

Understanding, Curing, and Preventing the Noun String: Part 2

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IN THE FIRST part of this two-part article on noun strings, published in the July/August 2015 issue of *Intercom*, I introduced critical concepts to understanding why noun strings impair the reading process. This article advances the concepts toward a practical process for repairing existing noun strings, as well as educating authors on preventing them.

Three-Step Process of Unstringing

In a noun string, several nouns modify another noun. How can this cause comprehension problems for the reader? Consider the object of the phrasal verb in this sentence (*were based on*): The safety instructions were based on the **military trainee firing range regulations orientation manual**.

Each noun or noun phrase in the string, indicated in bold, is a decoy for the true object, *manual*. As the reader encounters the transitive verb in the sentence, he looks for its object. Is it *military*, *trainee*, *firing range*, *regulations*, *orientation*, or *manual*? I hope you can see how this example real-world sentence can impair the reading process.

Below is a refresher of the three-step process for correcting a noun string, followed by an example of using the process to improve the reader's comprehension of the intended meaning.

1. Identify it

What is the anatomy of a noun string? There are five typical characteristics:

- ▶ First, and most conspicuous, a noun string contains three or more consecutive nouns, sometimes with an adjective in the mix, although occasionally, two consecutive nouns constitute a noun string, such as “forum for economics discussions,” which is more clearly constructed as “forum for discussions about economics” or, even better, “forum to discuss economics.”
- ▶ Second, the last noun of the string is typically the true subject of a verb, object of a transitive verb, or object of a preposition. As objects, noun strings are devils to interpretation. One would expect to encounter an object directly after the verb or preposition, but in a noun string, there are other intervening nouns. The noun stringer treats nouns like adjectives and piles them up to service a primary nominal that he is trying to earnestly explain. Therefore, the primary nominal gets pushed toward the end of the sentence, away from its natural slot.
- ▶ Third, the connective tissue (prepositions, conjunctives, and articles), which describes the relationship between the nouns, is missing (implied).
- ▶ Fourth, sometimes a verb masquerades as a noun. This noun has verbal thrust that can be put into play upon the rewrite. For example, *estimation* can be transformed into the verbal forms *estimate* or *estimating*.
- ▶ Fifth, the true number of a noun may be misrepresented. When a noun is enlisted to serve as an adjective, the singular form of the noun is typically used. However, upon analysis, one may discover that the notion of the noun is plural, and while unstringing the string, the editor can properly represent its plural form.

2. Analyze it

According to *dictionary.com*, analyzing is “to separate (a material or abstract entity) into constituent parts or elements; determine the elements or essential features of.”

Analyzing a noun string means to determine the meanings and functions of the words *in* the string, as well as the words that are implied. This is sometimes a painful examination because the author does not come attached to the text, and sometimes an editor has to guess the intended meaning. The examination begins with a simple “reflex” test: Does the thing make sense? Some noun strings will be clumsy and impede fluid reading but still make sense. If a noun string doesn't pass this test, then recomposing it will be a chore.

3. Expand and recompose it

You can call it *unstacking*, *unpacking*, *unfolding*, or *unstringing*, but repairing a noun string is literally expanding and recomposing a portion of a sentence. Once you figure out how one noun relates to another (in step 2), you can often use prepositions to declare relationships, recover nominalized verbs, correct the backward syntax, restore the proper number of a noun—in effect, reconstituting the intended meaning.

Example of the Three-Step Process

1. Identify

Consider the following sentence, where we encounter a string of four nouns (the red text). All four of these nouns are flat (three operating adjectivally *in some way* and one operating as the recipient of their adjectival smothering). Any string of three or more consecutive nouns is a conspicuous candidate for a pernicious noun string, and these four nouns are exemplary.

The project team developed a surge environment classification scheme.

2. Analyze

Let's analyze the words in this string. They are all nouns, and the first three *apparently* modify the fourth. A subsequent observation is that the object of the verb *developed* is neither *surge*, nor *environment*, nor *classification*. What did the team develop? A *scheme*, which is located at the end of the noun string, as is generally the case.



Also note that one of these nouns, *classification*, has some verbal thrust and is a candidate for conversion to a verb form. In fact, the verb *classify* is transitive and therefore takes an object—it would be good to provide the reader with a verb-object pattern in the place of a clunky noun.



Original	
Recomposed	
Notes	

Examples

On-site mechanical fabrication detailed electrical interconnections should be reviewed.	The device prevented most electronic system malfunctions typically attributed to power disturbances.
The engineer should review a detailed diagram of electrical interconnections for on-site fabrication equipment.	The device prevented most malfunctions of electronic systems that are typically attributed to power disturbances.
Recovered ligatures and article: of, for, a.	Recovered ligatures: of, that. Recovered phrasal verb: are attributed to.
The team released its reliability action plan performance update report.	Wiring and grounding can easily affect mitigation equipment performance.
The team released an update report on the performance of the reliability action plan.	Wiring and grounding can easily affect the performance of mitigation equipment.
Recovered ligatures and articles: on, of, an, the.	Recovered ligature and article: of, the.
The interest group published an energy storage technology options report.	An employee charity giving encouragement program.
The interest group published a report on options for energy-storage technologies.	A program to encourage employees to give more to charity.
Recovered ligatures: on, for. Restored plural form of noun: technologies.	Recovered ligature: to. Converted a gerundive (giving) to verb form (to give) and noun (encouragement) to verb form (to encourage). Restored plural form of noun: employees.
Assumptions will also impact the secondary circuit loss estimation accuracies.	Please use the form to record available mitigation equipment test information.
Assumptions will also impact the accuracy of estimating secondary circuit losses.	Please use the form to record available test information on mitigation equipment.
Recovered ligature: of. Converted noun (estimation) to verb form (estimating), which takes the object secondary circuit losses. Restored plural form of noun: losses.	Recovered ligature: on.
Investigators reviewed critical equipment electrical specifications.	The team then submitted the reliability action plan performance update report.
Investigators reviewed the electrical specifications of critical equipment.	The team then submitted an update report on the performance of the reliability action plan.
Recovered ligature and article: the, of. Note that this string could also be interpreted as “the critical electrical specifications of equipment.”	Recovered ligatures and articles: on, of, an, the.
Process equipment manufacturers were invited.	The energy storage technology options report guided the next phase of the prototype.
Manufacturers of the process equipment were invited.	The options for energy-storage technologies in the report guided the next phase of the prototype.
Recovered ligature and article: of, the.	Recovered ligatures and article: for, in, the.
Input power and room temperature will be monitored for system performance characterization.	Assumptions will also impact the secondary circuit loss estimation accuracies.
Input power and room temperature will be monitored to characterize system performance.	Assumptions will also impact the accuracy of estimating secondary circuit losses.
Converted noun (characterization) into a verb form (to characterize).	Recovered ligature: of. Converted noun (estimation) into a verb form (estimating). Restored plural form of noun: losses.
LEDSAL fixture manufacturers utilize a range of designs and components.	The vagueness of the BT wireless PV monitor module hardware specifications drew criticism.
Manufacturers of LEDSAL fixtures utilize a range of designs and components.	The vagueness of the hardware specifications for the BT wireless module of the PV monitor drew criticism.
Recovered ligature: of. Restored plural form of noun: fixtures.	Still ugly, but we recovered ligatures and articles: for, of, the, the.
How would you classify the employed energy shortfall makeup technology?	The client requested an update on renewables program research progress.
How would you classify the technology that the custom power device employs to make up for energy shortfalls?	The client requested an update on the progress of the research in the renewables program.
Recovered ligatures: that, the, to, up, for. Recovered elliptical content words (via interview with the author): custom power device. Converted noun (makeup) to verb form (to make up for). Restored plural form of noun: shortfalls.	Recovered ligatures and articles: of, in, the, the.
Verify the proper power electronic equipment operation.	
Verify the proper operation of power electronic equipment.	
Recovered ligature: of.	

3. Expand and recompose

First, let's move the object as close to its transitive verb as possible. Material that intervenes between a verb and its object can prevent phrase collapsing and cause misreading.



Now ask, "What kind of scheme is it?" It's the kind that classifies. Therefore, recover the nominalized verb from *classification* and cast it as an infinitive that modifies *scheme*. We have recovered the verb *classify* and a ligature (*to*) and moved them close to the noun that they modify. Now, what is the object of the verb *classify*? "Surge environment."



Is there only one environment to classify? No. There are many environments to classify. The plural form was hiding in a singular form because when nouns are used adjectivally ... you know. So we have restored the proper number to the noun *environments* because it behaves nominally (not adjectivally) in our new construction.

a scheme to classify surge environments

How to Prevent Noun Strings: Unteaching

Educators and professional editors are the vanguard against the noun string. But *unteaching* the noun string is like unteaching someone to cross his arms or interlock his fingers in reverse fashion. When you do a thing a thousand times, you don't think about alternatives. Reflexes are powerful determinants of writing style. Therefore, unteaching requires continual stimulation to compel stringers to think about their syntax.

According to Stanley Fish in *How to Write a Sentence*, there is only one rule to follow: "Make sure that every component of your sentences is related to the other components in a way that is clear and unambiguous." In the July/August 2015 edition of *Intercom*, I talk about teaching and unteaching engineers to write in the workplace (pp. 6–12). Here is a summary of ways to unteach stringers whom you can influence:

- ▶ Compose a formal course or presentation on effective technical writing. During formal training, you can present students with many examples of noun strings (perhaps from their own compositions) and ask them to repair them by using the three-step process described earlier.

By unstringing noun strings, technical communicators can become the unstrung heroes of the communication world.

- ▶ Provide on-grid sporadic education. During normal work hours, talk to known stringers about the subject.
- ▶ Provide off-grid education. Send out writing tips via email, and include periodic lessons on unstringing.
- ▶ Provide marginal (stealth) education during review and editing cycles, such as in the margins of Microsoft Word documents.

Conclusion

By unstringing noun strings, technical communicators can become the unstrung heroes of the communication world. But the problem of noun-stringing begins in the university and is indigenous to science and engineering. You won't find noun strings in great numbers in fiction, poetry, journalism, or other non-technical genres, and you generally won't find them in good science communication that is crafted for lay audiences. In good peer-to-peer magazines and journals—ones that sound like journalism—noun strings are uncommon.

One promoting factor of poor writing habits is that higher education takes off the training wheels too soon in technical fields, failing to teach technical people to properly convey their ideas at the sentence level. The noun-string meme may not have originated in the academic chambers of engineering, but it certainly thrives there. In those chambers is where grass-roots efforts to improve sentences should begin—not just the elimination of noun strings, but the correction of many ingrained worst practices. Post-graduation, the goal of the editor is to repair the faulty syntax of stringers and to encourage healthy "sentence-genic" behavior: the facile generation of good sentences. But I sense a complacency among editors, a sort of complicity, even an obedience to the string (evinced by the abiding presence of noun strings in documents that have been professionally edited). I fear that someday, the noun-string meme will breach the blood-brain barrier of those who carry it as an unconscious thing and unknowingly pass it in their DNA to a new generation of English majors. And if this happens, the reader is doomed. ■

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