Summary Writing: Part II*
The Bottom-Up Approach

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Why is summarization such an important component of any school curriculum∫ No language course is complete without it, even though the skills it requires are considered to be beyond the ability of the pre-adolescent student. We do not realize how difficult a task summary writing is (particularly, in the form of a précis), and make no attempt to bring it within the range of the learner's ability and mental maturity.

It is of course true that the ability to write a summary is essential for one's cognitive development. A summary is required in any intellectual venture where different views have to be coalesced, and different aspects of a situation (in say, a discussion, speech, article, etc.) have to be combined or differentiated and brought together in a concise form. Also, in a job, where disparate matters have to be brought together and different strands of information have to be separated and put under various categories, the skills involved in summarization are indispensable.

The ability to summarize signals a mind that is in control, and one that can see the larger picture from which to draw elements useful to the context; a mind that knows how to combine and differentiate, and ultimately to give rise to an organised and coordinated structure. It is something every boss requires in order to take an informed decision. It is also a skill every student (above a certain level) needs to acquire.

It is necessary to understand the complex mental activities involved in summarization. These include:

1. Distinguishing between the general and the particular, such as the larger whole and the specific contributing ideas, or between abstract and concrete examples;

2. Classification into categories, to combine features of a situation into one category or differentiate them into several categories. Here the skills of comparison and contrast are essential.

Not only do these mental skills have to be mastered, but appropriate language resources also have to be developed to express the ideas being put together. It is not at all necessary to reword all the points from the original text. However, clear textual signals are needed for an unambiguous statement of ideas, and relationships have to be forged between preceding and succeeding ideas by signposting information through appropriate lexical and cohesive devices.

Bottom-Up Approach

Here, I shall introduce another method of summary formulation that I have devised, which I call the Bottom-Up approach. This is completely different from the top-down pattern I had put forward earlier in "Summary Writing: Part I", in *LLT*, January 2016 (Volume 5, Number 1, Issue 9).

This approach is concerned with using the building blocks of language, i.e. both syntax (grammar) and lexical patterns of the passage, to form the basis for the summary, rather than simply writing the ideas contained in the text. In this approach, grammatical signals such as the main clause help us to focus on the informationally central parts of the sentence. Lexical signals help us to focus on the inter-connections in the text through: a) cohesive links (since, however, etc.) and b) repetition of words and their substitutes (pronouns for the name of an object or individual, or a similar word or phrase relating to the name). Both or either of these methods (grammatical and lexical) could be employed in the Bottom-Up approach to summarization[1].

To illustrate the difference between the two approaches to summary writing (Part I and II), we will use the same passage so that a comparison of the methods is easily possible. The passage used in Part I is given here for easy reference:

Passage for Summarization

(S1) The disturbing effects of the technological revolution may be felt in all fields. (S2) Oil tankers with unlimited capacities are built without considering the consequences of accidents. (S3) Detergents foam on our streams and lakes. (S4) Automobiles outrace safety standards, urban noises challenge our eardrums, and hidden eyes and ears invade our privacy.

(S5) Before answers can be found to these problems, it is necessary to understand two characteristics of the technological revolution—that it is mindless and that it is neutral. (S6) It is mindless because pure science is simply a desire to know, to uncover the facts, to unlock the secrets. (S7) A mind must be super-imposed onto it if it is to have any limitations. (S8) The technological developments described above are inevitable unless man actively decides to stop their development. (S9) Scientists will continue learning how to unwind the intricacies of DNA, transplant organs, and implant electrodes in the brain as long as there are unknown areas and as long as they are not specifically forbidden to do so.

(S10) It is neutral because the changes, in themselves, brought about by the technological revolution, are neither good nor bad. (S11) They acquire a value only by the way in which they are used. (S12) Science can tell us what we can do but not what we should do. (S13) It can tell us how to do something but not if we should do it. (S14) The possibilities for good and evil of many of the developments described above stagger the imagination and recall the use of atomic power.

(S15) Because the revolution challenging medicine and mankind is mindless and because it is neutral, mind must be imposed on it to control it and determine its values. (S16) The present failure to do this has created a wide gap between man's technological and his humanistic imagination. (S17) Mindless technology threatens to become a monster, destroying its creator: the visions of the future could become ghosts. (S18) This is a warning being sounded increasingly often by thoughtful men, the warning asked editorially, by *The New York Times* on the morning after Hiroshima had been bombed: "Can mankind grow up quickly enough to win the race between civilization and disaster∫"

Application of Bottom-Up Approach:

Application of Insights from Syntax (i.e. Grammar) for Summarization

Let us consider how to apply the Bottom-Up approach to summarization. This approach is based on the use of grammar and uses clause analysis to aid in the separation of ideas. The major information in a sentence is carried by its main clause, with the less important information being relegated to its subordinate clauses. For this reason, this process of summarization starts (wherever possible) by isolating and focusing on the main clause and removing the subordinate clauses, unless they happen to be crucial to the meaning. Next, the adverbial or other less important phrases within the main clause may be removed if they are not essential to the central meaning. It then remains for all other unnecessary words to be removed in order for the bare bones of the text to be revealed. Once this is done, these can be connected by adding the appropriate linking words, conjuncts and subordinators. An intuitive sense of what constitutes a topic sentence and which sentences convey important meaning also plays a part.

Let us work through the given passage to eliminate all but the most relevant information. We shall proceed sentence by sentence.

Paragraph 1: S1 reads like a topic sentence, so provisionally, it is retained in its entirety. The rest of the paragraph consists of examples of which any one example may be kept.

Paragraph 2: S5 again reads like a topic sentence, and so, is retained fully. S6 needs to be made brief so we cut out the restatement, i.e. the 2 subordinate clauses); it would now read thus: "It is mindless because pure science is simply a desire to know." S7, S8

and S9 deal with a further development of this point with the help of examples. These sentences can be condensed, by adding to the previous line of the summary given above: "…without any limitations based on ethical considerations, e.g. in organ transplants." This has the required summarization of the main idea of S8 and S9, retaining only one example.

Paragraph 3: Again the first sentence (S10) sounds like a topic sentence and so is retained in its entirety. The other sentences in the paragraph amplify and draw out the implications of the first, so they would require summarization. Perhaps S11 can be retained without any truncation.

Paragraph 4: The first (S15) and second (S16) sentences seem to convey the gist of the paragraph and should be retained in their original form.

Stage 1 of the summary based on the above steps would then read like this:

The disturbing effects of the technological revolution may be felt in all fields, e.g. detergents foam on our streams and lakes. Before answers can be found to these problems, it is necessary to understand two characteristics of the technological revolution—that it is mindless and that it is neutral. It is mindless, because pure science is simply a desire to know without any limitations based on ethical considerations, e.g. in organ transplants. It is neutral, because the changes brought about by the technological revolution are in themselves neither good nor bad. They acquire a value only by the way in which they are used. Because the revolution challenging medicine and mankind is mindless and because it is neutral, mind must be imposed on it to control it and determine its values. The

present failure to do this has created a wide gap between man's technological and his humanistic imagination. Mindless technology threatens to become a monster, destroying its creator.

Application of Insights from Lexis (or Vocabulary) for Summarization

It may also be possible to approach the summary through insights from lexical patterns, or use both syntactic and lexical cues. The close lexical relationships that exist within text can be used to supplement the structuring of ideas.

Notice that the stage 1 summary consists of the following sentences from the text: S1, S3, S5, S6, S10, S11, S15, S16 and S17. Of these, the following can be considered as topic sentences: S1, S5, S6, S10, S15. Of the rest, S3 provides an example, and S11, S16 and S17 consist of the development and drawing out of the consequences of the topic sentences.

The topic sentences themselves are very closely inter-related in terms of their lexis. S5 is connected to S1 because of the word "problems" which links with "disturbing effects" in S1. Though this relationship is explicitly stated here, it need not be so stated and instead be just implied. It also creates a bond between the two sentences by repeating the phrase "technological revolution". By referring to "two characteristics of the technological revolution", the sentence suggests that it is a development from S1. It then brings in the words, "mindless" and "neutral" which become the basis of S6 and S10. S15 also picks up "revolution" and "mindless" and "neutral", which link it closely with S1, S5, S6, and S10. Again, S15 brings in the word "values", which links it with S11.

Students could be asked to look for the words that occur three or more times in the text (cf. Hoey, 1991), through i) straight repetition, e.g. "revolution", ii) reference, e.g. "it", iii) substitution, e.g. "these problems" which can stand for S1 or even for the whole of paragraph 1. The larger the number of repetitions of a word, whether through straight repetition, reference or substitution, the more important that word is to the text.

If asked which word/ phrase they found most central to the passage, the chances are that students would say "technological revolution". This is fine because this is, in fact, the topic being dealt with. It occurs in S1, S5, and S10 (three of the topic sentences identified earlier). "Technological developments" occurs in S8, "the developments described above" in S14, "the revolution" in S15, "man's technological and humanistic imagination" in S16, "technology" in S17. The identification of this phrase as central to the passage leads to the isolation of the topic itself, as well as of the topic sentences, or sentences crucial to the passage.

Other words considered essential to the text would be "mindless" and "neutral", with their correlates "mind" and "values". As the passage seems to concentrate more on the problem than the solution, "mindless" and "neutral" seem to be more central to the text than their correlates.

These words could be identified in their order of importance to the text because they were foregrounded through repetition. Their repeated use made for a clear indication of the topic as well as the development of the topic.

In the above Stage I, the summary was arrived at by focusing on the sentence grammar in relation to the ideas within the text. The ability to identify topic sentences was also required, along with picking out

relevant points. In another kind of passage, we could make more use of the main clauses for focusing on the important points and supplement them with lexical cues, or the lexical cues could take a lead role.

However, in order that Stage 1 summary becomes readable, one has to go over it carefully, removing any instances of repetition, and adding markers of cohesion so that it reads smoothly. Stage 1 therefore deals with the isolation of the ideas and Stage 2 with the polishing of the language, if required, which is not reported here. The two stages together result in an adequate summary.

References

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Endnotes

[1] For further information see Winter, 1977 and Hoey, 1991.

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