

《科技论文的阅读与写作》课程主页: <http://inpluslab.com/paperwriting>

Course -5: Breaking Up Long Sentences – the 2nd Half

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Some facts before Course 5

- A survey carried out at Stanford University revealed that
 - **86.4% of students** admitted that in order to **appear more intelligent**, they used **complex language** in their essays, theses and dissertations.
- The average length of a sentence in English has become **shorter and shorter** over the centuries.
 - Shakespeare's time (1564-1616): 45 words
 - 150 years ago: 29 words
 - Today's experts recommend: 15-18 words

Some facts before Course 5 (cont.)

- **John Adair**, a communications expert who wrote *The Effective Communicator*, reports that 90% of people
 - understand an 8-word sentence on first reading,
 - but only about 4% understand a 27-word sentence first time.
- The Viennese art historian, **Ernst Gombrich**
 - wrote many of his books in **English rather than** in **his native German**.
 - His ***Story of Art*** (1950), is one of the most widely accessible art history books ever published, precisely because (恰恰因为) **it is written in a clear, simple, unpretentious style**.

Recall the Outline: **First-Half of Course-5**

How and Why the long sentences are created

1. Analyze why and how long sentences are created
2. Using short sentences will help your co-authors if they need to modify your text
3. Using short sentence often entails repeating the key word, thus improving clarity
4. Only use a series of short sentences to attract the reader's attention
5. Combine two short sentences into one longer if this will avoid redundancy

Outline: **2nd-Half** of Course-5

How to convert a long sentence into short ones

- 6. When expressing your aims, consider dividing up a long sentence into shorter parts**
7. If possible, replace *and* and *as well as* with a period (.)
8. Be careful how you use link words
9. Avoid which and relative clauses when these create long sentences
10. Avoid the *-ing* form to link phrases together
11. Limit the number of commas in the same sentence
12. Consider not using semicolons (分号)
13. Only use semicolons in lists
14. Restrict use of parentheses to giving examples



5.6 When **expressing your aims**, consider dividing up a long sentence into short parts

- To explain the **rationale** for adopting a **particular procedure**, use expressions such as
 - *In order to, with the purpose of, with the aim to, in an attempt to*
- An example:
 - *In order to test our hypothesis, we sampled a random selection of documents.*
- But if they are **longer than 15 words**,
 - you need to split the sentence up, to see an example



It is fine

ORIGINAL VERSION (OV)

- *Our readability index* is based on a series of factors - length of sentences and paragraphs, use of headings, amount of white space, use of formatting (bold, italics, font size etc.) - **in order to** provide writers with some metrics for judging how much readers are likely to understand the writers' documents.
- **In order to** establish a relationship between document length and level of bureaucracy and to confirm whether documents, such as reports regarding legislative and administrative issues, vary substantially in length from one language to another, *we conducted an analysis of A, B and C.*

- 如何改短？以下两种表达方式都可以：1. 先表述 what you did, 然后说 why you did it; 2. 首先表述你的 原理， 然后说 what you did.
- 第一种方式要好一些，因为表述 what you did 的时候，原理 已经蕴含在其中了。

REVISED VERSION (RV)

- We wanted to provide writers with some metrics for judging how much readers are likely to understand the writers' documents. We thus produced a readability index based on series of factors - length of sentences and paragraphs, use of headings, amount of white space, and use of formatting (bold, italics, font size etc.).
- (1) We conducted an analysis of A, B, and C. The aim of the analysis was to establish ...
- (2) We wanted to establish a relationship between .. language and another. **To do this,** we conducted ...

Outline: **2nd-Half** of Course-5

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5.7 If possible, replace *and* and *as well as* with a period (.)

❖ *and* 的用法

ORIGINAL VERSION (OV)

- The aim of this paper is to confirm that how we speak and write generally reflects the way we think *and* that this is true not only at a personal but also at a national level, *and to this end* two European languages were analyzed, English *and* Italian, to verify whether the structure of the language is reflected in the lifestyle of the respective nations.

REVISED VERSION (RV)

- How we speak and write generally reflects the way we think and act.
- *This* paper aims to prove that this thesis is true not only at a personal but also at a national level.
- *Two* European languages were analyzed, English *and* Italian, to verify whether the structure of the language is reflected in the lifestyle of the respective nations.

- **Problem:** In OV, 3 ideas are linked together using *and*, 所以导致写出了一个长句子
- How to revise?

❖ *and* 的用法 (cont.)

ORIGINAL VERSION (OV)

The treatments are very often expensive and technically difficult, *and* their effectiveness very much depends on the chemical and physical characteristics of the substances (物品药物) used for impregnation (受精), *and* on their ability to ...

REVISED VERSION (RV)

The treatments are very often expensive and technically difficult. *Their* effectiveness very much depends on the chemical and physical characteristics of the substances used for impregnation. *Also important* is their ability to ...

- 第一句第二句，断句最简单的方式：replace the first *and* with a **full stop**.
- 但是第二个 *and* 是为了说明额外的重要细节，所以 RV 中用了 **important** 唤起 **effectiveness** 的第二点依赖的原因。

❖ *and* 的用法 (cont.)

- Sentences containing **multiple** *and* are often found in **Experiment Results**

很常见！

- *S1. * All samples were collected at the same time every day to **prevent** any effects of possible time-difference variation *and then* stored in a central server.*
- *S2. All samples were collected at the same time every day to prevent any effects of possible time-difference variation. *They were then* stored in a central server.*
- Rather than a prevention, the author is now actually talking about **a different step**
- Two more similar examples -> Next page

❖ *and* 的用法 (cont.)

ORIGINAL VERSION (OV)

- Seeds, sterilized (杀菌消毒) for 3 min in NaOCl (1% available chlorine(氯)) *and* rinsed (冲洗) with distilled water (蒸馏水), were germinated (发芽) on moist filter paper in Petri dishes (培养皿) *and* grown in the dark at 23°C.
- At the beginning we performed 2D and 3D forward modeling of a medium (中介物) **where** only the lithological (岩性的) discontinuities(不连续) were taken into account *and* compared the apparent synthetic resistivity(名词: 电阻率) *and* **phase curves** (名词: 相位曲线) with our experimental data.

REVISED VERSION (RV)

- The seeds were sterilized for 3 min in NaOCl (1% available chlorine), *and* rinsed with distilled water. *They were then* germinated on moist filter paper in Petri dishes *and* grown in the dark at 23°C.
- At the beginning we performed 2D and 3D forward modeling of a medium where only the lithological discontinuities were taken into account. *We* then compared the apparent synthetic resistivity *and* phase curves with our experimental data.

❖ As well as 的用法

ORIGINAL VERSION (OV)

This finding could be **explained** by the specific properties of gold, silver **and** platinum (铂) *as well as* by the conditions in which these metals were found, for example silver was found in ...

这句是什么毛病？

REVISED VERSION (RV)

(1) This finding could be explained by the specific properties of gold, silver and platinum. *Another explanation could be* the conditions ...

(2) ... silver and platinum. *The conditions* in which these metals were found could also be an *explanation*. For example, ...

- 什么时候用 **as well as**，你真的会用吗？
 - 当避免重复使用多个 **and** 的时候，在最后一项 item 之前用
 - 如果用了它，导致句子很长，那就不用 --> 断句
 - 不能用 **as well as** 开启一个新句子
- Furthermore examples: see the next page

❖ As well as 的用法 (cont.)

- 不能用 **as well as** 开启一个新句子
- 与 **and, as well as** 类似作用的单词也同理，如
 - *in addition,*
 - *furthermore,* and
 - *moreover*

ORIGINAL VERSION (OV)

The treatments are very often expensive and technically difficult, *moreover* their effectiveness very much depends on...

REVISED VERSION (RV)

The treatments are very often expensive and technically difficult. *Moreover*, their effectiveness very much depends on...

Outline: **2nd-Half** of Course-5

How to convert a long sentence into short ones

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5.8 Be careful how you use link words

- **Whereas, on the other hand,**
- although, however

ORIGINAL VERSION (OV)

The levels of cadmium in Site C were comparable to the levels found in Sites A and B in the previous years, *whereas / on the other hand* the levels for copper were much lower in Site C with respect to the values found in the previous sampling campaigns in 2008 and 2010.

REVISED VERSION (RV)

The levels of cadmium in Site C were comparable to the levels found in Sites A and B in the previous years. *On the other hand*, the levels for copper were much lower in Site C with respect to the values found in the previous sampling campaigns in 2008 and 2010.

- Not all links words can be used at the beginning of a sentence
- When *whereas* is used to compare **two findings** in a long sentence, use *on the other hand*

5.8 Be careful how you use link words (cont.)

- Whereas, on the other hand,
- **although, however**

ORIGINAL VERSION (OV)

The levels of cadmium in Site C were comparable to the levels found in Sites A and B in the previous years, *although / however* this was not the case for the levels found in the south-east part of Site C.

REVISED VERSION (RV)

The levels of cadmium in Site C were comparable to the levels found in Sites A and B in the previous years. *However*, this was not the case for the levels found in the south-east part of Site C.

➤ Similar usage with *whereas*, and *on the other hand*

5.8 Be careful how you use link words (cont.)

- **BECAUSE, SINCE, AS**

- are used to give explanations in the middle of a sentence

Words such as *since* and *although* are often used in a subordinate clause (从句) at the beginning of a sentence, as in S1 below.

S1. * *Since* English is now spoken by 1.1 billion people around the world and is used as a lingua franca in many international business and tourism scenarios between people of different languages and between native English speakers and non-native speakers, *the learning of foreign languages in the United Kingdom has suffered a huge decline.*

- **The problem** with S1: readers are forced to carry too much !
- It is much easier to understand S2:

S2. English is now spoken by 1.1 billion people around the world and is used as a lingua franca in many international business and tourism scenarios between people of different languages and between native English speakers and non-native speakers.
The consequence is that the learning of foreign languages in the United Kingdom has suffered a huge decline.

5.8 Be careful how you use link words (cont.)

- **BECAUSE, SINCE, AS,**
 - are used to give explanations in the middle of a sentence

ORIGINAL VERSION (OV)

The chemical characterization of organic paint materials in works of art is of great interest in terms of conservation, *because / since / as* the organic components of the paint layer are particularly subject to degradation (降解).

REVISED VERSION (RV)

The chemical characterization of organic paint materials in works of art is of great interest in terms of conservation. *This is because / In fact* the organic components of the paint layer are particularly subject to degradation.

➤ *Since, as* 连接两个有依赖关系的字句，不适合用于连接两个长句子

- **Owing to, Due to, As a result of, consequently, thus etc.**
 - are used to explain the reasons for ‘something’ (省略)

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5.9 Avoid *which* and relative clauses when these create long sentences

- *which* is used to add information, e.g.,

S1. English is now the world's international language, *which* is why it is used in scientific papers.

S2. English, *which* has now become the world's international language, is studied by more than a billion people.

S3. English, [*which is*] now spoken by more than a billion people, is the world's international language.

- **No problem** to understand them, because they are short !
- **Problems arise** when sentences are longer, let's see next page

5.9 Avoid *which* and relative clauses when these create long sentences (cont.)

➤ **Problems arise** when sentences are longer

ORIGINAL VERSION (OV) 79 words

English is now the world's international language and is studied by more than a billion people in various parts of the world thus giving rise to an industry of English language textbooks and teachers, *which* explains why in so many schools and universities in countries *where* English is not the mother tongue it is taught as the first foreign language in preference to, *for example*, Spanish or Chinese, *which* are two languages *that* have more native speakers than English.

REVISED VERSION (RV)

English is now the world's international language and is studied by more than a billion people in various parts of the world thus giving rise to an industry of English language textbooks and teachers. *This (fact)* explains why in so many schools and universities in countries *where* English is not the mother tongue it is taught as the first foreign language. *For example*, English is taught in preference to Spanish or Chinese, *which* are two languages *that* have more native speakers than English.

- 将 *which* 改为 *this*,
- 或者使用 *This + noun* 结构 (This fact, this decision, this method) 将长句变短

5.9 Avoid *which* and relative clauses when these create long sentences (cont.)

- **Problems arise** when sentences are longer

ORIGINAL VERSION (OV)

English, *which* has now become the world's international language and is studied by more than a billion people in various parts of the world **thus giving** rise to an industry of English language textbooks and teachers, is generally used in scientific papers.

- Problem: 主语是什么？
- 两种解决方案 in RV, 只是 emphasis 不一样

REVISED VERSION (RV)

- (1) English is generally used in scientific paper. **In fact**, English has now become the world's international language and is studied by more than a billion people in various parts of the world. **This has given** rise to an industry of English language textbooks and teachers.
- (2) English has now become the world's international language and is studied by more than a billion people in various parts of the world. **This has given** rise to an industry of English language textbooks and teachers. **Today**, English is generally used in scientific papers.

5.9 Avoid *which* and relative clauses when these create long sentences (cont.)

- **Problems arise** when sentences are longer

ORIGINAL VERSION (OV)

English, [which is] *now spoken* by more than a billion people from all over the world, the biggest populations being those in China and India, and more recently in some ex British colonies in Africa, is the world's international language.

REVISED VERSION (RV)

English is the world's international language.

It is *now spoken* by more than a billion people from all over the world.

The biggest populations are those in China and India, and more recently in some ex British colonies in Africa.

- **Problem:** *which is* 是否可以省略?
- 解决方案: 用 **It is ...** 开启一个新短句

5.9 Avoid *which* and relative clauses when these create long sentences (cont.)

ORIGINAL VERSION (OV)

Using the method described by Peters et al. (2010), we assessed the state of pollution of three sites in a coastal area [which was] *characterized* by high levels of agricultural, industrial and tourist activity, as well as occasional volcanic activity (the last major eruption was in 1997).

Using the approach described by Smith and Jones (2011), a *distinction*, [which was] *useful* for analysis purposes, particularly in the final stages of the project, was made between the three types of pollution: agriculture, industry and tourism.

- **Facts:** *which was* 省略了
- Note that, *area* and *distinction* are repeated.
- This repetition is **NOT** a bad style in English scientific writing.

REVISED VERSION (RV)

Using the method described by Peters et al. (2010), we assessed the state of pollution of three sites in a coastal *area*. *This area is characterized* by high levels of agricultural, industrial and tourist activity, as well as occasional volcanic activity (the last major eruption was in 1997).

Using the approach described by Smith and Jones (2011), a *distinction*, was made between the three types of pollution: agriculture, industry and tourism. *This distinction* was useful for analysis purposes, particularly in the final stages of the project.

Outline: **2nd-Half** of Course-5

How to convert a long sentence into short ones

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5.10 Avoid the *-ing* form to link phrases together

- To use **-ing** form of a verb: another way that writers typically link phrases together

ORIGINAL VERSION (OV)

Using automatic translation software (e.g. Google Translate, Babelfish, and Systran) can considerably ease the work of researchers when they need to translate documents *thus saving* them money (for example the fee they might have otherwise had to pay to a professional translator) and *increasing* the amount of time they have to spend in the laboratory rather than at the PC.

REVISED VERSION (RV)

Using automatic translation software (e.g. Google Translate, Babelfish, and Systran) can considerably ease the work of researchers when they need to translate documents.

Such *software saves* them money, for example the fee they might have otherwise had to pay to a professional translator.

It also *increases* the amount of time they have to spend in the laboratory rather than at the PC.

- **Problem:** 导致句子太长

- **解决方案:** use another form of the verb and begin a new sentence

5.10 Avoid the *-ing* form to link phrases together (cont.)

ORIGINAL VERSION (OV)

As can be seen from Table 1, the concentrations were far higher than expected especially in the first set of samples, *indicating* that one cause of pollution was ...

REVISED VERSION (RV)

As can be seen from Table 1, the concentrations were far higher than expected especially in the first set of samples.
This indicates that one cause of pollution was ...

- **Facts:** 可以使用 *which indicates*, 结果句子太长
- 解决方案: 在 Verb-ing 之处断句, 然后 start a new sentence with *This*

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5.11 Limit the number of commas in the same sentence

ORIGINAL VERSION (OV)

As a preliminary study, in an attempt to establish a relationship between document length and level of bureaucracy (官僚主义), we analyzed the length of 50 European Union documents, written in seven of the official languages of the EU, to confirm whether documents, such as reports regarding legislative and administrative issues, vary substantially in length from one language to another, and whether this could be related, in some way, to the length of time typically needed to carry out daily administrative tasks in those countries (e.g. withdrawing money from a bank account, setting up bill payments with utility providers, understanding the clauses of an insurance contract).

The results showed that ...

REVISED VERSION (RV)

Our aim was to see if there is a direct relationship between the length of documents produced in a country, and the length of time it takes to do simple bureaucratic tasks in that country. Our hypothesis was: the longer the document, the greater the level of bureaucracy (官僚主义).

In our preliminary study we analyzed translations from English into seven of the official languages of the European Union. We chose 50 documents, mostly regarding legislative (立法) and administrative issues. We then looked at the length of time typically needed to carry out daily administrative tasks in those countries. The tasks we selected were withdrawing money from a bank account, setting up bill payments with utility providers, and understanding the clauses of an insurance contract.

The results showed that ...

- **Problem:** 用逗号持续添加句子, a sign of lazy writing, 自己思路不清晰
- **解决方案:** 重新梳理逻辑, 多用一些单词也可以, 分成几段表述

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5.12 Consider NOT using semicolons

- **Semicolons (;)**

- are NOT commonly used in modern English

How to solve this?

- 使用句号代替
- Some writers also use a colon (:) in the same way as a semicolon.

S1. * Old English had two distinct advantages over Modern English: it had a regular spelling system and was phonetic (语音学的).

- **It is fine** with S1, because the length is less than 20 words.
- If the resulting sentences are too long when using colon (:), divide them up into short parts



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5.13 Only use semicolons in lists

REVISED VERSION (RV)

Our system is based on four components. **Firstly, it has many data files, for example the weather, people, and places.** Secondly, it has procedures which it tries to use to combine these files by working out how to respond to certain types or patterns of questions and this entails the user knowing what types of questions it can answer. **Thirdly, it has a form to understand the questions posed in a natural language, which means the user needs to know English. It then translates the natural language into one of the types of questions it knows how to answer.** Finally, it has a very powerful display module, which it uses to show the answers. **These answers are shown using graphs, maps, histograms etc.**

ORIGINAL VERSION (OV)

Our system is based on four components: it has many data files (the weather, people, places, etc.); **it has procedures which it tries to use to combine these files by working out how to respond to certain types or patterns of questions (this entails the user knowing what types of questions it can answer);** it has a form to understand the questions posed in a natural language (so the user may need to know English) which it then translates into one of the types of questions it knows how to answer; **finally, it has a very powerful display module, which it uses to show the answers, using graphs, maps, histograms etc.**

- **The problem:** semicolons connect a too long sentence !
- **Solution:** (1) Use 6 short parts. (2) 换成句号. (3) Using firstly, secondly, etc. (4) remove the brackets (括号)

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5.14 Restrict use of parentheses to giving examples

- Original Version:
 - Using automatic translation software (*e.g. Google translate, Babelfish, and Systran*) can considerably ease the work of researchers when they need to translate documents thus saving them money (*for example the fee they might have otherwise had to pay to a professional translator*) and increasing the amount of time they have to spend in the laboratory rather than at the PC.

Non-list
explanations /
examples

5.14 Restrict use of parentheses to giving examples (cont.)

- Revised Version:
 - Using automatic translation software (*e.g. Google translate, Babelfish, and Systran*) can considerably ease the work of researchers when they need to translate documents thus saving them money, *for example the fee they might have otherwise had to pay to a professional translator.* ~~and increasing~~ It also increases the amount of time they have to spend in the laboratory rather than at the PC.

5.15 Final guidelines

- First draft, without thinking too much about long length of sentences
 - Find and Read them out: 换气就需要断句
- General rules:
 - Occasionally (偶尔) use short sentences to attract attention, particularly in **Abstract** and **Discussion**
 - Avoid sentences of more than 35 words
 - However, clarity and readability are independent of length
- If your sentence contains the following, to divide it up
 - Which + which
 - And + and + and
 - , ..., ..., ...
 - Also + in addition / furthermore
 - ;

Make your
story easy to
follow!

That is it

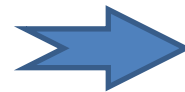
- This is today's class!
- 第一次作业下周上课发布！
- Thank you for your attending!
- I wish that this class helps you one day!

A Request (お願いします)

- **Help us** collect user-trace data
 - GPS data
 - What top N Apps are you using
- Don't worry about the privacy / security
 - We will remove all your sensitive information



Scan to download the APP




A Request (お願いします)

- Download from Homepage:
 - <http://inpluslab.com/paperwriting>

课程资料

COURSE_1.PDF 

COURSE_2.PDF 

COURSE_3.PDF 

移动用户TRACE数据收集计划

安卓App — “Tracer” 下载 —>

TRACER.APK 

“Tracer” APP 使用手册 下载 —>

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