as Irving Lorge, Edgar Dale, and Jeanne Chall—Flesch found that unusual words and sentence length were among the most frequent problems for readers [25, 26].

In Flesch's famous 1948 article, "A New Readability Yardstick," he proposed his Reading Ease Formula, in which he took these ideas about what makes texts hard to understand and developed an equation for predicting the presumed difficulty of text [27]. His readability formula, the Flesch test (later modified as the Flesch-Kincaid test, the same one still used in Microsoft's MS Word) became the most widely-used readability formula for predicting the grade level of student textbooks and the difficulty of manuals for the US Department of Defense. In 1949, Flesch published the first edition of *The Art of Readable Writing* [28], which went on to become a landmark on clear writing and readability. By the late 1940s, readability formulas by Flesch, Lorge, and the team of Dale and Chall, were used across the US to assess the difficulty of texts intended for children and adults.

The development of statistical procedures for studying the details of language was carried forward by linguists, such as Harvard's George Kingsley Zipf, who explored the relationships between hard words and easy words, word length and word frequency, and why people use shorter over longer words. In *Human Behavior and the Principle of Least Effort,* Zipf showed that people tend to take the road of least effort in everyday living, and that in human speech, people prefer communications that save time [29].

Zipf found an inverse correlation between word length and word frequency: frequently used words tended to be short.

Linguists and reading researchers continued to develop new ideas about readability and language theory throughout the 1950s. In fact, their work played an important role in ensuring that American textbooks were written at a grade level appropriate for the reading ability of children they were designed for.

During the same decade, consumer advocates such as Stuart Chase, author of the *Power of Words*, urged Americans to challenge corporations whose advertising was manipulative and deceptive [30]. Over time citizens became increasingly aware that they did not have to put up with misleading communications, that they had the right to question what they read. Rhetorician Richard Weaver published his *Ethics of Rhetoric* (1953), reminding American readers that word choices have ethical consequences and that we should be concerned with the positive or negative associations suggested by certain words (e.g., Communist or Un-American).

While the public was beginning to speak up when organizations confused them with overly complicated texts, reading researchers were carrying out empirical investigations of what made texts confusing. By the end of the decade, William Strunk and E. B. White's *Elements of Style* would advise writers to "omit needless words" [31]. (Strunk first published his book in 1918 with several plain-language guidelines, including "omit needless words." However, it was only after White, a student of Strunk's, enlarged and republished *Elements of Style* in 1959 that the book and its plain-language guidelines became so influential.)

Advice such as Strunk and White's was important, as companies were beginning to develop public communications for new services, such as the first credit cards. In 1959, credit card companies started to give credit card holders a choice to pay off their balance or maintain a balance and pay a finance charge [32], which led to the beginning of confusing credit card agreements—complete with too many words and fine print.

The 1960s were pivotal in launching the plain-language movement in the legal community. The publication of David Mellinkoff's *The Language of the Law* "gave scholarly weight—and undeniable validity—to criticisms of legal writing, providing the intellectual foundation for the plain-language movement in law" [33, p. 47].

Consumer orientation and plain language. By the late 1960s, the Consumer Federation of America was established to advocate for consumers before the US Congress and federal regulatory agencies. It focused on matters that affected consumers' daily lives, including food and product safety, communications, energy, financial services, housing, insurance, privacy, and fraud. Consumer affairs departments became what Brobeck and Mayer called the "watchdogs and whistleblowers," helping citizens deal with confusing bureaucratic communications [34]. Consumers also found allies in social activists, such as Ralph Nader, an outspoken critic of big companies, and whose *Unsafe at Any Speed* forced General Motors to listen to the public [35]. Carl Felsenfeld and Alan Siegel—pioneers of writing legal contracts in plain English—put it this way: "the consumer movement began to break down the

facade of invincibility and superiority that American industry had built around itself" [36, p. 45].

A milestone for consumer communications was the passage of the federal Truth in Lending Act in 1968 [37]. It focused on making sure Americans understood the terms of credit or loans. In particular, it established disclosure requirements for consumer-credit agreements. Though the Act did not specifically call for plain-language disclosures (for example, about interest-rate ceilings), it did require that disclosures be "clear and conspicuous." As a result, some lenders began using plain-language strategies. For example, some bankers reconsidered the tone of their communications, shifting from an impersonal to a more personal tone—using "I" and "me" rather than "the undersigned" or "Borrower" and "you" and "yours" rather than "the Bank" [36, p. 28].

The Truth in Lending Act paved the way for other legislation directed toward helping consumers. Case in point: seven years later the Magnuson-Moss Warranty Act required companies to conspicuously disclose the terms and conditions of warranties for consumer products and write them in easily understood words [38]. Even so, the directive to be "clear and conspicuous" remained ambiguous for years, with little guidance on how "conspicuousness" was distinct from clarity. Eventually, guidance from Board of Governors of the Federal Reserve System suggested that disclosures were "clear" if they were "reasonably understandable," and "conspicuous" if they were "designed to call attention to the nature and significance of the information" [39, p. 2]. The guidance also suggested that institutions "use a typeface and type size that are easy to read— not smaller than 8 points, and that 12-point type generally meets the standard" [39, p. 3]. Industry groups vigorously opposed these guidelines as too costly to implement.

Citizens grow weary of horrible documents. During the late 1950s and early 1960s, public pressure to simplify documents such as contracts, forms, and instructions began to grow. The 1960s saw tremendous growth in the federal government, coupled with an increase in the amount of paperwork generated by its new programs. It was also a time when Americans grew increasingly skeptical about bureaucratic communications, causing reform-minded advocates, even from within government, to demand better. Government employees, such as John O'Hayre, who worked in the US Bureau of Land Management and wrote *Gobbledygook Has Gotta Go* [40], admonished his colleagues to stop writing in passive voice because

The reader just won't stay with you.... So if your sentences don't have enough life and vigor to move themselves along, the reader abandons them. [40, p. 62]

Rumblings of discontent like O'Hayre's laid the groundwork for more vigorous plain-language efforts from within government in decades to come.

From the early 1970s, the government began to respond to criticisms of poor communications directed to the public. The Nixon administration in 1972 took a stab at simplifying what has been called "Uncle Sam's Rule Book," the *Federal Register* [41, 42]. In 1974, Congress passed the US Pension Reform Act, which required all material about pensions to be written in plain language [43]. In 1976, the Consumer Leasing Act required landlords to explain accurately and in a clear and conspicuous manner issues such as the cost of rent and how a lease could be ended [44].

Plain language documents emerge in business. New York's Citibank introduced the first plainlanguage-promissory note for consumer-bank transactions in 1975. It had the effect of increasing awareness of plain language in business and legal communities more generally. Its success paved the way for New York to pass the first state statute that required plain language in consumer contracts. After Citibank redrafted its promissory note (and other forms and contracts), lawyers from the company found they spent less time in small-claims court trying to collect on bad debts. Citibank also found they spent less time answering consumers' questions about their forms and contracts. Citibank's redrafting of consumer contracts not only gave them instant prestige in the eyes of lawyers and the plain-language community, it also led to a substantial increase in their market share by improving consumer relations [45].

Another sector that showed improvement in the mid-1970s was the insurance industry. In 1974, the Nationwide Mutual Insurance Company put plain language into focus by simplifying two of its insurance policies [46]. And in 1975, Sentry Insurance introduced its Plain Talk Auto Policy. Sentry had drawn on research about what policyholders wanted from their insurance companies: easy-to-read policies. Sentry's consumer-friendly policy led it to be featured in a national television campaign [36, p. 46]. The same year an industry-advisory committee on auto-policy forms drafted guidelines for simplified policies. The St. Paul Fire and Marine Insurance Company became among the first large insurers to simplify their policies [46].

Problems of too much paperwork recognized in government. In 1976, the Paperwork Reduction Act was introduced. It was aimed at minimizing the burdens of duplication, time spent reporting, and cost of recordkeeping imposed by government rules and regulations. Although proposed in 1976, it would not be until 1979 that senators took seriously the need to reduce the avalanche of government paperwork that citizens and federal employees had to contend with. In a hearing before a Senate subcommittee on the "Paperwork and Redtape Reduction Act of 1979," Senator Lloyd Bentson explained the growing problem—especially with bureaucratic forms—this way:

Each of these reporting requirements, all of which have been approved by either OMB [the Office of Management and Budget] or GAO [the General Accounting Office] under the provisions of the Federal Reports Act, creates an average of ten separate forms— and the staff at the GAO reported finding one OMB-approved reporting requirement that actually created 90 separate forms. [47]

The Paperwork Reduction Act eventually passed in December of 1980 [22], amended in 1995, and updated in 1998 as the Government Paperwork Elimination Act. The changes established policies for electronic-data security and for making it easy to conduct business with federal agencies electronically.

President Jimmy Carter supports plain English. These early signs of support for plain language were crucial in making business and government more aware of the need for clear communications. But the US plain-language movement got its strongest support on March 23, 1978, when President Jimmy Carter issued Executive Order 12044, designed to make "federal regulations clearer, less

burdensome, and more cost effective" [48]. His order required that all major regulations be "as simple and clear as possible, written in plain English, and understandable to those who must comply with [them]" [48, Sec. 1].

Carter strives to cut red tape. The idea was to minimize the burdensome paper trail—called "redtape"—referring to the dense tangle of legal language that pervaded the design of most federal regulations and government forms. In addition to encouraging government to reduce its paperwork, Carter's executive order also mandated changes in forms design. Specifically, Executive Order 12174 required agencies "to keep forms as short as possible and [to] elicit information in a simple, straightforward fashion" [49, Section 1–101]. As a result of these executive orders, government agencies began to curb their practice of collecting more (and often redundant or useless) information from the public.

States begin to pass plain language laws. These executive orders also led to streamlining paperwork and redesigning government forms for Medicare, Medicaid, and the Internal Revenue Service. It also prompted state governments to follow the example of New York, which in 1977 became the first state to pass a "Plain Language Law." Spearheaded by its State Assembly Member, Peter M. Sullivan, New York drafted its own plain-language legislation for consumer contracts of \$50,000 or less [36]. The law specified that consumer contracts must be written in a clear and coherent manner and that they had to be appropriately divided and captioned [45]. In the years that followed, at least ten other states followed suit and adopted statutes that required plain English in consumer contracts; for a discussion, see Kimble [33, pp. 54–56].

In 1984, the *Michigan Bar Journal* began producing a monthly "Plain Language" column, and it went on to become the nation's longest-running legal-writing column [33, pp. 48–49]. Passage of plainlanguage laws also inspired some legal scholars to develop strategies for improving the clarity of laws, rules, regulations, and contracts. See, for example, the excellent work of Bryan Garner [50] and Joseph Kimble [51].

Plain language practitioners develop principles for writing. Between 1940 and the late 1970s, most plain-language practitioners emphasized rewriting texts by eliminating complex sentences, using the active voice, choosing concrete words, making sentences shorter, and replacing hard words with simpler ones. For the most part, they did not focus on discourse-level text features, such as text structure, cohesion, and coherence. They attended mainly to the face value or propositional meaning of sentences and overlooked the fact that texts communicate much more than their literal meaning. (Writing also communicates culture, persona, attitudes, power, and beliefs.)

Practitioners also tended not to pay attention to the visual display of the text and were largely oblivious to issues of layout, space, tables, drawings, and typography (though there were some notable exceptions). Generally speaking, plain-language principles assumed that meaning resided "in the text" and that a plain style would make any content easy to understand and use.

Research on how adults dealt with everyday texts (such as forms and instructions) was beginning to show that plain language needed to involve more than crafting clear sentences. A 1970 Louis Harris

study surveyed a cross section of the US population and their performance on several common application forms, such as a Medicaid form or an application for a driver's license. The Harris survey was one of the first to show that people had significant trouble with poorly designed forms, whether they were college graduates or people with an 8th-grade education [52].

Findings such as this one suggested that plain-language practitioners needed to consider the broader context of how people interact with public documents such as forms, rather than merely considering the language of the form. Practitioners needed education in information design: how writing and design work together as people engage with everyday texts.

Few methods beyond readability formulas for judging what is plain. While lawyers and government administrators in the 1970s were beginning to embrace the idea of plain language, they had few methods for evaluating the quality of their products. To judge whether they succeeded in making texts clear, practitioners employed readability formulas, such as the 1948 Flesch Reading-Ease formula or the 1968 Simple Measure of Gobbledygook (the SMOG formula) [27], [53]. The formulas (also called readability indexes or readability equations) were easy to use and seemed objective, leading to widespread acceptance across business and government. Organizations assumed that if a text scored well, it must be plain.

But achieving plain language isn't so simple. Readability formulas have been overrated as tools for gauging text quality. Because the formulas and their results are so frequently misunderstood and misapplied (even today), plain-language advocates needed to scrutinize their value by understanding how they work.

Case in point: How the Flesch reading-ease formula scores a text. Flesch concluded that the most important factors influencing readability were word and sentence length. According to his formula, the shorter the sentences are in the text and the fewer the number of polysyllabic words employed, the higher the readability score. The Flesch formula, like others, generates a numerical score that presumably correlates with a grade level required to understand it. Flesch matched the scores to grade levels by measuring the readability of texts written for specific grade levels.

Based on the American school system, the grade levels typically ranged from the 4th or 5th grade, (a very easy text) to the college-graduate level (a very difficult text). Scores are supposed to predict how hard a given text will be for a given audience who reads at a certain grade level. Table 1 shows these relationships for the Flesch formula. "Plain English" falls between a score of 60 and 70, roughly an 8th-to 9th-grade reading level. Flesch argued that texts must score a minimum of 60 to be considered plain, and that an optimal plain English score is 65, with the now defunct *Reader's Digest* as a prototype of plainness [54].

Table 1

Reading Ease Score	Reading-Grade Level (typical age)	Level of Difficulty	Typical Texts for Reading Level	
90–100	4 th to 5 th grade (age 9–11)	Very Easy	Comics	
80–90	6 th grade (age 11–12)	Easy	Ads, pulp fiction	
70–80	7 th grade (age 12–13)	Fairly Easy	Tabloids	
60–70	8 th to 9 th grade (age 13–15)	Plain English	Reader's Digest	
50–60	10 th to 12 th grade (age 15–18)	Fairly Difficult	Time, Newsweek	
30–50	College (age 18–22)	Difficult	New York Times, Harvard Law Review	
0–30	College graduate (age 22+)	Very Difficult	Insurance policy U.S. tax code	

How the Flesch Reading-Ease Formula Defines Plain English (adapted from Flesch 1979, 1981 [207], [54])

Threats to the validity of the Flesch formula. Flesch tested his formula on texts published in the 1940s, such as magazines and newspapers aimed at adults. But he developed the formula by calibrating it with passages from a 1926 standardized reading test for children in which students answered multiple-choice questions after reading a passage [55]. Flesch reported that reading-ease scores are clearly associated with comprehension, with a correlation coefficient of .70 on the 1926 test and .64 on a 1950 version of the same reading test [56]. On first glance, these correlations seem impressive (accounting for 49% and 41% of the variance respectively). However, using a fact-based, multiple-choice test for children to calibrate reading comprehension raised significant questions. Although indexing comprehension in this manner may have been standard in the 1940s, this strategy did not stand the test of time.

Spin-offs of the Flesch formula. In 1975 the US Navy funded educational-pioneer Peter Kincaid and his team to carry out a major research project [57]. Their mission: to recalculate the formula so its output was not a score from 0–100 (as with the Flesch score) but a grade level from 5–16. Both the US Navy and the US Army desired a simpler index because they had a significant problem: as many as 30 percent of new recruits entered the military reading below the 7th-grade-reading level [58]. They

planned to use the updated formula to screen all written materials to assure that new recruits would understand them.

The military also specified the use of criterion texts that were more like those personnel might use (e.g., reports about sea-wave operations, instructions about how to make temporary repairs to a hull, warnings about how to avoid fires). The new test, called the Flesch-Kincaid formula, was first applied by the Army to assess its technical manuals.

Problems with the Flesch-Kincaid readability formula. Although the US military had been optimistic about finding an easy way to index text difficulty, they found that readability formulas did not provide what they claimed to provide: an accurate measure of the reading-grade level of instructional texts. Richard Kern (from the US Army Research Institute) retested the 18 passages developed by Kincaid for the Navy [59]. He compared the readability scores of the 18 passages using the Flesch-Kincaid test (as well as four other formulas) to what military personnel actually understood. He found the five readability formulas assigned scores that varied widely for the same text, and importantly, did not match the reading levels of the passages, especially those passages for lower grade levels. The formulas' lack of accuracy led Kern to draw these conclusions in his report to the US Army:

- (1) Readability formulas cannot match material to readers at targeted grade levels.
- (2) Rewriting to lower the reading-grade level score does not increase comprehension.
- (3) Requiring that text be written to satisfy a targeted reading-grade level focuses attention on meeting the score requirement rather than on organizing the material to meet the reader's information needs [59, p. 1].

How readability formulas were used. Despite such limitations, proponents of readability formulas continued to use them as a guide for writing for the general public. Some organizations encouraged their authors to write at a target-grade level, but as Kern pointed out, that didn't necessarily lead to increased understanding. Practitioners across the public and private sectors were urged to strive for readability scores at the 7th- or 8th-grade level (i.e., for 12- or 13-year-olds) [60]. Although making texts easier to understand was a good idea, writers soon discovered it was relatively easy to write to the formula—effectively gaming the system with just a few textual revisions. Being able to reach the target score was construed as a benchmark of quality, even though it was something that could be achieved by replacing commas with periods to shorten sentences—hardly an index of good writing. Other research supported Kern's assessment that using readability formulas was counterproductive when employed as a target for good writing [61]–[63].

More limitations of readability formulas: Ignoring information design and counting text features inconsistently. The formulas have also been shown to be deficient because they do not assess information design—visual and verbal content that has been designed for clarity and accessibility. Readability formulas ignore characteristics of text design associated with clarity; for example, using titles, multiple levels of headings, bulleted lists, equations, tables, figures, and illustrations [64]. The formulas also fail to assess the effectiveness of typographic signaling, the use of white space, and other design elements [65].

Research suggests that obtaining a good score with a readability formula on one text does not mean that text will receive a good score using another. Zhou and his colleagues recently evaluated how well five different readability formulas agreed with one another in terms of the score they calculated [66]. They found the output of the five formulas differed in the scores they assigned for the same text (ranging from the 12th grade to the 15th). This variability in the output of readability tools limits both their predictive value and their usefulness in practical situations.

Although we might expect that different formulas would produce different results, we would not expect that running the same formula on the same text would lead to different results. But the score may depend on the software.

For example, in a case study, Watson analyzed the readability of Lincoln's Gettysburg Address using eight competing online-readability-testing tools, each calculating a Flesch-Reading Ease score and a Flesch-Kincaid grade level [67]. Watson found the eight tools generated Flesch scores that varied from 45 to 73.1 (that is, from difficult to fairly easy) and Flesch-Kincaid grade levels from 9.7 to 16.18 (that is, from high school to beyond college). The number of difficult or complex words (3 or more syllables) also fluctuated from 18 to 29. The various software tools that Watson used couldn't even agree on whether there were 10 or 11 sentences in the Gettysburg Address. Watson blamed an errant colon.

Zhou et al.'s research explored the variability question explicitly: asking why online-readability tools tend to be so unreliable. They compared five readability tools for calculating the Flesch-Kincaid test on 18 test passages. The result: average grade levels differed by as much as two grade levels—although the scores should have been identical. The researchers found that the inconsistent scores were linked to vague criteria regarding how readability tools defined syllables, words, and sentences. In particular, they identified problems in how the tools counted (or ignored) text features such as compound and hyphenated words, slashes, numbers, abbreviations, acronyms, URLs, digits, dates, contractions, colons, and semi-colons, as well as other punctuation and text elements [66, p. 108].

Zhou et al.'s research also suggests that the length of the text influences the readability score one gets. They found that online-readability tools are inconsistent in scoring long texts, but tend to be especially unreliable for short texts—that is, those with fewer than 500 words. The researchers point out that in texts with fewer words, "a single unusual text structure is more likely to lead to an unrepresentative score" [66, p. 108]. An important implication of this research is that online-readability tools are inappropriate for shorter texts: most letters, forms, and web content.

Zhou's findings about text length may help explain the variation in scores Watson saw: the Gettysburg Address is only 268 words. Watson's case highlighted the variability in the output of online tools, yet he concluded that the key is to choose one tool and use it consistently. However well intended this advice, it is inappropriate. Instead, users might view readability tools as providing quick benchmarks of word and sentence length, and move on to conduct reader-focused testing—with people actually engaging with the text and graphics to learn about how plain or usable their content is.

Practitioner skepticism over readability formulas. Over time, practitioner skepticism about using readability formulas deepened as authors came to realize the resulting scores failed to reflect a

communication's clarity, usability, usefulness, or accessibility. For example, the following two passages consist of the same words and sentences; notice how they are different.

Passage 1. The calls of the two sexes are very distinct. Learn to recognize this display, for it will help you to identify mated pairs and understand other interactions. Since there are no differences in their plumage, you must rely primarily on their differences in behavior. Sometimes when a pair fly overhead you will hear one call and then the other, and this will help you distinguish the two sounds. It is also valuable to be able to distinguish the sexes. A truly amazing part of the greeting ceremony is that the male and female alternate their calls in such a well-timed way that the whole performance sounds as if it were given by just one bird. If you are near a pair of Canada Geese during the breeding season, you are bound to witness a conspicuous greeting ceremony. The male's is low with two syllables: ahonk; the female's is higher, with usually only one syllable: hink. This is a series of visual and auditory displays given by a mated pair each time they meet after being apart.

Passage 2. If you are near a pair of Canada Geese during the breeding season, you are bound to witness a conspicuous greeting ceremony. This is a series of visual and auditory displays given by a mated pair each time they meet after being apart. Learn to recognize this display, for it will help you to identify mated pairs and understand other interactions. It is also valuable to be able to distinguish the sexes. Since there are no differences in their plumage, you must rely primarily on their differences in behavior. The calls of the two sexes are very distinct. The male's is low with two syllables: ahonk; the female's is higher, with usually only one syllable: hink. A truly amazing part of the greeting ceremony is that the male and female alternate their calls in such a well-timed way that the whole performance sounds as if it were given by just one bird. Sometimes when a pair fly overhead you will hear one call and then the other, and this will help you distinguish the two sounds.

The first paragraph is less cohesive and has a more difficult structure than the second (the original text). The first has the same sentences as the second, but in scrambled order. Poor structure makes it difficult to put the story together. Even so, the Flesch Reading-Ease formula assigns both paragraphs a score of 60.6, deeming the scrambled version plain English (see Fig. 2).

Scrambled Sentence	e Order	Original Sentence Order	
Readability Statistics		Readability Statistics	
Counts		Counts	
Words	176	Words	176
Characters	811	Characters	811
Paragraphs	1	Paragraphs	1
Sentences	9	Sentences	9
Averages		Averages	
Sentences per Paragraph	9.0	Sentences per Paragraph	
Words per Sentence	19.6	Words per Sentence	19.6
Characters per Word	4.5	Characters per Word	4.5
Readability		Readability	
Passive Sentences	11%	Passive Sentences	11%
Flesch Reading Ease	60.6	Flesch Reading Ease	60.6
Flesch-Kincaid Grade Level 9.1		Flesch-Kincaid Grade Level	9.1

Readability Results for Paragraph

Fig. 2. Readability analyses for the same passage: scrambled-sentence order and original-sentence order. Original from [68, p. 17].

Readability results such as these—that confuse instead of inform—led researchers to argue that a valid and reliable model of comprehension must account for much more than word and sentence length. Researchers shifted focus to explore issues such as reading skill, subject-matter knowledge, motivation for reading, genre being read, context for the reading, and purpose for reading. Uncovering the limitations of readability formulas helped the field broaden its perspective about what plain language entails and reconsider how to evaluate final products.

Contributions of readability formulas. Although the problems associated with relying on readability formulas are numerous, research into readability did make (and continues to make) an important contribution [69]. Recent research draws on advances in psycholinguistics and cognitive accounts of text processing to develop more valid reading indices. Newer formulas, such as Coh-Metrix, investigate factors such as textual cohesion, syntactic complexity, rhetorical organization, word frequency, and propositional density [70]–[73].

Practitioners of plain language have learned a number of lessons, even from traditional readability formulas. For example, poor-readability results prompted writers to avoid long or low-frequency words and to revise overly-complex sentences. Readability research reminded writers (and speakers) to choose high-frequency words because more people would readily understand them [74]. Bombarding audiences with low-frequency words could make people ignore or misinterpret their messages, or worse, simply stop reading or listening.

Practitioners understood that cryptic word choices combined with a heavily embedded syntax could derail comprehension, whether people were reading at school, reading in a second language, or reading at work. For example, Trudeau [75] surveyed 376 readers on their behaviors and feelings when they encountered words they did not understand in legal documents. Many people reported ignoring Latin words and legal terms they found too complicated. Trudeau pointed out that 40% of

respondents were annoyed by legalese, and this occurred whether the respondent held a law degree or less than a bachelor's degree. As Garner put it,

A lawyer should keep in mind that the purpose of communication is to communicate, and this can't be done if the reader doesn't understand the words used [76, p. 183].

If nothing else, readability formulas have made it clear that word choice matters.

From understanding to usability. Professional writers in the 1970s began to realize that when they judged a communication solely on the basis of a few text characteristics that could be counted, they ran the risk of assuming a text was plain when it was actually quite unclear. By the late 1970s the American plain-language movement would take a turn—expanding the question it began with, "Can people understand the words and sentences?" to ask, "Can people actually comprehend and use the whole communication for their intended purposes?"

Document Design Project launches empirical research. Between 1978 and 1981, the US National Institute of Education funded the Document Design Project. This was an extensive research effort shared by the American Institutes for Research (Washington, DC), Carnegie Mellon University (Pittsburgh, PA), and New York consulting firm Siegel+Gale. The Document Design Project launched ongoing work at both the American Institutes for Research (AIR) and Carnegie Mellon University (CMU).

AIR's Document Design Center (1979–1998; after 1995 called the Information Design Center) and CMU's Communication Design Center (1979–1990) were interdisciplinary groups of writers, linguists, cognitive psychologists, human factors professionals, instructional designers, graphic designers, and computer scientists dedicated to studying and ameliorating communication problems in government and industry. Both gained international recognition for excellence in plain language and document design work; for details, see [2]. The Document Design Project produced a textbook on plain writing [77], a book of guidelines [78], a review of the research [79], and many technical reports. In a recent history of information design discussing "notable clusters of energy" in the field, the Communications Design Center was called "a hotspot in Pittsburgh … an opportunistic venture … that produced more than 50 research reports" [80, pp. 152–153].

One study by the Document Design Project investigated regulations for the Federal Communications Commission. A team compared a set of original regulations to a plain language version. Researchers found that both people with and without experience using the original regulations did better with the plain language version. People found information faster, they answered more questions correctly, and they rated the new regulations as easier to use [81].

The late 1970s showed us that interdisciplinary research between the academy and business could be enormously productive, as the successful collaboration of the Document Design Project demonstrated. Both the Document Design Center at the American Institutes for Research and the Communications Design Center at Carnegie Mellon continued their research efforts in plain language and document design, and over the next decade actively disseminated that work to practitioners around the world.

Plain language in the US gains strength: 1980–1999

The momentum for plain language at the federal level declined significantly in 1981 when President Ronald Reagan rescinded Carter's Executive Orders 12044 and 12174 by signing Executive Order 12291 [82]. Reagan felt the emphasis should be on weighing the costs and benefits of regulatory actions rather than on improving the writing and design of regulations.

Even though support for plain language ebbed during the Reagan administration, some administrators in government agencies sustained their interest. Those administrators who believed that clearly designed documents saved the government time and money continued to simplify their documents, even under Reagan [83]. For example, the Social Security Administration made it a priority to design its documents more clearly by revising many of its letters to citizens who receive Social Security benefits. And in 1983 California mandated that all state documents be written in plain language.

Also in 1983, Clarity—an organization for lawyers got its start in England. Its goal: to oppose archaic, overly complex legal language and to promote plain legal language [84]. Members originally shared ideas through a newsletter. Over time, lawyers from around the world joined the crusade for clarity. The group went on to found *The Clarity Journal*, an international forum on clear legal language. (By 2015, Clarity had members in 50 countries and had sponsored a number of international conferences [85].)

Perhaps the best public spokesperson for plain language in the US during the Reagan administration was Secretary of Commerce Malcolm Baldrige. He encouraged the publication of twelve illustrative case studies: *How Plain English Works for Business* [86]. Baldrige recognized that writing in plain English was a challenge for both private and public sectors, but felt that organizations would respond to a business case for plain language. He argued that if businesses understood how plain English benefitted their bottom line, organizations would begin to realize how "clear, simple consumer documents pay off for business as well as for customers" and "save the public's time and money" [86, p. i].

Despite the chilly climate for plain language during the 1980s, important research was conducted during this period—research that would lend empirical support to practice and expand the definition of plain language to include document design. Research in the 1980s increased our understanding of the cognition of reading, writing, and designing texts. This period was marked by explorations not only of writing, but also by studies of the reader's side of the equation, particularly of reader-text interactions.

Researchers studied the cognition of understanding texts and why people engaged with texts. They explored, for example, issues of readers' prior knowledge, literacy level, motivation, culture, and feelings about the message (or the messenger)—asking how these factors influenced understanding and willingness to engage. Also during this period were studies of composing on a computer and how it differs from writing on paper, of how people deal with complex content when reading on computers, and of the role of technology and multimedia in mediating reading or writing. For a review of these trends, see [87].

As these examples illustrate, the 1980s helped the field realize how valuable research on reading could be [60], [88], [89].

Publications about plain language help grow the field. The 1990s were important for expanding the reach of plain language (and document design) activity. During the decade, a number of books, reports, anthologies, and special issues of journals were published [2], [52], [90]–[93]. One important contribution was Erwin Steinberg's 1991 anthology, *Plain Language: Principles and Practice,* which brought together plain language work from around the globe [93]. The book was one of the first to illustrate the growing pains of plain language work, of struggling to define the terrain of the field—its principles and practices. Steinberg, a professor of English from Carnegie Mellon University, taught one of the first technical writing courses in the country and was a strong advocate of a plain writing style; for details, see Janice (Ginny) Redish's tribute to his plain-language legacy [94].

Steinberg's collection showcased issues related to plain-language laws, which were beginning to be passed. For example, by 1992, 36 states had passed laws about plain language in insurance contracts [90, pp. 32–37]. State laws required insurance policies to be written in everyday language. In his 1992 *Charter for Clear Writing*, Joseph Kimble pointed out that the measure of plain language for insurance contracts in most states was a score of 40 to 50 on the Flesch readability test [90]. As we have seen, such scores mean Difficult or Fairly Difficult and do not account for many of the features that are needed to make a document truly plain.

In contrast to the readability-test focus of these insurance laws, the Steinberg anthology offered chapters on evaluating the *quality* of plain language. Authors explored, for example, how to employ think-aloud reading protocols to track peoples' real-time understanding as they engaged with complex documents [95].

Veterans Benefits Administration draws on research about readers to educate employees.

In the early 1990s, the Veterans Benefits Administration (of the US Department of Veterans Affairs) realized that many of their clients were unable to understand the letters they were sending out. Even Veterans Administration employees often couldn't interpret letters to veterans written by another department. To make matters worse, most letters went to veterans who were pensioners, many of whom had trouble with reading comprehension. In answer to this problem, in 1994 the Veterans Administration launched a project to evaluate, redesign, and test the effectiveness of its letters. The project—led by writing consultant Reva Daniel—made use of research on reading, cognitive psychology, document design, and psycholinguistics to guide subject-matter experts to rethink their communications with veterans.

The project involved forming collaborative teams to draw on the research and to redesign the letters. The teams then asked veterans to help them further improve their redesigns by participating in interviews and think-aloud paraphrase tests of the old and revised letters [96]. The result: veterans using the revised letters were able to paraphrase the content of the letters 85% of the time as compared to 37% for the old letters [97]. Because more veterans found the revised letters easy to understand, many fewer of them called the telephone-support number to ask questions. The Veterans Benefits Administration estimated saving as much as \$40,000 a year in reduced support calls for one

clear letter sent out nationwide; for details, see [33, pp. 108–111]. Later results of the testing investigated how well veterans understood the content. Again, the results were impressive, with comprehension scores ranging from 80–100% on the new-style letters.

The program of revising letters using feedback from veterans went on to be called "Reader-Focused Writing." The program grew out of a more rhetorical sense of plain language—including audience analysis, usability, as well as principles of clear writing and information design. Over the next few years, the Veterans Benefits Administration provided reader-focused video training for employees across the country. By 1996, the Reader-Focused Writing effort—led by the Melodee Mercer at the Veterans Administration and Susan Kleimann at the American Institutes for Research Information Design Center—had reached some 8,000 employees in 56 offices [98].

Federal employees organize to encourage plain language. While some federal employees such as those at the Veterans Benefits Administration—were conducting research on plain language, others were at the forefront of developing ideas about how to revise poorly written documents. In 1996, a group of federal employees began monthly meetings in Washington, DC. Their agenda: to spread the use of plain language within government agencies. This informal group called themselves PEN (Plain English Network) and took it upon themselves to help their fellow federal employees to communicate more effectively. In 2000, PEN changed its name to the Plain Language Action and Information Network, nicknamed PLAIN. Leaders of PLAIN offered onsite training in reader-based writing strategies to employees across the US government. Over the course of the next decade, PLAIN would train hundreds of federal employees in developing plain-language documents tailored to their unique worksites. They also established the website <u>http://www.plainlanguage.gov/</u>, a one-stop portal for plain language advice, resources, and examples. PLAIN still exists and still holds free monthly meetings for anyone in government who wants to develop their expertise in plain language.

President Bill Clinton spearheads plain language effort. In the mid-1990s the plain-language movement would again see a major government initiative coming from the executive office. In early 1996 President Bill Clinton issued Executive Order 12988, which declared (among other things) that agencies make every reasonable effort to ensure that regulations are presented in clear language [99].

In a 1998 executive memorandum entitled, "Plain Language in Government Writing," President Clinton promoted the "National Partnership for Reinventing Government" [100]. Clinton charged heads of executive departments and agencies with making government more responsive, accessible, and understandable to the public (by October 1). Clinton encouraged all federal employees to create easy-to-read documents by using, for example, common everyday words, personal pronouns, active voice, and short sentences; see [100].

Vice President Al Gore recognizes efforts of federal employees. Vice President Al Gore was so confident that plain language was good for the American citizenry that he coined the expression, "Plain language is a civil right." Indeed, Gore's efforts led many federal employees to embrace plain language, even though they had little funding to implement new strategies. The Vice President presented monthly "no gobbledygook" awards to federal workers who translated jargon into readable

language. Between 1998 and 2000, Gore gave out 22 awards. For an example, see the award presented to the Federal Emergency Management Agency [101].

Securities and Exchange Commission develops models for best practices. In October of 1998, the Securities and Exchange Commission (SEC) created plain-English guidelines for the design of mutual-fund prospectuses (documents that present key data to shareholders, such as fees and past performance). The idea was to standardize key design features to allow investors to efficiently compare different funds. The Code of Federal Regulations stipulated that companies must enhance the readability of prospectuses by using plain-English principles in the organization, language, and design of the inside front and outside back cover pages, the summary, and the risk factors section [102]. In particular, authors of prospectuses had to consider guidelines such as these:

- Write clear, concise sections, paragraphs, and sentences.
- Use descriptive headings and subheadings.
- Use definite concrete, everyday words.
- Use the active voice.
- Employ tabular presentations or itemized lists for complex material.
- Avoid legal jargon, highly technical terms, and multiple negatives.
- Include pictures, logos, charts, graphs, or other design elements so long as the design is not misleading and the required information is clear.
- Draw the graphs and charts to scale. Any information provided must not be misleading.

As shown, the guidelines include not only suggestions for the writing, but also for the use of visual elements, such as itemized lists, charts, and graphs. For details, see [103].

Perhaps the biggest plain language success story during this period came in 1998 when the SEC created *A Plain English Handbook* [104]. With its focus on creating clear financial disclosures, the handbook offered practical advice on composing documents visually and verbally. The idea was to make it easier for investors to make informed decisions. As business and finance leader Warren Buffett said in the handbook's preface:

When writing Berkshire Hathaway's annual report, I pretend that I'm talking to my sisters. I have no trouble picturing them: Though highly intelligent, they are not experts in accounting or finance. They will understand plain English, but jargon may puzzle them. My goal is simply to give them the information I would wish them to supply me if our positions were reversed. To succeed I don't need to be Shakespeare. I must, though, have a sincere desire to inform. [104, p. 2]

William Lutz, one of the handbook's collaborators, characterized taking responsibility for making information clear and accessible like this:

Underlying the advice was the idea of transparency and that people had a right to clear communications that affected their lives. We felt it was the responsibility of the writer to make the material clear and understandable, not the responsibility of the

reader to ferret out the meaning of a text. This was a radical idea at the time, especially among lawyers and accountants, who fought us every step of the way. (Personal communication, March 8, 2012)

To download the handbook: <u>http://www.sec.gov/news/extra/handbook.htm</u>.

Plain language builds momentum: 2000–2015

The 2000s started with a reminder of how important plain language and clear information design can be. In 2000, the nation witnessed the so-called "butterfly ballot" fiasco, in which some Florida voters cast ballots for a presidential candidate they did not support. The culprit? Ballots designed with a wicked combination of poor layout and atrocious typography; for details, see Lausen's *Design for Democracy* [105]. When the writing or design of information is unclear, it can lead even good readers to make mistakes or get confused [106]. But problems of information design almost always pose more difficulties for the least literate adults because they are burdened by the need to occupy working memory with decoding the printed language while they are also trying to figure out the document's meaning [107].

During the 2000s, plain-language initiatives at the executive level languished under the George W. Bush administration, though there was one exception. In 2003, the US Supreme Court approved Federal Rule 23(c)(2)(B), which required that class-action-settlement notices "clearly and concisely state in plain, easily understood language" the information about the nature and terms of a class action and how it might affect potential class members [108].

Government agencies advance plain-language initiatives. Even though there was little administrative support for plain language during the Bush era, some government agencies, consulting firms, and nonprofits continued to develop evidence-based principles and guidelines for communications. For example, see the 2003 *Research-Based Web Design and Usability Guidelines* from the US Department of Health and Human Services [109]. And while the Bush administration did not have a formal plan for supporting plain-language programs, several agencies had them, including the following:

- Federal Aviation Administration
- Veterans Benefits Administration
- US Citizenship and Immigration Service
- Food and Drug Administration
- National Institutes of Health

These federal agencies (and others) pushed ahead to develop their own plain language agendas. For example, in 2004, an interagency committee—consisting of representatives from the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Federal Trade Commission, the National Credit Union Administration, the Office of the Comptroller of the Currency, and the Securities and Exchange Commission—sponsored a project to improve the clarity of privacy notices from financial institutions. The goal: to develop a model "financial privacy notice" that would help consumers better understand what the notices meant and how their personal data could be used.

Over a two-year period, the group collaborated on developing a prototype privacy notice that was based on iterative testing with consumers [110]. By 2006, the prototype had proved effective in helping consumers comprehend the privacy notices, understand how their personal information was being used, and compare financial institutions' sharing practices. Most financial institutions now use the model privacy notice—developed on the basis of plain language, information design, and usability research.

State governors launch plain-language initiatives. During this period, plain language practitioners increasingly teamed up with information design and usability experts to create more effective communication products [111]. At the same time, governors of various states began taking their own action. For example, in March of 2005, the governor of Washington State, Christine Gregoire, signed the "Plain Talk" Executive Order 05-03 [112]. It stated that government communications such as letters, applications, and instructions must be written and designed so they can be easily understood. Gregoire's directive followed on the plain-language initiatives of her predecessor, Governor Gary Locke, who in 1997 had signed Executive Order 97-02 on Regulatory Improvement [113]. It introduced a set of plain-language criteria for reviewing the clarity of state rules that had significant effects on businesses, labor, consumers, and the environment.

In 2007, the governors of Florida and Oregon followed Washington State's lead. In Florida, Charlie Crist pushed a Plain-Language Initiative by issuing an executive order the day after he took office. He called for "short sentences written in active voice that make clear who is responsible for what" [114, p. 4]. In an interview with the Tampa Bay Times, Crist showed his empathy for citizens:

Government can be frustrating enough as it is, and so the opportunity to communicate in language that people can understand and appreciate is very important. When government officials speak to people in government jargon that is difficult to understand, it is not only not appreciated, I think it is unkind. [115]

Crist's order required that all public announcements, publications, and other documents sent out by his office or Florida's executive agencies be written in clear and concise language. What's more, Crist went beyond the usual "write short sentences in active voice" to say that documents must include the following:

Layout and design that help the reader understand the meaning on the first try (including adequate white space, bulleted lists, and helpful headings). [114, p. 4]

On May 7, 2007, the Oregon State legislative assembly passed House Bill 2702, which declared that agencies of state government conform to plain-language standards. The trend continued through the next decade, with the Governor of Minnesota in 2014 signing Executive Order 14-07, in which he ordered state agencies—among other things—"to present information in a format that is easy-to-find and easy-to-understand, and to clearly state directions and deadlines to the audience" [116].

Legal scholars publish arguments about plain language. The plain-language movement also made advances within the legal community more generally. During the 2000s, Joseph Kimble and

Bryan Garner wrote seminal books on legislative drafting, brief writing, and expository legal writing [50], [117]. Kimble's book *Lifting the Fog of Legalese: Essays on Plain Language* is now a classic [51]. In *Making Your Case,* former Supreme Court Justice Antonin Scalia and Brian Garner made a vigorous argument for clarity in both written and oral presentations:

Literary elegance, erudition, sophistication of expression—these and all other qualities must be sacrificed if they detract from clarity. [118, p. 107]

Calls for empirical research on plain language. During the 2000s, most practitioners recognized that plain language went beyond writing: it applied to oral and written, visual and verbal communications. Increasingly, advocates sought to assess the quality of their work and embraced the idea that usability testing was important, even if not always practical—seizing any opportunity to do testing and to share best practices [119].

As successful as some plain-language efforts had been, for example, in government agencies such as the Federal Aviation Administration (led by plain-language "pit bull" Annetta Cheek), advocates recognized the need to professionalize and establish standards for their work. They wanted to move beyond intuition and what worked yesterday. Communicators on-the-job realized that carrying out plain-language work in organizations (especially in large bureaucratic settings) called on the ability to marshal cogent arguments about the *why* of writing and design decisions. Practitioners recognized that being good at revising poor communications was a good start, but insufficient in mounting persuasive cases within bureaucracies that had a vested interest in maintaining the status quo.

Advocates needed to build support for their rhetorical strategies, establish their credibility, and demonstrate their work added value. Accomplishing these goals proved to be challenging because organizations tended to be ambivalent about the need for plain language and unwilling to fund benchmark studies that could demonstrate a return on investment. For a case study of the rhetoric of redesign in difficult bureaucratic settings, see [120]. As Etzkorn put it, "the reality is that government and business have a love/hate relationship with clarity" [121]. Fortunately, plain-language advocates from the legal community, such as Joseph Kimble, were assembling case studies providing evidence that plain language saves time and money [33].

To share their knowledge about solving typical problems of plain language and information design, practitioners organized conferences and online-discussion groups. They agreed that research could help them shift to evidence-based practice. They initially looked to empirical studies of writing and design, but found their interests were broader. Some also wanted to know about reading online, content management, business workflow analysis, instructional design, translation studies, or about how to shape communications for diverse audiences who were reading on screens (e.g., laptops, e-readers, or smartphones).

Most practitioners were eager to learn about inclusive design—so they could develop their web content to be accessible for people with auditory, cognitive, neurological, physical, speech, or visual impairments [122]–[124]. Increasingly, they acknowledged the importance of gaining insight into the interplay of cognition, motivation, and affect [125]. They knew that many communications, even plain

ones, were not being read and wanted to know more about what drives people to read or not to read [126].

As a consequence, the international plain language community called for grounding plain-language activity in research. But doing so has been difficult. Although there is a large corpus of empirical research relevant to plain language, this work is scattered over many disciplines and has not been synthesized or critiqued from the perspective of professionals in writing and visual design [127].

Advocates form the Center for Plain Language. In late 2003, plain-language pioneers Annetta Cheek, Janice (Ginny) Redish, Susan Kleimann, Joseph Kimble, Joanne Locke, John Strylowski, and Melodee Mercer formed the nonprofit organization, the Center for Plain Language. Its mission: to champion plain language in government and industry and to educate the US Congress about the importance of plain-language legislation; see http://centerforplainlanguage.org/. In the 14 years since its founding, members of the Center have helped many government agencies and businesses create a culture of clarity—encouraging organizations to strive for clear communication for every audience in every format every time [128]. By talking directly with members of the US Congress about the need for laws and regulations that include requirements for plain language, the Center for Plain Language helps legislators form more accurate ideas about implementing plain language, about why it makes good economic sense, and about the growing body of empirical research that supports it.

SEC creates Information Design Handbook. Despite the lack of executive support for plain language during most of the decade, there were some striking success stories toward its end. For example, the Securities and Exchange Commission in 2008 (under the direction of Chairman Christopher Cox) kicked off an ambitious effort to improve the quality of information for investors; see [129]. This effort followed on the SEC's 1998 *Plain English Handbook* [104]. Chairman Cox drew on the expertise of plain-language champion William Lutz to lead an internal study known as the 21st Century Disclosure Initiative. Lutz had helped on the SEC's first handbook and its 2006 update, *An Information Design Handbook: Creating Clear Financial Disclosure Documents*, which demonstrated how good writing and information design can lead to excellent financial documents [130].

President Barack Obama promotes transparency in government. In 2009, President Barack Obama took office with the promise of transparency in government. The same year, the Credit Card Act of 2009 required credit card companies to explain their agreements, including interest rates and penalties in plain language [131]. Revisions were also made to the federal requirements for documents related to real-estate settlements, health insurance, and employee-retirement income. And many states were making their own plain-language reforms—for example, by rewriting their instructions for jurors or redesigning their ballots for voting. For studies of ballot design, see [107] and [132].

US Congress backs plain-language legislation. The Obama administration's support of clear communication led some members of the US Congress to rekindle their work in promoting plain-language legislation and in banishing bureaucratic lingo from government documents. In particular, Representative Bruce Braley (Democrat from Iowa) and Senator Daniel Akaka (Democrat from Hawaii)

restarted earlier efforts to pass a plain-language bill. Both had attempted to get Congress to approve such legislation prior to Obama's 2009 win.

In 2007, Representative Braley rallied fellow representatives to vote on his bill, the "Plain Language in Government Communications Act of 2007"—arguing that the time was right for federal support of clear communication [133]. Bipartisan support of the bill pushed the US House to pass it with an overwhelming margin of 376 (yeas) to 1 (nay) [134]. Also in 2007, Senator Daniel Akaka (Democrat from Hawaii) introduced a companion bill in the Senate. Despite Democratic and Republican support for the Senate version of the bill, it did not pass. Senator Robert Bennett (Republican from Utah) stalled the bill by placing a hold on it (an informal practice by which a senator informs the chief Senate spokesperson that he or she does not wish a particular bill to reach the floor for consideration), and the 110th Congress never voted on it again. For details of the legislative history, see [135] and [136].

Although some members of Congress remained unconvinced of the need for plain-language legislation, on February 10, 2009, Representative Braley reintroduced a modified version of the bill to the 111th Congress. It was called the Plain Language Act of 2009 (H.R. 946) [137]. The House amended the bill as the "plain writing act" rather than the "plain language act". Senator Daniel Akaka and George Voinovich (Republican from Ohio) proposed a companion plain writing bill in the Senate on March 11, 2009. Braley's version had described plain writing in this way:

Writing that the intended audience can readily understand and use because that writing is clear, concise, well organized, and follows the best practices of plain writing. [137]

After months of wrangling, the Senate omitted the premise about readers needing to understand and use the writing. The Senate defined plain writing as follows:

Writing that is clear, concise, well organized, and follows other best practices appropriate to the subject or field and intended audience. [138]

On September 27, 2010, the Plain Writing Act of 2010 passed the Senate by unanimous consent, paving the way for signature by the President [139], [140]. The vote put Braley's agenda into focus: to show business and government why plain language was an idea whose time had come—not only because plain speaking is the appropriate way to communicate with citizens, but also because it saves the government effort, time, and money. For examples of how plain language improves customer satisfaction and an organization's bottom line, see [33], [86], and [141].

Wall-Street meltdown stimulates plain-language reforms. In 2010, under pressure from citizens who had lost their homes because of foreclosure—which in 2008 had gone up a record 81% over the previous year [142]—the US Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act. It was signed by President Obama on July 21, 2010 [143]. This legislation— commonly referred to as Dodd-Frank—focused on protecting consumers from unethical practices by banks and other financial institutions deemed "too big to fail" [144]. Among many things, Dodd-Frank required that disclosures about the terms of home-mortgage loans be written in plain language and validated through consumer testing [143, sec. 1032]. The goal was that consumers shopping for a mortgage loan could get all the facts before they signed. For example, Bank of America introduced its

Clarity Commitment—a one-page loan summary that presented the borrower's mortgage rate, terms, closing costs, and details of the loan in plain language [145].

Dodd-Frank Act mandates testing with citizens. The inclusion of consumer testing in the Dodd-Frank Act represented an important step forward in assessing the quality of financial disclosures. The idea of testing how citizens understood the disclosures stood in stark contrast to document-assessment procedures employed, for example, in the insurance industry, which—even in 2017—evaluated most consumer contracts and insurance policies using the 1948 Flesch Reading-Ease Scale.

Amy Friend—chief counsel of the Senate Banking Committee under Senator Chris Dodd—played a key role in drafting the Dodd-Frank Act [146] and its inclusion of testing. She had collaborated in developing the model Financial Privacy Notice (between 2004 and 2006) and understood that testing the disclosures with citizens was relevant to their success.

President Barack Obama signs Plain Writing Act of 2010. As important as the Dodd-Frank Act was for consumers, the most important piece of plain-language legislation would come on October 13, 2010, when President Barack Obama signed the Plain Writing Act of 2010 into law [147]. The Act gave federal agencies one year to begin designing their new documents (or those substantially revised) using plain language. Documents included paper and electronic letters, publications, forms, notices, and instructions. (It did not include government regulations.) The purpose of the Act:

To improve the effectiveness and accountability of Federal agencies to the public by promoting clear Government communications that the public can understand and use. [147]

As we can see, the government acknowledged both comprehensibility and usability. At the same time, the Act defined plain writing as that which is "clear, concise, well organized, and follows other best practices appropriate to the subject or field and intended audience" [147]. Agencies were advised to follow the writing guidelines developed by the government-advocacy group, the Plain Language Action and Information Network [148]. Agencies were also asked to publish a report on their website in which they described their plan for compliance with the Act. For details, see [147].

Consumer Financial Protection Bureau (CFPB) formed. The financial crisis and crippled economy of the late 2000s led Congress to develop new ideas about reforming the practices of the banking industry and about the need for stronger consumer protections. The most notable change related to the Wall-Street reform was the formation of a new watchdog agency, the CFPB, on July 21, 2011. Under the guidance of Harvard Law School professor Elizabeth Warren (appointed by the President as a special advisor to set up the new agency) and Richard Cordray, the CFPB's first formal director (still serving in 2017), the CFPB provided oversight on banks, credit unions, and other financial companies on a range of their products—from mortgage applications to credit card agreements—making sure that Americans got a fair deal [149].

"Know Before You Owe" campaign launched. Despite efforts by some members of Congress to derail and defund the agency, the new bureau set ambitious goals for itself, with the impetus of the Dodd-Frank Act. Under the banner, "Know Before You Owe," the CFPB launched a campaign to help consumers understand their mortgage-loan options, shop for a mortgage that was best for them, and

avoid costly surprises at closing. The Dodd-Frank Act mandated that the CFPB "prohibit and enforce against unfair, deceptive, or abusive acts of practices (called UDAAP)" [150, p. 37].

The Act also directed that disclosures for loan applications and loan closings be made simpler. The goal: to combine the disclosures required by the Truth-in-Lending Act (TILA) and the Real Estate Settlement Procedures Act (RESPA). The agenda was summed up in this mouthful: TILA-RESPA Integrated Disclosures or TRID.

To help consumers understand the terms of their loans, the CFPB funded a major project between 2011 and 2014 to develop the TRID by testing the quality of the many forms associated with getting a mortgage [151]. The goal was to get a detailed picture of how consumers as well as lenders, mortgage brokers, and settlement agents understood and used the forms. The project was unique in that it tested the forms with both consumers and industry experts. The results of extensive consumer testing provided both valuable insights about the visual and verbal content people needed and ideas about optional prototype designs for the new disclosures. The CFPB posted the prototypes on its website so the public could look them over and make comments.

Under the direction of plain-language warriors Susan Kleimann and Barbra Kinglsey, the prototype revisions were evaluated with both English- and Spanish-speaking consumers. The disclosures went through ten rounds of empirical testing with English speakers and seven additional rounds with Spanish speakers. The final forms, co-developed with the CFPB, showed a marked improvement over the originals in making the disclosures easier to comprehend and use [152]. To view the befores and afters, see [153].

In February of 2012, the CFPB also published a prototype credit-card agreement that spelled out the terms for the consumer in simple language; see [154]. This prototype was developed in connection with fulfilling some of the requirements of the Credit Card Act of 2009, which mandated that credit card companies explain their agreements in plain language, including interest-rate policies and penalties [131].

Even with its early successes, the road ahead for the Consumer Financial Protection Bureau remains bumpy, mainly because the bureau lacks support from some members of Congress. That said, the Consumer Financial Protection Bureau "Know Before You Owe" campaign stands as a fine example of how clear writing and design can provide useful information while simultaneously helping to rebuild public trust in government.

Plain Writing Act goes into effect. The Plain Writing Act of 2010 went into effect in October of 2011. Once it did so, many US government agencies participated in workshops about developing plain-language solutions while others moved ahead with full-scale initiatives. For examples, see [155].

Between 2011 and 2015, American advocates for plain language (both inside and outside of government) continued to collaborate with like-minded colleagues from around the world on e-forums, such as the listserv hosted by PLAIN (<u>http://plainlanguagenetwork.org/</u>) or the LinkedIn discussion group, Plain Language Association International, started by Canadian plain-language pioneer Cheryl Stephens. These forums have provided a useful way for advocates to share best

practices and wrangle over issues. By 2017, the LinkedIn group had over 18,000 members.

US Congress introduces legislation for plain federal regulations. Although the Plain Writing Act of 2010 gave Federal Agencies one year to use plain writing in all new documents (or those that underwent substantive revision), the act did not cover the many regulations enforced by government. Not covered were regulations concerning everything from the IRS tax code to fuel efficiency standards to chicken farming to the number of hours an airline pilot is allowed to spend in the air [156]. As a first step in changing the baroque regulations that dominate government, President Barack Obama on January 18, 2011, issued Executive Order 13563, "Improving Regulations and Regulatory Review." It stated that regulations must be "accessible, consistent, written in plain language, and easy to understand" [157]. In an executive memorandum a year later, Obama specified that lengthy or complex regulations should include executive summaries written in plain English [158].

In January of 2012, Representative Bruce Braley continued his fight for plain language by proposing a new Plain Regulations Act of 2012 (H.R. 3786) [159]. As Braley put it, "you shouldn't need an accountant or lawyer to explain every regulation that impacts your business" [160]. His goal: to require all new and updated regulations to be written in clear, simple, easy-to-understand language.

Similarly, in April of 2013, Senator Claire McCaskill (Democrat from Missouri) introduced the Plain Writing Act for Regulations of 2013 (S. 807) [161]. The act would have required authors of federal regulations to use language that is clear, concise, and well organized. Said McCaskill:

Accountability in government shouldn't require folks to have to navigate the weeds of bureaucracy in order to get the most basic information. The bill is a simple way to lose the jargon and shine more sunlight on our democracy, as well as better hold government officials accountable. [162]

Unfortunately, Braley and McCaskill's call for plain language regulations went unheeded. What remained: the President's mandate to include straightforward executive summaries. That a plain-regulations act failed was regrettable because its passage would have helped businesses comply with the law without the burden of hiring professionals to translate the law into common language. And since plain regulations would have had a clear text structure, they would have been easier for policy makers to interpret and review, making litigation over alternative interpretations of regulations less likely. But as the *Boston Globe* pointed out, this will only happen if policy makers actually agree on what they are trying to say in a regulation [156]. Still—as Joseph Kimble concluded, "Everybody who is affected by regulations has a right to understand what they're being told to do or not to do" [156].

From understanding content to usability of content to trust in content

As we have seen, American plain-language advocates in the 2010s were very concerned with how their work could help organizations combat the erosion of public trust that had occurred over the previous several decades. Advocates continued to worry over their old questions, ("Can people

understand the content?" "Can people actually use the content?"), but now they also asked, "Will people believe the content? Do they trust the message? Do they think the messenger is honest?"

Federal Trade Commission (FTC) stresses honesty in design. Plain-language advocates were not the only ones emphasizing the importance of honesty and ethics in paper and digital communications [8]. In 2013, the FTC updated its 2000 DotCom Disclosure guidelines for online advertising to include mobile ads [163]. The FTC told advertisers that if a disclosure is needed to prevent a claim from being deceptive or unfair, it must be clear and conspicuous. Marketers were advised to avoid the practice of using hyperlinks, for example, to disclose details about health and safety. The FTC instructed marketers to tell the truth and don't mislead [163, pp. 1–2]. The FTC specified "clear and conspicuous" using the mnemonic of "the 4Ps" of making a good disclosure: placement (put the disclosure where consumers are likely to look, not in small type at the bottom of a page or screen); proximity (put the disclosure close to the claim it modifies and don't make users scroll or zoom to see it); and presentation (make the language easily understood and don't bury it in a dense block of legalese in all-caps; make it "unavoidable" that consumers see disclosures before they can proceed) [163], [164].

Even with these guidelines, some advertisers claimed they did not understand the requirements for disclosures. The FTC's response:

Really? Really? Advertisers' stock in trade is the ability to use the tools at their fingertips—texts, sound, visuals, contrast, or color, to name a few—to convey information effectively. [164]

To broaden the argument, the FTC put it this way:

Clear and conspicuous is a performance standard, not a font size. A disclosure is clear and conspicuous if consumers notice it, read it, and understand it. [164]

Sounds strikingly similar to our modern view of plain language and information design.

Plain-language advocates consider affective aspects of design. The increased attention to trust in public communications led plain-language practitioners to take seriously the idea that people's feelings about the message (and the messenger) matter. They recognized that the public's sense of an organization's persona influences their willingness to engage with its content. For example, in a study of teenagers interpreting drug-prevention literature, my colleagues and I found that teens understood plain-language texts directed at them, but because the text's persona made teens feel "talked down to," they rejected messages they understood and made fun of the presumed authors [2]. Another study showed that retired college professors who read poorly-designed-financial advice became confused and frustrated with the information because it assumed a knowledge of finance they did not have [165]. Findings such as these prompted advocates to expand their concerns—from understanding the cognition of comprehending and using texts—to considering affective aspects of texts, especially voice, persona, and tone.

Legal-writing advocates stress storytelling. Advocates also grew more interested in how good writing could help people make better decisions. For example, in a discussion of what makes for good legal writing, Osbeck takes the reader's perspective instead of the lawyer's: the legal reader's purpose is one of extracting information that will facilitate the reader's decision-making [166, p. 15]. But getting the facts straight to facilitate good decision-making is not the only challenge faced by legal writers (or technical communicators for that matter). They must tell a story in ways that engage the reader.

Osbeck contends that legal writers are also storytellers—deciding which facts to include, which facts to emphasize, and how to arrange those facts. The way the writer tells the client's story plays an important role in determining whether the text will connect with the professional reader at an emotional level [166, p. 47]. Osbeck argues that good legal writing is clear, concise, and it engages the expert reader by projecting a sense of the writer's voice; that is, language expressed in a way that allows professional readers to imagine a real legal mind at work, the person behind the document [166, p. 39]. When legal texts are clear, judges and lawyers prefer them to legalese [51], [91], [118], [167].

Advocates expand interests to diverse expert and novice audiences. By the late 2000s, advocates from many fields—legal writing, health literacy, translation studies, education—elaborated their vision of plain-language practice: from clarity to usability to believability. With this broadening of scope came a richer sense of the diverse audiences for plain language—from young people to the elderly, from those with good eyesight to those who are colorblind or visually impaired, from those who are culturally and linguistically similar to the authors to those with different cultural and linguistic traditions. Advocates continued to empathize with audiences who had trouble with literacy (or who read English as a second language). See, for example, *The Times in Plain English*, a weekly wrap-up of major news stories in easy-to-understand prose (or audio), with the option of on-the-spot machine translation of stories [168].

Advocates also concentrated on making lengthy scientific texts more accessible (and searchable) for experts reading in various domains, such as engineering. See, for example, the National Academies of Sciences, Engineering, and Medicine website for its helpful "chapter skim interface," enabling readers to preview large bodies of content with ease [169]. Practitioners in the late 2000s were concerned not only with experts and novices' initial encounter with an organization's content, but also with their interactions over time, with their journey—trying to lighten the load along the way and engender a positive experience at each touch-point with the organization.

Organizations may need a push before recognizing benefits of plain language. Plain language has been gaining momentum as more organizations recognize the important social and economic benefits of speaking clearly and honestly. Still, as we have seen, organizations often need a push before making a change.

Heath insurers urged to get user-friendly. In February of 2012, US Health and Human Services Secretary, Kathleen Sebelius, announced that health insurers would be required to provide consumers with clear, consistent, and comparable summary information about their health plans [170]. The goal:

to emulate the clarity of the "nutrition facts" labels found on food packages. By late September 2012, the Plain Language in Health Insurance Act went into effect as part of the Affordable Care Act [171]. It required health insurers to provide user-friendly guides explaining their plans, including a plain language "summary of benefits and coverage" and a uniform glossary, explaining terms such as "copayment"; see [172]. The idea was that with all companies using the same form, consumers—including individuals with limited English proficiency—could readily compare health plans and benefits for common medical situations [171, p. 122].

Although standardizing such information sounds trivial, it has never been the case that consumers could make such apple-to-apple comparisons about health insurance without significant personal effort and irritation. In 2011, the Consumers Union carried out a study to evaluate whether the new "summaries of benefits and coverage" might help or confuse consumers [173]. In 2015, the National Association of Insurance Commissioners ran a follow-up study with the revised summary of benefits and coverage, along with an updated "uniform glossary" of health terms. Among many things, the 2015 study found that consumers benefitted from the inclusion of a glossary for health terms they didn't understand (e.g., network, level, tiers, coinsurance) [174]. They also report:

There was a saturation point for consumers in terms of the amount of technical insurance information they can absorb and more importantly, comprehend and apply. When text boxes are long and full of complex terms, consumers will avoid reading the information in its entirety. [174, p. 2]

Not surprisingly, insurance companies balked at the requirement, arguing it would raise costs [175].

Health-literacy community embraces plain language. While some parts of the healthcare industry were reluctant to consider plan language, many health-literacy experts took the opposite stance. They took seriously the mission of changing the face of public information about health and wellness. Between 2000 and 2015, the field of health literacy grew stronger, in part, because key members of the community embraced plain language. For example, in the mid-2000s, the US Department of Health and Human Services took a plain-language approach to health information in healthfinder.gov. After redesigning its website based on feedback from hundreds of people whose literacy skills were limited, the redesign won the Center for Plain Language 2010 ClearMark Award for best public-sector website [176].

In another 2010 initiative, the Office of Disease Prevention and Health Promotion (at the US Department of Health and Human Services) continued its mission to improve the health of Americans with its HealthyPeople 2020 campaign and website (Dec. 2). The website provided plain-language infographics and interactive-data tools—to understand, for example, how health disparities are closely linked to social, economic, or environmental disadvantages [177].

Throughout the decade, the US Department of Health and Human Services promoted its evidencebased best practices in plain language. It developed and curated a wide range of resources, health literacy tools, and decision aids [177]. In 2015, it created an easy-to-use guide to inform the design of health websites and digital-literacy tools [178]. Also that year, the Centers for Disease Control and Prevention released plain-language advice for federal employees and contractors writing for the public in *Everyday Words for Public Health Communication* [179].

Center for Plain Language gives government efforts a grade. Clearly, plain language in the US has gained momentum in many contexts, but government agencies and the industries reporting to them (such as the insurance industry) still have a long way to go. The Washington Post suggests that with no penalty for inaction, plain writing, like many unfunded mandates imposed by Congress, may fall to the bottom of the to-do list [180]; see also [136]. Fortunately, since 2012, the Center for Plain Language has sponsored an annual "Federal Plain Language Report Card," which serves as a way to publicize how well—or poorly—government agencies comply with the Plain Writing Act of 2010. For example, in the 2015 report card, the Center for Plain Language gave the Department of Defense a grade of C+ and the Department of State a grade of C, based on their adherence to the Act. By 2016, both had greatly improved, with the Department of Defense receiving an A- and the Department of State receiving an A; see [181]. We can conclude that government departments, like most of us, hate getting bad grades.

Of course, government agencies are not the only ones who could benefit from being graded. Business leaders, academics, engineers, scientists, doctors, teachers, technologists all need plain language both to avoid what cognitive linguist Steven Pinker has called the "curse of knowledge" [182] and to circumvent being ignored, misunderstood, misrepresented, or viewed with suspicion [183].

As organizations grow to recognize that communicating in plain language can be both a wise ethical choice [8] and good for business, more will be likely to leave their fine print behind. And as advocates get better at articulating the value of clear communications, more organizations will draw on the growing empirical evidence that plain language works for everyone [184]. Many government agencies and corporations are already realizing the advantages of communicating more effectively and are eager to showcase their plain-language activity; see [177], [179], [185]–[189]. Some are sharing their "befores" and "afters" by participating in the annual ClearMark Awards for best plain-language work [176]. And the Center for Plain Language, which sponsors the awards, recently invited Spanish-language entries—enabling more culturally diverse work to be rewarded.

As we have seen, some organizations still need a push before they consider plain language. One of the founders of the Center for Plain Language, Annetta Cheek, put it this way, "what is needed is a major cultural change" [190]. Fortunately, over the past 75 years that cultural change has been happening, and the momentum for plain language in the US is likely to continue.

Plain Language Develops Roots: 1940–1979

1940s

- 1942 Congress passed the Federal Reports Act, with the goal of cutting paperwork and excessive complexity imposed by government on business (such as asking the same question on multiple forms) [19].
- 1944 Maury Maverick coined the word "gobbledygook" to describe impenetrable, bureaucratic jargon [21].
- 1944 Irving Lorge developed one of the early readability formulas, the Lorge Index [25].
- 1945 World War II ended and the GI bill was passed. Americans clamored for consumer goods and services denied during the war, many of which came with hard-to-understand policies and procedures. The popularity of *Consumer Reports* increased [191].
- 1946 In "Politics and the English Language," George Orwell railed against slovenliness in using the English language, which makes it easier to manipulate public opinion [23].
- 1946 Rudolph Flesch published *The Art of Plain Talk,* which became a bestseller [24].
- 1948 Edgar Dale and Jeanne Chall created the Dale-Chall readability formula [26].
- 1948 Rudolph Flesch created his Flesch Reading-Ease readability formula, later made part of MS Word [27].
- 1949 George Kingsley Zipf's research found that people tend to use and prefer shorter over longer words. Zipf found an inverse correlation between word length and word

frequency. The more frequent the word, the shorter it was [29].

 1949 Rudolph Flesch published the first edition of *The Art of Readable Writing*, which became a landmark on clear writing and readability [28].

1950s

- 1950s Reading researchers explored what made texts difficult to understand, a project started in the 1890s.
- 1951 A group of lawyers concerned with excellence in legal writing formed Scribes, the American Society of Legal Writers. In 1990, the group started *The Scribes Journal of Legal Writing*, which has gone on to publish many articles on plain language. Scribes also gives out annual awards for excellent legal writing [192].
- 1952 Robert Gunning generated a new readability formula, the Fog Index [193].
- 1953 Stuart Chase published The Power of Words, urging Americans to challenge advertising that was manipulative and deceptive [30].
- 1953 Wilson Taylor developed the Cloze procedure, a "fill-in-theblanks" readability measure in which every 5th word of the text is deleted. Readers use clues from the textual context to guess the missing words [194].
- 1955 The "Why Johnny Can't Read" debate began in the popular press, bringing with it frequent exposés of illiteracy across the U.S. and the need for simple texts for the general public [195].
- 1956 George Miller studied human working memory in "The Magic Number Seven, Plus or Minus

Two: Some Limits on Our Capacity for Processing Information." His research would influence how writers and designers considered organizing and grouping content to avoid cognitive overload [196].

- 1958 The proposal emerged as an important genre within organizations. During the late 1950s and 1960s, industry spent more than \$1 billion per year on proposals, creating demand for proposal writers whose prose was clear and compelling [197, p. 346].
- 1959 Credit cards began giving cardholders a choice to pay off their balance or maintain a balance and pay a finance charge, leading to the emergence of confusing credit-card agreements [32].
- 1959 The first edition of Strunk & White's *Elements of Style* was published, emphasizing clarity and simplicity. It served as a practical reference for many decades [31].

1960s

- 1960s Readability studies proliferated as researchers tried to make sure that textbooks were written for the age and reading level of students, whether they were children, young adults, college students, or military personnel.
- 1963 Miles Tinker published the Legibility of Print, bringing together his early studies about what makes typography readable [198].
- 1963 In *The Language of the Law* David Mellinkoff concluded that legal language had a tendency to be wordy, unclear, pompous, and dull [199].
- 1966 John O'Hayre, an employee of the Bureau of Land Management, wrote a book called

Gobbledygook Has Gotta Go [40].

- 1968 John Bormuth advanced ideas about readability by testing ways to improve the Cloze test [200] (see 1953).
- 1968 Congress passed the Truth in Lending Act, requiring disclosures in consumer-credit agreements to be clear and conspicuous [37]. It was a major milestone in consumer communications.
- 1968 G. Harry McLaughlin developed the Simple Measure of Gobbledygook: the (SMOG) formula [53].

1970s

- 1970s Plain-language advocates developed principles for clear writing, which focused mainly on crafting good sentences in English.
- 1970s Plain-language advocates drew on research on legibility to help them make choices about typefaces and type styles.
- 1972 President Richard Nixon ordered that the *Federal Register* be written in "laymen's terms" [41].
- 1974 Congress established a Commission on Federal Paperwork. One finding was that government should rewrite its documents in clear language and understandable formats.
- 1974 U.S. Pension Reform Act passed, also called the Employee Retirement Income Security Act (ERISA). It required organizations to disclose the financial details of pension plans in ways that average plan participants and beneficiaries could understand.
- 1974 The 25th anniversary edition of The Art of Readable Writing, with the Flesch Readability Formula, was published [56].

 — 1974 George Klare summarized the findings about readability and readability formulas, focusing on the strengths and limitations of the approach and the formulas [201].

- 1974 The National Council of Teachers of English published its first issue of the *Public Double-speak Newsletter*, a precursor to the *Quarterly Review of Doublespeak*, edited by William Lutz until 1995 [202].
- 1974 The Equal Credit Opportunity Act and the Fair Credit Billing Act were enacted, leading some financial institutions to reconsider the design of their forms.
- 1974 The Nationwide Mutual Insurance Company put plain language into focus within private industry by simplifying two of its insurance policies [46].
- 1975 New York's Citibank simplified its forms and introduced the first plain-language-promissory note for consumer-bank transactions. This pioneeringsimplification project led other organizations to adopt a plain-language approach and inspired the first state statute requiring plain language in consumer contracts [45].
- 1975 The Magnuson-Moss Warranty Act required companies to conspicuously disclose the terms and conditions of warranties for consumer products and write them in easily understood words. It reinforced the distinction between consumer and commercial contracts [38], [36, p. 32]. It was updated in 2015 to include E-warranties.

 — 1975 Peter Kincaid and his U.S. Navy team developed the Flesch-Kincaid readability formula [57].

 — 1975 An industry advisory committee on auto-policy-forms simplification drafted guidelines for simplified policies. The St. Paul Fire and Marine Insurance Company became one of the first large insurers to simplify its policies [46].

- 1976 Groundwork for the Paperwork Reduction Act was laid, though it would take four years to pass. It was designed to minimize the paperwork burden imposed by the federal government on individuals, federal employees, and public- and private-sector organizations.
- 1977 New York became the first state to pass a "Plain English Law" for consumer contracts (Aug. 5; amended 1978). Other states soon followed suit [36].

— 1977 The Federal Communications Commission issued rules for Citizens Band Radios that were written in plain English, making them the first U.S. regulations written in plain language [81].

- 1977 The New York Times reported that on an average day, the U.S. government printed about 1-million words of regulations and notices in the Federal Register. The quantity of text led some in government to value concise writing [203].
- 1978 Hawaii amended its state constitution to include the provision that "all government writing" intended for the public should be clear [204].
- 1978 President Jimmy Carter promoted plain language in government by issuing Executive Order No. 12044 (Mar. 23). The order aimed to make "federal regulations clearer, less burdensome, and more cost effective" [48].
- 1978 The federal government funded the Document Design Project (a research collaborative shared among the American Institutes for Research, Carnegie Mellon University,

and Siegel+Gale). The group pioneered important work on plain language and document design [2].

- 1979 Carnegie Mellon University faculty formed the Communications Design Center, a non-profit organization where faculty and graduate students conducted basic and applied research into plain language and document design. The Center published dozens of technical reports (closed 1990) [2].
- 1979 The American Institutes for Research formed the Document Design Center (after 1995 called the Information Design Center). It carried out basic and applied research on plain language and document design—publishing dozens of technical reports (closed 1998).
- 1979 The Document Design Center of the American Institutes for Research published the newsletter Simply Stated (originally named Fine Print) between 1979 and 1989. By the late 1980s, it had a mailing list of 18,000.
- 1979 President Jimmy Carter signed Executive Order No. 12174: Federal Paperwork Reduction Act (Nov. 30), requiring agencies to design forms to be as short as possible, using simple and straightforward writing [49].
- 1979 U.S. Senate conducted hearings on the Paperwork and Redtape Reduction Act of 1979, supported by President Jimmy Carter.
- 1979 U.S. Department of Defense required manuals to meet certain readability requirements [205].
- 1979 Richard Wydick published the first edition of *Plain English* for Lawyers. It would guide the writing of lawyers and law students for over 35 years,

becoming a classic in legal writing [206].

- 1979 Rudolph Flesch published How to Write in Plain English: A Book for Lawyers and Consumers [207].
- 1979 Connecticut passed a plainlanguage law for consumer contracts, outlining readability requirements and guidelines for layout and typography (Oct. 1) [36].

Plain Language Gains Strength: 1980–1999

1980s

- 1980s Researchers in linguistics, reading, and technical communication continued to expose the limitations of readability formulas—evidence they had been accruing during the 1970s.
- 1980s Studies of usability emerged, drawing on work in cognitive psychology and human factors.
- 1980s American practitioners drew on the research of Patricia Wright, a British pioneer in document design, cognitive ergonomics, and plain language [208].
- 1980 The Paperwork Reduction Act of 1980 was enacted. It aimed to reduce the paperwork burden that government imposed on business and citizens [209].
- 1980 Governor Hugh Carey of New York issued Executive Order No.100 (Apr. 8), requiring all State agencies to write rules and regulations in plain language [36].
- 1980 Richard Kern studied the utility of readability formulas for the U.S. military and concluded they did not work [59].
- 1980 John R. Hayes and Linda Flower (Carnegie Mellon University) developed the first

cognitive model of the writing process. It aimed to capture writers' thinking processes as they composed for an audience [210].

- 1981 The Document Design Project ended with the publication of a book of guidelines, a review of research, a textbook, and a cognitive model of the writing process; see [2].
- 1981 Michigan formed the first Plain English Committee in a State Bar. It was composed of judges and lawyers [33, p. 48].
- 1981 Janice (Ginny) Redish and her colleagues usability tested a plain-English version of regulations and found it was easier to use for both experts and novices [81].

 — 1981 Carl Felsenfeld and Alan Siegel, who helped develop the simplified-Citibank-loan form in 1975, published their influential Writing Contracts in Plain English [36].

 — 1981 Marshall Atlas introduced the user edit, a usability method based on think-aloud protocol research pioneered at Carnegie Mellon University's department of psychology [211].

- 1981 President Ronald Reagan rescinded Carter's Executive Orders (No. 12044 and No. 12174) by signing Executive Order No. 12291 (Feb. 17). His action was a step backward for plain language [82].
- 1981 Joseph Williams published a landmark book about revising text, Style: Ten Lessons in Clarity and Grace [212].
- 1983 Clarity, an organization for lawyers, got its start. Its mission: to promote plain legal language. Members originally shared ideas by newsletter, which later became *The Clarity Journal*, an international forum on clear legal and official

language. By 2015, Clarity had 500 members in 50 countries [84].

- 1983 Edward Tufte published a landmark book about the design of clear data graphics, *The Visual Display of Quantitative Information* [213].
- 1983 Complaints about unusable consumer products and impossible-to-understand instructions were on the rise. Some Americans returned products; others sued companies over misleading instructions or inadequate warnings [214].
- 1984 The Michigan Bar Journal created its "Plain Language" column (edited since 1988 by plain-legal-writing advocate Joseph Kimble).
- 1984 Apple Computer advertised its new Apple Macintosh during the Super Bowl and made the case that a well-designed product should be easy to use.
- 1984 U.S. Secretary of Commerce Malcolm Baldrige encouraged the publication of illustrative case studies in *How Plain English Works for Business* [86].
- 1984 The U.S. Department of Health released Pretesting in Health Communications, a guide about evaluating of health communications with readers [215].
- 1984 The National Association of Insurance Commissioners began recommending readability formulas to develop more understandable life and health insurance policies [90].
- 1985 New York required a plain language format for residential gas and electric bills [90].
- 1986 Space shuttle Challenger exploded after launch. Later analysis found that poorlydesigned diagrams about

O-ring data made dangerous temperature effects hard to notice. The disaster led some people in government to take visual clarity more seriously [216].

— 1988 The U.S. Congress passed amendments to the Truth in Lending Act, the Truth in Savings Act, and the Fair Credit Reporting Act. These amendments required consumer contracts to be designed using clear, conspicuous, and understandable language [217].

1990s

- 1990s Plain-language advocates expanded their interests to include issues of culture, usability, and accessibility.
- 1990s Practitioners in health literacy began to make connections between their work and plain language.
- 1990s Plain-language advocates from around the world began to share ideas electronically, using email, listservs, and websites.
- 1990 The Americans with Disabilities Act (ADA) was signed into law, providing civil rights for people with physical challenges and setting standards for making public places and information more accessible. The ADA took effect in 1992 and was updated in 2010 [218].
- 1990 Congress passed the Nutrition Labeling and Education Act, requiring the development of more informative food labels that specify the sodium, fat, and cholesterol levels in all foods. The act took effect in 1994 [219].
- 1991 The Usability Professionals' Association and the Usability Special Interest Group of the Society for Technical Communication were formed.

- 1991 Between 1984 and 1991, 36 states passed laws about plain language in insurance contracts. Policies were required to score between 40 and 50 on the Fleschreadability test [90].
- 1991 Erwin R. Steinberg edited Plain Language: Principles and Practice, an anthology that brought together work from the U.S., Canada, Australia, and Japan [93].
- 1992 Joseph Kimble proposed ways to avoid legalese in *Plain English: A Charter for Clear Writing* [90].
- 1993 Cheryl Stephens and Kate Harrison in Vancouver, Canada formed The Plain Language Consultants Network. It became the Plain Language Association International (PLAIN), an important forum for advocates from around the world, with over 20 participating countries. See [4].
- 1993 The Society for Technical Communication sponsored research to measure the "value added" that communicators bring to corporations and government agencies.
- 1993 Pennsylvania passed a Plain Language Consumer Contract Act—aimed at clarifying agreements about borrowing, renting, leasing, or obtaining credit under \$50.000 [220].
- 1994 Thomas Sticht and William B. Armstrong published a review of adult literacy in the U.S., important for understanding how people deal with everyday texts (e.g., instructions and bus schedules) [52].
- 1994 After passing a Plain Language Consumer Contract Act in 1993, Pennsylvania created its first plain-language apartment lease (updated in 2011).

- 1995 The Canadian-based Plain Language Consultants Network (now PLAIN) held its first conference in Winnipeg, Canada.
- 1996 In Washington, DC, a group of U.S.-federal employees met monthly to spread the use of plain language in government. The group called itself PEN, the Plain English Network. Over the next decade, members developed in-house training for hundreds of government employees [128].
- 1996 The U.S. Office of Management and Budget sponsored a plain-English forum at the White House (Apr.), energizing federal employees and members of the newly formed Plain English Network to champion clear communication in government.
- 1996 President Bill Clinton issued Executive Order No. 12988, declaring that agencies make every effort to draft their regulations in clear language [99].
- 1996 The U.S. Veterans Benefits Administration mounted a major effort to improve its letters to veterans by using plain language. The effort involved training in Reader-Focused Writing, a course taught to 8000 employees in 56 offices [98].
- 1996 Under the encouragement of the Securities and Exchange Commission, the first plainlanguage proxy statement was sent out to stockholders of Bell Atlantic and NYNEX [221].
- 1997 William Lutz published The New Doublespeak as a sequel to his 1989 exposé about business and government's deliberate use of evasive language [92].
- 1997 The Canadian-based Plain Language Network (now

PLAIN) held its second conference in Calgary, Canada.

- 1997 Karen Schriver published Dynamics in Document Design: Creating Texts for Readers, integrating ideas about plain language, rhetoric, psychology, visual design, typography, and professional writing [2].
- 1997 Joseph Kimble showed how plain language saves organizations time and money in "Writing for Dollars, Writing to Please" [91].
- 1998 The Securities and Exchange Commission issued a regulation requiring the use of plain language in certain sections of mutual-fund prospectuses, such as cover pages, back pages, executive summaries, and risk-factor sections [102].
- 1998 President Bill Clinton revived the plain-language movement with Executive Memorandum, "Plain Language in Government Writing" (June 1). Clinton charged heads of executive departments and agencies with making government communications more responsive, accessible, and understandable to the public (by Oct. 1) [100].
- 1998 Vice-President Al Gore presented monthly "No Gobbledygook Awards" to federal employees who turned bureaucratic messages into language citizens could understand. Between June 1, 1998–Dec. 22, 2000, he gave out 22 awards) [101].
- 1998 In Walters v. Reno, the 9th Circuit Court of Appeals found that some forms used by the U.S. Immigration and Naturalization Service (INS) did not clearly communicate to people suspected of illegal entry into the country that they might be deported. The court ordered INS to redo the dense and

hard-to-understand forms to communicate more effectively the consequences of illegal entry [222].

- 1998 The Securities and Exchange Commission, under Chairman Arthur Levitt, created A Plain English Handbook: How to Create Clear SEC Disclosure Documents (in Aug.). It offered guidelines for designing mutual-fund prospectuses (documents that present key data to shareholders, such as fees and past performance) [104].
- 1998 Business and finance leader Warren Buffett endorsed plain language in the introduction to the SEC's A Plain English Handbook [104].
- 1998 All regulations printed in the Federal Register were required to be in plain language (by Jan. 1, 1999) [223].
- 1999 The American Bar Association urged federal agencies to use plain language in regulations as a means of promoting people's understanding of legal obligations; see [224].

Plain Language Builds Momentum: 2000–2015

2000s

- 2000 Critics of readability formulas identified serious problems in the reliability and validity of the formulas' analyses of text quality [64], [65].
- 2000 The U.S. government advocacy-group PEN (see 1996) became the Plain Language Action and Information Network (PLAIN). It is one of the oldest and most important plainlanguage advocacy groups; see [225].
- 2000 The global advocacy group Plain Language Association International (PLAIN) held its

third conference, the first in the U.S. (Houston, TX).

- 2000 The "butterfly ballot" fiasco influenced the presidential election. Poorly-designed ballots created confusion for residents of Florida (Nov. 7), causing them to inadvertently vote for a presidential candidate they did not support; see [105].
- 2001 Bryan A. Garner published Legal Writing in Plain English, an important textbook on improving legal briefs, opinions, contracts, statutes, and persuasive writing [117].
- 2002 The global-advocacy group Plain Language Association International (PLAIN) held its fourth conference in Toronto, CA.
- 2003 The U.S. Department of Health and Human Services published Research-based Web design and Usability [109].
- 2003 Plain-language pioneers Annetta Cheek and her colleagues formed the Center for Plain Language, a 501c3 nonprofit dedicated to championing plain language in government and industry [226].
- 2003 Federal Rule 23(c)(2)(B) required that class action settlement notices "clearly and concisely state in plain, easily understood language" the information about the nature and terms of a class action and how it might affect potential class members; see [227].
- 2003 After Washington State's Department of Revenue rewrote a letter about taxes into plain language, the number of businesses who complied with a commonly ignored tax tripled, and in one year, the state received \$800,000 more in revenue than the department had projected [228], [33].

— 2004 An interagency committee consisting of representatives from the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Federal Trade Commission, the National Credit Union Administration, the Office of the Comptroller of the Currency, and the Securities and Exchange Commission—sponsored a project to improve the clarity of privacy notices from financial institutions [110].

- 2004 The Los Angeles County's Quality and Productivity Commission launched a Plain-Language Initiative to improve its customer service and reduce costs. The Commission was honored for its plainlanguage work in 2010 with a Challenge Award from the California State Association of Counties; see [229].
- 2005 Clarity (the international association promoting plain legal language) hosted a conference in Boulogne, France on "clarity and obscurity in legal language."
- 2005 Richard C. Wydick's Plain English for Lawyers (5th ed.) won the Legal Writing Institute's Golden Pen Award for promoting a plain style of writing among lawyers and law students [230].
- 2005 The Center for Plain Language hosted the fifth international PLAIN conference (Washington, DC).
- 2005 The "design for democracy" movement began in response to problems of confusing ballot designs in the 2000 presidential race; see [105], [107].
- 2005 Governor of Washington State, Christine Gregoire, signed a "Plain Talk" Executive Order (Mar. 24), which stated that government communications

be written and designed so they can be easily understood [112].

- 2006 Joseph Kimble collected many of his early essays about plain legal language in *Lifting the Fog of Legalese* [51].
- 2006 The Texas Office of Consumer Credit issued a rule that financial institutions write their consumer contracts for secondmortgage loans and homeequity loans in plain language (Aug. 31). The office also developed a set of model forms for lenders to follow [231].
- 2007 Governor of Florida, Charlie Crist, pushed a Plain Language Initiative by issuing Executive Order 07-01 (Jan. 3). Crist launched websites devoted to openness in government [114].
- 2007 In Letting Go of the Words, Janice (Ginny) Redish took a plain-language approach to writing for the web [232].
- 2007 Marcia Lausen brought together innovations in designing paper and electronic ballots in *Design for Democracy* [105].
- 2007 Payday loan sharks exploited low-income people by tricking them into thinking their loans had an interest rate of 15% when they were actually as high as 443% [233].
- 2007 William Dubay's Unlocking Language: The Classic Readability Studies integrated research on readability and reprinted early readability studies [60, 69].
- 2007 Plain language advocates within government revised their earlier guidelines for public communications (Mar.), creating the first Federal Plain Language Guidelines [148].
- 2007 The sixth international PLAIN conference was held in Amsterdam, Netherlands.

 2007 The Oregon State legislative assembly passed House Bill 2702 (May 7), which declared that agencies of state government conform to plain language standards [234].

— 2008 New York City Mayor, Michael Bloomberg, signed Executive Order 120 (July 22), requiring city agencies to improve access to their oral and written information. The Mayor's Office of Adult Education began an "Easy-to-Read NYC" campaign that offered guidelines [235].

- 2008 Clarity (the international association promoting plain legal language), the Mexican Ministry of Public Administration, and the Instituto Technológico Autónomo de Mexico teamed up to host a conference in Mexico City.
- 2008 A University of Chicago study found that plain graphics significantly improved people's comprehension of the real costs of payday loans and led them to borrow less money from unscrupulous lenders who peddle high-cost debt [233].
- 2008 After several major U.S. financial institutions and mortgage securities firms went bankrupt, a severe crisis in financial markets created huge losses for consumers. Millions of homeowners defaulted on their mortgages; many did not understand their mortgage applications.
- 2008 The Securities and Exchange Commission (under the direction of Chairman Christopher Cox) kicked off an ambitious effort to improve the quality of information for investors.
- 2008 The Securities and Exchange Commission published the Information Design Handbook, showcasing how good writing and information design can

lead to excellent financial documents [104].

- 2009 The seventh international PLAIN conference was held in Sydney, Australia.
- 2009 U.S. Representative Bruce Braley (Iowa) introduced the Plain Writing Act (H.R. 946) to Congress (Feb. 10) [137]. It required government to design new publications, forms, and other public documents using writing that is clear, concise, well organized, consistent with best practices in plain language, and appropriate to the subject and audience. Senator Daniel Akaka (Hawaii) introduced a companion bill in the Senate.
- 2009 The Securities and Exchange Commission helped investors to compare mutual funds by requiring a Summary Prospectus in which key content is presented using the same structure [129].
- 2009 The Credit Card Act of 2009 passed (May 22), requiring credit-card companies to explain their agreements, including interest-rate policies and penalties in plain language [131].
- 2009 Bank of America introduced its Clarity Commitment—a one-page loan summary that presented the borrower's mortgage rate, terms, closing costs, and details of the loan in plain language [145].
- 2009 U.S. Representative Bruce Braley (lowa) introduced the Plain Language in Health Insurance Act to Congress (June 25). The goal was to "cut the confusion" and "put health documents into simple, easy-to-understand language." It was later incorporated in the 2012 Affordable Care Act; see [171], [236].

2010s

- 2010s As more organizations tried to reach more people through social media (e.g., Twitter, FaceBook, LinkedIn), they began to embrace the idea of clear and succinct messages.
- 2010 The House of Representatives passed the Plain Writing Act of 2010 (Mar. 17).
- 2010 The Center for Plain Language presented its first ClearMark awards for excellence in plain language and its first Wonder-Mark awards, later renamed Work-That-Failed Awards (Washington, DC: Apr. 29) [176].
- 2010 Sean Flammer surveyed judges and found that they overwhelmingly preferred plain English to legalese. The finding supported research by Joseph Kimble, who found that judges preferred plain language about 80% of the time [51], [167].
- 2010 The Center for Plain Language launched a plain-language public-awareness campaign on YouTube, "Demand to Understand" [237].
- 2010 Clarity (the international association promoting plain legal language) and Português Claro (a plain-language consultancy) hosted a conference in Lisbon, Portugal.
- 2010 The Dodd-Frank Act of 2010 (Public Law 111-203) was passed on July 21 [143]. It required that disclosures about the terms of home-mortgage loans be written in plain language and validated through consumer testing.
- 2010 The U.S. Senate passed the Plain Writing Act of 2010 (Sept. 27). The positive vote established that both the U.S. House and Senate affirmed plain language [139], [238].

- 2010 President Barack Obama signed the Plain Writing Act of 2010 (H.R. 946) into law, a significant victory for plain language advocates (Oct. 13). The act gave federal agencies one year to begin designing their new documents using plain language [147].
- 2010 A set of Federal Plain Language Guidelines (developed in 2007 and updated 2010–2011) became official after the signing of the Plain Writing Act of 2010; see [148].
- 2010 The Office of Management and Budget issued an executive memo (Nov. 22) offering guidance on implementing the Plain Writing Act of 2010 [239].
- 2010 The U.S. Department of Health and Human Services took a plain-language approach to health information in healthfinder.gov. After redesigning the website based on feedback from hundreds of people whose literacy skills were limited, the redesign won the Center for Plain Language's 2010 Clear-Mark Award for best public sector website. The team also won a ClearMark Award in 2013.
- 2010 The Office of Disease Prevention and Health Promotion (at the U.S. Department of Health and Human Services) continued its mission to improve the health of Americans with its HealthyPeople 2020 campaign (Dec. 2). The Office promoted evidence-based health literacy and communication tools, practices, and research [177].
- 2011 The eighth international PLAIN conference was held in Stockholm, Sweden.
- 2011 President Barack Obama issued Executive Order No. 13563 (Jan. 18). It stated that regulations must be "accessible, consistent, written in

plain language, and easy to understand" [240].

- 2011 The Times in Plain English, an online news service began (Apr. 14). Editors rewrote stories from various national newspapers so people who read at a basic level or for whom English is a second language could better understand them. Editors used the Flesch-Kincaid readability test to assess the stories [241].
- 2011 The U.S. Government group PLAIN hosted its first Trainthe-Trainer Bootcamp for new plain-language educators. Trainers would acquire the skills needed for teaching employees of federal agencies. Bootcamps were conducted from 2011-2015 and still continue.
- 2011 July 13 was the first deadline for implementing the Plain Writing Act of 2010. It required federal agencies to designate a senior official to oversee the agency's implementation of the act and create a process for training agency employees in carrying out plain-language efforts.
- 2011 The Consumer Financial Protection Bureau (CFPB) formed (July 21). Inspired by Harvard Professor Elizabeth Warren and directed by Richard Cordray, the CFPB's goal was to ensure that Americans got a fair deal by providing them with clear information in order to make responsible financial decisions; see [150].
- 2011 On Oct. 13 the Plain Writing Act of 2010 went into effect. It required federal agencies to use plain writing strategies for new communications directed to the public.
- 2011 On Oct. 13 the first International Plain Language Day was celebrated. Cheryl Stephens,

a Canadian plain-language advocate, started it.

- 2011 After the Internal Revenue Service took part in a project for improving the writing and design of its notices to taxpayers, the revised notices won the 2011 Grand Prize Clear-Mark Award from the Center for Plain Language [181].
- 2011 The Consumers Union evaluated a set of user-friendly guides for explaining health plans. The goal was to understand whether the new approach would help or confuse consumers [173].
- 2011 In *Thinking Fast and Slow*, Nobel Prize winner Daniel Kahneman examined how organizations may take advantage of people's tendency not to read disclosure notices [242].
- 2011 The Consumer Financial Protection Bureau (CFPB) started a campaign, "Know Before You Owe." Its goal: to design mortgage disclosures that average citizens could understand. Many forms associated with getting a mortgage were tested in both English and Spanish [152]. The English form for a getting a loan estimate won the Center for Plain Language Grand ClearMark Award in 2014 [176].
- 2012 The Consumer Financial Protection Bureau continued its "Know Before You Owe" campaign and developed a prototype credit-card agreement that spelled out policies and terms of agreement in simple language [154].
- 2012 Congressman Bruce Braley (lowa) continued his fight for plain language by proposing (on Jan. 18) the Plain Regulations Act of 2012 (H.R. 3786) [159].

- 2012 Health and Human Services Secretary, Kathleen Sebelius, announced that health insurers would be required to provide consumers with clear, consistent, and comparable summary information about their health plans [170].
- 2012 The Plain Language in Health Insurance Act went into effect as part of the Affordable Care Act (Sept. 24). It required health insurers to provide user-friendly guides explaining their insurance plans. Insurers needed a plain-language "summary of benefits and coverage" and a glossary explaining terms such as "copayment" [172]. Insurance companies balked.
- 2012 The Center for Plain Language hosted the Clarity conference (dedicated to promoting plain legal language). The agenda: to discuss the impact of the Plain Writing Act of 2010 and the pros and cons of international standards for plain language (Washington, DC: May 21-23) [85].
- 2012 In Writing for Dollars, Writing to Please, Joseph Kimble expanded his 1997 argument about the value of clarity with dozens of studies showing how plain language saves organizations a great deal of time and money, and demonstrating that all readers strongly prefer plain language, understand it better and faster, and are more likely to read it in the first place [33].
- 2012 The Center for Plain Language released its first "Federal Report Card" (July 19), evaluating how well federal agencies were meeting the requirements of the Plain Writing Act of 2010 [181].
- 2012 Plain Language Advocates, a LinkedIn discussion group (moderated by Cheryl Stephens since 2008) had

2300 members from around the globe. In 2016, Plain Language Association International took over management of the group. As of 2017, there were over 18,000 members from more than 100 countries—the largest online forum to date [243].

- 2013 The ninth international PLAIN conference was held in Vancouver, Canada; it emphasized evidence-based plain language [184].
- 2013 UK plain-language pioneer Martin Cutts released the 4th edition of the *Oxford Guide to Plain English* [244].
- 2013 The Federal Trade Commission stressed honesty in the design of online advertising by issuing a set of revised guidelines for digital-advertising disclosures. The guidelines elaborated the phrase "clear and conspicuous" [163], [164].
- 2014 The European Union funded the IC Clear Project, in which U.S. plain-language professionals worked with those from around the world to develop online courses in plain language.
- 2014 Clarity (the international association promoting plain legal language) and the E.U.-funded IC Clear project teamed up to host a conference in Antwerp, Belgium.
- 2014 The Society for Technical Communication published its first special issue on plain language and information design in its magazine *Intercom* [245].
- 2014 Steven Pinker published *The* Sense of Style about why writing is so bad and how we can make it better [182].
- 2014 The European Commission hosted a conference, inviting U.S. plain-language experts to speak on evidence-based

writing and design at the E.U. in Brussels, Belgium [246].

- 2015 Russell Willerton published Plain Language and Ethical Action, the first book to make a strong case for the crucial role of ethics in plain-language communications [8].
- 2015 The tenth international PLAIN conference was held in Dublin, Ireland; the eleventh, in 2017, in Graz, Austria.
- 2015 The U.S. Department of Health and Human Services created *Health Literacy Online*—an easy-to-use research-based guide to inform the design of health websites and digitalliteracy tools [178].
- 2015 The National Association of Insurance Commissioners sponsored a study (following on a 2011 study by the Consumers Union) to understand how well consumers benefitted from plain-language health-insurance information. They found consumers understood much more about health plans when they were written in plain language [174].
- 2015 In the 4th annual "Federal Plain Language Report Card," the Center for Plain Language gave the Department of Defense a grade of C+ and the Department of State a grade of C, based on the clarity of their writing and design. By 2016, both had improved, with the Department of Defense receiving an A- and the Department of State receiving an A [181].
- 2015 The Centers for Disease Control and Prevention released advice for federal employees and contractors writing for the public in Everyday Words for Public Health Communication [179].
- 2015 Plain-language advocates celebrated International Plain Language Day on October 13.

References

- [1] M. Babwahsingh. (2017, Jan. 31, Feb. 1). *Uniting for understanding* [Online]. Available: <u>http://michaelbabwahsingh.com/2017/01/31/uniting-for-understanding/</u>.
- [2] K. A. Schriver, *Dynamics in document design: Creating texts for readers*. New York, NY: John Wiley & Sons, 1997.
- [3] J. C. Redish, "What is information design?," *Technical Communication*, vol. 47, no. 2, pp. 163-164, 2000.
- [4] Plain Language Association International. (2016). *What is plain language?* [Online]. Available: <u>http://plainlanguagenetwork.org</u>.
- [5] N. James. (2013). *What's in a name? The future for plain language in a converging communication profession* [Online]. Available: <u>https://www.slideshare.net/2013PLAINConference/plain2013-whats-in-a-name-neil-james</u>.
- [6] A. Cheek, "Defining plain language," *Clarity*, vol. 64, pp. 5-15
- [7] J. Kimble, "A curious criticism of plain language," *Legal Communication & Rhetoric: JALWD*, vol. 13, pp. 181-191
- [8] R. Willerton, *Plain language and ethical action: Dialogic approach to technical content in the twenty-first century*. New York: Routledge, 2015.
- [9] M. De Jong and L. Lentz, "Expert judgments versus reader feedback: A comparison of text evaluation techniques," *Journal of Technical Writing and Communication*, vol. 26, no. 4, pp. 507– 519, 1996.
- [10] B. E. John and M. M. Mashyna, "Evaluating a multimedia authoring tool with cognitive walkthrough and think-aloud user studies," *Journal of the American Society for Information Science*, vol. 48, no. 11, pp. 1004-1022, 1997.
- [11] L. Lentz and M. De Jong, "The evaluation of text quality: Expert-focused and reader-focused methods compared," *IEEE Transactions on Professional Communication*, vol. 40, no. 3, pp. 224–234, 1997.
- [12] K. A. Schriver, "Teaching writers to anticipate readers' needs: A classroom-evaluated pedagogy," *Written Communication*, vol. 9, no. 2, pp. 179–208, 1992.
- [13] M. Welle Donker-Kuijer, M. De Jong, and L. Lentz, "Heuristic web site evaluation: Exploring the effects of guidelines on experts' detection of usability problems," *Technical Communication*, vol. 55, no. 4, pp. 392–404, 2008.
- [14] K. A. Schriver, "Evaluating text quality: The continuum from text-focused to reader-focused methods," *IEEE Transactions in Professional Communication*, vol. 32, no. 4, pp. 238–255, 1989.
- [15] R. Virzi, "Refining the test phase of usability evaluation: How many subjects is enough," *Human Factors,* vol. 34, no. 4, pp. 457-468, 1992.
- [16] G. Lindgaard and J. Chattratichart, "Usability testing: What have we overlooked?," *CHI 2007 Proceedings*, pp. 1415-1424Accessed on: Apr. 28-May 3[Online]. Available: <u>https://pdfs.semanticscholar.org/25d6/be79b2f2b1bd4931a92e23b47e405d7445ee.pdf</u>

- [17] K. A. Schriver, "Teaching writers to anticipate readers' needs: What can document designers learn from usability testing?," in *Studies of functional text quality*, H. Pander Maat and M. Steehouder, Eds. Amsterdam: Rodopi Press, 1992, pp. 141–157.
- [18] K. A. Schriver, "What we know about expertise in professional communication," in *Past, present, and future contributions of cognitive writing research to cognitive psychology*, V. W. Berninger, Ed. New York, NY: Psychology Press, 2012, pp. 275-312.
- [19] U.S. Congress, 77th U.S. Congress, 2nd Session Session. (1942, Dec. 24). *Federal Reports Act: Public Law 77-831*.
- [20] G. Barrett. (2008, September 15). *Maverick and gobbedygook* [Online]. Available: <u>https://www.waywordradio.org/maverick-and-gobbledygook-minicast/</u>.
- [21] M. Maverick. (1944, Mar. 24). *Lengthy memoranda and gobbledygook language* [Online]. Available: <u>https://catalog.archives.gov/id/7788338</u>.
- [22] U.S. Congress, 96th Congress, 2nd Session Session. (1980, Dec. 11). 94, Paperwork Reduction Act of 1980: Public Law No. 96-511.
- [23] G. Orwell, "Politics and the English language," *Horizon,* vol. 13, no. 76, pp. 252-265, 1946.
- [24] R. Flesch, *The art of plain talk*. New York: Harper & Brothers, 1946.
- [25] I. Lorge, "Predicting readability," *Teachers College Record*, vol. 45, no. 6, pp. 404-419, 1944, March.
- [26] E. Dale and J. S. Chall, "A formula for predicting readability," *Educational Research Bulletin,* vol. 27, no. 1–2, pp. 11–20, 28; 37-54, 1948, Jan. 21–Feb. 18.
- [27] R. Flesch, "A new readability yardstick," *Journal of Applied Psychology,* vol. 32, no. 3, pp. 221–233, 1948.
- [28] R. Flesch, *The art of readable writing*, 1st ed. New York: Harper & Row, 1949.
- [29] G. K. Zipf, *Human behavior and the principle of least effort*. Cambridge, MA: Addison-Wesley, 1949.
- [30] S. Chase, *Power of words*. New York: Harcourt Brace Jovanovich, 1953.
- [31] W. Strunk, Jr. and E. B. White, *The elements of style*. New York: Macmillan, 1959.
- [32] B. Woolsey and E. S. Gerson. (2016). *The history of credit cards* [Online]. Available: <u>http://www.creditcards.com/credit-card-news/credit-cards-history-1264.php</u>.
- [33] J. Kimble, *Writing for dollars, writing to please: The case for plain language in business, government, and law.* Durham, NC: Carolina Academic Press, 2012.
- [34] S. Brobeck and R. Mayer, *Watchdogs and whistleblowers: A reference guide to consumer activism*. Santa Barbara, CA: Greenwood, 2015.
- [35] R. Nader, Unsafe at any speed: The designed-in dangers of the American automobile. New York: Grossman, 1965.
- [36] C. Felsenfeld and A. Siegel, *Writing contracts in plain English*. St. Paul, MN: West Publishing Company, 1981.
- [37] U.S. Congress, 90th Congress, 1st session Session. (1968, May 29). Truth in Lending Act.

- [38] U.S. Congress, 94th Congress, 1st Session Session. (1975, Jan. 4). *Magnuson-Moss Warranty— Federal Trade Commission Improvement Act: Public Law 93-637*.
- [39] Board of Governors of the Federal Reserve System. (2004, June 22). *Withdrawal of proposed rules: Regulations B, E, M, Z, DD* [Online]. Available: https://www.federalreserve.gov/boarddocs/press/bcreg/2004/20040622/attachment.pdf.
- [40] J. O'Hayre, *Gobbledygook has gotta go*, Washington, DC: US Bureau of Land Management 1966. [Online]. Available: <u>https://archive.org/details/gobbledygookhasg3836ohay</u>.
- [41] M. Hunter, "In plain English, gibberish," *The New York Times,* Accessed on: Jan. 1, 2013[Online]. Available: <u>http://www.nytimes.com/1985/06/04/us/in-plain-english-gibberish.html</u>
- [42] W. Lutz, "Notes toward a description of doublespeak," *Quarterly Review of Doublespeak*, vol. 13, no. 2, pp. 10-11, 1987.
- [43] A. M. Skolnik. (1974, Dec.). *Pension reform legislation of 1974* [Online]. Available: https://www.ssa.gov/policy/docs/ssb/v37n12/v37n12p35.pdf.
- [44] U.S. Congress, 94th Congress, 2nd Session Session. (1976). U.S. Code 1601 Consumer Leasing Act of 1976: Public Law 94-240.
- [45] C. Felsenfeld, "The plain English experience in New York," in *Plain language: Principles and practice*, E. R. Steinberg, Ed. Detroit, MI: Wayne State University Press, 1991, pp. 13–18.
- [46] G. H. Hathaway, "An overview of the plain English movement for lawyers," *Michigan Bar Journal*, vol. 62, pp. 945-949
- [47] U.S. Senate, 96th Congress, 1st session Session. (1979, Jan. 15). *Paperwork and Redtape Reduction Act of 1979: Hearing before the Subcommittee on Governmental Affairs*.
- [48] J. Carter, "Improving government regulations: Statement on Executive Order 12044, March 23, 1978," *Public papers of the Presidents of the United States, Book I*, pp. Washington, DC: US Government Printing Office, 563–564
- [49] J. Carter. (1979, Nov. 30). *Executive Order 12174: Federal Paperwork Reduction* [Online]. Available: <u>http://www.presidency.ucsb.edu/ws/?pid=31759</u>.
- [50] B. A. Garner, *The elements of legal style*, 2nd ed. New York, NY: Oxford University Press, 2002.
- [51] J. Kimble, *Lifting the fog of legalese: Essays on plain language*. Durham, NC: Carolina Academic Press, 2006.
- [52] T. G. Sticht and J. S. Armstrong, "Adult literacy in the U.S.: A compendium of quantitative data and interpretive comments," [Online]. Available: <u>https://eric.ed.gov/?id=ED371241</u>
- [53] G. H. McLaughlin, "SMOG grading—A new readability formula," *Journal of Reading*, vol. 12, no. 8, pp. 639–646, 1969.
- [54] R. Flesch, *How to write in plain English: A book for lawyers and consumers*. New York, NY: Barnes & Noble, 1981.
- [55] W. A. McCall and L. M. Crabbs, *Standard test lessons in reading*. New York, NY: Teachers College, Columbia University, 1925.
- [56] R. Flesch, *The art of readable writing, with the Flesch readability formula, 25th Anniv. Edition.* New York, NY: Harper & Row, 1974.

- [57] J. P. Kincaid, R. P. Fishburne, R. L. Rogers, and B. S. Chissom, "Derivation of new readability formulas (automated readability index, fog count, and Flesch reading ease formula) for Navy enlisted personnel," Millington, TN: Naval Air Station, Memphis, Research Branch Rep. 8-75, February 1975.
- [58] J. Mathews, J. Valentine, D. Lonnie, and W. S. Sellman, "Prediction of reading grade levels of service applicants from armed services vocational aptitude battery (ASVAB)," Air Force Human Resources Laboratory, Brooks AFB, San Antonio: Texas, AFHRL-TR-78-82, 1978, Dec.
- [59] R. P. Kern, "Usefulness of readability formulas for achieving Army readability objectives: Research and state-of-the-art applied to the Army's problem," U.S. Army Research Institute for the Behavioral and Social Sciences Technical Report, 437, pp. 1–43[Online]. Available: <u>https://eric.ed.gov/?id=ED189563</u>
- [60] W. H. DuBay, *Smart language: Readers, readability, and the grading of text.* Costa Mesa, CA: Impact Information, 2007.
- [61] T. N. Huckin, "A cognitive approach to readability," in *New essays in technical and scientific communication: Research, theory, practice*, P. V. Anderson, R. J. Brockmann, and C. R. Miller, Eds. New York: Baywood Press, 1983, pp. 90–108.
- [62] J. C. Redish and J. Selzer, "The place of readability formulas in technical communication," *Technical Communication*, vol. 32, no. 4, pp. 46–52, 1985.
- [63] N. O. Stockmeyer, "Using Microsoft Word's readability program," *Michigan Bar Journal*, vol. 88, no. 1, pp. 46-47, 2009.
- [64] K. A. Schriver, "Readability formulas: What's the use?," *ACM Journal of Computer Documentation,* vol. 24, no. 3, pp. 138-140, 2000.
- [65] J. C. Redish, "Readability formulas have even more limitations than Klare discusses," *ACM Journal of Computer Documentation*, vol. 24, no. 3, pp. 132–137, 2000.
- [66] S. Zhou, H. Jeong, and P. A. Green, "How consistent are the best-known readability equations in estimating the readability of design standards?," *IEEE Transactions on Professional Communication*, vol. 60, no. 1, pp. 97-111, 2017, March.
- [67] C. Watson, "Write better: Online readability testing tools compared," *Smiley Cat Web Design Blog*, Dec. 26, 2007. Accessed on: April 1, 2012Blog. [Online]. Available: https://www.smileycat.com/write-better-online-readability-testing-tools-compared/
- [68] D. Stokes, A guide to bird behavior. Boston: Little, Brown, and Company, 1979.
- [69] W. H. DuBay, *Unlocking language: The classic readability studies*. Costa Mesa, CA: Impact Information, 2007.
- [70] S. A. Crossley, J. Greenfield, and D. S. McNamara, "Assessing text readability using cognitively based indices," *TESOL Quarterly*, vol. 42, no. 3, pp. 475-493, 2008.
- [71] S. A. Crossley, D. B. Allen, and D. S. McNamara, "Text readability and intuitive simplification: A comparison of readability formulas," *Reading in a Foreign Language*, vol. 23, no. 1, pp. 84-101, 2011, April.
- [72] A. Graesser, D. S. McNamara, Z. Cai, M. Conley, H. Li, and J. Pennebaker, "Coh-Metrix measures text characteristics at multiple levels of language and discourse," *The Elementary School Journal*, vol. 115, no. 2, pp. 210-229, 2014.

- [73] N. Dowell, Z. Cai, and A. Graesser. (2015). Analyzing language and discourse with Coh-Metrix
 [Online]. Available: https://www.academia.edu/7522203/Analyzing Language and Discourse with Coh-Metrix.
- [74] G. R. Klare, "The role of word frequency in readability," *Elementary English,* vol. 45, no. Jan., pp. 12-22, 1968.
- [75] C. R. Trudeau, "The public speaks: An empirical study of legal communication," *The Scribes Journal of Legal Writing*, vol. 14, pp. 121-152
- [76] B. A. Garner, *The redbook: A manual on legal style*, 3rd ed. St. Paul, MN: Thomson/West, 2006.
- [77] D. Goswami, J. C. Redish, D. Felker, and A. I. Siegel, *Writing in the professions: A course guide and instructional materials for an advanced composition course*. Washington, DC: American Institutes for Research, 1981.
- [78] D. B. Felker, F. Pickering, V. R. Charrow, M. Holland, and J. C. Redish, *Guidelines for document designers*. Washington, DC: American Institutes for Research, 1981.
- [79] D. B. Felker *et al.*, *Document design: A review of the relevant research*. Washington, DC: American Institutes for Research, 1980.
- [80] P. Stiff, "Some documents for a history of information design," in *Information design: Research and practice*, A. Black, L. Paul, O. Lund, and S. Walker, Eds. London: Routledge, 2017, pp. 147-159.
- [81] J. C. Redish, D. B. Felker, and A. Rose, "Evaluating the effects of document design principles," *Information Design Journal*, vol. 4, no. 2/3, pp. 236-243, 1981.
- [82] R. Reagan, "Executive Order 12291: Federal Regulation," Federal Register, CFR 3, vol. 46, no. 13193, p. p. 127[Online]. Available: <u>https://www.archives.gov/federal-register/codification/executive-order/12291.html</u>
- [83] J. C. Redish, "The plain English movement," in *The English language today*, S. Greenbaum, Ed. New York: Pergamon Press, 1985, pp. 125–138.
- [84] J. Walton, "The founding of Clarity," *Clarity*, vol. 54, pp. 4-5[Online]. Available: <u>http://www.clarity-international.net/journals/54.pdf</u>
- [85] Clarity International. (2017). *Past conferences* [Online]. Available: <u>http://www.clarity-international.net/conferences/past-conferences/</u>.
- [86] U.S. Department of Commerce, *How plain English works for business: Twelve case studies*. Washington, DC: U.S. Government Printing Office, 1984.
- [87] K. A. Schriver, "Document design from 1980 to 1989: Challenges that remain," *Technical Communication*, vol. 36, no. 4, pp. 316–331, 1989.
- [88] D. S. McNamara, E. Kintsch, N. B. Songer, and W. Kintsch, "Are good texts always better? Interactions of text coherence, background knowledge, and levels of understanding in learning from text," *Cognition and Instruction*, vol. 14, no. 1, pp. 1-43, 1996.
- [89] K. Rayner, A. Pollatsek, J. Ashby, and C. Clifton Jr., *The psychology of reading*, 2nd ed. New York, NY: Psychology Press, 2012.
- [90] J. Kimble, "Plain English: A charter for clear writing," *Thomas M. Cooley Law Review*, vol. 9, no. 1, pp. 1–58, 1992.

- [91] J. Kimble, "Writing for dollars, writing to please," *The Scribes Journal of Legal Writing*, vol. 6, pp. 1-38[Online]. Available: <u>http://www.plainlanguage.gov/whyPL/benefits/fordollars.pdf</u>
- [92] W. Lutz, *The new doublespeak: Why no one knows what anyone's saying anymore*. NY: HarperCollins Publishers, 1997.
- [93] E. R. Steinberg, Ed. "Plain language: Principles and practice." Detroit, MI: Wayne State University Press, 1991.
- [94] J. C. Redish. (2013). *Plain language and the legacy of professor Erwin R. Steinberg* [Online]. Available: <u>https://www.youtube.com/watch?v= cq0oPwABGw</u>.
- [95] K. A. Schriver, "Plain language through protocol-aided revision," in *Plain language: Principles and practice*, E. R. Steinberg, Ed. Detroit, MI: Wayne State University Press, 1991, pp. 148–172.
- [96] R. Daniel, "Reader-based document testing at the VA," *The Bulletin of the Association for Business Communication*, vol. 57, no. 4, pp. 54-58, 1994.
- [97] R. Daniel, "Revising letters to veterans," *Technical Communication*, vol. 42, no. 1, pp. 69-75, 1995.
- [98] S. D. Kleimann and M. Mercer, "Changing a bureaucracy—One paragraph at a time," *Clarity*, vol. 43, pp. 26-33
- [99] W. J. Clinton, "Executive Order 12988: Civil Justice Reform," *Federal Register*, vol. 61, no. 26, pp. 4729-4734, 1996, Feb. 7.
- [100] W. J. Clinton, "Executive Memorandum: Plain language in government writing," [Online]. Available: <u>http://govinfo.library.unt.edu/npr/library/direct/memos/memoeng.html</u>
- [101] National Partnership for Reinventing Government. (1999). Vice President Gore presents sixth no gobbledygook award to FEMA employees [Online]. Available: http://govinfo.library.unt.edu/npr/library/announc/vpgrfema.html.
- [102] Securities and Exchange Commission, "Plain English Disclosure: Presentation of Information in Prospectuses," *Code of Federal Regulations (CFR)*, vol. 17, no. 230.421 (b) and (d), [Online]. Available: <u>https://www.sec.gov/rules/final/33-7497.txt</u>
- [103] Legal Information Institute. (1998). *17 CFR 230.421: Presentation of information in prospectuses* [Online]. Available: <u>https://www.law.cornell.edu/cfr/text/17/230.421</u>.
- [104] N. M. Smith, *A plain English handbook: How to create clear SEC disclosure documents*. Washington, DC: U.S. Securities and Exchange Commission, 1998, Aug.
- [105] M. Lausen, *Design for democracy: Ballot and election design*. Chicago, IL: University of Chicago Press, 2007.
- [106] R. Neutelings and H. Pander Maat, "Investigating the processes of reading-to-assess among Dutch legislators," *Journal of Literacy Research*, vol. 29, no. 1, pp. 47-71, 1997, March.
- [107] T. G. Sticht, "Literacy, document design and the Florida controversy," Accessed on: September 29, 2012[Online]. Available: <u>http://www.nald.ca/library/research/sticht/florida.htm</u>
- [108] Legal Information Institute. (2003). *Federal Rule 23. Class actions* [Online]. Available: <u>https://www.law.cornell.edu/rules/frcp/rule_23</u>.
- [109] US Department of Health and Human Services. (2003). *Research-based web design and usability guidelines* [Online]. Available: <u>http://guidelines.usability.gov</u>.

- [110] Kleimann Communication Group. (2006, Feb. 28). Evolution of a prototype financial privacy notice: Report on the form development process [Online]. Available: <u>https://www.ftc.gov/sites/default/files/documents/reports/evolution-prototype-financialprivacy-notice-report-form-developmentproject/evolution_prototype_financial_privacy_notice.pdf.</u>
- [111] B. Mazur, "Revisiting plain language," *Technical Communication*, vol. 47, no. 2, pp. 205-211, 2000.
- [112] C. Gregoire, "Executive Order 05-03: Plain Talk," Accessed on: Mar. 24[Online]. Available: http://www.governor.wa.gov/sites/default/files/exe_order/eo_05-03.pdf
- [113] G. Locke, "Executive Order 97-02: Regulatory Improvement," [Online]. Available: http://www.governor.wa.gov/sites/default/files/exe_order/eo_97-02.pdf
- [114] C. Crist, "Executive Order Number 07-01: Plain Language Initiative, Office of the Governor, State of Florida," pp. 1-6[Online]. Available: <u>https://www.fdle.state.fl.us/cms/Open-Government/Documents/E00701outline.aspx</u>
- [115] Associated Press, "Crist pushes plain talk crusade," *Tampa Bay Times*, [Online]. Available: http://www.sptimes.com/2007/01/09/State/Crist_pushes_plain_ta.shtml
- [116] M. Dayton. (2014, Mar. 4). *Executive Order 14-07: Implementing Plain Language in the Executive Branch* [Online]. Available: <u>https://mn.gov/governor/assets/EO-14-07.pdf_tcm1055-93446.pdf</u>.
- [117] B. A. Garner, *Legal writing in plain English: A test with exercises*. Chicago: University of Chicago Press, 2001.
- [118] A. Scalia and B. A. Garner, *Making your case: The art of persuading judges*. St. Paul, MN: Thompson/West, 2008.
- [119] W. Quesenbery, J. C. Redish, and K. Walser. (2010, Nov. 10). *Three ways to help users understand your information: A usability workshop on world usability day* [Online]. Available: <u>https://www.slideshare.net/whitneyg/3-usability-techniques</u>.
- K. A. Schriver, "The rhetoric of redesign in bureaucratic settings," in *Information design as principled action: Making information accessible, relevant, understandable, and usable*, J. Frascara, Ed. Champaign, IL: Common Ground Publishing LLC, 2015, pp. 173-184.
- [121] I. Etzkorn, "National plain English day 12/10/10—Celebrate or commiserate?," Accessed on: Dec 10 2010[Online]. Available: <u>http://www.siegelgale.com/blog/national-plain-english-day-121010celebrate-or-commiserate/</u>
- [122] M. F. Theofanos and J. Redish, "Guidelines for accessible and usable websites: Observing users who work with screen readers," *Interactions*, vol. 10, no. 6, pp. 36-51[Online]. Available: <u>http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.368.1017&rep=rep1&type=pdf</u>
- [123] M. F. Theofanos and J. Redish, "Helping low-vision and other users with websites that meet their needs: Is one site for all feasible?," *Technical Communication*, vol. 52, no. 1, pp. 9-20, 2005.
- [124] W. Quesenbery. (2010, Dec. 20). Accessibility first—for a better user experience for all [Online]. Available: <u>http://www.uxmatters.com/mt/archives/2010/12/accessibility-firstfor-a-better-user-experience-for-all.php</u>.
- [125] S. Carliner, "Physical, cognitive, and affective: A three-part framework for information design," *Technical Communication*, vol. 47, no. 4, pp. 561-576, 2000.

- [126] P. Wright, "The need for theories of NOT reading: Some psychological aspects of the humancomputer interface," in *Working models of human perception*, H. Bouma and B. Elsendoorn, Eds. London: Academic Press, 1988, pp. 319–340.
- [127] K. A. Schriver and F. Gordon, "Grounding plain language in research," *Clarity*, vol. 64, pp. 33-39
- [128] J. Locke. (2017, Jan. 3). A short history of the Center for Plain Language [Online]. Available: http://centerforplainlanguage.org/a-short-history-of-the-center-for-plain-language/.
- [129] U.S. Securities and Exchange Commission. (2008, June 24). *SEC announces '21st century disclosure' initiative to fundamentally rethink the way companies report and investors acquire information* [Online]. Available: <u>https://www.sec.gov/news/press/2008/2008-119.htm</u>.
- [130] Addison. (2006). An information design handbook: Creating clear financial disclosure documents [Online]. Available: <u>http://www.theplainlanguagegroup.com/wp-content/uploads/2013/02/Addison-Style-Guide.pdf</u>.
- [131] U.S. Congress, 111th Congress, 1st Session Session. (2009, May 22). *Credit Card Act of 2009: Public Law 111-24*.
- [132] J. C. Redish, D. E. Chisnell, and E. Newby, "Report of findings: Use of language in ballot instructions," NIST Interagency/Internal Report (NISTIR) 7556, Accessed on: March 5, 2011[Online]. Available: <u>http://www.nist.gov/manuscript-publication-search.cfm?pub_id=901388</u>
- [133] U.S. House, 110th Congress,1st Session Session. (2007, Sept. 17). *Plain Language in Government Communications Act of 2007*.
- [134] U.S. House, 110th Congress, 2nd Session Session. (2008, Apr. 14). Congressional Record House: H2245, vo. 154, no. 58, Plain Language in Government Communications Act of 2008.
- [135] A. Cheek, "The Plain Writing Act of 2010: Getting democracy to work for you," *Michigan Bar Journal*, vol. 90, no. 10, pp. 52-53[Online]. Available: https://www.michbar.org/file/journal/pdf/pdf4article1915.pdf
- [136] R. Stabler, "What we've got here is failure to communicate: The Plain Writing Act of 2010," *Journal of Legislation*, vol. 40, no. 2, pp. 280-323, 2013.
- [137] U.S. House, 111th Congress, 2nd Session Session. (2009, Feb. 10). Plain Writing Act of 2009.
- [138] U.S. Congress, 111th Congress, 2nd Session Session. (2010, Sept. 27). H.R. 946, Plain Writing Act of 2010.
- [139] U.S. Senate, 111th Congress, 2nd Sesson Session. (2010, September 27). vol. 124, The Plain Writing Act of 2010: Actions Overview.
- [140] U.S. Social Security Administration. (2010, Sept. 30). House and Senate Pass H.R. 946, the "Plain Writing Act of 2010" [Online]. Available: https://www.ssa.gov/legislation/legis bulletin 092910a.html.
- [141] K. A. Schriver, "Quality in document design: Issues and controversies," *Technical Communication*, vol. 40, no. 2, pp. 239–257, 1993.
- [142] L. Christie. (2009, Jan. 15). *Foreclosures up a record 81% in 2008* [Online]. Available: http://money.cnn.com/2009/01/15/real_estate/millions_in_foreclosure/.
- [143] U.S. Congress, 111th Congress, 2nd Session Session. (2010, July 21). Dodd-Frank Wall Street Reform and Consumer Protection Act: Public Law 111-203.

- [144] A. R. Sorkin, Too big to fail: The inside story of how Wall Street and Washington fought to save the financial system—and themselves. New York, NY: Penguin Books, 2010.
- [145] C. Robertson. (2009, Apr. 27). *Bank of America's Clarity Commitment* [Online]. Available: <u>http://www.thetruthaboutmortgage.com/bank-of-americas-clarity-commitment/</u>.
- [146] K. Gillespie. (2013, Jan. 14). *BankThink: Amy Friend rejoins OCC as its top lawyer* [Online]. Available: <u>https://www.americanbanker.com/opinion/amy-friend-rejoins-occ-as-its-top-lawyer</u>.
- [147] U.S. Congress, 111th Congress, 2nd Session Session. (2010, Oct. 13). 111th Congress, The Plain Writing Act of 2010: Public Law 111-274.
- [148] Plain Action and Information Network. (2011, Mar.). *Federal plain language guidelines* [Online]. Available: <u>http://www.plainlanguage.gov/howto/guidelines/FederalPLGuidelines/TOC.cfm</u>.
- [149] E. Warren, "Time to get to work on consumer protection," *Wall Street Journal,* [Online]. Available: <u>http://blogs.wsj.com/washwire/2010/09/17/warren-time-to-get-to-work-on-consumer-protection/</u>
- [150] R. Horn, "Consumer testing to avoid the Dodd-Frank Act's UDAAP tripwire," *The Clarity Journal*, vol. 75, pp. 37-39
- [151] Kleimann Communication Group. (2012, July 9). Know before you owe: Evolution of the integrated TILA-RESPA disclosures [Online]. Available: <u>https://s3.amazonaws.com/files.consumerfinance.gov/f/201207_cfpb_report_tila-respatesting.pdf</u>.
- [152] S. D. Kleimann and B. Kingsley, "What's "the deal?": Designing mortgage disclosures that consumers can understand and use," *The Clarity Journal*, vol. 75, pp. 30-36
- [153] Consumer Financial Protection Bureau. (2014). *Know before you owe* [Online]. Available: <u>https://www.consumerfinance.gov/know-before-you-owe/compare/</u>.
- [154] Consumer Financial Protection Bureau. (2011, Dec. 7). *CFPB aims to simplify credit card agreements* [Online]. Available: <u>https://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureau-aims-to-simplify-credit-card-agreements/</u>.
- [155] Plain Language Action and Information Network. (2010). Plain writing act of 2010: Plain language in federal agencies [Online]. Available: <u>http://www.plainlanguage.gov/plLaw/fedGovt/index.cfm</u>.
- [156] L. Neyfakh, "Why the government can't write in plain English," *Boston Globe*, Apr. 15. [Online]. Available: <u>https://www.bostonglobe.com/ideas/2012/04/14/why-government-can-write-plain-english-complicated/JEgnGmwy2XFeHOJUxpa2hN/story.html</u>
- [157] B. Obama. (2011, Jan. 18). *Executive Order 13563: Improving Regulation and Regulatory Review* [Online]. Available: <u>https://obamawhitehouse.archives.gov/the-press-office/2011/01/18/executive-order-13563-improving-regulation-and-regulatory-review</u>.
- [158] Office of the President, "Clarifying Regulatory Requirements: Executive Summaries," *Memorandum on E.O. 13563*, [Online]. Available: <u>https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/for-agencies/clarifying-regulatory-requirements_executive-summaries.pdf</u>
- [159] U.S. House, 112th Congress, 2nd Session Session. (2012, Jan. 18). Plain Regulations Act of 2012.

- [160] J. Serbu. (2012, Jan. 19). *Bill takes federal plain language requirements a step further* [Online]. Available: <u>http://federalnewsradio.com/congress/2012/01/bill-takes-federal-plain-language-requirements-a-step-further/</u>.
- [161] U.S. Senate, 113th Congress, 1st Session Session. (2013). Plain Writing Act for Regulations of 2013.
- [162] FEDweek. (2012). *Plain writing for regs proposed* [Online]. Available: <u>http://www.fedweek.com/federal-managers-daily-report/plain-writing-for-regs-proposed/</u>.
- [163] Federal Trade Commission. (2013, Mar.). .com Disclosures: How to make effective disclosures in digital advertising [Online]. Available: <u>https://www.ftc.gov/sites/default/files/attachments/press-releases/ftc-staff-revises-online-advertising-disclosure-guidelines/130312dotcomdisclosures.pdf</u>.
- [164] Federal Trade Commission and L. Fair. (2014, Sept. 23). *Full disclosure* [Online]. Available: <u>https://www.ftc.gov/news-events/blogs/business-blog/2014/09/full-disclosure</u>.
- [165] D. S. Bosley, "From chaos to clarity: Overcoming negative emotional responses to financial information," *Intercom*, vol. 61, no. 2, pp. 16-20, 2014.
- [166] M. K. Osbeck, "What is "good legal writing" and why does it matter?," *Drexel Law Review*, vol. 4, no. 2, pp. 417-66, September 23. [Online]. Available: <u>http://repository.law.umich.edu/cgi/viewcontent.cgi?article=1937&context=articles</u>
- [167] S. Flammer, "Persuading judges: An empirical analysis of writing style, perusasion, and the use of plain English," *The Journal of the Legal Writing Institute*, vol. 16, pp. 183-221[Online]. Available: <u>http://www.law2.byu.edu/Law_Library/jlwi/archives/2010/183.pdf</u>
- [168] A. Schiff, V. H. Sibbison, and A. Bledsoe. (2015, May 20). *About us* [Online]. Available: <u>http://www.thetimesinplainenglish.com/about-us/</u>.
- [169] National Academies Press. (2017). *About chapter skim* [Online]. Available: <u>https://www.nap.edu/content/about-skim-this-chapter</u>.
- [170] G. Perna. (2012, Feb. 9). *Insurers required to use plain language for coverage description* [Online]. Available: <u>https://www.healthcare-informatics.com/news-item/insurers-required-use-plain-language-coverage-description</u>.
- [171] U.S. Congress, 111th Congress, 1st Session Session. (2009, Oct. 29). Affordable Health Care for America Act.
- [172] Centers for Medicare & Medicaid Services. (2012, Aug. 7). *Providing clear and consistent information to consumers about their health insurance coverage* [Online]. Available: <u>https://www.cms.gov/CCIIO/Resources/Fact-Sheets-and-FAQs/labels08172011a.html</u>.
- [173] Consumers Union and Kleimann Communication Group. (2011, Aug.). *Early consumer testing of the coverage facts label: A new way of comparing health insurance* [Online]. Available: <u>http://consumersunion.org/wp-content/uploads/2013/03/CU_CFL_Report_FINAL.pdf</u>.
- [174] National Association of Insurance Commissioners and Center for Insurance Policy Research. (2015, Sept. 30). Letter to US Department of Health and Human Services [Online]. Available: <u>http://www.naic.org/documents/committees b consumer information 151005 ltr on proprule on sbc uniform glossary.pdf</u>.
- [175] Kaiser Health News. (2012, Sept. 25). *Health insurance to provide easy-to-understand plan summaries* [Online]. Available: <u>http://khn.org/morning-breakout/insurance-summaries/</u>.

- [176] Center for Plain Language. (2017). *ClearMark Awards and Work that Failed Awards* [Online]. Available: <u>http://centerforplainlanguage.org</u>.
- [177] U.S. Department of Health and Human Services and Offices of Disease Prevention and Health Promotion. (2017). *Healthy people 2020* [Online]. Available: <u>https://www.healthypeople.gov</u>.
- [178] U.S. Department of Health and Human Services and Offices of Disease Prevention and Health Promotion. (2015). *Health literacy online: A guide to simplifying the user experience* [Online]. Available: <u>https://health.gov/healthliteracyonline/</u>.
- [179] Centers for Disease Control and Prevention. (2015, October). Everyday words for public health communication [Online]. Available: <u>https://www.cdc.gov/other/pdf/everydaywordsforpublichealthcommunication_final_11-5-15.pdf</u>.
- [180] L. Rein, "Advocates of the plain writing act prod federal agencies to keep it simple," *The Washington Post: Politics*, April 8 2012. [Online]. Available: <u>http://www.washingtonpost.com/politics/advocates-of-the-plain-writing-act-prod-federal-agencies-to-keep-it-simple/2012/04/08/gIQAITCe4S_story.html</u>
- [181] Center for Plain Language. (2012). *Federal Plain Language Report Card* [Online]. Available: <u>http://centerforplainlanguage.org/reports/federal-report-card/</u>.
- [182] S. Pinker, *The sense of style: A thinking person's guide to writing in the 21st century.* New York: Viking, Penguin Books, 2014.
- [183] D. M. Oppenheimer, "Consequences of erudite vernacular utilized irrespective of necessity: Problems with using long words needlessly," *Journal of Applied Psychology*, vol. 20, no. 2, pp. 139-156, 2006.
- [184] K. A. Schriver. (2013). *Plain by design: Evidence-based plain language* [Online]. Available: <u>http://www.slideshare.net/FirstWren/evidence-based-plain-language-29063983</u>.
- [185] Centers for Disease Control and Prevention. (2016, Dec. 19). *Plain language materials & resources* [Online]. Available: <u>https://www.cdc.gov/healthliteracy/developmaterials/plainlanguage.html</u>.
- [186] FreddieMac. (2015, Dec. 8). *The GSEs announce future updates to the URLA* [Online]. Available: <u>http://www.freddiemac.com/singlefamily/news/2015/1208_gses_urla.html</u>.
- [187] FannieMae. (2017). *Uniform residential loan application* [Online]. Available: <u>https://www.fanniemae.com/content/fact_sheet/urla-overview.pdf</u>.
- [188] K. Ramirez. (2016, Aug. 23). Fannie, Freddie revise mortgage app form for first time in 20 years [Online]. Available: <u>https://www.housingwire.com/articles/37845-fannie-freddie-revise-mortgage-app-form-for-first-time-in-20-years</u>.
- [189] K. Kloberdanz, "Honey, I shrunk the contract: How plain English is helping GE keep its business running," GE Reports, [Online]. Available: <u>http://www.ge.com/reports/keep-simple-plain-</u> <u>english-helping-ge-keep-business-humming/#.WXCx_UxG5rB.twitter</u>
- [190] J. Lee, "One year after Plain Language Act, agencies still have 'long way to go'," Best Practices News of Federal News Radio, Oct. 14, 2011. [Online]. Available: <u>http://www.federalnewsradio.com/?nid=148&sid=2590884</u>
- [191] T. H. Witkowski. (1998). The American consumer home front during World War II. Advances in Consumer Research 25, 568-573. Available: <u>https://www.acrwebsite.org/search/viewconference-proceedings.aspx?ld=8204</u>

- [192] T. M. Steele and N. O. Stockmeyer. (2008-2009). Scribes after more than 50 years–A history. *The Scribes Journal of Legal Writing 12*, 1-24.
- [193] R. Gunning, *The technique of clear writing*. New York, NY: McGraw-Hill, 1952.
- [194] W. L. Taylor, "Cloze procedure: A new tool for measuring readability," *Journalism Quarterly*, vol. 30, no. 4, pp. 415–432, 1953.
- [195] R. Flesch, Why Johnny can't read—and what you can do about it. New York: Harper & Row, 1955.
- [196] G. A. Miller, "The magic number seven, plus or minus two: Some limits on our capacity for processing information," *Psychological Review*, vol. 63, no., pp. 81–97, 1956.
- [197] R. J. Connors, "The rise of technical writing instruction in America," *Journal of Technical Writing and Communication*, vol. 12, no., pp. 329–352, 1982.
- [198] M. A. Tinker, *Legibility of print*. Ames, IA: Iowa State University Press, 1963.
- [199] D. Mellinkoff, *The language of the law*. NY: Little Brown & Company, 1963.
- [200] J. R. Bormuth, "Cloze test readability: Criterion scores," *Journal of Educational Measurement,* vol. 5, no. 3, pp. 189–196, 1968.
- [201] G. R. Klare, "Assessing readability," *Reading Research Quarterly*, vol. 10, no. 1, pp. 61–102, 1974.
- [202] W. Lutz, Doublespeak—From revenue enhancement to terminal living: How government, business, advertisers and others use language to deceive you. NY: HarperCollins Publishers, 1989.
- [203] New York Times. (1977, February 6). As per paragraph (i) (2) (ii) (B) or (D). *The New York Times*, 14E.
- [204] State of Hawaii. (1978, Nov. 7). *The constitution of the state of Hawaii*. Available: <u>http://lrbhawaii.org/con/</u>
- [205] J. D. Kniffin, "The new readability requirements for military technical manuals," *Technical Communication*, vol. 26, no. 3, pp. 16–19, 1979.
- [206] R. C. Wydick, *Plain English for lawyers*. Durham, NC: Carolina Academic Press, 1979.
- [207] R. Flesch, *How to write plain English: A book for consumers and lawyers*. New York, NY: Harper & Row, 1979.
- [208] P. Wright, "Quality control aspects of document design," *Information Design Journal*, vol. 1, no. 1, pp. 33–42, 1979.
- [210] J. R. Hayes and L. Flower, "Identifying the organization of writing processes," in *Cognitive processes in writing: An interdisciplinary approach*, L. W. Gregg and E. R. Steinberg, Eds. Hillsdale, NJ: Lawrence Erlbaum, 1980, pp. 3–30.
- [211] M. Atlas, "The user edit: Making manuals easier to use," *Institute of Electrical Engineers (IEEE) Transactions on Professional Communication*, vol. PC-24, no. 1, pp. 28–29, 1981.
- [212] J. M. Williams, *Style: Ten lessons in clarity and grace*. Glenville, IL: Scott, Foresman and Company, 1981.
- [213] E. R. Tufte, *The visual display of quantitative information*. Cheshire, CT: Graphics Press, 1983.
- [214] B. Davis. (1983, November 30). Hundreds of Coleco's Adams are returned as defective: Firm blames user manuals. *Wall Street Journal*, A4.

- [215] U.S. Department of Health, "Pretesting in health communications: Methods, examples, and resources for improving health messages and materials," Washington, DC: U.S. Department of Health and Human Services, NIH Publication 84-1493, 1984.
- [216] E. R. Tufte, *Visual explanations: Images and quantities, evidence and narrative*. Cheshire, CN: Graphics Press, 1997.
- [217] U.S. Office of the Comptroller of the Currency. (2014, Dec.). Comptroller's handbook: Truth in Lending Act. Available: <u>https://occ.gov/publications/publications-by-type/comptrollers-handbook/truth-in-lending-handbook.pdf</u>
- [218] Equal Employment Opportunity Commission. (1990). *The Americans with Disabilities Act of 1990*. Available: <u>https://www.eeoc.gov/eeoc/history/35th/1990s/ada.html</u>
- [219] U.S. Food & Drug Administration. (1994). *Nutrition Labeling and Education Act (NLEA) Requirements*. Available: <u>https://www.fda.gov/ICECI/Inspections/InspectionGuides/ucm074948.htm</u>
- [221] G. H. Hathaway and K. Gibson, "The word from the Securities and Exchange Commission: Put it in plain English," *Michigan Bar Journal*, vol. 75, no. 12, p. 1314, 1996.
- [223] Office of the Federal Register. (1998, Mar. 5). Plain English format: Rules and regulations. *Federal Register 63(43)*, 10744. Available: <u>https://www.ncua.gov/Legal/Regulation History/740F-63fr10743.pdf</u>
- [224] Plain Language Action and Information Network. (1999, Aug 9). American Bar Association adoption by the house of delegates. Available: <u>http://www.plainlanguage.gov/populartopics/regulations/aba.cfm</u>
- [225] Plain Language Action and Information Network. (2000). *About us*. Available: <u>http://www.plainlanguage.gov/site/about.cfm</u>
- [226] Center for Plain Language. (2003). *History*. Available: <u>http://centerforplainlanguage.org/about/history/</u>
- [227] The National Court Rules Committee. (2017). *Rule 23: Class actions*. Available: <u>https://www.federalrulesofcivilprocedure.org/frcp/title-iv-parties/rule-23-class-actions/</u>
- [228] D. H. Botka. (2003). "Plain Talk" in Washington. Available: http://www.plainlanguage.gov/examples/government/WArules.cfm
- [229] County of Los Angeles Quality and Productivity Commission. (2010). Simply speaking—Plain language initiative. Available: <u>http://qpc.lacounty.gov/Portals/QPC/Plain</u> Language/Pdf/cms1 165691.pdf?ver=2016-06-28-105029-393
- [230] R. C. Wydick, *Plain English for lawyers*, 5th ed. Durham, NC: Carolina Academic Press, 2005.
- [231] Finance Commission of Texas. (2006). *Plain language iniitative*. Available: <u>http://occc.texas.gov/industry/plain-language-initiative</u>
- [232] J. C. Redish, *Letting go of the words: Writing web content that works*. San Francisco, CA: Morgan Kaufmann/Elsevier, 2007 (2nd ed., 2012).
- [233] M. Bertrand and A. Morse, "Information disclosure, cognitive biases and payday borrowing," *The Journal of Finance*, vol. 66, no. 6, pp. 1865-1893, 2011.
- [234] State of Oregon. (2007). *Plain language: The standard in Oregon*. Available: <u>http://libguides.osl.state.or.us/plain_language</u>

- [235] M. R. Bloomberg. (2008, July 22). Executive Order No. 120: Citywide Policy on Language Access to Ensure the Effective Delivery of City Services. Available: <u>http://www.nyc.gov/html/om/pdf/2008/pr282-08_eo_120.pdf</u>
- [236] Plain Language Action and Information Network. (2009, June 25). *Braley introduces 'Plain Language in Health Insurance Act' to lower costs, cut confusion*. Available: <u>http://www.plainlanguage.gov/news/index.cfm?topic=ysnHealth</u>
- [237] Center for Plain Language. (2010, May 24). *Dr. Doubletalk—Demand to understand*. Available: <u>https://www.youtube.com/watch?v=4VEGSPPORWQ</u>
- [238] C. Legacki. (2010, Sept. 28). *Plain language bill passes the Senate!* Available: http://www.plainlanguage.gov/news/braleyBillPasses.cfm
- [239] Office of Management and Budget. (2010, Nov. 22). *Preliminary guidance for the Plain Writing Act* of 2010. Available: https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2011/m11-05.pdf
- [240] B. Obama, "Executive Order 13563: Improving Regulation and Regulatory Review," *Federal Register*, vol. 76, no. 14, pp. 3821-3823, 2011, Jan. 18.
- [241] The Times in Plain English. (2015). *About us*. Available: <u>http://www.thetimesinplainenglish.com/about-us/</u>
- [242] D. Kahneman, *Thinking fast and slow*. NY: Farrar, Straus and Giroux, 2011.
- [243] Plain Language Association International. (2016). *PLAIN takes over successful LinkedIn group*. Available: <u>http://plainlanguagenetwork.org/plain-takes-over-management-of-plain-language-supporters-group-on-linkedin/</u>
- [244] M. Cutts, Oxford guide to plain English, 4th ed. Oxford, UK: Oxford University Press, 2013.
- [245] K. A. Schriver. (2014). Special Issue on plain language and information design. *Intercom (February),* 4-30. Available: <u>http://intercom.stc.org/magazine/february-2014/</u>
- [246] K. A. Schriver. (2014, Nov. 14). *Designing plain language guidelines internationally* [Video presentation]. Available: <u>http://www.slideshare.net/FirstWren/designing-plain-language-guidelines-for-international-audiences</u>