Making Lists: A Journey into Unknown Grammar

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Abstract

Textbooks on technical writing, and academic, corporate and other style guides, often prescribe rules for lists that result in basic grammatical errors. Itemised and enumerated lists are grammatically different, and errors arise when the rules for one type of list are used in constructing the other type. Examples of correct and incorrect usage are given, and ways of avoiding errors are described. The strict application of grammatical rules to list construction reveals some interesting limitations of the list form.

1 Introduction

We are all familiar with numbered and bulleted lists, and use them often. After ordinary paragraphs, lists are perhaps the commonest devices used by technical and scientific writers for arranging text on a page. It is an unfortunate fact that textbooks on technical writing, corporate style guides, and even style guides promulgated by learned societies, often prescribe rules for lists that result in grammatical errors. Some of the errors produced by these rules, such as prescribing sentences without correct terminating punctuation, are basic indeed. The purpose of this article is to examine some of these errors, and try to find ways to avoid them.

The approach adopted here is an axiomatic one: a number of assumptions about the desirable properties of a technical text are made, and the consequences of those assumptions are examined.

1.1 Preliminaries and Basic Assumptions

First, some preliminaries and plausible basic rules or axioms.

1.1.1 Writing in a Formal Register

Technical works are usually written in a *formal register*. It will be assumed here that a formal document is one that is written in grammatically correct, complete sentences, and is correctly punctuated. The actual quality and style of the language used is not under consideration.

1.1.2 Improving Comprehension

A technical work must be written in complete, grammatically correct sentences. These sentences can be typographically arranged on a page or screen in any way that helps the reader to understand the material. We can, in the interests of clarity and comprehension, decorate the text of the work in any way that we consider necessary: bold, italic, indenting, white space, bullets, numbers, table rules, illustrations, and so on.

Navigational devices, such as headings and subheadings, page numbers, captions for figures and tables, tables of contents, lists of figures and tables, and headers and footers may be applied to the text as the writer considers necessary. These navigational devices may be, but are not necessarily, made from text elements, and may be, but are not necessarily, complete sentences. No matter what they are, text decorations are designed to assist comprehension of the text, and navigational devices are designed to assist in finding specific material in the text. Neither text decorations nor navigational devices are part of the text itself.

1.1.3 Ellipsis

Ellipsis is the omission of elements recoverable from the context, and can involve punctuation as well as words. Restoring the punctuation and missing words (usually conjunctions like *and*) will produce a complete, grammatically correct sentence.

Elliptical sentences should be constructed carefully, in such a way that the reader of the material can without effort reconstruct the full version, and *not gain any conscious impression that the material is grammatically incorrect.*

Elliptical sentences are often used to reduce the apparent complexity of sentences in technical works. In particular, elliptical sentences are commonly used in list constructions.

1.1.4 There is No Such Thing as a Sentence Fragment

Some writers refer to incomplete or otherwise ungrammatical sentences as *sentence fragments*. Now *sentence fragment* is not really a useful concept: incomplete or ungrammatical sentences are not acceptable in the body of a technical work, which must be written in complete sentences or easily-reconstructed elliptical sentences.

There is no requirement for the words in chapter and section headings and captions to constitute complete sentences, and they usually don't. Such headings are only navigation devices, designed to help readers to find their way around a complicated document. Such navigational devices could be called *sentence fragments*, but since *sentence fragments* are limited to navigation devices, there seems to be no real need for a separate name: we could simply refer to headings and captions.

1.1.5 Sentences Cannot be Nested

In the English language, sentences cannot be *nested*, that is, a complete sentence cannot be placed inside another sentence as a standalone entity. (It is of course possible to construct elaborate sentences that contain parts that would be complete sentences if they were written out separately, but that is not the same as a nested sentence.)

1.1.6 A Basic Rule for Writing

Any writing rule that results in grammatical error is useless, and must be discarded. The application of this rule to the construction of numbered and bulleted lists leads to some surprising conclusions.

2 How Do You Know It's a List?

Bullets or numbers do not make a list. Word processors and text formatters can generate tagging symbols or sequential numbering for any type of text item that you can specify, and you can place those symbols anywhere in a text. However, these symbols and numbers may not serve the purpose of assisting in comprehending the ideas being presented.

2.1 False Lists

There are lists, and there are *false lists*. A false list is a collection of items that do not really belong together, but have bullets or numbers at the left on their first lines. In the Age of PowerPoint, false lists are very common, because it is so easy to add symbols to text. However, the bullet symbols, pointing hands, marching ants, or numbers quite often add nothing to the presentation: plain, undecorated text would have been more informative.

Bad Example 1 shows a false list, of a kind commonly found in PowerPoint presentations.

Bad Example 1: Vertical False List

Topics for today

- *What is the Automatic Manual Writer?*
- *Five easy steps to success*
- *How it works*

False lists are not always set out in a neat vertical alignment, as Bad Example 2 shows.

Bad Example 2: Horizontal False List

There are three options available, namely, (a) running away; (b) staying and hiding; and (c) staying and being brave.

If the brackets and letters are left out, the sentence is grammatically correct, and a little easier to read. The bracketed letters add nothing to our understanding, and are merely extraneous decoration.

2.2 Identifying a List

The items of a list must have some common property: for example, they must all relate to a single idea or task; and the bullets or numbers must in some way improve the clarity of the material being presented. This idea will be progressively refined here.

3 Terminology

LaTeX recognises three types of lists: *enumerated* lists, described in Section 3.2, *itemised* lists, described in Section 4, and *definition* lists.

The definition list is something of an oddity, because it appears to be nothing more than a table in disguise. The definition list is considered further in Section 8.

3.1 Other Names for Itemised Lists

Itemised lists are sometimes referred to as *bulleted lists* or *unordered* lists. The term *bulleted list* is common but not all that useful, because bulleted lists do not necessarily have text bullets to mark their items: items may be marked by dashes, graphics, or not marked at all but merely set out on separate lines. The term *unordered list* is often used as a more general term than *bulleted list*.

The term *unordered list* is not particularly useful either, since the items of the list are arranged on the page in some order that the author considered useful. The important point is that the order does not matter, in the sense that the items can be rearranged without changing the meaning of the text, even if the clarity of the presentation is reduced as a consequence.

3.2 Enumerated Lists

An *enumerated list* is used to set out sequential instructions, or to list components or cases, or to indicate the order of importance of cases. The items in enumerated lists are marked by numbers or letters, or other obviously sequential symbols.

Setting out sequential instructions is fundamentally different from the other two uses: if the enumerated list comprises components or cases, then the order of the items in the list does not matter, because the items can be rearranged without changing the meaning of the presentation. Sometimes the items in an enumerated list, such as a list of component parts of an assembly, can be changed at random without reducing the clarity of the presentation.

4 Itemised Lists

Itemised and enumerated lists appear to be similar, but there is a fundamental difference between the two types, and each has its own rules of construction. Itemised and enumerated lists are often confused by technical writers, in the sense that the rules for one type are often applied to the other.

An *itemised* list is simply a visual device for displaying a single, usually complex, sentence on a page. The bullets and other typographical devices, such as indents and line spacing, are not part of the syntactical structure of the sentence itself: they serve only to assist comprehension. It follows from the basic premise stated in Section 1.1.2 that a sentence written as an itemised list should still be grammatically correct when the visual devices are removed. Consider the itemised list shown in Example 1.

Example 1: Simple Itemised List

Three colours are available:

- *red,*
- *green, and*
- *blue.*

This itemised list is only a typographical rearrangement of the following sentence.

Three colours are available: red, green, and blue.

4.1 Commas and Semicolons

In order to avoid ambiguities arising from the repeated use of the word *and* in more complicated examples, we could adopt a convention that sentences are to be subdivided by semicolons, not commas, and thus write out itemised lists in the form shown in the Example 2.

Example 2: Itemised List with Semicolons

Three colour combinations are available:

- *red, white, and blue;*
- *blue, green, and yellow; and*
- *green, orange, and white.*

This is an example of the classic, fully punctuated version of the itemised list.

Since an itemised list comprises only one sentence, the word immediately following an item decoration must not be capitalised unless it is a proper noun of some form. Bad Example 3 illustrates a common but incorrect usage.

Bad Example 3: Incorrect Use of Initial Capitals

This section gives guidelines for:

- *Creating lists;*
- *Punctuating lists; and*
- *Creating embedded lists.*

4.2 Omitting Punctuation

Itemised lists are often written in unpunctuated, or elliptical, form. Consider the itemised list shown in Example 3. (Some textbook writers insist that an elliptical list like this should have a final full stop. But why would you bother?)

Example 3: Itemised List, Unpunctuated (Elliptical)

Three colours are available:

- *red*
- *green*
- *blue*

4.2.1 Ellipsis

The unpunctuated list in Example 3 is derived from the fully punctuated version by the process of *ellipsis*.

Some textbooks on technical writing refer to an itemised list formed by ellipsis as a *list of sentence fragments*, but, as was pointed out in Subsection 1.1.4, the concept of a *sentence fragment* is not useful.

If a grammatically correct version cannot be constructed, then we are dealing with a false list.

Many corporate style guides actually specify that the elliptic form of an itemised list *must* be used in place of the fully punctuated original version. There is of course nothing wrong with this specification, as long as we are aware that the elliptical form is a derivative and not the full version.

4.2.2 Ellipsis and Parallel Construction

Many style guides specify that the items in an itemised list should show *parallel construction*, that is, the items should be syntactically similar. Parallel construction is useful because it makes it easier to understand the material presented, and easier to recover the full form of a list from the elliptical form.

5 Enumerated Lists

An itemised list is a visual device for displaying a single sentence. In contrast, an *enumerated list*, in

numbered or lettered form, is a visual device for displaying a passage of text comprising a number of sentences. The sentences in the text may, but do not necessarily, collectively describe a sequence of events in time or space. Sometimes the form of a enumerated list is used to indicate the number of components in a collection, or cases under consideration. This is usually clear from the context.

If you intend to construct cross-references to individual list items, then those items should be part of an enumerated list.

The commonest example of an enumerated list is a set of instructions that must be performed in a fixed time order. Consider the set of instructions in Example 4.

Example 4: Instructions in Narrative Form

The instructions for servicing the device are as follows. Open the top panel of the veeblefetzer. Insert the screwdriver into the slot at the left. Turn the screw clockwise until the pressure is released. Close the top panel.

We usually present a set of instructions like this as a numbered or lettered list with an introductory sentence, or heading, or both. The heading is only text decoration, and as such need not be either grammatically correct or punctuated. The introductory sentence must of course be a complete sentence, ending with a full stop (or question mark, or exclamation mark, if appropriate). An example of an enumerated list with a heading and an introductory sentence is shown in Example 5.

Example 5: Enumerated List with Heading and Introduction

Servicing the Device

To perform a routine service, carry out the following steps.

1. Open the top panel of the veeblefetzer.
2. Insert the screwdriver into the slot at the left.
3. Turn the screw clockwise until the pressure is released.
4. Close the top panel.

5.1 No Colon Introducing an Enumerated List

Many writers end the introductory sentence before an enumerated list with a colon. *This is a grammatical error*: every sentence in a technical work must be complete, and every sentence must end with either a full stop, a question mark, or an exclamation mark, but *never* with a colon. This remarkably common error arises from a confusion of the layout rules for an enumerated list with those for an itemised list.

5.2 Decorating the Numbers

The numbers beside the items in an enumerated list are decorations — visual devices that assist the reader in understanding the material — and have no syntactical meaning at all. Any full stops, brackets, bolding, animation or other devices added to the numbers are, from a syntactical point of view, also decorative. The order of the actions is determined by the order of the sentences, not by the numbers on the page: the numbers serve only to reinforce the sequence in the reader's mind.

The use of full stops or brackets after the numbers or letters could suggest to a reader a syntactical structure that does not actually exist, and this is one reason why such decorations of the basic numbers or letters should perhaps be avoided. This is more easily said than done: most writing software will insert these decorations (for example, full stops after item numbers) automatically.

Sometimes, you may need to make the numbers quite prominent: for example, lists of instructions in a user guide may be embedded in masses of explanatory material.

6 Complications and Restrictions

Strict application of the rules produces some interesting results. These results are described in more detail in following sections.

An individual item in an itemised list may have another, subsidiary itemised list attached to it. (See Subsection 6.1.)

Putting an explanatory paragraph after an item in an itemised list is a grammatical error. (See Subsection 6.2.)

An individual item in an enumerated list may have an itemised list attached to it. (See Subsection 6.3.)

An individual item in an itemised list *cannot* have a subsidiary, enumerated list attached to it. (See Subsection 6.4.)

6.1 Itemised Lists within an Itemised List

It is possible, and quite common, to insert secondary itemised lists under the individual items in another higher level list. There are even widely accepted rules about the selection of bullet points: round bullets at the first level, dashes at the second level, and so on. Recall that an itemised list comprises only one sentence: it follows that all of the items in the list, considered together, must constitute only

one sentence. Attempting to follow this rule could easily result in complicated constructions that lack clarity. Example 6 shows a two-level itemised list that follows the rule and is still clear. (A sentence that can be displayed as a three-level itemised list would be rather complicated, at best.)

Example 6: Itemised Lists within an Itemised List

The colour of the body of the device may be:

- a primary colour, which may be one of:
  - *red*;
  - *yellow*; *or*
  - *blue*; *or*
- a pastel colour, which may be one of:
  - *pink*;
  - *pale yellow; or*
  - *azure; or*
- a neutral colour, which may be one of:
  - *beige*;
  - *bone; or*
  - *ecru.*

6.2 Explanatory Paragraphs in Itemised Lists Not Possible

It is common practice to insert explanatory paragraphs after items in itemised lists. *This is a grammatical error*: an itemised list comprises only one sentence, and it is not possible to nest other sentences within that sentence.

6.3 Itemised List After Numbered Item

In an enumerated list, it is possible to have two or more sentences after each number, if the writer thinks this necessary — and of course any of those sentences may be displayed as an itemised list if appropriate (that is, bullet points may follow a numbered list item).

Some of those following sentences may be displayed with their own ordering symbols (that is, a subsidiary enumerated list may follow a numbered list item). This is common, and presents no conceptual problems.

6.4 No Numbered Lists After a Bullet Item

We can place an itemised list after a numbered item in an enumerated list. Can we, conversely, place an enumerated list after a bulleted item in an itemised list? As was the case with the legendary ski resort full of girls looking for husbands and husbands looking for girls, the situation is not as symmetrical as it may at first appear.

Recall that the bulleted items form a single sentence, and each enumerated item contains one or more complete sentences. Sentences cannot reasonably be nested within other sentences, and so an enumerated list *cannot* be placed after a bulleted item without violating grammatical rules.

It is common in technical works to use bulleted items as a variety of unnumbered heading, with a bulleted item, often in bold type, followed by explanatory paragraphs. On reflection, it is hard to think of any reason why you would want to do this — why would you lay out sets of instructions on one or more pages, and imply that the order in which those sets are presented to the reader does not matter? The best solution to this problem is to avoid it: possibly by rewriting the bulleted items as headings followed by text, with any enumerated lists in the text left to stand alone.

7 Pathologies

Technical works often contain strange list constructions: enumerated lists disguised as itemised lists, itemised lists disguised as enumerated lists, and hybrid constructions and monsters. These errors often proceed from a failure to understand the basic difference between enumerated and itemised lists.

7.1 Enumerated List Disguised as an Itemised List

The most common error appears to be displaying an enumerated list in the guise of an itemised list.

Bad Example 4, taken from a corporate style guide, appears to be an itemised list, but it actually contains four sentences, one of which is not correctly terminated.

Bad Example 4: Enumerated List Disguised as an Itemised List

Use the following guidelines for creating appendices:

- *List the appendices in the table of contents.*
- *Refer to the appendices in the preface.*
- *For each appendix, provide an introductory paragraph.*

The list shown in Bad Example 4 should be presented as an enumerated list with an introductory paragraph, as shown in Example 7.

The numbers in Example 7 do not necessarily specify a sequence of actions: they may merely clarify the number of rules to be followed.

Example 7: Improved Version of Bad Example 4

Use the following guidelines for creating appendices.

1. *List the appendices in the table of contents.*
2. *Refer to the appendices in the preface.*
3. *For each appendix, provide an introductory paragraph.*

7.2 Itemised List Disguised as an Enumerated List

Bad Example 5 appears to be an enumerated list, but the numbers serve no purpose: they do not indicate steps to be taken, or a sequence in which items may be used, or a number of items (how many items are included in "its usual accoutrements"?), or an order of importance.

Bad Example 5: Itemised List Disguised as an Enumerated List

The items enclosed in the Vampire Protection Kit are as follows.

1. *An efficient pistol with its usual accoutrements.*
2. *Silver bullets.*
3. *An ivory crucifix.*
4. *Powdered flowers of garlic.*
5. *A wooden stake.*
6. *Professor Blomberg's new serum.*

The information in Bad Example 5 is better presented in an itemised list, as shown in Example 8.

Example 8: Improved Version of Bad Example 5

The items enclosed in the Vampire Protection Kit are as follows:

- *an efficient pistol with its usual accoutrements;*
- *silver bullets;*
- *an ivory crucifix;*
- *powdered flowers of garlic;*
- *a wooden stake; and*
- *Professor Blomberg's new serum.*

7.3 Sometimes, a Table is a Better Idea

It is possible to put too much material into a list, and sometimes the material would be clearer if it were set out in a table. Bad Example 6, which displays a list with too much material, was taken from a popular work on linguistics [2].

Bad Example 6: An Overloaded List

[The] eight main varieties of speech in China [. . .]

- *Cantonese* (Yúe) Spoken in the south, mainly Guangdong, southern Guangxi, Macau, Hong Kong. (46 million)
- *Gan* Spoken in Shanxi and south-west Hebei. (21 million)
- *Hakka* Widespread, especially between Fujian and Guangxi. (26 million)
- *Mandarin* A wide range of dialects in the northern, central, and western regions. North Mandarin, as found in Beijing, is the basis of the modern standard language. (720 million)
- *Northern Min* Spoken in north-west Fujian. (10 million)
- *Southern Min* Spoken in the south-east, mainly in parts of Zhejiang, Fujian, Hainan Island, and Taiwan. (26 million)
- *Wu* Spoken in parts of Anhui, Zhejiang, and Jiangsu. (77 million)
- *Xian (Hunan)* Spoken in the south-central region, in Hunan. (36 million)

The material in Bad Example 6 would be better displayed in a three-column table — possibly with itemised lists in some of the table cells.

8 Definition Lists

The *definition list*, mentioned in Section 3, is a different kind of list, because the elements of the list are neither itemised nor enumerated. Instead, an item in a definition list comprises two parts: a term and an explanation of the term. These two parts of the item are usually distinguished typographically, and may, but do not necessarily, appear on the same line.

Most word processors do not offer the definition list as an option on their drop-down menus, because a two-column table without a caption, rules, or headers (that is, an *informal table*) does much the same job.

The definition list may be used for setting out glossary items, as shown in Example 9. (This material was derived from [1].)

8.1 Uses of the Definition List

Definition lists may be used to set out definitions and construct glossaries. Other possible uses of definition lists are not so obvious: for example, a definition list could be used as a way of setting out otherwise awkward one-bullet lists, which are banned by some style guides.

Example 9: A Definition List

Klingon This is perhaps the most fully realised science fiction language. Klingon has a complete grammar and vocabulary, and countless nerds have learned it like high-school French or German.

Qwghlmian From Neal Stephenson's *Cryptonomicon* novel and *Baroque Cycle* trilogy, this fictional language is allegedly spoken on obscure British islands. The language has sixteen consonants and no vowels, and is thus ideal for representing binary information — and nearly impossible to pronounce.

R'lyehian This other-worldly, barely speakable language is part of the Cthulhu mythos (introduced in the classic Lovecraft short story *The Call of Cthulhu*).

Sindarin While Tolkien created several languages for his various *Lord of the Rings* books, Sindarin, the language of the elves, is not only his most beautiful but also his most fully realised invented language.

8.2 No Definition List in Common Word Processors

Constructing a definition list with the wraparound layout shown in Example 9 is simple enough in LaTeX, but common word processors do not offer menu items relating to definition lists. Two-column informal tables will usually be a good approximation.

8.3 History of the Definition List

The definition list is defined in HTML, in the DITA (Darwin Information Typing Architecture: an XML data model for authoring) specification of 2005, in the DocBook specification of 1990, and in the LaTeX specification of 1986; it appears to have originated in the now almost-forgotten Scribe text formatter, ca. 1978. The aim of the author of Scribe was to provide a simple way of coding command descriptions in programming manuals.

Scribe could not handle tables, but LaTeX could, to a limited extent. The only tables that LaTeX could handle at first were less than one page in length, and those tables had to be *floats*, where the position of the table in the final print version of the document was determined by an algorithm that positioned the table so that it did not extend over a page break. While that one-page limitation existed, the definition list was still useful, because it could be used to lay out tabular material that occupied more than one page.

9 Conclusions

Applying a few simple rules to itemised and enumerated lists leads to some unexpected conclusions. In particular, itemised lists are much more limited in scope than they at first appear. In many instances, enumerated lists are much more useful.

Definition lists are not used by technical writers as much as they could be.

References

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