ARTICLE

The Problems, and Positives, of Passives

Exploring Why Controlling Passive Voice and Nominalizations Is About More Than Preference and Style

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Introduction

Passive voice and nominalizations are "among the worst writing weaknesses."[1] Passages written with passive voice and nominalizations, compared to the same passages rewritten in the active voice, are often slower to read, harder to read, harder to comprehend, harder to remember, less concise, less familiar feeling, and less engaging.[2] When writing briefs, attorneys strive to explain legal analysis as clearly, effectively, and persuasively as possible. Yet attorneys commonly impede the reader by using passive voice and nominalizations excessively in their briefs.[3]

Though many textbooks, bar-journal articles, and professional-development speakers advise attorneys to prefer active voice over passive voice and to avoid nominalizations, the topic typically receives only a

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1 Lloyd R. Bostian, *Dysfunctional Pseudo-Elegance: Why Passive and Nominal Writing Fails*, 65 J. Applied Commc'ns 32, 32 (1982).

2 See section II, *infra*, for a discussion of studies that have demonstrated these impediments.

3 Peter M. Tiersma, Legal Language 75, 206 (1999). Tiersma states that "[l]egal language is often excoriated for overreliance on passive constructions." *Id.* at 75 (citing Edward Finegan, *Form and Function in Testament Language*, *in* Linguistics and the Professions 113, 118 (Robert J. DiPietro ed., 1982)); Risto Hiltunen, Chapters on Legal English: Aspects Past and Present of the Language of the Law 76 (1990) (noting that the passive is very common in legal English). Professor Linda Edwards stated that "most legal writing . . . relies far too much on verbs in the passive voice." Linda H. Edwards, Legal Writing and Analysis 283 (4th ed. 2015). Edwards noted that because so many cases students read are "infected" with passive voice, students "will have to struggle against developing the habit" themselves. *Id.*

few paragraphs of quick, surface-level attention.[4] Many attorneys remain oblivious to their own excessive use of passive voice and nominalizations. It seems that attorneys forget what passive voice and nominalizations are,[5] are not convinced that avoiding them matters, or are unable to identify them in their writing.[6]

On the other hand, advice to "never use passive voice" is potentially harmful for writers. When used strategically, passive voice can create cohesion, shift emphasis, imply objectivity, and make readers feel more distant, less connected, and less emotional about an event.[7] Thus, mastery of passive voice can be a valuable rhetorical tool. The problem with passive voice isn't that it is always bad.[8] The problem is that many attorneys use it indiscriminately, unknowingly, and excessively, amplifying its negative effects while blunting its potential value.

To help legal writers realize how much passive voice and nominalizations can affect their readers, this article explores passive voice and nominalizations in a depth that style guides, textbooks, and speakers have not. For foundation, section I explains passive voice and nominalizations, including quick, simple ways for busy practitioners to spot each in their briefs. Then, section II explores these linguistic constructions more deeply, relaying the results of interdisciplinary studies that show how passive voice and nominalizations can indeed impede readers and weaken writing. These studies provide professors with substantive support to show that the advice they give legal writers is not just an arbitrary style

4 Though nearly every legal writing textbook could be cited, here is just a short list of examples from recent, excellent legal writing textbooks: Charles R. Calleros & Kimberly Holst, Legal Method and Writing I 206–08 (8th ed. 2018); Camille Lamar Campbell & Olympia R. Duhart, Persuasive Legal Writing 127–28, 214–15 (2017); Joan M. Rocklin et al., An Advocate Persuades 204, 295 (2016); Heidi Brown, The Mindful Legal Writer 206 (2016); Edwards, *supra* note 3, at 282–85; Tracy Turner, Legal Writing from the Ground Up 215–17 (2015); Jill Barton & Rachel H. Smith, The Handbook for the New Legal Writer 104, 114 (2d ed. 2014); Daniel L. Barnett, Putting Skills Into Practice 122 (2014); Kristen E. Murray & Jessica Lynn Wherry, The Legal Writing Companion 150 (2d ed. 2019). Specific to nominalizations, Bryan Garner has stated, "Though long neglected in books about writing, [nominalizations] ought to be a sworn enemy of every serious writer." Bryan A. Garner, Garner's Modern American Usage 121 (2009). Garner refers to nominalizations as "buried verbs." *Id.* at 120.

5 This mirrors the observation made in a *New York Times* bestseller about writing: "Passive voice is one of those things many people believe they should avoid, but fewer people can define." Mignon Fogarty, Grammar Girl's Quick and Dirty Tips for Better Writing 171 (2008).

6 Bryan A. Garner, Legal Writing in Plain English 25 (2001) (stating that "less than 50% of lawyers can spot passive voice reliably"). Lawyers are not alone in this. Passive voice is a hallmark of scientific writing. In an article examining overuse of passive voice in scientific writing, the author noted that while advice to avoid passive voice is common, "[i]t is far less clear whether scientists and researchers themselves are aware of these effects and whether they make careful decisions about the use of [passive voice]." Leong Ping Alvin, *The Passive Voice in Scientific Writing. The Current Norm in Science Journals*, 13 J. Sci. Commc'n 1, 4 (2014). Leong doubts whether the scientists and researchers are even able to recognize passive voice or know when passive may be appropriate. *Id.*

7 *See* section III, *infra*.

8 "In any type of writing, the active voice is usually more precise and less wordy than is the passive voice. [But] [t]his is not always true; if it were, we would have an Eleventh Commandment: 'The passive voice should never be used.'" Leong, *supra* note 6, at 10 (italics omitted) (quoting R.A. Day & B. Gastel, How to Write and Publish a Scientific Paper (7th ed. 2012)).

preference.[9] Finally, to flesh out the nuance of passive voice, section III examines the other side of the coin—if used carefully, how passive voice can create flow and focus readers in important, helpful ways.

Even though attorneys are "professional writers,"[10] many do not understand or have command of passive voice and nominalizations. Yet these constructions are common in every brief, for better or worse. Attorneys can become more effective advocates when they learn to control passive voice and nominalizations in their legal writing.

I. Understanding passive voice and nominalizations

Though not the same construction, passive voice and nominalizations often go hand-in-hand. Both can make writing bloated, dull, and harder to understand, and writers who overuse one typically overuse the other as well. Both lengthen briefs without adding substance, making writing feel limp and lifeless.[11] Being able to spot and reduce passive voice and nominalizations can bring legal writers' text back to robust life.

A. Explanation of passive voice

The concept of passive voice is easy to remember by analogizing it to passive people.[12] Active people do things; passive people have things done to them. The same concept applies to the grammatical subject of a sentence. If a sentence is written in active voice, the subject of the sentence does something:[13] *The attorney filed a complaint*. The subject of the sentence, *the attorney*, actively did something—she filed a complaint. On the other hand, if a sentence is written in passive voice, the grammatical subject of the sentence has something done to it.[14] For example, that same sentence written in passive voice reads as follows: *The complaint was filed*

9 This may be especially important for law students, who see so much passive voice in the cases they are reading and thus begin to associate passive voice with legal writing style and emulate it in their own writing.

10 "Usually, there's a lot riding on your writing: your client's money, your client's rights and, in the criminal setting, your client's liberty or even life. . . . Grasping the complex subject matter and writing about it effectively are the hallmarks of a professional writer—a lawyer." Wayne Schiess, *Lawyers are Professional Writers*, Austin Law., Nov. 2012, at 11; *see also* Douglas Litowitz, *Legal Writing: Its Nature, Limits, and Dangers*, 49 Mercer L. Rev. 709, 711 (1998) ("Law is a profession of language and writing; lawyers get paid for drafting persuasive documents and speaking for clients. Lawyers have no choice but to write.").

11 Stephen V. Armstrong & Timothy P. Terrell, Thinking Like a Writer: A Lawyer's Guide to Effective Writing and Editing 222 (2d ed. 2003) ("[With passive voice,] the actor disappears into the sentence's interior and verbs become limp and hollow."); Noah A. Messing, The Art of Advocacy 247–48 (2013) (stating that nominalizations "drain vitality from prose").

12 The description in this paragraph mirrors Bryan Garner's description. *See* Garner, *supra* note 6, at 24–25.

13 Tiersma, *supra* note 3, at 75.

14 *Id.*

by the attorney. Both sentences are grammatically correct, but one is an active sentence while the other is a passive sentence, based on whether the subject is acting or being acted upon.

The subject of a sentence is typically a noun (a person, place, or thing)[15] and is followed by a verb.[16] Verbs that denote action can be transitive or intransitive.[17] Transitive verbs act on something (*The judge grabbed his gavel.*). Intransitive verbs do not (*The victim cried.*).[18] With transitive verbs, what receives the action is the "direct object."[19] In the transitive example, the gavel is the direct object (it is what received the action—what the judge grabbed).[20] Only transitive verbs can be made passive.[21]

When a transitive sentence is written in active voice, the actor is the grammatical subject and comes before the action: *I will review the file*.[22] But in a passive sentence, the direct object is the grammatical subject and comes before the action, and the actor may be omitted entirely: *The file will be reviewed*.[23] The difference between an active and a passive sentence can be shown graphically:

- **Active sentence**: Actor → Action → Object.[24]
- **Passive sentence**: Object → Action → Actor (when present).[25]

Readers typically expect to receive information in the Actor → Action → Object order.[26] Readers "tend to anticipate that whenever a noun occurs at the beginning of the sentence, it will be . . . the actor."[27]

15 James A.W. Heffernan & John E. Lincoln, Writing: A Concise Handbook 59 (1997).

16 *Id.* at 60. Some verbs express action, while some do not.

17 *Id.* at 61.

18 *Id.* at 60–61.

19 *Id.* at 61.

20 *Id.*

21 If the verb is intransitive, then there would be no direct object.

22 *Id.* at 49–50.

23 *Id.* With active sentences, the subject and the object are distinct from each other, and the object is placed *after* the verb. On the other hand, with passive sentences, the subject and the object are the same and are placed *before* the verb, as in this example: *The door was punched by Sheila*. In that passive sentence, the *door* is the grammatical subject of the sentence, as it precedes the verb *was punched*. The *door* is also the direct object, because it is what received the action—it is what got punched.

24 The graphical concept is addressed using different labels in *Thinking Like a Writer: A Lawyer's Guide to Effective Writing and Editing*. Armstrong & Terrell, *supra* note 11, at 226. For an active sentence, Armstrong and Terrell use the labels Subject → Verb → Object, and Agent → Action → Recipient. *Id.*

25 Another simple way to think of it is to ask, "Who did what?" If the *who* comes before the *what*, then the sentence is active. Determining whether a sentence is active or passive is as simple as identifying (1) what the action is, (2) who the actor is, and (3) whether the actor is placed before or after the action. *See id.* (suggesting writers ask, "who did what to whom (or what)?").

26 Peter Herriot, *The Comprehension of Sentences as a Function of Grammatical Depth and Order*, J. Verbal Learning & Verbal Behav. 938, 940 (1968); Jennifer E. Mack et al., *Neural Correlates of Processing Passive Sentences*, 3 Brain Sci. 1198, 1200 (2013).

27 Tiersma, *supra* note 3, at 75.

So "[r]eaders comprehend a sentence in the active [voice] more quickly because it follows the way they normally process information. They do not have to search through the sentence looking for the actor."[28] Passive voice makes it "harder for readers to process the information" because "the passive subverts the normal word order for an English sentence."[29]

Some sentences are not entirely active or entirely passive. Sentences often involve multiple clauses.[30] In the same sentence, some clauses may be active while others may be passive. Consider this example: *John rode in a car that was driven by Mike*. The first clause is active (*John rode in a car*) while the second clause is passive (*that was driven by Mike*).[31]

B. Explanation of nominalizations

A nominalization is a verb (an act) that the writer turned into a noun (a thing).[32] For example, a writer could use the verb investigate: *The police will investigate the theft*. Or, a writer can turn the verb *investigate* into a noun (a thing—*an investigation*).[33] The writer would then have to word the sentence as follows: *The police will conduct an investigation of the theft*. Because all complete sentences need a verb, the writer had to add a new verb (*conduct*) for the sentence to be grammatically complete.

Nominalizations are not the same as passive voice, but both state the action in less direct, more boring ways:[34] passive voice has the grammatical subject of the sentence receiving the action, rather than actively doing the action; a nominalization replaces an action verb with a noun. The true action (the police *investigate*) is instead expressed as a thing (*an investigation*) that must receive some action (the police are conducting *an investigation*). Attorneys often bloat a sentence by using both a

28 Deborah E. Bouchouz, Aspen Handbook for Legal Writers: A Practical Reference 87 (2005); Mack et al., *supra* note 26, at 1200 ("Some studies have found longer reaction times for passive as compared to active sentences, which may be due to the processing costs of thematic reanalysis," *i.e.*, reanalyzing who the actor is and what the object is in a sentence.).

29 Garner, *supra* note 4, at 613.

30 Heffernan & Lincoln, *supra* note 15, at 65–72.

31 Interestingly, some research has indicated that location of passive voice in a sentence affects comprehension, with passive voice located in subordinate clauses hurting comprehension more than when passive voice is located in a sentence's main clause. Robert P. Charrow & Veda R. Charrow, *Making Legal Language Understandable: A Psycholinguistic Analysis of Jury Instructions*, 79 Colum. L. Rev. 1306, 1325–26, 1337 (1979).

32 Tiersma, *supra* note 3, at 77; Charrow & Charrow, *supra* note at 31, at 1321.

33 As in the example of "investigation," most nominalizations end with the letters *-ion*. However, not every word that ends in *-ion* is a nominalization. Further, nominalizations may end in other ways, such as *-al* ("the removal of" rather than "we removed") and *-ment* ("made an acknowledgement" rather than "acknowledged"). Charrow & Charrow, *supra* note 31, at 1321.

34 "Active voice stresses the activity of the subject and helps make a sentence more direct, concise, and vigorous." Heffernan & Lincoln, *supra* note 15, at 49; Messing, *supra* note 11, at 247–48 (stating that nominalizations "drain vitality from prose").

nominalization and passive voice: *An investigation of the theft will be conducted by the police.*

Like passive voice, nominalizations are not grammatically wrong. But overusing them creates a dull,[35] wordy, more-abstract writing style that is more difficult for the reader to process.[36] "[B]y denominalizing, writers . . . construct clearer and more[-]direct sentences, more[-]concrete verbs, fewer abstract nouns, and ultimately less intimidating sentences."[37] Thus, when there is action in a sentence, strong writers strive to (1) use active voice so the grammatical subject does the action (rather than receives it), and (2) use action verbs to express the action (rather than nouns as nominalizations).

C. Why passives and nominalizations both bloat and dull writing

Passive voice and nominalizations inflate sentences with unneeded words and are normally less dynamic ways to say things. That is why experts advise speech writers to "avoid the use of the passive voice at every opportunity [because it] robs the writing of force, pep, and punch—the passive voice certainly makes the writing inactive, literally and figuratively."[38] Similar advice is that writers "will convey [their] meaning more forcefully and usually clearly when [they] use verbs in the active voice."[39]

The types of words passive voice attracts contribute to the loss of this "force, pep, and punch." Linguists call words "that make reference to the real world, those for which synonyms can be easily found," *content words*.[40] They are typically nouns, action verbs, and descriptive adjectives and adverbs.[41] Content words could also be called substantive words, as they carry substance and real-world meaning. *Function words*, on the other hand, "serve a grammatical function"; they have neither substance nor real-world meaning, "little, if any, connotative meaning," and, it would

35 Bostian, *supra* note 1, at 32 ("Nominal prose is dull because it substitutes nouns for verbs, and the few remaining verbs are mostly weak ones or forms of 'to be.'").

36 "Anything that makes a verb less verb-like and more noun-like creates abstraction." Charrow & Charrow, *supra* note 31, at 1321 (citing James D. McCawley, *Where Do Noun Phrases Come From? in* Readings In English Transformational Grammar 166 (R. Jacobs & P. Rosenbaum eds. 1970); Robert B. Lees, The Grammar of English Nominalizations (1968)). "[Nominalizations], like passive constructions, also can have the effect of . . . obscuring the identity of the actor." Tiersma, *supra* note 3, at 77.

37 Jan H. Spyridakis & Carol S. Isakson, *Nominalizations vs. Denominalizations: Do They Influence What Readers Recall?*, 28 J. Tech. Writing & Commc'n 185 (1998).

38 Joseph A. DeVito, *Some Psycholinguistic Aspects of Active and Passive Sentences*, 55 Q. J. Speech 401, 401 (1969) (quoting James J. Welsh, The Speech Writing Guide: Professional Techniques for Regular and Occasional Speakers 40 (1968)).

39 *Id.* at 401 (quoting John F. Wilson & Carroll C. Arnold, Public Speaking as a Liberal Art 295 (2d ed. 1968)).

40 *Id.* at 405 n.15.

41 *Id.*

follow, few synonyms.[42] Examples of function words are linking verbs, like forms of "to be": is, are, was, were, be, being, been, and am.[43] Thus, in the sentence *John ran home*, all three words are content words because all have real-world meaning. But, in the sentence *John is a fast runner*, the verb *is* and the article *a* are just function words. They do not carry meaning—they just complete the sentence grammatically. The content words are *John*, *fast*, and *runner*.

"By their very nature, active sentences contain a higher percentage of content words but a lower percentage of function words than do passive sentences."[44] Nominalizations likewise often increase the number of function words. Because they provide no substance, function words are dull. The higher the percentage of function words a passage has—words not providing meaning—the more it drags. Content words, on the other hand, deliver impact—meaning, knowledge, information—to the reader. The higher the percentage of content words a passage has, the leaner, more engaging, and more forward moving the text typically feels.

Because passive voice or nominalizations necessarily involve more function words than active voice and active verbs do, a cumulative effect develops over the course of a writer's long sentence, or paragraph, or brief, making the writing feel dense, tangled, or cumbersome. Consider the following three sets of sentences (the function words are in italics).

Active form	**Passive form**
Jurors took *a* lunch break.	*A* lunch break *was* taken *by* jurors.
Clients dread phone calls	Phone calls *are* dreaded *by* clients.
Victims always want justice.	Justice *is* always wanted *by* victims.
Original	**Nominalization**
The D.A. investigated.	*The* D.A. conducted *an* investigation.
The judge inferred intent.	*The* judge made *an* inference *of* intent.
The victim called *the* judge.	*The* victim made *a* phonecall *to the* judge.
Original	**Passive plus nominalization**
The plaintiff appealed.	*An* appeal *was* filed *by the* plaintiff.
The judge *will* decide.	*A* decision *will be* made *by the* judge.
The defendant chose *to* object.	*The* choice *was* made *by the* defendant to state *an* objection.

These sentences demonstrate why unnecessarily using passive voice and nominalizations makes writing feel considerably more dense and

42 *Id.*

43 Rather than express action, linking verbs connect the subject to a word or clause that identifies, classifies, or describes the subject (e.g., John is tall; John is mad). Heffernan & Lincoln, *supra* note 15, at 61.

44 DeVito, *supra* note 38, at 405.

slow moving. The sentences in the left column contain 37 words: 27 are content words and 10 are function words. Thus, 73% of the words carry meaning, while 27% are functional. Compare these to the sentences in the right column, which contain 65 words: 35 are content words and 30 are function words. Only 54% of the words carry meaning, while 46% of the words are just functional. In the active sentences, nearly three-fourths of the words carry meaning, but when passive voice and nominalizations are used, only about half of the words carry meaning.

Moreover, when active voice was converted to passive voice and nominalizations, the number of function words tripled (from 10 to 30). The sentences on the left totaled 37 words. The sentences on the right totaled 60 words. The active sentences used nearly 40% fewer words to express the same information.[45]

Few would dispute that a considerably shorter brief, with no loss of substance, is usually a dramatic improvement. As United States Supreme Court Chief Justice John Roberts stated, "I have yet to put down a brief and say, 'I wish that had been longer.' . . . [T]here isn't a judge alive who won't say the same thing. Almost every brief I've read could be shorter."[46] For many attorneys, removing unnecessary passive voice and nominalizations can be an easy way to draft briefs that are more concise, more engaging, easier to understand, and faster to read.[47] The arguments will feel sharper and the writer will seem more confident, focused, and in command of the substance.[48]

D. How to spot passive voice and nominalizations

Attorneys need not only to appreciate the bloat and drag that passive voice and nominalizations create in their briefs, but also how to efficiently spot them in their drafts.[49] Below are easy and effective ways to do so.

45 These nine sentences with no passives or nominalizations compared to nine sentences in which every sentence contains one or the other or both may seem to artificially skew the numbers; in a brief, not every sentence would include passive voice or nominalizations. But it is staggering how much unnecessary passive voice and how many nominalizations many briefs do include.

46 Bryan A. Garner, *Interviews with United States Supreme Court Justices*, 13 Scribes J. Legal Writing 35 (2010).

47 A recent study that tracked eye movements of participants as they read active and passive passages showed that readers did not read passives more slowly than actives. Laura Winther Balling, *No Effect of Writing Advice on Reading Comprehension*, 48 J. Tech. Writing & Commc'n 104, 114–15 (2018). Though some studies have shown otherwise, even if that is true, there is no doubt that a judge would read a clear, concise, engaging fifteen-page brief much more quickly than a bloated twenty-page brief.

48 Eugene Y. Chan & Sam J. Maglio, *The Voice of Cognition, Active and Passive Voice Influence Distance and Construal*, 46 Personality & Soc. Psych. Bull. 547, 555 (2020) (noting a study that found "authors thinking abstractly also tend to use more passive voice constructions in their writing compared with those thinking more concretely").

49 Garner, *supra* note 6, at 25.

1. Passive voice: look for "to be" verbs followed by words ending in "ed."

Passive voice very often involves a "to be" verb followed by a past participle.[50] A past participle is a verb form that typically ends in "ed." Thus one effective way to spot passives is to skim sentences, looking for such clusters as these:[51]

- The decision *will be appealed* by the plaintiff.
- The defendant *was warned* not to delay submitting his discovery responses.
- The defendant *was denied* his request for witnesses to *be sequestered*.

When you notice a "to be" verb followed by a past participle (usually ending in "ed"), ask yourself where in the sentence the actor is. If the actor comes after the action (or is not stated at all), the sentence is passive. Passive sentences can be made active simply by putting the actor in front of the action. Doing so for the first example above creates the active sentence, *The plaintiff will appeal the decision*.

This approach is not foolproof. Some passive sentences have "to be" verbs that are not followed by a past participle ending in "ed" (*e.g.*, *The gun was thrown* into the river.). "Bare" passives do not include a "be" verb at all (*e.g.*, *The lie told* by the witness was subtle.).[52] And some sentences with a "be" verb are not passive, like "*The witness was staring at the jury*." But because they, combined with *–ed* past participles, are often used in passive constructions, these passives are easy to spot. When you do, take a second to confirm that the clause is passive—if the actor is present, is it placed after the action? If it is passive, consider converting it to active voice. Moving the actor to precede the action always does so.

The advantage of this approach is its simplicity and efficiency. Skimming each line of a brief or other writing quickly, looking for "be" verbs will catch many passive constructions. In time, attorneys may notice that passives begin to jump out at them in early drafts, even if they aren't specifically looking for them.

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50 *Id.* at 37. "To be" verbs include "am," but I omitted "am" from the list because "am" follows only "I" (*I am*), and attorneys rarely use the first person in briefs.

51 Thomas Sigel, *How Passive Voice Weakens Your Scholarly Argument*, 28 J. Mgmt. Dev. 478, 479 (2009).

52 Leong, *supra* note 6, at 7. This is an example of a "whiz" deletion (short for "which is") or complement deletion because a complement (which, that, who, etc.) and "to be verb" (is, are, was, were, am, be, being, been) are deleted and thus implied. Charrow & Charrow, *supra* note 31, at 1323. The sentence could be written as *The lie that was told by the witness* instead of *The lie told by the witness.* These "whiz" deletions are common in English, but "because some of the grammatical information is missing, the mind has to work harder to reconstruct it." *Id.*

2. Passive voice: ask three questions—Action? Actor? Order?

An effective—but slower, labor-intensive—approach to weeding out passive voice is to work through each sentence of a draft one-by-one and, for each sentence, ask three questions: Action? Actor? Order? (1) Action: What act is happening? (2) Actor: Who (or what) is doing that act? (3) Order: Is the actor placed before or after the act? If the actor is placed before the act, the sentence is active. On the other hand, if the actor is placed after the act, the sentence is passive. Then simply moving the actor to before the action transforms the sentence from passive to active. This is essentially the same approach as the prior one, except without focusing on the "to be" verbs.[53] Rather than skim, the attorney has to read every sentence.[54]

3. Nominalizations: look for "ion" endings.

Many nominalizations end with "ion." For example, *take something into consideration* (consider it); *conduct an investigation* (investigate); *enter into deliberations* (deliberate); *make preparations* (prepare). Thus, *–ion* words are another easy red flag—simply skim the sentences looking for words that end in *–ion* (or use the "find" function in Microsoft Word).

Each time you spot a word that ends in *–ion*, ask yourself if it is a nominalization. The answer will not always be "yes," but it often will be. To revise it, simply restate the sentence with the *–ion* word converted back to its verb state. Thus, for the sentence "*The police will conduct an investigation*," just convert the noun (*investigation*) back to a verb (investigate) and restate the sentence: "The police will investigate."

This approach will not catch every nominalization in a brief, as some nominalizations do not end in *–ion*.[55] But most do. You may even decide that a nominalization works better in a particular sentence. Still, many writers do not notice how much they overuse nominalizations. Watching for the *–ion* ending will catch most nominalizations and help writers make their briefs more concise, direct, and engaging.

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53 The advantage of this approach is that it can catch the "bare" passives—passives that drop the "to be" verb—that often form participial phrases (e.g., "The lie *[~~that was~~] told by the witness* was subtle."). This sentence overall is not passive: "The lie . . . was subtle." But, the participial phrase identifying which lie (the lie *told by the witness*) is a passive construction. As is typical, avoiding the passive voice can shorten the sentence: *The witness's lie was subtle*.

54 Despite the inefficiency, though, this approach can be helpful in cementing what passive voice is. When I work with law students and attorneys during legal writing trainings, applying this approach often becomes the "aha" moment for them, with many saying things like, "Yes, now I see it." Though this approach is not optimal for large-scale edits, it can help legal writers grasp passive voice in a way they seem to remember permanently.

55 Some nominalized words end with *–al*, *–ence*, *–ancy*, *–ity*, *–ment*, *–ency*, *–ant*, *-ent*, or *–ance*. Richard C. Wydick, Plain English For Lawyers 26 (4th ed. 1998). However, keeping all of those endings in mind when skimming a draft is difficult. And nominalizations end in *–ion* much more frequently than other endings.

II. Studying the problems of passive voice and nominalizations

Though surface-level advice to prefer active voice and avoid nominalizations is common, studies about how people actually process each are rare.[56] However, a handful of studies have shown that passive voice and nominalizations, compared to active voice and active verbs, make writing slower to read,[57] harder to read, harder to comprehend,[58] harder to remember,[59] less concise, less familiar feeling,[60] and less engaging.[61] These studies can help legal writers appreciate that overusing passive voice and nominalizations can significantly impede their readers and provide legal writing professors support to show that their advice does not just reflect personal style preferences.[62]

A. Reading comprehension

One early study by psychology professor E.B. Coleman demonstrated how nominalizations, rather than their verb forms, impede reader comprehension.[63] Using a testing method called the Cloze Procedure,[64] Coleman

56 Balling, *supra* note 47, at 106 (noting, in 2018, that "investigations of the actual processing of recommended and problem constructions are rare"). Another 2018 article noted that "[a]lthough both the active and passive voices are common, an understanding of their psychological consequences has remained largely absent." Chan & Maglio, *supra* note 48, at 557. Likewise, "existing research on nominalizations is limited." Spyridakis & Isakson, *supra* note 37, at 184. (I omit studies that involved young children as subjects because studying how elementary-school children process passive voice would not necessarily carry over to adult readers. I also omit studies of passive voice in non-English languages. After doing so, I was surprised how little the effects of passive voice and nominalizations have been studied.)

57 E.B. Coleman, *The Comprehensibility of Several Grammatical Transformations*, 48 J. Applied Psych. 186, 186 (1964) (Studies showed nominalizations are slower to read.); Daniel T. Willingham & Cedar Riener, Cognition: The Thinking Animal 293 (4th ed. 2019) ("[T]he parser assumes that sentences will be active. People are faster in determining the meaning of a sentence in the active voice ('Bill hit Mary') than in the passive voice ('Mary was hit by Bill')." (citing D.I. Slobin, *Grammatical Transformations and Sentence Comprehension in Childhood and Adulthood*, 5 J. Verbal Learning & Verbal Behav. 219–27 (1966)).

58 E.B. Coleman, *Learning of Prose Written in Four Grammatical Transformations*, 49 J. Applied Psych. 332, 335 (1965) ("A previous experiment showed that a long passage was more easily comprehended after the transformations were applied to it, one of three being detransforming passive sentences to actives (Coleman. 1964a, Experiment I)"); Lloyd R. Bostian, *How Active, Passive and Nominal Styles Affect Readability of Science Writing*, 60 Journalism Q. 635, 636 (1983) ("The bulk of previous research shows readers find active easier to comprehend and recall.").

59 Coleman, *supra* note 58, at 336 ("Actives were better retained than passives for all scoring systems."); Coleman, *supra* note 57, at 186 (Studies showed nominalizations made it harder for readers to recall the content of the sentences.).

60 *See generally* Chan & Maglio, *supra* note 48.

61 Bostian, *supra* note 1, at 38.

62 These studies may also help students understand one reason they may be struggling when reading some of the cases in their casebooks.

63 The following text briefly summarizes this study. For a more detailed explanation of the study, see the Appendix, *infra*.

64 E.B. Coleman & J.P. Blumenfeld, *Cloze Scores of Nominalizations and Their Grammatical Transformations using Active Voice*, 13 Psych. Reps. 651, 651 (1963). Researchers consider this procedure better than others (such as the Flesch reading ease formula and multiple-choice tests) for determining comprehension. *See* Lloyd R. Bostian, *Comprehension of Styles of Science Writing*, 61 Journalism Q. 676–78 (1984).

gave students two passages with every fifth word deleted, substituted by a word-length blank line. One passage had a high percentage of nominalizations; in the other, the nominalizations were converted back to verbs. The students were asked to fill in the blanks. [65]

The results showed that the readers filled in more of the blanks correctly in the active-verb version than the nominalized version[66]—at a statistically significant rate[67]—especially for content words.[68] So favoring verb forms over nominalizations better communicates substantive information;[69] after reading such a passage just once, a reader will learn more than she would on a single read of a passage written with excessive nominalizations.[70]

B. Studies on recall and reading time

Studies that compared readers' recall and reading time for passages written with a passive style—passive voice, nominalizations, and adjectivalizations[71]—versus a style favoring active voice and verb forms demonstrated that an active style enhanced both recall and reading time.[72] In one experiment, researchers provided college students with the same long passage, written either in the passive–nominalized style or a more active style. Since active constructions are often shorter than passive constructions, the researchers supplemented the active version with articles and prepositions so that both passages had the same word count.[73] Students took a multiple-choice test as soon as they were finished reading and were scored on the number of words they had read and the number of questions they answered correctly. "Anyone interested in improving readability would be heartened by the magnitude of the improvement,"

65 Coleman & Blumenfeld, *supra* note 64, at 652.

66 *I.e.*, 10.80 per passage for the verb version, versus 9.63 for the nominalized version. *Id.* at 652–53.

67 *Id.* at 653.

68 An average of 1.44 times per sentence, compared to 2.22 times for the active-voice versions. *Id.*

69 A subsequent study similarly indicated that "[w]hen nominalizations are not central to the meaning of the text, denominalizing them may not significantly improve readers' recall. However, denominalizing those nominalizations central to the meaning of the text may improve readers' recall of the information provided in the document." C.S. Isakson & J.H. Spyridakis, *Nominalizations: Effect on Recall and Comprehension*, 203, 206, *1995 IEEE International Professional Communication Conference. IPCC 95 Proceedings. Smooth Sailing to the Future*, doi: 10.1109/IPCC.1995.554908.

70 Coleman & Blumenfeld, *supra* note 64, at 653.

71 An adjectivalization is "[t]he conversion of a member of another word class into an adjective; the use of such a word in an adjectival function. The commonest way of forming an adjective from another part of speech is by adding an affix (e.g. *wealth*, *wealthy*; *fool*, *foolish*; *hope*, *hopeful*)." https://www.oxfordreference.com/view/10.1093/acref/9780192800879.001.0001/acref-9780192800879-e-25 (last visited Aug. 8, 2021).

72 Coleman, *supra* note 57, at 186. The following text briefly summarizes these studies. For a more detailed explanation of the studies, see the Appendix, *infra*.

73 Coleman, *supra* note 57, at 187.

Coleman wrote.[74] Some students, he assumed, may have guessed answers for some of the multiple-choice questions. Yet even when corrected for guessing, there was a 25.2% improvement in the number of questions students answered correctly from the active passages, compared to the passive ones.[75]

A second version of this experiment used shorter passages in active and passive styles. No articles or prepositions supplemented the word count, so the active version was shorter than the passive one, and because reading time corresponded to the word count, the students had less time to read the active versions.[76] As soon as students finished reading a paragraph, they were to write what they had read as exactly as they could. Their scores reflected the number of content words the students reproduced correctly and the number of synonyms they'd used for content words they could not recall.[77] The scoring reflected better recall for the active-style versions than for the passive-style ones.[78]

Two other experiments focusing on the effect of nominalizations versus verb forms led to similar results, showing that students recalled the sentences with verb forms more accurately than when the same sentences had some verbs converted to nominalizations.[79]

One reason nominalizations can be harder to comprehend than active-verb versions is because active styles subtly communicate more information to readers: "nominalized sentences lack many specific references," for example, that active-verb versions provide.[80] For example:

Nominalized version: An inclusion of this is an admission that it was important.

Active verb version: Since she included this, she is admitting that it was important.[81]

74 *Id.* A subsequent study indicates that the results could vary based on whether the passives were reversible or irreversible. Slobin, *supra* note 57. In a reversible passive, the subject and object could be switched, and the sentence would still make sense (even though the meaning may change). For example: *John was kicked by Bill.* In an irreversible passive, the subject and object could not be switched. If they were, the sentence would not make sense. For example, *The ball was kicked by John.* That passive is irreversible because it would not make sense to say, "*John was kicked by the ball.*" Three years after Coleman's study, psychology professor Dan Slobin's study showed that reversible passives create more difficulties for readers than irreversible passives. With reversible passives, it is more difficult to keep track of which noun is the actor. But irreversible passives "create fewer opportunities for confusion" because, even though "the normal subject-object order is reversed, only one of the two nouns could plausibly be the [actor]." *Id.* at 225–26.

75 Coleman, *supra* note 57, at 187.

76 Students had 0.5 seconds per word to read each of four passages of around 100 words each. *Id.*

77 *Id.* at 187–88.

78 *Id.* at 188.

79 *Id.* at 188–89.

80 *Id.* at 189 (citing Otto Jesperson, The Philosophy of Grammar 133–44 (1924)).

81 *Id.*

Active voice requires an actor (Actor → Action → Object), so the actor *she* is inserted in the active-verb version. Including the actor provides the reader with more information: *she* is the subject of the sentence, *she* indicates a person, and *she* indicates a number (a singular person). Also, the verb *included* establishes past tense, whereas the nominalization *an inclusion* does not.[82] Similarly, the verb phrase *is admitting* establishes present tense that progresses from the past, whereas the nominalization *an admission* does not. And *since* expresses causation. All of these specific references are potentially important pieces of information that do not exist in the nominalized version.[83] The nominalized version requires the reader to assume, infer, and insert the omitted information (like *who* included this, *who* admitted that, the implied tenses (past then present), and the causal connection). Yet both sentences have eleven words. So in the same number of words, using active voice can provide more concrete, specific information than a nominalized version may.

This information could be implied from context preceding a nominalized sentence, but using the active verbs expresses them explicitly.[84] If the information is not contextually obvious, then the nominalized version becomes harder to understand.[85] Even if the reader *can* deduce those references from context, doing so requires the reader's effort to make the connections. When the writer provides the specific references, the reader can understand the sentence more quickly and easily.

Also, shorter sentences (and shorter clauses) are easier to understand and comprehend.[86] Using active verbs rather than nominalizations often shortens clauses.[87] Shorter sentences can predict readability because they have less "transformational complexity"—for example, more active voice and active verbs, less passive voice and nominalizations.[88]

82 For example, the *inclusion* could be past: *Since she included this, she is admitting that it was important.* Or it could be present: *By including this, she is admitting it was important.* Or it could be future: *If she includes this, she will be admitting it was important.* Using the verbs, rather than the nominalizations, makes the tense clear.

83 *Id.*

84 *Id.* at 190.

85 *Id.*

86 "Flesch has argued that short sentences are relatively easy to comprehend, but a careful reading of his works . . . suggests that he is concerned with clause length more than sentence length." Coleman, *supra* note 57, at 190 (citing R.F. Flesch, The Art of Plain Talk 32 (1946)); R.F. Flesch, The Art of Readable Writing 129 (1949)). "An experiment by Coleman . . . also supports the notion that shortening clauses would improve comprehensibility more effectively than shortening sentences." Coleman, *supra* note 57, at 190 (citing E.B. Coleman, *Improving Comprehensibility by Shortening Sentences*, 46 J. Applied Psych. 131–34 (1962)).

87 For example, in the 1,000-word sample from one of the long passages in Coleman's first experiment, the average word length for each clause was 15.3 words. However, when he rewrote the passage by replacing passive voice with active voice, replacing nominalizations with active verbs, and replacing adjectivalizations with adjectives or adverbs, the average clause length dropped to 8.9 words, a drop of 58%. Coleman, *supra* note 57, at 190.

88 *Id.*; *see also* Spyridakis & Isakson, *supra* note 37, at 185 ("We are quite certain that denominalizing would be of benefit in cases where the text is convoluted or heavily nominalized with polysyllabic terminology since denominalizing would shorten the existing clauses and add more concrete words in the verb slot.").

C. Passive constructions: slower to read, harder to comprehend, and less interesting

About twenty years after the Coleman studies, Lloyd R. Bostian, a journalism professor at the University of Wisconsin-Madison, conducted two studies demonstrating that students found passages written in a passive and nominal style slower going, less comprehensible, and less interesting.[89]

The author rewrote two articles—one, from a sports-medicine journal, addressed injuries to runners; the second, from a soil-science journal, addressed alfalfa's need for sulfur. He assumed readers would find the running article naturally more interesting than the soil article.[90]

First, he rewrote both articles to be in the active voice.[91] Second, he rewrote the articles primarily in the passive voice.[92] Third, he converted the passive verbs in the passive version into nominalizations.[93] For example:

Active Researchers have found that more and more Americans are running to achieve physical fitness.

Passive It has been found by researchers that more and more Americans are running to achieve physical fitness.

Nominal The finding of researchers is that more and more Americans are running for the achievement of physical fitness.[94]

To determine reading speed, the author distributed the six versions randomly and instructed the students to read at a normal pace.[95] After they had read for shortly more than two minutes, he stopped them to determine what percentage of the article each had read.[96] To determine comprehension, he had each student finish reading the article[97] and asked

89 Bostian, *supra* note 1, at 33. Professor Bostian also explained this study and its results in Bostian, *supra* note 58.

90 Bostian, *supra* note 1, at 35.

91 *Id.*

92 Thus, he made more than ninety percent of the transitive verbs passive. Bostian made some exceptions, avoiding situations where multiple passives in a sentence would make the sentence too awkward. *Id.*

93 *Id*. The number of words in the two active articles averaged 561. The number of words in the passive articles averaged 651.5. The number of words in the nominal articles averaged 669. Thus, by doing nothing but converting active voice to passive voice, the articles increased in length by 16%. By converting active voice to nominalizations, the articles increased in length by 19%. Bostian, *supra* note 58, at 638 (Table 1).

94 Bostian, *supra* note 1, at 35 (allcaps in original changed to boldface for consistency and more readable typography).

95 The six samples were comprised of the three versions of the running article and the three versions of the soil article. The students did not know that others received different versions. *Id.*

96 *Id.* at 33.

97 *Id.* at 36

them to complete ten fact-retention questions.[98] He also asked students to rate how familiar they were with the topic of their article, how interesting the material was to read, and how easy it was to read.[99]

The students read the active passages "significantly faster than the passive and nominal passages."[100] In terms of comprehension, the students who read the passive and nominal passages surprisingly did not score significantly lower than the students with the active passages.[101] This result differed from results in other studies, though, in which comprehension was lower when passages were written in passive and nominal styles.[102] This aberration might have been because the subjects were university students, who have experience reading and processing texts written in a passive and nominal style.[103] It might have been because slow readers were allowed to take as much time as they needed to complete the passages, "wash[ing] out effects evident at normal reading speed."[104] Or it might have been because the comprehension questions were simple, fact-retention questions. If the questions had required more difficult analysis or reasoning, the author thought the readers' comprehension would likely be less for those who read the passive and nominal passages (compared to those who read the active passages).[105] Or the similar comprehension scores might have been because the average sentence length across all six versions was fairly short: fifteen words per sentence.[106] Prior research "show[ed] that nominalization adds complexity, so longer sentences in nominal style would likely be more complex and reduce comprehension further."[107]

98 Professor Bostian did not inform students before they read that they would be tested on the material. *Id.*

99 *Id.*

100 *Id.* To be specific, the students read the active passages 7% faster than the passive passages, and 9% faster than the nominal passages. *Id.* Interestingly, a recent study using eye-tracking technology found that subjects did not read nominalizations and passive voice slower than active voice. *See generally* Balling, *supra* note 47. The eye-tracking technology allowed researchers to observe how much time readers' eyes linger on certain words and phrases throughout a passage. The longer eyes linger on a construction indicates reader difficulty. *Id*. at 106. However, the author cautioned that "there is more to comprehension than what an eye-tracking measure can gauge." *Id.* at 115.

101 Bostian, *supra* note 1, at 36.

102 *Id.*

103 *Id.* This factor may be true of judges and lawyers, who are experienced in reading legal writing, much of which is written with passive and nominal constructions. However, this factor may not be true for some clients, who attorneys often draft contracts, memos, and letters to.

104 Bostian, *supra* note 58, at 640.

105 Bostian, *supra* note 1, at 36, 38. This factor could apply directly to legal writing, as much of what attorneys write to colleagues and judges involves complex legal analysis and reasoning.

106 *Id.* at 38.

107 *Id.* This is an important observation because long sentences—well beyond fifteen words—are common in legal writing. *See, e.g.*, Wayne Schiess, *Sentence Length*, Austin Law., Sept. 2007, at 15 (noting that legal writing experts recommend an average sentence length of 20–25 words).

As for which passages the students found more interesting and easier to read, the author correctly assumed that the students would find the versions of the soil article more difficult, less familiar, and less interesting than the versions of the running article.[108] Regardless of which version they received, students read the running article faster, comprehended it better, and judged it to be more interesting than any version of the soil article.[109] But the students who read the passive and nominal versions of the soil article "judged [them] to be significantly less familiar" than those who read the active version of the soil article.[110] Thus, "an active style enhances the perception of familiarity of an inherently dull topic."[111] A "[n]ominal style [was] clearly the poorest choice of the three styles—it rank[ed] below active and passive in every measure. . . . [N]o matter how much [some writers] value it, nominal style is a poor choice for effective communication; it is dysfunctional pseudo-elegance."[112]

A subsequent study on passive voice and nominalizations, using shorter samples of the soil article, focused primarily on students' comprehension.[113] Following the Cloze Procedure,[114] the author left the first and last sentences intact, but substituted a blank for every fifth word throughout the rest of the passage. Students had as much time as needed to fill in the blanks. [115] The results demonstrated that "[u]niversity students with substantial exposure to technical and scientific writing can comprehend an active style better than a passive style"[116] and that a nominal style is even less comprehensible than a passive style.[117]

108 Bostian, *supra* note 1, at 38.

109 *Id.*

110 *Id.*

111 *Id.*

112 *Id.* at 38–39. A word of caution about this study: It is unlikely that any of the three versions of each article reflect an entirely realistic writing style. Version 1 of each article made every sentence active voice, while Version 2 converted over 90% of the transitive verbs to passive voice, and Version 3 converted most verbs into a nominalization. First, even great writing would rarely be entirely active—though it can be close! In a sample of thirty *Wall Street Journal* articles from 2007, researchers found the median frequency of passive voice—measured as "the percentage of sentences with a passive voice construction"—to be 3%. Robert J. Amdur et al., *Use of the Passive Voice in Medical Journal Articles*, 25 Am. Med. Writers Ass'n J. 98, 98–99 (2010). Though most great writing is largely active, there is value in using passive constructions occasionally for variety, interest, rhythm, emphasis, etc. *See* section III, *infra*. Second, even weak writing would typically not be entirely passive, as versions 2 and 3 mostly were. Rather, it would just use passive much too often—not for effect, but just because writers are unaware of when they are using it.

113 Bostian, *supra* note 64, at 676–78. These samples were approximately 300 words long.

114 *See supra* note 64 and *infra* note 180 and accompanying text.

115 The students accurately filled in 43.88% of the blanks in the active version, 38.79% of the blanks in the passive version, and just 36.73% of the blanks in the nominal version—statistically significant differences. Bostian, *supra* note 64, at 678.

116 *Id.*

117 *Id.*

These studies should be informative for all writers, including legal writers. Even if attorneys do not use passive voice and nominalizations for *every* transitive verb, many do use them much too often. Further, many attorneys use passive voice more than once in longer sentences, often also combined with one or more nominalizations. Many attorneys do so unknowingly and without realizing the cumulative effect it has on a reader over the course of a brief. The more attorneys overuse passive voice and nominalizations, the more difficult to read their writing becomes.

D. A study of passive constructions in jury instructions

In a psycholinguistic study of spoken jury instructions, law professor Robert P. Charrow[118] demonstrated that "standard jury instructions . . . are not well understood by the average juror" and that certain linguistic constructions are largely responsible for this incomprehensibility.[119] Two of the constructions Charrow focused on were passive voice and nominalizations.[120]

Charrow first played jury instructions to the subjects, presenting them orally, rather than in writing, since that is how jurors typically receive them.[121] Charrow then asked the subjects to paraphrase what they'd heard.[122] The results demonstrated that the subjects "did indeed have difficulty comprehending the instructions."[123]

Charrow then rewrote the jury instructions to correct the assumed linguistic weaknesses, such as changing the passives to actives and converting nominalizations to active verbs, among other changes.[124] New subjects were presented with the same scenarios as in the first part, but played the rewritten jury instructions. When asked to paraphrase what they'd heard, the subjects performed "significantly and substantially better" than those who had received the original instructions.[125]

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118 Charrow & Charrow, *supra* note 31, at 1307–08. The study was funded by a National Science Foundation Grant. *Id.* at 1306.

119 *Id.* at 1309.

120 Charrow also focused on prepositional phrases, misplaced phrases, complement deletion, lexical items, modals, negatives, word lists, discourse structure, and embeddings. *Id.* at 1321–28.

121 Because this study focuses on information provided orally rather than in writing, it is not a direct fit for this article. However, I included this study because it still addresses how people understand information when receiving it in an active voice compared to through passive voice and nominalizations. Further, its results parallel the results from the studies that examined the same concepts in writing, as addressed earlier in this section.

122 *Id.* at 1309–14.

123 *Id.* at 1316. However, Charrow noted that "the results should not be interpreted as definitive evidence that jurors or juries do not comprehend jury instructions" because other factors may play a role, such as context, closing arguments, specific issues attorneys focus on, etc. *Id.* at 1317.

124 *Id.* at 1328–29.

125 *Id.* at 1331.

By isolating the linguistic changes, Charrow found that converting nominalizations to active verbs led to a 45% improvement in paraphrase scores for those particular parts.[126] When focusing on the parts in which passives were converted to active voice, Charrow found an overall improvement of 48.5%.[127] For seventeen of the twenty-two instructions, "subjects performed much better in paraphrasing active-voice phrases than their passive counterparts."[128] Charrow noted, "Of even greater significance, . . . seven subjects who heard the original [passive] version . . . actually misunderstood the phrase; with the rewritten [active] version, only one subject did."[129]

These results indicate that, like the readers tested in the earlier studies, listeners process and understand information better when they receive it in active form compared to passive form.[130]

III. The positives of passive

Studies prove that advice to prefer active voice and avoid nominalizations is much more than a style preference: passives and nominalizations can impede how a reader comprehends a sentence, paragraph, argument, or analysis. However, while attorneys should be on the lookout for passive voice and nominalizations in their drafts and work to convert them to active voice, they should not do so indiscriminately. For one thing, all-active sentences would lead to a monotonous rhythm. But apart from varying the rhythm, passive voice used strategically can make what matters most in a sentence more prominent.[131]

126 *Id.* at 1336.

127 *Id.* at 1337.

128 *Id.*

129 *Id.* The results, though, were more nuanced than a blanket conclusion. Charrow noted that passive voice located in subordinate clauses seemed to hurt comprehension more than when passive voice was located in a sentence's main clause. *Id.* Charrow stated that his research indicated "passive construction[s] create serious comprehension problems only when located in a subordinate clause." *Id.* Thus, "there is some evidence that passive constructions, when properly used and not obscured in subordinate clauses, do not impede comprehension." *Id.* at 1326.

130 Using MRI machines, neurologists found that reaction times were slower when subjects heard passive sentences compared to active sentences. Mack et al., *supra* note 26, at 1202. The neurologists noted that psycholinguistic studies show people interpret the initial noun-phrase in a sentence to be the actor, unless there are context clues to suggest otherwise. *Id.* at 1200. However, passive sentences trigger "thematic reanalysis," meaning that once readers realize the subject is the object, not the actor, readers must revise their initial mapping of *who the actor is* and *what the object is*. This additional mental processing (the "reanalysis") may be what causes longer reaction times for passive compared to active sentences. *Id.* Further, MRI scans showed that when subjects heard sentences in passive voice, regions of their brains "lit up" that did not when subjects processed sentences in active voice. *Id.* at 1203. The regions activated by the passive voice sentences are those associated with processing complex information. *Id.* at 1204. This difference "is most likely associated with the greater . . . complexity of passive compared to active sentences." *Id.* at 1205. This neurological finding supports the prior psycholinguistic studies that indicate passive voice in written form is also more complex for our brains to process.

131 Wydick, *supra* note 55, at 33. "'Certainly the passive voice has a place in every kind of writing; it is a legitimate tool—but like any tool it must be right for the job.'" Daniel Skinner & Steven Pludwin, *Unsought Responsibility: The U.S.*

A. To emphasize something other than the actor

When sentences are written in active voice, the primary focus is typically on the actor. For example, in the sentence "*The judge considered the victims' impact statements*," the sentence first focuses on the judge. The rest of the sentence builds on the judge—what did the judge do? Yet to focus the reader on the impact statements themselves,[132] the writer may make them the subject of the sentence:[133] *The victims' impact statements were considered by the judge.* The revision is in passive voice, but it focuses the reader more on the impact statements than on the judge.[134] In fact, the writer could leave the judge out of the sentence altogether, further emphasizing the impact statements: *The victims' impact statements were considered.*[135]

Readers view the grammatical subject as the emphasis of a sentence.[136] In an active sentence, that is the actor.[137] In the same sentences written in passive voice, readers view the direct object, now the grammatical subject, as the main emphasis of the sentence.[138] In fact, one study indicated that readers find that a passive sentence emphasizes the grammatical subject (the verb's object) even more than an active sentence emphasizes the subject (the actor).[139]

If the reader is more interested in or expects a sentence to be chiefly about the verb's object, rather than an actor, then passive voice can be as

Supreme Court and the Politics of Passive Writing, 45 Polity 499, 500 (2013) (quoting Martha Kolln & Loretta Gray, Rhetorical Grammar: Grammatical Choices, Rhetorical Effects 48 (5th ed. 2007)). Bryan Garner stated that professional editors find writers use passive voice effectively "for only about 15% to 20% of the contexts in which the passive appears." Garner, *supra* note 4, at 613.

132 Fogarty, *supra* note 5, at 172.

133 Rebecca Elliot, Painless Grammar 28 (1997).

134 William Strunk & E.B. White, The Elements of Style 18 (4th ed. 2000); Bouchouz, *supra* note 28, at 86 ("The passive voice focuses attention on the object of the action by placing it first and relegating the subject or actor of the sentence to an inferior position.").

135 In fact, "most passive sentences . . . consist only of an object and verb—the actor is omitted entirely." Herbert H. Clark, *Some Structural Properties of Simple Active and Passive Sentences*, 4 J. Verbal Learning & Verbal Behav. 365, 370 (1965). One source stated that "in formal English, more than 80 per cent of passives are [actorless]." R.M.W. Dixon, A Semantic Approach to English Grammar 353 (2005). However, this exact possibility is often one of the problems with passive-voice sentences—the writer may leave the actor out of the sentence, even when it is important who the actor is, but it might not be clear to the reader who the actor is.

136 For a study so showing, see P.N. Johnson-Laird, *The Interpretation of the Passive Voice*, 20 Q.J. Experimental Psych. 69, 69–72 (1968).

137 *Id.*

138 *Id.*

139 *Id.*; *see also* Clark, *supra* note 135, at 370 (citing B. Andersen, *The Short-Term Retention of Active and Passive Sentences*, unpublished doctoral dissertation, The John Hopkins University (1963) ("[A] study of recall of simple active and passive sentences[] demonstrated that recall is best for the first sentence part and poorest for the second part, regardless of the grammatical form of the sentence.").

easy to comprehend as active voice.[140] These passive sentences effectively, and appropriately, emphasize the object over any actor:

- Senior citizens are harmed most by the new law.
- The plaintiff, not the defendant, was given an extension.
- Punitive damages are being requested.
- The newest employee was never going to be given a fair opportunity.
- The facts are uncontroverted.
- If the integrity of our judicial system is to be maintained, court orders cannot be ignored with impunity.
- Plaintiff's motion for summary judgment is denied.

These sentences all emphasize the beginning of the sentence more than the actor (who is actually present in only the first sentence). Each of these sentences could be rewritten in active voice. But doing so would then emphasize the actor more than the object. When the writer puts the object first—as the grammatical subject—it becomes the focus of the sentence.

B. When the actor is unimportant or unknown

Sometimes the actor is not important in the information a sentence is delivering. In those situations, passive voice works perfectly fine.[141] Consider these examples:

- Mask-wearing was mandated across the country.
- Restaurants around the country were allowed to reopen under limited capacity.
- Alcohol is not allowed on school grounds.

In all these examples, who did the action, even when the reader can infer who it is, is not important. It is simpler and more to the point to say, "Restaurants around the country were allowed to reopen under limited capacity," rather than to say whether it was mayors, city councils, or governors, etc., who allowed restaurants to reopen in each jurisdiction. Passive voice is typically a wordier way to write a sentence. But, when the actor is unimportant, passive voice allows the writer to leave the actor out of the sentence.[142] In active sentences the actor must be included. Thus,

140 Bostian, *supra* note 58, at 636.

141 Elliot, *supra* note 133, at 27; Garner, *supra* note 6, at 25; Wydick, *supra* note 55, at 33.

142 Up to 80% of the time writers use passive voice, they omit the actor from the sentence. Dixon, *supra* note 135, at 353. Though omitting the actor is often a reason passive voice is less clear for a reader, if the preceding context makes it clear who the actor is, then omitting the actor in the passive sentence does not create that confusion. Similarly, if the actor is unimportant, omitting an actor in a passive sentence will not likely create confusion.

passive voice can sometimes be more concise and effective by omitting such unnecessary information.

Similarly, sometimes the actor may be important but unknown. In those situations, passive voice can be effective.[143] For example, consider these sentences:

- The restaurant was vandalized at 4:00 a.m.
- Four victims were assaulted that same night.
- The jurors may be harmed if their names are revealed.

In each example, if the writer does not know who the actor is, she cannot attach the actor to the sentence unless she does so in general terms, like "*Somebody assaulted four victims that night*." But saying *Somebody* may feel awkward or be imprecise. The writer may not know if one person assaulted all four victims, or if the assaults were unrelated. To put that sentence into active voice (*Somebody, or some people, assaulted four victims that same night*) is wordy and choppy.[144] Ultimately, using passive voice in these situations can make the sentence more smooth, direct, and concise than writing it in active voice.

C. To improve cohesion and concision through dovetailing

Passive voice at the beginning of a sentence may create an effective "dovetail" connecting adjacent sentences.[145] Two sentences dovetail when a sentence begins with information provided in the prior sentence; often, the direct object in an active sentence becomes the grammatical subject of the subsequent, passive sentence. Consider these examples (with underlining added to highlight the dovetailing).

- Pursuant to CPLR 3126, the court has the power to dismiss or strike any pleading where a party willfully fails to comply with discovery. Striking a pleading is warranted when a party's refusal to comply with discovery is willful and contumacious.
- In subsequent telephone conferences, the defendant's counsel promised to produce the documents within 30 days. The documents were never produced.
- Plaintiff alleged that he sent a demand letter to the driver's guardian on July 15, 2021. However, the demand letter was dated August 1, 2021.

143 Elliot, *supra* note 133, at 27; Garner, *supra* note 6, at 25; Wydick, *supra* note 55, at 33.

144 *See* Leong, *supra* note 6, at 10 (noting that converting "bare" passives (passives without "be" verbs) to active voice can actually add words and sometimes create awkwardness in the sentence).

145 Diana J. Simon, *The Power of Connectivity: The Science and Art of Transitions*, 18 Legal Comm. & Rhetoric 65, 75 (2021).

A dovetail using passive voice can have two stylistic benefits. First, it indicates immediately that the second sentence will focus on the act or object of the prior sentence, which creates flow from one sentence to the next.[146] Second, it can make the writing more concise: the subsequent sentence focuses on the act or object without repeating the obvious actor—something active sentences must do.

Because passive voice can create effective dovetails, a writer should not automatically rewrite every passive construction to active voice. Instead, when a sentence starts with passive voice, a writer should ask herself (1) is the actor obvious,[147] and (2) does beginning with the act or object—rather than the actor—connect from the prior sentence in a clear, concise way? If the answers are yes, then the passive voice will likely be the best choice.

D. To portray objectivity or deflect responsibility

In other areas of professional writing, such as scientific writing, authors use passive voice to convey objectivity.[148] Scientists use passive voice to remove themselves from the experiments they describe and instead focus on "things" ("organisms, materials, methods, findings, analyses, concepts, etc., [and] *not* [on] themselves").[149] The passive voice "removes the personal qualifications and personal privileges" of the author, emphasizing the results rather than the scientists conducting the experiments.[150] An article addressing passive voice in scientific writing gave this example:

> Protein solution containing 10 to 100 µg protein in a volume up to 0.1 ml *was pipetted* into 12 × 100 mm test tubes. The volume in the test tube *was adjusted to* 0.1 ml with appropriate buffer. Five milliliters of protein reagent *was added* to the test tube and the contents mixed either by

146 Thomas L. Kent, *Paragraph Production and the Given-New Contract*, 21 J. Bus. Commc'n 45, 49–50, 52, 57 (1984); *see also* Balling, *supra* note 47, at 116 ("[A] passive construction that allows the sentence to follow the canonical pattern of given before new information . . . , and is coherent with the previous and following sentences, is likely to be more easily read in a text context than an active [one] that does not.").

147 Or unimportant, as discussed in the prior subsection.

148 "The objectivity that the passive voice communicates explains its popularity in academic writing, where writing is 'object-' or 'thing-centered' and where researchers need to maintain impartiality (Leong, 2014, Pruitt, 1968). But even outside of the academic discourse and journalism, authors tend to use the passive voice to maintain impartiality about the event they are describing. (Reilly, Zamora, & McGovern, 2005)." Chan & Maglio, *supra* note 48, at 548 (citing Leong, *supra* note 6; J.D. Pruitt, *Passive Voice Should be Avoided by Research Writers*, 39 J. Higher Educ. 460–64 (1968); J. Reilly et al., *Acquiring Perspective in English: The Development of Stance*, 37 J. Pragmatics 185–208 (2005)).

149 Daniel D. Ding, *The Passive Voice and Social Values in Science*, 32 J. Tech. Writing & Commc'n 137, 138 (2002) (quoting A.W. Wilkinson, *Jargon and the Passive Voice: Prescriptions and Proscriptions for Scientific Writing*, 22 J. Tech. Writing & Commc'n 319, 322 (1992)).

150 *Id.* at 149.

> inversion or vortexing. The absorbance at 595 mm *was measured* after 2 min and before 1 hr in 3 ml cuvettes against a reagent blank prepared from 0.1 ml of the appropriate buffer and 5 ml of protein reagent (italics added).[151]

The passive voice communicates that the steps in the experiment are important, not the person conducting it:[152] "The implication is that the results are independent of any particular individuals; they may simply be observed, and every qualified working scientist may obtain the same result by following the described procedure."[153]

Consider how similar the structure of the sentences in this order is to the above example:

> On order of the Chief Justice, the motion of plaintiff-appellee to extend the time for filing its supplemental brief is GRANTED. The supplemental brief submitted on December 16, 2021, is accepted as timely filed. On further order of the Chief Justice, the motion of defendant-appellant to extend the time for filing his reply brief is GRANTED. The reply brief will be accepted as timely filed if submitted on or before January 4, 2022.[154]

Though only four sentences long, the Order has eight instances of passive voice. Every passive is truncated, leaving the actor out of all eight passive constructions.[155] Of course, everybody knows it is the justices' responsibility to read the parties' briefs, do the legal analysis, make a decision, and issue an order. And readers know it is the authors of the scientific papers who conducted the experiments. But passive voice in these passages provides a gloss of objectivity, putting the focus on the process and results and keeping the actors from the reader's mind. This effect of objectivity fits well into judges' desires to hide any politics or other subjectivity underlying a written decision.[156]

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151 *Id.* at 148 (quoting M.M. Bradford, *A Rapid and Sensitive Method for the Quantitation of Microgram Quantities of Protein Utilizing the Principle of Protein-Dye Binding*, 72 Analytical Chemistry 248, 249 (1976) (italics added by Ding)).

152 *Id.* at 148.

153 *Id.* at 149.

154 People v. Hinton, 967 N.W.2d 70, 70–71 (Mich. 2021) (mem.) (emphasis omitted—in the original, both instances of "is GRANTED" were bolded).

155 The paragraph does start with "On order of the Chief Justice." But the writer then uses all passive voice. Further, it is still not clear who the actor is. Who made the decision? The Chief Justice? A different justice? A panel of justices? Is "On order of the Chief Justice" just boilerplate language? If so, does "On order of the Chief Justice" even intend to identify the actual actor/decisionmaker, or just identify the document—the order?

156 Patricia J. Williams, The Alchemy of Race and Rights 8–9 (1991) ("[L]egal discourse is premised on strategies for obscuring subjectivity, even though subjectivity is ever present. This, in turn, gives legal reasoning an air of objectivity that hides the politics at work beneath a passive legal sheen.").

The United States Supreme Court, scholars have observed, uses passive voice to enhance its "judicial legitimacy by suppressing the appearance of the politics of legal decision making" in two ways: it "cast[s] itself as forced to act,"[157] and . . . portray[s] itself "as a messenger, devoid of its own subjectivity and serving as a conduit through which the original intentions of the founders speak."[158]

> The rhetorical erasure of agency creates the illusion of a Court that makes only "legal" judgments. . . . [Passive voice] provides a sense—even if a false sense—of security for those—from judges and justices to citizens who have faith in the law—for whom a legal discourse of subjectivity would be destabilizing. The Court's use of passives rehearses the conventions of legal writing that afford its legal legitimacy.[159]

But it's not just the judges. The ubiquity of passive voice in legal writing generally relates, one professor theorizes, "to the positivist assumptions most legalists internalize":[160] "We like to believe law, legal principles, and precedents stand tall and clear. When we apply the law to controversies, neutral and certain answers emerge. It is easy and ideologically convenient to announce, 'It is so ordered.'"[161]

Similarly, writers may use passive voice to avoid, deflect, or obscure responsibility. For example, passive phrases such as *it is widely understood that*, *it is believed that*, *it is well known that*, *it can only be described as*, "obscure[] agency by placing the actor(s) in the background"[162] and not identifying who the actors are.[163] Such constructions make it ambiguous as to who understands, who believes, or who knows.[164] Yet by obscuring agency in this way, the writer attempts to establish the statement as a common truth that the reader should accept and focus on, rather than focus on the actor. Passive voice has the "capacity to not only bury the

157 Skinner & Pludwin, *supra* note 131, at 513, 513–16.

158 *Id.* at 513, 516–21.

159 *Id.* at 512.

160 David R. Papke, *Sonia Sotomayor: Activist Grammarian*, Marquette University Law School Faculty Blog (June 28, 2009), https://law.marquette.edu/facultyblog/author/david-papke/page/7/.

161 *Id.*

162 Chan & Maglio, *supra* note 48, at 548.

163 For example, in a case about analyzing a police's custodial interrogation, the court stated that the interrogation "can only be described [as] being conversational rather than coercive or forceful." People v. Ealy, No. 06 CF 4866, 2012 WL 12883513, at *22 (Ill. Cir. Ct. Mar. 9, 2012). However, whether intentional or not, the court's use of the truncated passive makes the actor ambiguous. Who could only describe it that way? The court? Anybody and everybody? Or, anybody other than the defendant? By using the truncated passive, the writer obscures not only who could "only describe it that way" but also who made that conclusion. By using passive voice, the court takes itself out of the sentence and portrays its own conclusion as a universal truth.

164 Chan & Maglio, *supra* note 48, at 548.

subject, but to lend an air of inevitability to events"[165] and universality to beliefs.

E. To distance the reader psychologically

A recent study tested whether passive voice can increase a reader's psychological distance from a topic.[166] The greater the distance from a person, event, or concept, the more likely it is that we will think about it abstractly,[167] more objectively, and less emotionally.[168] Such distancing might be *temporal* (how far into the past (or future) an event seems), *spatial* (how distant in location a place seems), or *hypothetical* (how likely or unlikely it seems that an event was real or will occur).[169]

In this study, subjects who read a passage written in passive voice rated a trip discussed in the passage as occurring farther into the future than did those who read the passage in active voice, despite that each passage stated the trip would occur in six months.[170] Thus, passive voice increased the temporal distance for the reader.[171] Similarly, those who read a passage written in passive voice felt the destination discussed in the passage (North Carolina) was farther away than did those who read the same passage in active voice.[172] Thus, passive voice increased the spatial distance. Additionally, those who read a passage about the "MacBeth effect" ("that a threat to one's moral purity can induce the need to cleanse oneself") written in passive voice felt less certain that the effect was "real" compared to those who read an active-voice version of the same passage.[173] Thus, passive voice increased the hypothetical distance.[174] All three experiments showed that passive voice can increase a reader's psychological distance from the subject.[175]

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165 Skinner & Pludwin, *supra* note 131, at 507.

166 Chan & Maglio, *supra* note 48, at 547, 549.

167 Yaacov Trope & Nira Liberman, *Construal Level Theory of Psychological Distance*, 117 Psych. Rev. 440, 441 (2010).

168 Chan & Maglio, *supra* note 48, at 548–49, 555.

169 Trope & Liberman, *supra* note 167, at 445; Chan & Maglio, *supra* note 48, at 549.

170 Chan & Maglio, *supra* note 48, at 549–50. The study was conducted in September 2018, and the trip the passage discussed was to occur in March 2019. *Id.* at 549.

171 *Id.* at 550.

172 *Id.* at 552.

173 *Id.* at 550–51. After reading the passage, the subjects who read the active version were asked, on a scale of 1–9, "how certain they were that 'the MacBeth effect was real—that a threat to one's moral purity can induce the need to cleanse oneself.'" *Id.* at 551. Those who read the passive version were asked the same question, but in the passive voice—"that the need to cleanse oneself can be induced by a threat to one's moral purity." *Id.*

174 *Id.*

175 *Id.* at 552.

Such results indicate that an attorney might use active and passive voice to alter the pathos of an argument. A prosecutor or plaintiff's attorney might use active voice to make the judge feel closer to the action and the victim and emotionally more engaged. Alternatively, a defense attorney might use passive voice to distance the judge from the action and victim, causing the judge to think about the crime more abstractly and objectively. In increasing hypothetical distance, passive voice could subtly make the judge feel it is less likely that an alleged crime occurred, or less likely the defendant committed it. Voice is just one tool an attorney can wield in manipulating a reader's psychological distance from a topic, and its effects might well be subtle.[176] But any tool that might have such "crucial cognitive consequences for readers"[177] is worth considering.

Conclusion

Attorneys are professional writers—clients pay attorneys handsomely to write about complex legal analysis for important purposes and contested outcomes. Attorneys write to communicate, educate, and persuade. To do this at a professional level, attorneys must understand the effects of passive and active voice and of active verbs and their nominalizations, be able to spot them in their writing, and use them strategically.

Overuse of passive voice and nominalizations weakens many attorneys' writing, spreading through briefs unchecked like an undiagnosed virus. While most legal writing experts say to prefer the active voice over passive voice, attorneys must appreciate that such advice is more than a style preference. Attorneys who know and use the power of each write clearer, more engaging briefs, providing more forceful, effective, and professional advocacy for their clients.

176 The authors noted that this study was "the first to link the active and passive voices to psychological distance" and that additional studies are needed to explore this with more nuance. *Id.* at 556–57.

177 *Id.* at 547.

Appendix

This appendix provides further details about the studies summarized in section II of this article.

A. Professor Coleman's study on reading comprehension summarized in part II.A

For this study, Professor Coleman used the Cloze procedure to test comprehension when a sentence is written in various ways,[178] believing that the Cloze procedure was superior for determining comprehension to other traditional readability formulas (such as the Flesch reading ease formula) and multiple-choice tests.[179] The Cloze procedure works as follows:

> The Cloze procedure randomly deletes an equal number of words from compared passages, such as every nth word, and substitutes an underlined blank of a standard length. Subjects must then write in words they think were deleted. Responses are scored correct when they exactly match words deleted.[180]

Coleman gave 100 college students materials to read and fill in the blanks. Coleman created two alternate versions of the materials. One version included two paragraphs that had a high percentage of nouns nominalized from verbs. The materials also included ten sentences, each of which contained two nominalizations. The second version converted the nominalizations into active verbs.[181]

In each set, Coleman prepared five Cloze tests with every fifth word replaced by a blank line for students to fill in. In the first set of tests, Coleman replaced the first word with a blank line, and did so again for every fifth word thereafter. In the second set of tests, Coleman replaced the second word with a blank, and every fifth word thereafter. He continued this pattern so that he had ten sets of tests—five sets of the nominalized version, and five sets of the active version. Thus, over the five sets of the nominalized version and the five sets of the active version, every word of the passage was replaced at some point by a blank line. This allowed Coleman to pinpoint where in the sentences the use of active voice compared to passive voice affected students' performance. For example, Coleman was interested in whether the passive versus active

178 Coleman & Blumenfeld, *supra* note 64, at 651.

179 Bostian, *supra* note 64, at 677–78.

180 *Id.* at 677.

181 Coleman & Blumenfeld, *supra* note 64, at 652.

transformations affected students' performance when filling in nouns versus verbs, when filling in function words versus content words, etc. To administer the tests, Coleman separated 100 students into ten groups of ten students each and gave each group a different set of the test versions.[182]

The results showed that the average number of blanks students filled in correctly per sentence in nominalized versions was 9.63, while the average number students filled in correctly for the active versions was 10.80.[183] This was statistically significant.[184] Students correctly filled in content words in the nominalized versions an average of 1.44 times per sentence, compared to 2.22 times for the active-voice versions. This was also statistically significant.[185] Unlike with the content words, there was not a significant difference in results when comparing functional words left blank (like articles (a, an, the) and "be" verbs (is, are, was, were, am, be, being, been).[186] Thus, while active voice and nominalizations may make little difference when readers deal with non-content words, Coleman concluded that active voice does a better job of communicating substantive information.[187]

Overall, on average students correctly predicted the various types of words as follows:

- **Nouns**: 7.3 times in the nominalized versions, but 12.9 times in the active versions;
- **Verbs**: 4.6 times in the nominalized versions, but 7.1 times in the active versions;
- **Adjectives**: 9.5 times in the nominalized versions, but 10.6 times in the active versions;
- **Adverbs**: 8.1 times in the nominalized versions, but 11.2 times in the active versions.[188]

B. Professor Coleman's studies on recall and reading time summarized in part II.B

Coleman conducted four studies that compared readers' recall and reading time for passages written with passive style compared to active style.[189] In particular, the passive passages contained passive voice,

182 *Id.*

183 *Id.* at 652–53.

184 *Id.* at 653.

185 *Id.*

186 *Id.*

187 *Id.*

188 *Id.*

189 Coleman, *supra* note 57, at 186.

nominalizations, and adjectivalizations.[190] One study used long passages (around 3000 words), one used shorter passages (around 100 words), and two used sets of single sentences.

The first experiment involved two difficult passages, both 2969 words long. Coleman then rewrote the passages by (1) changing passive voice to active voice, (2) changing nominalizations into active verbs, and (3) changing adjectivalizations into adjective or adverbial forms.[191] Since active constructions are often shorter than passive constructions, Coleman added many articles and prepositions into the active versions so that the word length would remain consistent between the active and passive versions.[192]

Coleman then provided the passages to forty-eight college students, one in the original version and one in the revised (active) version. The students received twelve minutes to read each passage. As soon as a student finished, Coleman gave the student a multiple-choice test. Coleman scored each student on the number of words the student read and the number of questions the student answered correctly.

Eleven students answered more questions about the original versions, thirty students answered more questions about the active versions, and there were seven ties. Thus, nearly three times as many students answered more questions correctly when the passages were written in active voice than with passive voice and nominalizations.[193] Coleman understood that some students may have guessed at some questions. Yet when Coleman corrected the results for guessing, the average number of questions answered correctly was 5.38 for the active versions and 4.29 for the original versions.[194] Thus, even when corrected for guessing, there was a 25.2% improvement in the number of questions students answered correctly from the active passages compared to the passive passages.[195]

In the second experiment, Coleman followed the same approach as in the first experiment, except Coleman used shorter passages, around 100 words each.[196] Also, the students read four passages each, instead

190 *See supra* note 71.

191 Coleman, *supra* note 57, at 186. Coleman noted that he did not water down the vocabulary in the active versions. *Id.* at 187.

192 *Id.*

193 *Id.* "By a binomial test, a ratio of 30 to 11 is significant beyond the .005 level." *Id.* Interestingly, the average number of words read did not significantly differ in this study—2,169 words in the active versions compared to 2,160 words in the original versions. *Id.*

194 *Id.*

195 *Id.* Coleman also noted that the results will vary based on the relation between the reader's intelligence and the difficulty of the passages. However, Coleman noted that "this improvement is [still] heartening because the only changes made were in the grammatical frame of function morphemes: The content morphemes were not diluted to less technical synonyms." *Id.* In other words, Coleman did not change the substance or vocabulary used in the passages.

196 *Id.*

of just two. Further, Coleman gave the students 0.5 seconds per word to read the passages. Unlike in the prior study, Coleman did not add articles and prepositions to the active versions to match their word count to the original versions. Thus, the active versions were shorter, which also meant the students had less time to read the active versions.

As soon as students finished reading a paragraph, Coleman told the students to write the paragraph as exactly as they could to what they had just read. Coleman scored the results by computing (1) the number of content words the student correctly reproduced; (2) the number of content words the student correctly reproduced plus the number of synonyms a student used for content words (if the student did not remember the exact content word, but used a synonym instead); (3) the number of content words in correct kernel sentences;[197] and (4) the number of content words plus synonyms for other content words in correct kernels.[198] Under all four of these scoring systems, the students recalled the active versions more accurately than the originals.[199]

For his third experiment, Coleman focused on the effect of nominalizations.[200] This experiment involved twenty random sentences that each contained nominalizations. For each sentence, Coleman revised the sentence to replace the nominalizations with active verbs. When needed, Coleman also added modifiers (like "of course") so that all forty sentences were twenty words long. Coleman then typed each sentence on separate flash cards.[201]

Coleman showed the students the twenty sentences—ten in nominalized form and ten in active form—each on its own flashcard. For each sentence, students saw the flashcard for four seconds. When the flashcard was removed, students had to write down as much of the sentence as they could remember. After students completed this for all twenty sentences, Coleman gave students a twenty-question multiple-choice test (one question per sentence).[202]

Again Coleman scored the students in four ways. First, Coleman scored the number of words that students correctly reproduced. Second,

197 *Id.* A kernel sentence is "a simple, active, declarative sentence containing no modifiers or connectives that may be used in making more elaborate sentences: The sentence *'Good tests are short'* is made from two kernel sentences: *(1) 'Tests are short.' (2) '(The) tests are good.'" Kernel sentence,* Dictionary.com, https://www.dictionary.com/browse/kernel-sentence (last visited Aug. 8, 2021). One long sentence may have multiple "kernel sentences" in it. A kernel sentence is essentially a discrete meaning. So, the sentence "*John's operation of the large boat was skillful*" has three kernel sentences: (1) John operated the boat; (2) This was skillful; and (3) The boat was large. Coleman, *supra* note 57, at 188 n.3.

198 *Id.* at 187–88.

199 *Id.* at 188.

200 *Id.*

201 *Id.*

202 *Id.*

Coleman scored the number of content words that subjects correctly reproduced. Third, Coleman scored the number of content words that students correctly reproduced in correct kernel sentences. Fourth, Coleman scored the number of questions subjects answered correctly on the multiple-choice test.[203] Under all four scoring systems, the results showed that subjects remembered the active-verb versions more accurately than the nominalized versions.[204] In the first three scoring systems, the results differed enough to be considered significant.[205] The results were not different enough to be considered significant in the multiple-choice tests, yet the results still favored the active-voice sentences.[206]

Coleman's fourth experiment also focused on nominalizations compared to active voice.[207] This experiment involved ten "original" sentences. The original sentences each contained two nominalizations. Coleman revised each sentence to replace the nominalizations with active verbs. Coleman then presented the sentences to the students using a Gerbrand memory drum at a one-second rate. This meant that students viewed the sentences one word at a time as the sentence revolved around a wheel. The drum rotated at a rate such that students saw, on average, 4.7 words per second.[208]

After a student saw a sentence for the first time, Coleman gave the student a packet of cards. Each card had on it a content morpheme from the sentence.[209] A morpheme is a unit of a word that cannot be further divided—so, the word *incoming* has three morphemes: *in*, *come*, *ing*.[210] Content morphemes are morphemes that carry meaning—in contrast to function morphemes like *is*, *are*, *was*, *were*, etc. Coleman then tasked the student with placing the cards in the correct order to reflect the sentence.[211] If the student failed, the student viewed the sentence again on the memory drum and tried again. Once students succeeded, they were then tasked with filling in the function morphemes. To help the students

203 *Id.*

204 All tests of significance were by Wilcox on matched-pairs tests. The multiple-choice test gave rather disappointing results, failing to reach significance for both samples; however, the difference was in the predicted direction. By all other scoring systems, the differences were significant for both samples—sentences and subjects. *Id.*

205 *Id.*

206 *Id.*

207 *Id.* at 188–89.

208 *Id.* at 189.

209 *Id.*

210 So, for the sentence "*The association of written signs with visual images and with auditory signs is only an extension of the same process*," the student would be given cards which had typed on them the following morphemes: associate-, writ-, sign-, vis-, imag-, audit-, sign-, only-, exten-, same, and proce-. *Id.*

211 *Id.*

with this, Coleman gave them a list of all function morphemes needed to complete all sentences.[212]

Once again, the results showed that readers process active style better than nominalizations. Fourteen of the eighteen students learned the active sentences in fewer exposures than the nominalized sentences.[213] Overall, it took students an average of 6.19 exposures per sentence to learn the active-verb transformations, but 7.61 exposures to learn the nominalized sentences. Again this difference was statistically significant.[214]

The purpose of the studies was to examine "grammatical transformations as independent variables in readability experiments."[215] Each experiment showed "that some transformations are easier to comprehend than others. The last three experiments more specifically suggested that transformations using active verbs are easier to comprehend than their nominalized counterparts."[216]

212 *Id.*

213 *Id.*

214 *Id.*

215 *Id.*

216 *Id.*