

Scientific Writing in English  
— 英语科研论文写作 —



Lecture 19 Monday 23.11.2015  
(8.30-10.10am)

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Scientific Writing in English  
— 英语科研论文写作 —

Volunteers for Note Taking  
(Chinese/English)

compiled version to:

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Scientific Writing in English  
— 英语科研论文写作 —

OVERVIEW - Module 2

- Unit 1: Approach to Academic Writing
- Unit 2: Writing General -> Specific Texts
- Unit 3: Problem-Process-Solution Texts
- Unit 4: Data Commentary (Results/Discussion Section)**
- Unit 5: Writing Summaries
- Unit 6: Writing Critiques
- Unit 7: Constructing a Research Paper I and II

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OVERVIEW - Module 2

**Unit 4: Data Commentary**

1. Strength of Claim
2. Structure of Data Commentary
3. Language Focus: Verbs in Indicative and Informative Summaries
4. Language Focus: Linking *as*-Clauses
5. Language Focus: Qualifications and Strength of Claim
6. Language Focus: Qualifying Comparisons
7. Language Focus: Dealing with Problems
8. Language Focus: Referring to Lines on Graphs
9. Language Focus: Prepositions of Time

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Unit 4 – Data Commentary

Language Focus: Linking *as*-Clauses

Examples:

**As shown** in Fig. 1 and Fig. 2, the companies used in this survey varied significantly in geographical location, size, and method of operation.

**As can be seen** in Table 5, the overall rate of recall, while low, also showed considerable variation

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Incubation of non-canonical sites in parallel with their converted, canonical versions with nuclear protein extracts from B cells, L cells and HeLa cells revealed in EMSAs mainly quantitative differences in factor binding. This is true for all three sites, although, as shown in Fig. 4, the affinity of Oct factors to the UPS and UPS<sub>O</sub> differed by a factor of two, whereas that

As shown in Fig. 2, in EMSAs the converted Octamer-UPS (UPS<sub>O</sub>), TREp (153T-TREp) and TCED (TCED A/C) probes generated the same complexes as canonical binding sites upon incubation with nuclear protein extracts of EL4 T lymphoma cells.

Hepatomegaly suggested that some of the liver functions might be suboptimal. **As shown** in Table 1, homozygous animals had higher plasma transaminases and

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Language Focus: Passive Linking as-Clauses

\* use of prepositions somewhat tricky (preposition: 介词)

Most used:

|    |   |
|----|---|
| in | As shown <b>in</b> Table 1...               |
| by | As predicted <b>by</b> the model...         |
| on | As described <b>on</b> the previous page... |

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OVERVIEW - Module 2

Unit 4: Data Commentary

1. Strength of Claim
2. Structure of Data Commentary
3. Language Focus: Verbs in Indicative and Informative Summaries
4. Language Focus: Linking as-Clauses
- 5. Language Focus: Qualifications and Strength of Claim**
6. Language Focus: Qualifying Comparisons
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9. Language Focus: Prepositions of Time

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Unit 4 – Data Commentary

Highlighting Statements

- \* central section of data commentaries consist of highlighting statements
- \* generalizations that you draw from from the details of the data
- \* need good judgment

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Unit 4 – Data Commentary

Highlighting Statements

\* opportunity to show that...

- > you can spot trends/regularities in the data;
- > you can separate important findings from less important ones
- > you can make claims of appropriate strength

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Unit 4 – Data Commentary

Highlighting Statements

Therefore, **DO NOT**:

- \* simply repeat all the details in words,
- \* attempt to cover all the information, or
- \* claim more than is reasonable or defensible

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Unit 4 – Data Commentary

Highlighting Statements

-> not just about what you know, but also about what you think

'It is likely that...' (Hedging)

'Clearly there is a need to...' (Booster)

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Unit 4 – Data Commentary 

Highlighting Statements

-> not just about what you know, but also about what you think

'It is likely that...' (Hedging)

'Clearly there is a need to...' (Booster)

-> moderating claims is **common** in most disciplines, but requires good command of language

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Unit 4 – Data Commentary 

Language Focus: Qualifications and Strength of Claim

Highlighting statements need

1) good judgment      -> need to be cautious/critical  
2) good presentation    -> requires linguistic resources

"It is important for students to learn to be **confidently uncertain**." (Skelton, 1988)

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Unit 4 – Data Commentary 

Language Focus: Qualifications and Strength of Claim

TASK (in class)  
Find phrases that qualify claims




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## Example

According to our results, impulsive buying is on the rise. Furthermore, our survey data suggest that buying goods to improve one's self- image is probably a motivation that plays some role in most buying behavior, but it might be particularly important when people make unplanned or "spur of the moment" purchases. These unplanned purchases may well be regretted later and can lead to financial difficulty. (Dittmar and Drury 2000)

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## Unit 4 – Data Commentary

## Language Focus: Qualifications and Strength of Claim

**According to our results**, impulsive buying is on the rise. Furthermore, our survey data **suggest** that buying goods to improve one's self- image is **(probably)** a motivation that plays **some** role in **most** buying behavior, but it **might be** particularly important when people make unplanned or "spur of the moment" purchases. These unplanned purchases **may** well be regretted later and **can lead** to financial difficulty. (Dittmar and Drury 2000)

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## Group Task

Time: 5 min

Currently, satellite launches cost approximately \$10,000 for each pound lifted into space. However, this may soon change as a result of microelectromechanical systems (MEMS) devices, which could greatly reduce the size, weight, power requirements, complexity, and, eventually, the costs of space systems. For example, because of MEMs miniaturization it may be possible to construct a 1kg satellite that is highly resistant to radiation and vibration and therefore more reliable than a traditional satellite. Preliminary tests of MEMS subjected to accelerations over 20,000 times gravitational acceleration have shown promising results.

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## Language Focus: Qualifications and Strength of Claim

Currently, satellite launches cost **approximately** \$10,000 for each pound lifted into space. However, this **may** soon change as a result of microelectromechanical systems (MEMS) devices, which **could** greatly reduce the size, weight, power requirements, complexity, and, eventually, the costs of space systems. For example, because of MEMS miniaturization it **may be** possible to construct a 1kg satellite that is highly resistant to radiation and vibration and therefore more reliable than a traditional satellite. **Preliminary tests** of MEMS subjected to accelerations over 20,000 times gravitational acceleration have shown **promising** results. (Cass 2001)

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## Unit 4 – Data Commentary

## Language Focus: Qualifications and Strength of Claim

**Probability**

- \* various ways of expressing probability in written academic English
- \* simplest way is to use a **modal auxiliary verb** (情态助动词)

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## Unit 4 – Data Commentary

## Probability – Example

Sleeping 7-9 hours each day **will** result in better academic performance.  
 Sleeping 7-9 hours each day **may** result in better academic performance.  
 Sleeping 7-9 hours each day **might/could** result in better academic performance.

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Unit 4 – Data Commentary 

Probability – Standard phrases

- 1) It is **certain** that...
- 2) It is **almost certain** that...
- 3) It is **very probable/highly likely** that...
- 4) It is **probable/likely** that...
- 5) It is **unlikely** that...
- 6) It is **very/highly unlikely** that...

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Unit 4 – Data Commentary 

Probability – Standard phrases

Stronger

↓

Weaker

It is **certain** that...

It is **almost certain** that...

It is **very probable/highly likely** that...

It is **probable/likely** that...

It is **unlikely** that...

It is **very/highly unlikely** that...

sleeping 7-9 hours each day will result in better academic performance.

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Unit 4 – Data Commentary 

Probability – Standard phrases

- 1) There is a **definite** possibility that...
- 2) There is a **strong** possibility that...
- 3) There is a **good** possibility that...
- 4) There is a **slight** possibility that...
- 5) There is a **little** possibility that...

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Unit 4 – Data Commentary

Probability – Standard phrases

|          |   |   |
|----------|---|---|
| Stronger | a) There is a <b>definite</b> possibility that... | } sleeping 7-9 hours each day will result in better academic performance. |
| ↓        | b) There is a <b>strong</b> possibility that...   |   |
| ↓        | c) There is a <b>good</b> possibility that...     |   |
| ↓        | d) There is a <b>slight</b> possibility that...   |   |
| Weaker   | e) There is <b>little</b> possibility that...     |   |

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Unit 4 – Data Commentary

**Distance**

\* another way of removing yourself from a strong/unjustified claim

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Unit 4 – Data Commentary

Language Focus: Qualifications and Strength of Claim

Example:  
The factory **has benefited** from the recent technology upgrade.

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Unit 4 – Data Commentary 

Distance

Example:

The factory **has benefited** from the recent technology upgrade.

The factory **seems to have benefited** from the recent technology upgrade.

The factory **appears to have benefited** from the recent technology upgrade.

**It seems that** the factory **has benefited** from the recent technology upgrade.

**It has been said that** the factory **seems to have benefited** from the recent technology upgrade.

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Unit 4 – Data Commentary 

Distance

Examples:

|   |   |  |
|---|---|--|
| a) Based on the limited data available,<br>b) In the view of some experts,<br>c) According to this preliminary study,<br>d) Based on an informal survey of<br>nine department managers, | } | different<br>employees<br>react to the<br>same<br>situations<br>differently. |
|---|---|--|

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Unit 4 – Data Commentary 

Language Focus: Qualifications and Strength of Claim

Qualifying Generalizations

**tend:** "classic" verb for qualifying (or defending) a generalization




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Unit 4 – Data Commentary

Qualifying Generalizations

Example:  
Children living in poverty have a history of health problems.  
->  
Children living in poverty **tend to** have a history of health problems.

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Unit 4 – Data Commentary

Qualifying Generalizations

\* another way to qualify a generalization is **qualifying the subject**

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Unit 4 – Data Commentary

Qualifying Generalizations

Example:  
**Many** children living in poverty have a history of health problems.  
**A majority of** children living in poverty have a history of health problems.  
**In most parts of the world** children living in poverty have a history of health problems.

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Unit 4 – Data Commentary

Qualifying Generalizations

\* third option for generalizations is to **add exceptions**

Examples:

|   |   |  |
|---|---|--|
| <p>a) With the exception of</p> <p>b) Apart from</p> <p>c) Except for</p> | } | <p>a small number of countries such as Japan, Sweden, and Thailand, student loan schemes are <u>almost</u> <u>exclusively</u> reserved for higher education.</p> |
|---|---|--|

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Unit 4 – Data Commentary

Use of Weaker Verbs

Examples:

Unsound policies of the IMF **led to** the financial crisis. (stronger)

Unsound policies of the IMF **contributed to** the financial crisis. (weaker)

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Unit 4 – Data Commentary

Language Focus: Qualifications and Strength of Claim

TASK 35

Which of two verbs provided is weaker?

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Unit 4 – Data Commentary

Combined Qualifications

\* often, several types of qualification are combined to construct a **defensible highlighting statement**


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Unit 4 – Data Commentary

Combined Qualifications

Example for a big claim:

The use of seat belts prevents physical injuries in car accidents.


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Unit 4 – Data Commentary

Combined Qualifications

Example

The use of seat belts may reduce **certain types of physical injuries** in car accidents.

Possible changes:

- prevents -> reduces (weaker verb)
- reduces -> may reduce (adding probability)
- + in some circumstances (weakening the generalization)
- + certain types of injury (weakening the generalization)
- + according to simulation studies (adding distance)

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Unit 4 – Data Commentary

Combined Qualifications

The use of seat belts prevents physical injuries in car accidents.

↓

**According to simulation studies**, in some circumstances the use of seat belts may reduce certain types of physical injuries in car accidents.

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Unit 4 – Data Commentary

Combined Qualifications

The use of seat belts prevents physical injuries in car accidents.

↓

According to simulation studies, in some circumstances the use of seat belts may reduce certain types of physical injuries in car accidents.

-> god example of writer being "confidently uncertain"!

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Combined Qualifications

**BEWARE! Do not overdo qualifications!**

According to some more less qualified experts, sometimes the use of yellow seat belts seems to appear to be useful for reducing to an unknown degree certain types of physical injuries in car accidents, but possibly only when occurring on slippery roads.

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Unit 4 – Data Commentary

Combined Qualifications

**BEWARE! Do not overdo qualifications!**

It could be concluded that some evidence seems to suggest that at least certain villagers might not have traded their pottery with others outside the community.

-> **DANGER of saying nothing at all!**

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Unit 4 – Data Commentary

Language Focus: Qualifications and Strength of Claim

**TASK 36**

Make the following statements academically respectable and defensible.

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TASK 36



<http://www.wenjuan.com/s/BbueUj/>

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