

Sentence

Patterns

for

Scientific

English

科技英语 写作句型



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科技英语写作句型

孙桐姝 编著

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内 容 简 介

本书共分两篇,第一篇句型按科技论文写作结构划分,共选取句型 12 类,148 条,约 1300 句,并给出各类常用的形容词。第二篇遴选出科技写作中经常使用的功能句型 80 类,每类句型中列出常用的词与词组,举例说明各单词如何搭配,并解释各词的真实含义、相互区别、使用范围及习惯用法。

本书可供广大科技工作者、大专院校师生阅读,亦可作为参考工具书使用。

科技英语写作句型

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编 者 的 话

当前,我国和世界其它国家科学技术发展一日千里,科技成果层出不穷。在这种形势下,一方面要求我们大力吸收国外先进技术和科技发展的先进经验,繁荣我国的科技事业;另一方面要将我国科技领域中具有先进水平的科研成果介绍给外国科技人员和其它读者,以开展对外科学技术交流。因此,用外国文字撰写科技论文,日益为发展我国科学事业所迫切需要。

科技英语有其自己的特点,目前科技论文的书写格式正在趋向统一,趋向于规范化、标准化。熟记并正确运用科技英语常用句型结构,乃是每个科技写作人员应有的基本功。有了这种基本功,写作起来就会得心应手,使论文更具简明性和可读性。

句型结构是从实际语言材料中总结归纳出来较为固定的句子构成的模式,通过句型结构,往往便于把词汇和语法、句子的组成和在科技语体中某一方面的表示法有机地融合在一起。对于年轻的科技写作人员来说,必须要熟悉科技英语的各种句型,懂得单词应该如何搭配,懂得某些类型单词在句子中的正常位置,以及同义词的区别。只有这样才能缀句成章,写出一篇合乎要求的论文来。

编写本书的目的是为年轻科技工作者写英语科技论文时提供帮助和指导。当然也可作为参考工具书之用。

本书主要分为两大部分:第一部分句型按科技论文写作

结构分类,第二部分句型按功能分类。第一部分选自本人编著的《谈谈写作英语科技论文(续)——常见病句和句型》一书的第二编,句型共148条,约1300句,按照研究、实验、方法、数据等12个标题分类,并给出各类的常用形容词。读者可根据需要选出各项中的词或词组,按顺序连接起来即成一个完整的句子,使用起来十分方便。这次重印这部分,主要是根据不少读者要求,他们反映这部分句型对写作科技论文用字遣词掌握分寸、正确表达很有参考价值,同时原书已经绝版,难于找到,现经修订补充并入本书,可和第二部分相互配合,组成一个完整的系统。

第二部分是遴选出科技写作中经常使用的功能句型80类。每类句型中列出常用的词与词组,举例说明各单词如何搭配,并解释各词的真实含义、相互区别以及习惯用法等,这样便于读者选择使用时能分清主次、衡量轻重、搭配适中、表达确切。

本书所使用的材料主要是本人在中国科学院《中国科学》编辑部工作期间积累的。另外参考了若干有关的英语科技书刊、语法书籍和辞典工具书等。

在完稿后承蒙中国科学编辑部编辑李战英同志协助复制。责任编辑认真细致的文字加工,将含糊的词句予以修订,增强了清晰度。此外,本书若无方辉先总工程师的热情支持与帮助,也难以顺利完成。特此一并致以衷心地感谢!

由于业务水平有限,经验不足,书的内容缺点错误在所难免,热忱欢迎广大读者批评指正。

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第一篇 科技写作句型 I 按结构划分

本篇根据科技论文中经常出现的结构,分作:情报(information),知识(knowledge),问题(problem),研究(study 或 research),研究工作(work),方法(method),实验(experiment),理论(theory),假说(hypothesis),假设(assumption),证据(evidence),数据(data 或 result)等十二节。句型中有 A、B、C、D 四项。读者可根据需要,选出各项中适当的词或词组,按序连接起来即成一句。例如,情报句型 1(1)中,A 项内有: some(一些), enough(足够的), sufficient(充足的), a great deal of(很多), a lot of(很多), ample(充裕的), precise(准确的), detailed(详细的), reliable(可靠的), valuable(有价值的)等条,如果有很多报导,则可引用 A 项第五条,写成 There is a lot of information, B 项中的括弧,表示该条可要可不要。如果读者认为括弧中三条(in literature(在文献中), at present(现在), nowadays(目下,现今))都不合用,可以放弃此项,将 A、C 两项相接,如果认为 at present 是所要求的,则可选出 at present 去掉括弧,再同 A 项相接。C 项中出现的“…”意味着本项是不完整的,需要按读者的情况加以补充。about the use…(关于使用…), on the application of …(关于应用…), concerning the observation of …(关于…的观察), regarding the fine structure of …(关于…的精细结构), bearing on the action of …(关于…的作用), 如果读者计划写的是原子能应用的报导,则可选用第二条,加入 atomic energy,

成为 on the application of atomic energy。A、B、C 三项结合，成为下面符合读者要求的句子：

There is a lot of information at present on the application of atomic energy. (现在有很多关于原子能应用方面的报导。)

如果读者计划写的是印染业中新工艺的应用，则可加入 new technology to printing and dyeing, 全句成为：

There is a lot of information at present on the application of new technology to printing and dyeing. (现在有很多关于印染业中新工艺应用的报导。)

如果认为括弧内的内容是不必要的，本句可写成：

There is a lot of information on the application of new technology to printing and dyeing. (有很多关于印染业中新工艺应用的报导。)——A、C 项结合，去掉有括弧的 B 项。

每节末列出该节可能使用的形容词，并将形容词分成三类，以便读者迅速地选出所需要的词。

一、情报

句型 1 在某方面拥有××程度的情报

(1)

- A There is some information
- There is enough information
- There is sufficient information
- There is a great deal of information
- There is a lot of information

There is ample information
There is precise information
There is *detailed* information
There is reliable information
There is valuable information

B (in literature)

(at present)

(nowadays)

C about the use of ...

on the application of ...

concerning the observation of ...

regarding the fine structure of ...

bearing on the action of ...

举例：

A **B**

There is detailed information nowadays

C

regarding the fine structure of mitochondria.

(2)

A At present we have

We now have

We now possess

We are now in possession of

B some information

enough information

sufficient information

a great deal of information

a lot of information
ample information
complete information
precise information
detailed information
reliable information
valuable information

- C** about the nature of ...
on the influence of ...
concerning effects of ...
regarding the consequences of ...
bearing on the interaction of ...

句型2 在某方面缺乏情报

- A** There is little detailed information
There has been lack of (exact) information
We still have no (precise) information
They still have not any (reliable, valuable) information
There hasn't been any information
- B** (in literature)
(in current literature)
(at present)
- C** about the phenomenon of ...
on the extent of ...
concerning the changes in ...
regarding the changes in ...
bearing on the changes in ...

句型3 在某方面至今仍在××程度上缺乏情报

- A** We still have little information
We still possess poor information
Until now we have scanty information
Until now we possess scarce information
Until recently we had incomplete information
Until recently we possessed uneven information
We still do not possess sufficient information
We do not possess yet complete information
We are not yet in possession of reliable information
- B** about (on) the evolution of ...
concerning (regarding) the evolution of ...

句型4 在某方面缺乏××类型的情报

- A** No adequate information
No detailed information
No exact information
No precise information
No reliable information
No valuable information
- B** on this subject
about these changes
concerning such effects
regarding this course of ...
- C** is available

is (so far) available¹⁾

D (at present)

(in literature)

(in current literature)

句型 5 现有的情报不够完善

A The information we have (possess)

The information they have presented

The information available at present

The information available in literature

B is (very) incomplete

seems (obviously) insufficient

is scarce

seems (very) uneven

is unreliable

is extremely poor

seems (extremely) unreliable

seems (extremely) scarce

is extremely uneven

seems (quite) unreliable

seems (quite) incomplete

is (quite) insufficient

is only preliminary

1) so far 与 at present 不能同时选用。

句型 6 过去所占有的情报是不够完善的

- A** Until recently the information we had
Until recently the information we possessed
Until recently the information about it
- B** was very incomplete
was very scarce, etc.
was quite insufficient
was quite inadequate, etc.

句型 7 需要某方面进一步的情报

(1)

- A** We want
We need
- B** some further information
much (reliable) information
more (precise) information
- C** about ion transport across ...
on transmission of impulses across ...
concerning the origin of ...
regarding photoperiodism in plants

(2)

- A** Some further information
Much further information
More reliable information
More precise information
More detailed information

More information

- B** is wanted
is needed
is required
- C** about the transmission of ...
to elucidate the mechanism of ...
to establish the rate of ...
to evaluate the amount of ...
to identify the particles ...

句型 8 某情报来源于 × ×

- A** The information
Some of our information
Much of the information
Most of the recent information
- B** come from
has come from
is obtained from
is provided from
has been obtained
has been provided by
- C** experiments on ...
recent studies on ...
studies involving ...
recent investigations in the field

句型 9 用××方法已获得××程度的情报

- A** We have obtained
The authors (have) obtained
- B** this information
further information
sufficient information
detailed information
precise information
reliable information
valuable information
- C** from recent experiments with ...
using X-ray analysis
using the newly developed method

句型 10 从××获得的情报说明(指出)××

- A** The information obtained from recent studies
This information provided by the experiment
The information about the experiment
- B** shows
indicates
suggests
seems to suggest
does not suggest
does not seem to suggest
- C** that the theory is incorrect
that the CO₂ content is low

that these organisms occurring in ...

that the process is inhibited by ...

句型 11 某情报不足以说明(指出)××

A Our information is insufficient

Our information has been insufficient

Our information seems sufficient

This new information is not sufficient

This new information has not been sufficient

This new information does not seem sufficient

B to indicate that the change is dramatic

to indicate that this action is so slow

to indicate that this is the most likely response

to suggest increases amounts of ...

to suggest an interference from ...

to suggest a participation of ...

to permit any such assumptions

to allow any of these conclusions

to suggest such conclusions

to suggest the following assumptions

句型 12 已有情报可用于××

A The information

B we (have) obtained

they (have) provided

the author (has) reported

C can be used

will further be used

will most likely be used

D in studies of ...

for the determination of ...

as a basis for ...

修饰“情报”的形容词：

① 肯定方面

sufficient, complete, extensive, ample; detailed, exact, precise; good, reliable, valuable

② 否定方面

insufficient, incomplete, fragmentary; poor, scanty; uneven, unreliable

③ 其他

earlier, previous, preliminary, past, present, current, further

二、知识

句型 13 现在已有某方面的知识

A There is now

We have now

At present we have

We are now in possession of

B some knowledge of

detailed knowledge of

thorough knowledge about

precise knowledge about

- C the gravitational field of ...
- the ionizing effects of ...
- the productivity of ...
- the microbial production in ...

句型 14 缺乏(没有)××知识

- A We (still) do not possess sufficient knowledge
- We still have little knowledge
- So far we have no knowledge
- Until recently we had no knowledge
- There is (still) some lack of knowledge
- There are (still) some gaps in our knowledge
- There were (still) certain deficiencies in our knowledge
- Until recently there were gaps in our knowledge
- B of other planets
- of plasma properties
- of host-parasite relationships
- of genetic resources in plants
- of genetic aspects of ...

句型 15 缺乏某方面的知识

- We (still) know (very) little about ion transport across ...
- So far we know (very) little about the neural basis of ...
- We still do not know many features of ...
- We do not know (yet) whether this is the true role of ...
- We do not know (yet) how brain mechanisms operate

句型 16 至今对某方面的知识仍是缺乏(不完整)

- A** Knowledge of ...
Our knowledge of ...
At present our knowledge of ...
So far our knowledge of ...
- B** is still
is obviously
still remains
- C** incomplete
insufficient
uneven
superficial
perfunctory
scanty
uneven
limited to a few features of ...
limited to one aspect of ...

句型 17 从某项研究还不能获得全面的知识

- A** No complete knowledge
No comprehensive knowledge
No thorough knowledge of ...
- B** has so far been provided by experiments with
was provided by experiments with ...
can be obtained from studies of ...

句型 18 尚未获得某方面的知识

- A** Knowledge of this phenomenon
Knowledge of these events
knowledge of the features of ...
- B** has not yet been obtained
has not yet been provided
has not yet been accumulated
has not yet been amassed

句型 19 已有的知识来自××研究(实验)

- A** Our present knowledge
Our current knowledge of ...
Some knowledge of ...
All our knowledge
Some of our knowledge of ...
Much of our knowledge
Most of our knowledge
The bulk of our knowledge
- B** comes from
emerges from
stems from
has come from
has emerged from
is obtained from
was furnished by
has been provided by

- C the studies of ...
- experiments with ...
- recent works on ...
- some studies of ...
- the pioneer works by ...

句型 20 某方面的知识还需进一步积累(扩大)

- A Knowledge of ...
- Our knowledge of ...
- B must be improved
- must be increased
- has to be (further) enlarged
- has to be (further) accumulated
- ought to be amassed
- will be obtained from
- will be provided by ...
- will be based on ...
- must (further) come from ...
- will (further) come from ...

句型 21 某方面的知识可用于××

- A Knowledge of this
- Knowledge of this phenomenon
- Knowledge of the nature of ...
- Knowledge of the role of ...
- Knowledge of the behaviour of ...
- Knowledge of the action of ...

Knowledge of the pathways of ...

Knowledge of the synthesis of ...

Knowledge of the details of ...

- B** is used for the determination of ...
was used for the estimation of ...
has been used for the evaluation of ...
will be used for the isolation of ...
can be used to demonstrate ...
may be used to determine ...
can hardly be used to elucidate ...
could be used to establish ...
might be used to create ...

修饰“知识”的形容词:

① 肯定方面

sufficient, complete, all-embracing, comprehensive; good, thorough, profound; detailed, exact, precise

② 否定方面

insufficient, incomplete; poor, scanty, fragmentary, uneven; superficial, perfunctory

三、问题

句型 22 某问题是关于××的研究(说明,判断)

A This problem

The problem of ...

The problem we have outlined

The problem they have advanced
The problem I am studying now
The problem thus presented

- B** is concerned (chiefly)
deals (largely) with
deals (mainly) with
bears on
- C** the study of ...
the determination of ...
the elucidation of ...

句型 23 这是研究××(与××有关)的问题

- A** This is a problem
- B** dealing with
concerned with
bearing on
relating to
which deals with
which bears on
- C** the nature of ...
the influence of ...
the role of ...
the effects of ...
the measurement of ...
the activity of ...

句型 24 问题的关键在于××

- A** The main aspect of the problem
The core of the problem
The essence of the problem
The problem (here)
The problem, as can be seen,
The problem, as I can figure it out,
The problem, as follows from the presentation,
- B** is
- C** the interaction of ...
the mode of action of ...
the origin of ...
the movement of ...
the connection between ...
how to isolate these components
how to separate the particles
how to purify the mitochondria
how to extract such substances
how to obtain further information
how to bring together ...
what method to use

句型 25 某问题很难解决

- A** The problem
The problem of ...
The problem under discussion

- The problem I am studying now
- B** involves
presents
 - C** certain difficulties
considerable difficulties
great difficulties
tremendous difficulties
a great deal of difficulty

句型 26 某问题容易(难于)解决(详细讨论)

- A** The problem of ...
The problem under investigation
The problem you mention here
The problem, as has been outlined,
The problem, as we have just seen,
- B** is easy
seems difficult
is not too complicated
does not seem too intricate
does not seem far too involved
does not seem too broad
- C** (to solve very quickly)
(to discuss in detail)
(to formulate in precise terms)
(to present in all its complexity)
(to tackle at present)
(to describe in every detail)

句型 27 在××方面难以(容易)讨论某问题

- A** It is easy
It seems difficult
It is not possible
It does not seem impossible
- B** to present the problem
to review all the aspects
to discuss the problem
to analyze all the aspects
- C** in all its complexity
in all its immensity
in every detail
concerned with

句型 28 在××时期难以解决某问题

- A** It is (rather) difficult
It will be very difficult
It would be (extremely) difficult
☆ It was (exceedingly) difficult
It seems (enormously) difficult
☆ It seemed difficult
It may seem (quite) impossible
☆ It would seem (totally) unrealistic to try
It proves (quite) impossible
It may prove (totally) unrealistic to try
- B** to solve the problem

to resolve the problem
to find solution to the problem
to obtain knowledge of the problem

C at present

now

now that we know little about...

now that we know nothing about...

in the coming year

in the near future

△ in the past

△ a few decade ago

△ at this level

△ at the level of ...

△ with the existing techniques

△ using the old methods

注：① 标有“△”的 A 项应与标有“△”的 C 项同时选用。

② 标有“#”的 A 项应与标有“#”的 C 项同时选用。

句型 29 某问题在××时候提出

A This problem

The problem of ...

The problem under discussion

The problem as such

The problem as is outlined now

The problem as is viewed now

B was (first) advanced

was (first) brought up

was (first) put forward

was (first) formulated

was (first) raised

was (first) posed

C by K

at the beginning of the XXth century

at the turn of the century

in 1929

as early as the early 60's

as far back as the late 30's

as far back as the 1970's

as far back as the mid-40's

as far back as the mid-XIXth century

句型 30 某问题如何受到重视

A Since then the problem

Since then it

B has attracted many scientists

has fascinated many workers in this field

has been referred to in a number of investigations

has been referred to many times

has been referred to more than once

句型 31 某问题可描述如下

A This problem

The problem

The problem of ...

- B** is (briefly) described
was outlined
has been formulated
can be stated
- C** as follows
as is given below

句型 32 某问题在××范围之内(外)

- A** The problem
This problem
Our problem
The problem you have just outlined
The problem the authors have raised
The problem I have referred to
- B** is within
lies beyond
seems to be outside
goes
falls
- C** the scope of the above theory
the range of the existing theory
the province of the problems pertaining to ...
the limits of the given research
the limits of this theory
the limit of our concepts
the limits of our present knowledge of ...

句型 33 某问题从××角度来考虑

- A** The problem of ...
- B** is interpreted
was regarded
has been viewed
can be looked upon
cannot be interpreted
can hardly be regarded
could be viewed
- C** in terms of current concepts
in the light of this fundamental theory
in the light of recent findings in this area
as a new one
as a fundamental one in the field
in the main one

句型 34 某问题在××时加以解决(说明)

- A** This problem
This very intriguing problem
- B** has been clarified only recently
was elucidated quite a short time ago
will be solved in the near future
will be resolved in the near future
can be clarified in experiments with ...
can hardly be elucidated in the light of recent findings
cannot be solved with conventional techniques

句型 35 某问题刚刚得到解决

- A** The problem of ...
This problem
- B** which was very intriguing
which seemed to be so intricate
which we thought to be very complicated
which we regarded as so challenging
which was believed to be very obscure
- C** until recently
until quite recently
until a short time ago
- D** is no longer a mystery
does not remain a mystery any longer
does not remain a mystery now
has now been solved
has been fully resolved
is now fully elucidated

句型 36 某问题仍未得到解决

- A** The problem
The above problem
The problem of ...
- B** (as we have seen)
(as we can see)
(as can be seen)
(as is known)

- C** is (still) poorly understood
- (still) remains inadequately examined
- (still) remains insufficiently studied
- (still) remains not sufficiently understood
- (still) remains (quite) a mystery
- (still) remains (very) obscure
- (still) remains (totally) obscure
- (still) remains its secrets

句型 37 某问题仍需进一步研究

- A** It
The problem
- B** demands (much) further research
requires a great deal of further research effort
calls for further study
calls for further investigation
calls for further work
- C** (in this area)
(in the above area)
(in this field)
(in the above field)

句型 38 要解决某问题对××需进一步研究

- A** (much) further research
(A great deal of) further research effort
(Much) study
(A great deal of) further investigation

Further work

- B** is needed to elucidate
is required to clarify
is wanted to bring to light
is wanted to reveal
is required to discover
- C** certain aspects of ...
certain details of ...
some facts about ...
the intricate nature of ...

句型 39 要解决某问题确实并非容易(尚需时间)

- A** It will (still) take time
It will, obviously, take much time
It will, undoubtedly, take many years
It is, indeed, no easy task
- B** to elucidate the problem of ...
to clear up this aspect of the problem ...
to clear up the mystery of ...
to unravel the intricate details of ...
to gain an insight into the structure of ...
to gain an insight into the mechanism of ...
to disclose the secrets of ...
to uncover the secrets of ...
to discover the mechanism of ...

修饰“问题”的形容词:

① 困难、复杂方面

difficult, challenging, complex, complicated, involved, intricate; confusing, puzzling; obscure, vague

② 吸引人、有趣方面

attractive, exciting, fascinating, interesting, intriguing, tempting

③ 其他

basic, chief, main, major; fundamental, essential, important; broad, vast; minor; specific, highly-specific, peculiar

四、研究

句型 40 在××时候已有某方面的研究

A At present

In the past

In recent years

In the last few years

Until now

B there are

there were

there have been

C some (experimental) studies of
several (laboratory) investigations of ...
numerous (field) investigations of
many (pilot) investigations of
(very) few (pioneer) investigations of
(almost) no (preliminary) studies of

no (comprehensive) studies of
(almost) no (detailed) studies of
(almost) no (fundamental) studies of

- D** the function of ...
the structure of ...
the effects of ...
the action of ...
the nature of ...

句型 41 为××目的所进行的研究现(已)达到××程度

- A** Several experimental studies
Numerous preliminary studies
Many comprehensive studies
Few detailed investigations
(So far) no thorough investigations
(So far) no fundamental investigations

- B** are made
are now being carried out
were then performed
have been undertaken
have been attempted
have been initiated

- C** to elucidate the nature of ...
to understand the mode of action of ...
to reveal the causes of ...
in order to bring to light some facts about ...

句型 42 过去曾有过某方面的研究

- A** A study was
An investigation was
Studies were
Investigations were
- B** made
carried out
performed
initiated
started
- C** of the effects of ...
of the influence of ...
of the basic units of ...
to determine the amount of ...
to establish the degree of ...
to elucidate the true role of ...
to ascertain whether the structure is affected
to establish how the mechanism operates

句型 43 到××时候为止,从未有过某方面的研究

- A** A study of the kind
An investigation of the kind
The kind of study you have in mind
The kind of investigation you mention
- B** has not been made
has not been carried out

has never been performed
was not attempted
will not be undertaken

- C** (until) now
(until (quite) recently)
(until a few years ago)
so soon
in the near future

句型 44 现在正在(已经)进行某项研究

- A** The laboratory is now carrying out
We are now performing
The authors are now starting
The author is now initiating
We have already carried out
We have already performed
The authors have already started
The authors have already initiated
- B** a preliminary study
an experimental study
some experimental investigation
several preliminary investigations
some experimental investigations
- C** of the influence of ...
to determine ...
to establish ...

句型 45 到现在为止,从未有过某方面的研究

- A** Until now the laboratory has not made
Until now we have not carried out
Until now the authors have not performed
So far the laboratory has not attempted
So far we have not undertaken
- B** any (experimental) study of ...
any (laboratory) investigation of ...
any (field) studies of ...
any (integrated) investigations of ...

句型 46 为××目的进行了某项研究

- A** To elucidate this question
To ascertain this
- B** we (have) made
we (have) carried out
we (have) performed
we (have) attempted
we (have) initiated
we (have) started
we undertook
we have undertaken
- C** some (experimental) studies of ...
several (laboratory) investigations which ...
a number of (preliminary) studies of ...
many investigations which ...

certain (detailed) investigations which ...

句型 47 某项研究的主要目的是 × ×

(1)

- A** The chief aim
The main purpose
The primary object
The primary objective
- B** of the present study is
of this investigation was
of our research has be
of this fundamental research will be
of these studies will be
- C** to obtain some results which ...
to obtain some knowledge of ...
to assess the role of ...
to find out whether ...
to establish what factors are ...
to reveal the cause of ...

(2)

- A** The present study
The above study
This investigation
The study of ...
- B** was made
was carried out
was performed

was attempted
has been undertaken
has been started
has been initiated
has been designed

- C** with a view to elucidate ...
with a view to clarify ...
with a view to determine ...
in order to establish ...
in order to show ...
in order to demonstrate ...
to provide evidence for ...
to obtain information about ...

(3)

- A** Our studies were intended to
Their pioneer studies were intended to
These investigations were intended to
Those earlier investigations were intended to

- B** elucidate ...
clarify ...
determine ...
establish ...
demonstrate ...
provide evidence for ...
obtain information about ...

(4)

- A** We

The authors

- B** made this study
carried out the above study
performed the present study
attempted our investigations
undertook their studies
started this study
initiated the above study
- C** in order to show correlation between ...
with a view to verify some basic data about ...
hoping to test the validity of the model ...
to check this hypothesis ...
in the hope of providing new evidence of ...
in the hope of obtaining further information as to ...
in the hope that we (they) might bring to light some
facts about ...
to the end that (so that) we (they) might bring to light
some facts about ...

(5)

- A** Carrying out this research
Performing these studies
Undertaking the present study
Starting these investigations
Initiating these investigations
- B** we hope to
the author(s) intended to
- C** find out ...

discover ...

reveal ...

obtain ...

demonstrate ...

句型 48 某项研究涉及到××范围

A Studies of these effects

Investigations on humans

Our studies with this technique

Our investigations involving ...

Recent studies to the same effect

More recent studies by this worker

B cover(ed) various aspects of ...

involve(d) also specific situations

are confined to one particular aspect

were concerned (chiefly) with the influence of ...

were chiefly concerned with the properties of ...

句型 49 某项研究进一步推广到××范围

(1)

A These studies

Their investigations

The above studies

B are (further) extended to

have been (further) extended to

were (further) extended to

will be (further) extended to

can be (further) extended to
could be (further) extended to
must be (further) extended to
will have to be (further) extended to
should be (further) extended to

- C** other species
other substances
include other organisms
include other aspects

(2)

- A** We
The authors
- B** (have) extended our (their) studies to
will probably extend our (their) investigations to
hope to extend our (their) investigations to
are likely to extend our (their) studies to
- C** some other related species
include other materials
include other agents of ...

句型 50 某项研究的结果说明(指出,揭示)了××

(1)

- A** The studies we have performed
These pioneer studies that the authors attempted
The studies initiated in their laboratory
We carried out several studies which
All further investigations

B show(ed)

have shown

(have) demonstrate(d)

(have) indicate(d)

(have) suggest(ed)

(have) reveal(ed)

(have) establish(ed)

C that the above process is t^0 -dependent...

that these particles are responsible for ...

that the substance acts on ...

that the effect is eliminated by ...

that such individuals are strongly affected by ...

diverse mechanisms of ...

marked variations in ...

(2)

A The research we have done

The investigation carried out by ...

B shows

suggests

reveals

showed

has shown

(has) suggested

(has) revealed

C a similarity between

an increase in ...

no adaptation to ...

no resistance to ...

句型 51 某项研究的结果支持了某理论(假设)

- A** Autoradiographic studies
Microscopic studies
Electron microscopic studies
Studies with scanning electron microscope
- B** (have) furnish(ed)
(have) provide(d)
(have) support(ed)
(have) favour(ed)
(have) confirm(ed)
bear (bore) out
have borne out
- C** sufficient information about ...
a considerable body of evidence
further evidence for this theory
the assumption that ...
the hypothesis that ...
the idea that ...
the opinion that ...
the views expressed by
the current views as to
the current concepts concerning ...
that ribosomes are the sites of ...

**句型 52 某项研究的结果并未说明(指出,揭示)某理论
(假设)**

A Laboratory studies of ...

Our preliminary studies of ...

The studies performed with this technique

The studies thus performed

Further studies to the same effect

Our research carried out to the same effect

Recent research into the nature of ...

Further investigations on the influence of ...

B do not show that the particles are involved in ...

do not show that the changes are so dramatic ...

did not suggest that this is truly the case ...

fail(ed) to reveal any variations in ...

failed to reveal any increase in ...

does not furnish any information about ...

does not furnish any evidence in favour of ...

did not provide any data concerning ...

fails to support the assumption that ...

fails to confirm the theory that ...

fails to confirm the opinion that ...

failed to bear out the views concerning ...

failed to favour the current views as to ...

句型 53 某项研究的结果说明(指出)没有某现象(效应)

A Microscopic studies show(ed)

Preliminary observations reveal(ed)
Further research shows (showed)
Recent research reveals (revealed)
Most recent research reveals (revealed)

- B** no interaction *between* ...
no changes in ...
no increase in ...
no effects of ...
no traces of ...
no evidence of ...

句型 54 从某项研究可以得出某结论

- A** All these studies lead the authors to
These and other studies to have led them to
The same effect (have) enable(d) to
Further research in this area leads the authors to
Further research in this area enables them to
Further research in this area has led them to
Further research in this area (has) enabled us to
- B** conclude that ...
suggest that ...
believe that ...
postulate that ...
a conclusion that ...
a belief that ...

句型 55 从某项研究得到某(有益)结果

(1)

- A** Those comprehensive studies
(All) further investigations
- B** add(ed) to our understanding of ...
contribute(d) to our knowledge of ...
lead (led) to the elucidation of ...
lead (led) to a discovery of ...
result(ed) in the discovery of ...
shed (new) light on the role of ...
shed the mechanism of ...

(2)

- A** Their fundamental research
Their research of many years
- B** adds to our present knowledge of ...
contributes to our current concepts of ...
(has) added to the elucidation of ...
(has) contributed to the elucidation of ...
leads to the elucidation of ...
(has) led to a discovery of ...
(has) resulted in the discovery of ...
(has) shed (new) light on the role of ...
(has) shed (new) light on the mechanisms of ...

修饰“研究”的形容词:

① 肯定方面

encouraging, stimulating, promising; useful; fruitful, successful; interesting; elegant; fascinating

② 学术研究方面

autoradiographic, microscopic, electron-microscopic, chromatographic, serological; taxonomic, morphological, cytological, genetic; molecular, macromolecular, micromolecular

③ 其他

initial, pioneer, previous, recent, current, present, further; experimental, theoretical; field, laboratory; intergrated, multidisciplinary; full-scale, extensive; technical, highly-technical; careful, detailed, thorough, profound, complete, comprehensive, fundamental; intense

五、研究工作

句型 56 某项工作是关于××的

A The present work

The above work

Our work at present

The work we are doing now

The work we have done

B deals with

is concerned with

is devoted to

bears on

C the processes underlying ...

the mechanism involved in ...

the effects produced by ...

句型 57 某项工作的主要目的是××

(1)

- A** The chief aim of the present work
The main purpose of 'our recent' work
The major object of their further work
The principal objective of this preliminary work
The principal task of their joint work
- B** is to investigate the features of ...
was to examine the properties of ...
will be to assess the amount of ...
has been to reveal the intricate details of ...
has been to elucidate the cause of ...
has been to gain an insight into ...
has been research into the nature of ...
has been investigation of the transport of ...
has been examination of the properties of ...

(2)

- A** Our work in this direction
Current work along these lines
Further work in this field
The work we are doing now
The work which is being done now
- B** is intended
is designed

- C to demonstrate certain phenomena which ...
- to provide some information about ...
- to shed some light on ...
- to bring about changes in ...
- to find some solution to the problem (of ...)

(3)

- A Work of this kind
 - The present work
 - Our preliminary work
 - Previous work in this area
- B is undertaken
 - was initiated
 - has been started
 - has been done
- C with a view to test the hypothesis
 - in order to shed further light on ...
 - in order to assess the role of ...
 - in order to observe interaction between ...
 - in the hope of obtaining data in ...
 - in the hope of providing further information about ...
 - in the hope that we will (would) succeed in determining ...

(4)

- A The authors undertook this work
 - The author started this work
 - We did this work
- B with a view to show ...

in order to demonstrate ...
hoping to observe ...
hoping to reveal .../
with a view to establish ...
in order to elucidate ...
in order to clarify ...

(5)

- A** By doing this (preliminary) work
Doing this joint work
- B** we intended (intend)
we hoped (hope)
the authors expect(ed)
- C** to show ...
to demonstrate ...
to observe ...
to reveal ...
to elucidate ...

句型 58 在某处进行某方面的工作

- A** Some work along these lines
More work in this direction
Further work of this kind
Recent work of this kind
More recent work of this kind
- B** is being done
has been carried out
will be accomplished

was performed

- C in the laboratory of ...
- at the Institute of ...
- by research teams at ...

句型 59 某项工作(没)说明××

- A Our recent work
- Our previous work
- Preliminary work
- Further work of this kind
- More work in this direction
- The work undertaken in the laboratory
- The work we have done
- Their recent work involving attempts to ...
- Much further work was done which
- We carried out some work which
- B** showed that the decrease is due to ...
- demonstrated that the process is slowed down by ...
- has shown considerable increase in ...
- has demonstrated a low content of ...
- showed (no) occurrence of ...
- demonstrated no distinction between ...
- demonstrated some similarity between ...
- provided substantial support for ...
- has provided unequivocal evidence in favour of ...
- provided further information about...
- has not shown that the phenomenon is due to ...

has not shown that this is what actually happens

has not shown any increase in ...

has not shown any occurrence of ...

has not provided any new data about ...

has not furnished any substantial evidence against ...

did not show that such lesions are the cause of ...

failed to demonstrate that there is any such correlation

failed to provide any interesting results

failed to furnish any new ideas about ...

句型 60 某项工作(不)是十分成功的

A The author's work on oxydative phosphorylation

Prof. Wang's (recent) work with solid particles

Our work involving studies of guinea pigs

Our work involving studies of (the) samples of ...

B has been very successful

(has) proved (to be) highly fruitful

was extremely promising

has not been quite encouraging

has not proved to be stimulating

did not prove to be successful

was not very successful

句型 61 某项工作提供出××结果

A This fruitful work

Their fundamental work

The author's pioncer work

This (joint) work of many years

Our (integrated) work of the past few years

B gives explanation of

provides some knowledge of ...

gave some understanding of ...

has given a clue to ...

has provided new information about ...

(has) facilitated elucidation of ...

(has) contributed to our present knowledge of ...

(has) led to a solution of ...

(has) led to a discovery of ...

has led to further progress in ...

(has) led to further advance in ...

adds to our knowledge of ...

added to our current concepts of ...

has added to the progress in ...

(has) brought about a discovery of ...

resulted in elucidation of ...

has resulted in a solution of ...

句型 62 某项工作没给出××结果

A Our work on ...

Their initial work with ...

Further work in this field

This work, however,

B (has) failed to

did not

- C give ...
 provide ...
 facilitate ...
 contribute to ...
 lead to ...
 result in ...
 bring about...

修饰“研究工作”的形容词:

① 肯定方面

careful, detailed, thorough, profound; basic, fundamental, comprehensive, extensive, all-embracing; joint, integrated; intense, intensive; useful, encouraging, promising, stimulating; fruitful, successful

② 其他

initial, pioneer, early, preliminary, previous, recent, current, present, further

六、方法

句型 63 某方法在××程度上(不)适合于某项(某领域)研究

A₁¹⁾ The method of ...

The method used

The method you de-
 scribed

A₂¹⁾ This laborious and time-

consuming procedure

1) A₁ 项应与 C₁ 项同时选用, A₂ 项应与 C₂ 项同时选用。

The old method
The old technique

B is
seems
is (generally) regarded as

C₁ accurate for
adequate for
appropriate for
suitable for
effective in
efficient in
reliable in

C₂ unsuitable for
unreliable for
inaccurate for
inadequate for
inappropriate in
ineffective in
inefficient in

D the study of...
the evaluation of...
the separation of...
field conditions...
laboratory conditions

句型 64 某方法(技术)被广泛(很少)地用到某项研究上

(1)

- A** This method
The above technique
The newly developed procedure
The old technique

- B** is widely used
is extensively used
is commonly used
is frequently used
is often used
is rarely applied
is seldom applied
is never applied
is no longer applied
#is in wide use nowadays
#is widely in use nowadays

- C** in studies of...
in experiments of this kind
in laboratory conditions
in various fields of research
for the estimation of ...
for the evaluation of ...

nowadays

at present

注：标有“#”的B项与标有“#”的C项不能同时选用。

- A** We
Most workers
Most authors
- B** widely use
extensively use
frequently use
often use
seldom apply
rarely applied
never apply
no longer apply
do not apply
- C** this method
the method of
the old technique
the above procedure
- D** (nowadays)
(in our research)
(in their studies)
(in such experiments)
(in investigations of this kind)
(in measuring ...)
(in examining ...)
(when evaluating ...)
(when estimating ...)
(for analyzing ...)

(for determining ...)

(for the determination of ...)

(for the assessment of ...)

句型 65 某方法已广泛应用于××

- A** The above method has
The method we used has
Spectroscopic techniques have
Nuclear magnetic resonance techniques have
- B** (found) a wide application
(found) a wide range of application
- C** nowadays
in biology nowadays
in various fields
in the examination of ...
in the investigation of ...

句型 66 某方法可称为(可描述为)××

- A** The method used
The technique we applied
The procedure they followed
The method we used in our studies
The procedure we followed in the experiments
- B** is known as
is (generally) referred to as
can be referred to as
can be (briefly) described as

- C ion-exchange chromatography
- the technique of flash photolysis
- X-ray diffraction
- silver-staining technique
- as follows

句型 67 应用某方法进行了(完成了,获得了)××

- A Using this technique
- Using the above procedure
- With this method
- With the above technique
- B we
- the authors
- these workers
- C performed a few experiments which ...
- carried out a number of experiments owing to which ...
- made several sets of experiments. As a result ...
- (have) obtained certain results which ...
- (have) revealed numerous new facts of ...
- (have) succeeded in analyzing the composition of ...

句型 68 某方法首先由某人在××时期发明(利用)

- A The method of ...
- B was (first) developed
- was (first) elaborated
- was (first) applied
- was (first) used

was (first) brought into use
came into use¹⁾

C by N

in experiments with ...

in the 1950's

in the early XXth century

at the end of the XIXth century

as far back as the mid-nineteenth century

as long ago as 1920

句型 69 某方法极好地(略微地)得到改进

A The method

The technique

B is now greatly improved (since then)

is now completely modified

has been (only) slightly modified

has been (completely) replaced by a new method (technique)

句型 70 某方法与其它方法有××程度的差别

A The method of ...

The method we use

The method they developed

The method they have elaborated

The new technique

1) came into use 不能同 by N 合用。

- The newly elaborated technique
- B** does not differ (at all)
does not differ (greatly)
does not differ (essentially)
differs (greatly)
differs (essentially)
is (somewhat) different from
is (slightly) different from
is (a little) different from
is (quite) different from
is (totally) different from
is (altogether) different from
is (not at all) different from
has something in common with
has nothing in common with
has much in common with
has many features in common with
has little in common with
- C** the routine one
the conventional one
the one we used earlier
the one previously used
the old technique
other technique used for ...
the existing technique

句型 71 某方法在某方面(比其它方法)优越(不优越)

- A** The newly developed method
The procedure we followed
Their technique
- B** has certain advantages (over the existing methods)
has some advantages (over the one used for ...)
has several advantages (over the old procedure)
has many advantages (as compared with ...)
has few advantages (over the existing methods)
has no advantages (over the one used for ...).
has only one (essential) advantage (over the old procedure)
is advantageous in one respect
is convenient in some respect
is good in many respects

句型 72 某方法的优点在于××

- A** One (essential) advantage of the method
One (essential) advantage that the method has
One of the assets of the technique
Another obvious advantage
Another good feature of the technique
- B** is
- C** its simplicity
its reliability
its (much) greater sensitivity

the (relative) case with which ...
that it is very simple
that it allows determination of ...
that it allows the use of ...

句型 73 应用某方法可以进行××工作

- A** This method
This technique
The above procedure
- B** allows us to demonstrate ...
enables us to observe ...
enables us to detect ...
makes it possible to evaluate ...
is capable of providing ...
is capable of producing ...
is capable of revealing ...
is capable of detecting ...

修饰“方法”的形容词:

① 肯定方面

accurate, adequate, appropriate; suitable; precise, sensitive;
effective, efficient, workable; practicable; satisfactory, good;
useful, valuable; reliable; valid; promising

② 否定方面

inaccurate, inadequate, inappropriate, unsuitable; insensitive;
ineffective, inefficient, unworkable, unpracticable; unsatis-
factory, poor; useless, unreliable; invalid; laborious, time-

consuming

③ 其他

current, modern, up-to-date, improved, modified; new, old, out-of-date, outdated; conventional, routine

七、实验

句型 74 进行××实验是为了××

(1)

A We

The authors

B made these experiments

carried out these experiments

performed this series of experiments

undertook this series of experiments

attempted this set of experiments

started this set of experiments

initiated these experiments

C (in order to) show a correlation between ...

(with a view to) demonstrate certain phenomena ...

to elucidate the mechanism of ...

to evaluate the amount of ...

hoping to test the hypothesis of ...

hoping to provide some understanding of ...

hoping to provide some information about ...

in the hope of providing some features of ...

in the hope that we might provide the feature of ...

in the hope that we might elucidate the feature of ...
in the hope that we might shed light on the feature of ...

(2)

- A Experiments on animals
 - Experiments on humans
 - Experiments on membrane permeability
 - Experiments by these workers
- B were made in order to
 - were carried out in order to
 - were performed in order to
 - were undertaken with a view to
 - were started with a view to
 - were initiated with a view to
- C determine certain parameters
 - establish the rate of ...
 - reveal the components of ...
 - elucidate some facts about ...
 - examine certain question concerning ...
 - measure the amount of ...
 - measure the rate of ...
 - measure the parameters of ...
 - obtain some data on ...
 - obtain some facts about ...
 - obtain certain parameters

(3)

- A Experiments on protein synthesis
 - Experiments involving nuclear differentiation

Experiments involving observation of living material

Experiments using this technique

- B** are made
 - have been carried out
 - are (not) being performed
 - are (not) being underway
- C** to determine ...
 - to elucidate ...
 - to check ...
 - to test ...
 - to answer the question whether ...

句型 75 用××方法做某项实验的目的是××

- A** Further experiments with this technique
 - Earlier experiments with humans
 - Previous experiments with animals
 - Recent experiments with radioactive isotopes
 - Current experiments with this technique
- B** were intended to
 - are designed to
 - are designated to
- C** answer some questions about ...
 - demonstrate certain phenomena ...
 - establish whether the hypothesis is ...
 - find out whether the process is ...

句型 76 某项实验证实(提供)了××

A Experiments by M and his associates

Recent experiments in this area

The present series of experiments

Their experiments on...

B show(ed)

have shown

(have) demonstrate(d)

(have) indicate(d)

(have) suggest(ed)

C a much higher resistance to ...

a variety of changes in ...

a correlation between ...

that the changes are due to ...

that these phenomena are interrelated

句型 77 某项实验(未能)证实(提供)××

A Our experiment

These highly technical experiments

Recent experiments with ...

These experiments involving ...

B support(ed) our assumption that the effect is short-lived

confirm(ed) our evidence that ...

furnish(ed) some new information about the mechanism of ...

provide(d) some further data concerning the influence
of ...

failed to provide any correlation between ...

failed to show any changes in ...

failed to demonstrate any increase in ...

failed to detect any changes in ...

句型 78 根据实验结果可得出××结论(假设)

(1)

- A** Further experiments in this area
More recent experiments in this area
Most recent experiments to the same effect
- B** lead us
(have) led the authors
(have) enable(d) these workers
- C** to conclude
to believe
to suggest
to a conclusion
- D** that the phenomenon is related to ...
that the mechanism is put out of action

(2)

- A** As a result of our experiments we conclude(d)
As a result of our experiments we came to realize
From our experiments the authors came to a conclusion
From these experiments one can conclude
- B** that lighting is dependent on ...

that these strains produce substances which ...

修饰“实验”的形容词:

① 肯定方面

elegant, fine, ingenious, precise, thorough, specific, highly, technical, highly-technical

② 否定方面

discouraging, meaningless, unreliable; unsuccessful

③ 其他

initial, pioneer, early, earlier, previous, preliminary, recent, current, present, further

八、理论

句型 79 某理论是在××时提出的

A The theory of ...

An alternative theory

B was created

was constructed

was developed

was elaborated

was formulated

was advanced

was put forward

was proposed

was suggested

C 50 years ago

in the 50's
in the early 80's
as early as 1900
as long ago as 1960's
as far back as 1896

句型 80 某人提出××理论

- A** These authors
These workers
- B** (have) created
(have) constructed
(have) developed
(have) elaborated
(have) formulated
(have) advanced
(have) put forward
(have) proposed
(have) suggested
- C** a new theory
a fruitful theory
a fascinating theory
an attractive theory
an interesting theory

句型 81 某理论是根据××提出来的

(1)

- A** Our theory

His theory

There is a theory which

- B** is based on an (the) assumption that the effect is ...
- rests on the idea that the effect is ...
- proceeds from the idea of ...
- proceeds from the principle of ...
- proceeds from one essential principle
- proceeds from two fundamental principles

(2)

- A** A new theory
- Another theory
- An alternative theory
- B** is developed
- is elaborated
- has been worked out
- has been proposed
- was suggested
- was put forward
- was advanced
- C** which is based on the assumption that ...
- which was based on the assumption that ...
- which proceeds from the concept of ...
- which proceeded from the concept of ...

句型 82 某理论的内容是 × ×

(1)

A₁¹⁾ Underlying this theory

A₂ The underlying concept of this theory

The underlying idea of this theory

The underlying principle of this theory

B₁ is the idea that the theory is due to ...

is the concept that such effects are caused by ...

is the principle of cohesion

B₂ is ...

is as follows

(2)

A There is an alternative theory

There is a similar theory

There is a tentative theory

There is working theory

B that

to the effect that

which is based on the idea that

C the observed objects are neutron stars

the changes may persist for much longer periods

the influence is due to ...

句型 83 某理论的基本特点是 × ×

A A basic

The fundamental

1) A₁ 项后接 B₁ 项, A₂ 项后接 B₂ 项。

- An essential
B feature of this theory
C is ...
is as follows

句型 84 ××基本概念构成××理论的基础

- A₁** The following basic concept(s)
One basic idea
Two basic principles
A₂ There is one (basic) concept that
There are two (basic) ideas that
There are two (basic) principles that
B underlie(s) this theory
underlie(s) this new theory
underlie(s) our theory

句型 85 某理论的目的是××

- A** The object of this theory
The aim of this theory
The principle task of the above theory
B is
was
has been
will be
must be
C to arrange and explain a series of events underlying ...
to interpret the phenomena underlying

to explain the mechanism of ...
to correlate such processes with ...

句型 86 某理论认为(坚持)××

- A** The kinetic theory
This newly developed theory
The theory advanced by ...
the theory of ...
- B** holds
maintains
implies
claims
postulates
predicts
- C** that such modifications may persist for a long time
that antibody synthesis may be inhibited by ...
that such changes do not occur when ...
that sporadic methods arise from ...

句型 87 根据某理论,可得出××

- A** According to B's theory
As follows from the theory by N
As can be seen from the theory advanced by ...
- B** both processes occur simultaneously
both effects are eliminated
such disturbances may cause ...
such situations lead to ...

such interactions are the basis of ...

句型 88 某理论(没)有优(缺)点

A₁¹⁾ The theory of ... has (had)

The theory by ... (has) had

The newly advanced theory ... has (had)

A₂¹⁾ There are

There were

B₁ certain advantages

some assets

several strong points

many attractive features

no positive features

B₂ not any deficiencies in the theory

not any drawbacks in the theory developed by ...

not any inadequacies in the theory

not any faults in the theory

not any flaws in the theory developed by ...

not any shortcomings in the theory developed by ...

not any weak points in the theory developed by ...

句型 89 某理论在××方面是很好的(重要的)

A The theory of ...

The theory by ...

Their theory

1) A₁ 项后接 B₁ 项, A₂ 项后接 B₂ 项。

B is

was

seems

seemed

C (quite) good

(quite) adequate

(quite) competent

(quite) correct

(most) probable

(most) satisfactory

(most) suitable

(best) suited

best

(most) interesting

(very) important

(very) advantageous

(very) convincing

(quite) interesting

(quite) important

(quite) attractive

D (for the explanation of ...)

(for the elucidation of ...)

(for the interpretation of ...)

(to explain the origin of ...)

(to account for the changes in ...)

(to interpret the series of events in ...)

(to demonstrate the effects of ...)

- (in one respect)
- (in certain respects)
- (in one aspect)
- (in certain details)

句型 90 某理论在××方面是错误的(不足的)

(1)

- A** The theory of ...
The theory by ...
This theory
This is a theory which ...
That was a theory which ...
There is a theory which ...
- B** is
was
seems
seemed
- C** faulty in some respects
deficient in many respects
(quite) inadequate (to interpret the phenomena occurring in ...)
(most) incompetent (for the interpretation of ...)
unsatisfactory (for the demonstration of ...)
(quite) unsuitable (in certain situations ...)
(quite) improbable (to a certain extent ...)
(totally) wrong (in one respect ...)
(totally) incorrect (in some details ...)

(very) ambiguous (in certain points)

(very) inexplicit (as far as this latter aspect is concerned)

(very) vague (as far as specific situations are concerned)

(quite) meaningless (when applied to specific situations)

(2)

A The new theory

This is a theory which

They proposed a theory which

B is not

does not seem

was not

did not seem

(quite) good

(quite) inadequate

(quite) competent

(very) convincing

(very) satisfactory

(very) suitable

(quite) suited

(quite) probable

(quite) correct

(totally) wrong

(totally) meaningless

(totally) inadequate

(totally) incompetent

(totally) unconvincing
(totally) unsatisfactory
(totally) unsuitable
(totally) improbable
(totally) incorrect
ambiguous
vague

- C** (to interpret ...)
(for the interpretation of ...)
(when applied to ...)

句型 91 某理论(不,不再)被认为是正确的(令人满意的)

(1)

- A** The new theory
The current theory
The old theory
- B** is believed to be
is not considered to be
is no longer regarded as
is looked upon as
is no longer treated as
- C** (quite) correct
(quite) true
(quite) likely
(quite) possible
(quite) adequate (for ...)
most competent

fairly satisfactory
quite suitable
most suitable

(2)

A We

We can

We cannot

We do not

We no longer

B consider the new theory to be
regard the old theory as
look upon the current theory as

C quite reliable
quite probable
most likely
most suitable
most satisfactory
a suitable one
a true one

句型 92 应该(必须)如何看待某理论

(1)

A Their theory

The above theory

The old theory

B can be regarded as
must be regarded as

should be looked upon as
has to be looked upon as
ought to be treated as
cannot be treated as
should not be treated as

- C** quite correct
quite true
quite likely
quite possible
quite probable
fairly adequate
quite competent
most convincing
quite likely
most probable
quite satisfactory
most suitable

- D** (for the explanation of ...)
(to explain ...)

(2)

- A** Their theory
The above theory
The old theory
- B** must be used with reservation
should be treated with caution
has to be approached critically
can only be used in a few situations

can only be used in a limited number of cases

句型 93 某理论可用于××

- A This theory
The above theory
They (have) developed a theory which
- B applied to other systems
can apply to other cases of ...
can be applied to a (much) wider range of ...
- C is valid for other species
proves to be valid for equilibrium conditions
(has) proved to be true for all steps of ...

句型 94 根据××,某理论的可靠性是显然的

- A The validity of the theory
- B has become obvious in the light of recent findings nowa-
days
has become obvious now
has become obvious now that ...
has been made obvious by further evidence
has been made obvious by extensive studies of ...
has been made obvious by experiments with ...
has been proved (nowadays by ...)
is proved (nowadays by ...)

句型 95 某理论已为××所进一步(充分)证明

- A The theory ...

The theory by ...
His theory
The investigating theory
This very peculiar theory
The old theory

- B** is (further) proved
is (further) confirmed
is (further) corroborated
has been (sufficiently) supported
has been (sufficiently) substantiated
has been (sufficiently) checked
has been (sufficiently) tested
has been (sufficiently) verified
- C** by many workers
by other authors
by new evidence from ...
by further studies of ...
in experiments with ...
at present
nowadays
these days

句型 96 某理论得到××的支持

- A** The old theory
This newly developed theory
The theory of ...
The theory by ...

- B** find (much) support
 gains (new) experimental support /
 has found (further) support
 has gained (further) experimental support
 (has) received universal recognition
 (has) gained general acceptance
 is generally accepted
 has been generally accepted
- C** (these days)
 (nowadays)
 (now)¹⁾
 (at present)¹⁾

句型 97 某理论对××是不适用的

- A** The new theory
 The newly developed theory
 The old theory
 The theory of ...
- B** does not apply to
 did not apply to
 cannot apply to
 could not apply to
 is not applied to
 was not applied to
 cannot be applied to

1) “now”, “at present”可用在 B 项中的“has”, “is”之后。例如: The

could not be applied to
is not valid for
was not true for
does not prove to be valid for
did not prove to be true for
does not hold true for
did not hold true for
cannot hold true for
could not hold true for

- C** situations like those mentioned earlier
specimens with properties other than ...
individuals whose characters differ from ...
circumstances totally different from ...
processes occurring in ...
systems with ...
crystals with ...
organisms with ...
cases of ...

句型 98 某理论未被××证实

- A** The new theory
The newly developed theory
The old theory
The theory of ...
The validity of the theory
- B** is not (further) supported
is (was, has been) invalidated

was not proved
has not been confirmed
failed to be checked
cannot be tested
could not be demonstrated
is to be substantiated
(still) has to be
(still) remains to be

- C** by recent evidence from ...
by further studies which showed ...
by further experimentation in the field experiment
(experimentally)
(by experiment)

注：标有“#”的 A 项和标有“#”的 B 项不能同时选用。

句型 99 某理论必定(已经)被否定(拒绝)

(1)

- A** As can be seen, the above theory
As we have seen, the above theory
As we have shown, the above theory
- B** must be disproved
must be refuted
has to be given up
has to be abandoned
has been rejected
has been renounced
- C** (as incorrect)

(as invalid)
(as improbable)
(as totally wrong)
(as totally inconsistent)

(2)

- A** As can be seen, the authors
As we have seen, the authors
As we have shown, the authors
- B** gave up their theory
abandoned their theory
- C** (since it proved invalid)
(as it proved incorrect)

句型 100 某理论没有(不能)说明××

- A** The theory of ...
The theory by ...
- B** does not explain
did not explain
fails to explain
failed to explain
cannot explain
could not explain
- C** what mechanism underlies these events
how such modifications arise
the causes of ...
the nature of ...
the mechanism of ...

句型 101 应用某理论(不)能说明××

(1)

- A** We can interpret
We cannot interpret
We can hardly explain
- B** these findings
these phenomena
- C** in terms of the above theory
using the above theory
applying this theory

(2)

- A** These findings
Such phenomena
- B** can be interpreted
cannot be explained
can hardly be interpreted
- C** in terms of the above theory
on the basis of this theory

句型 102 ××发现(现象)与某理论(不)相符

- A** These findings
Such phenomena
- B** (do not) fit into
are (not) consistent with
are (not) in line with
are (not) within the range of

- C** this theory
either of the two theories
the current theory
the existing theories

句型 103 某几个理论(没)有共同点

(1)

- A** The two theories
These two theories
The above two theories
Our theories
Their theories
- B** have something in common
have little in common
have nothing in common
seem to have much in common
seem to have some features in common
seem to have many features in common
seemed to have one feature in common
seemed to have one common feature
seemed to have some common features

(2)

- A** There is one feature
There are some features
One feature is
Some features are
- B** common to both theories

句型 104 某几个理论在××方面基本(不)相同

- A** These two theories
The two theories
- B** are (fundamentally) different
are not (largely) at variance
seem to be (totally) at variance
do not seem to be (quite) conflicting
are (basically) the same
seem to be (quite) conflicting
are (basically) the same
seem to be (essentially) the same
differ (fundamentally)
seem to differ (fundamentally)
do not differ (essentially)
do not seem to differ (essentially)
- C** (as far as their main postulates are concerned)
(in their principal ideas)
(in their main postulates)

句型 105 某几个理论之间存在着××程度的差别

- A** There is some difference
There is little difference
There is not much difference
There is much difference
There is a great difference
- B** between the theories

between these theories

between the two theories

修饰“理论”的形容词:

① 肯定方面

satisfactory, good, competent, convincing, adequate, reliable; correct, probable, plausible; valid, helpful, fruitful, successful; promising, stimulating; attractive, fascinating, interesting; meaningful; peculiar; clearcut, explicit

② 否定方面

deficient, faulty, inadequate, incompetent, unconvincing, unsatisfactory, meaningless; improbable; unreliable, incorrect, wrong; invalid; ambiguous, confusing, puzzling; inexplicit; divergent, conflicting, contradictory, controversial

③ 其他

alternative; tentative, working, basic, fundamental; substantial, comprehensive

九、假说

句型 106 某假说是××时提出的

- A** This hypothesis
The above hypothesis
The hypothesis of ...
- B** was advanced
put forward
suggested

- C** in 1988
in the last decade
in the early 80's
in the late 60's
as early as 1938
as long ago as 1880
as far back as the mid XVIIIth century

句型 107 某人在××时提出他的假说

- A** The author
B advanced his hypothesis
put forward his hypothesis
suggested his hypothesis
C in 1963
in the last decade
in the early 70's
in the late 60's
as early as 1938
as long ago as 1860
as far back as the mid XVIIIth century

句型 108 某假说是为了××而提出的

- A** The hypothesis of ... is
The hypothesis of ... was
The hypothesis of ... has been
Two hypotheses are
several hypotheses were

- A number of hypotheses have been
- B** offered
suggested
advanced
put forward
- C** to explain
to account for
to help elucidate
- D** that interesting phenomenon
the mechanism of ...
the process of ...
the causes of ...
the changes in ...

句型 109 某假说的内容是 × ×

(1)

- A** The authors suggested a hypothesis
A hypothesis has recently been advanced
Their hypothesis is
The basis for the above hypothesis is the assumption
Underlying this hypothesis is the idea
- B** that the observed effect is reversible
that the structure remains intact
that the gas is a narcotic agent
that the energy source lies in ...

(2)

- A** The hypothesis of ...

The hypothesis advanced by ...

We suggested a hypothesis which ...

Our working hypothesis

B holds that

claims that

maintains that

implies that

C the structure remains unaffected

the interaction is due to ...

the particles arise from ...

the modifications result from ...

the genus evolved as a result of ...

the species originated in ...

these effects are inhibited by ...

(3)

A A hypothesis was advanced according to which

According to the hypothesis

As follows from the above hypothesis

B the structure remains unaffected

the interaction is due to ...

the particles arise from ...

the modifications result from ...

the genus evolved as a result of ...

the species originated in ...

those effects are inhibited by ...

句型 110 某假说(不)是很有意义的(有帮助的)

A This hypothesis

The above hypothesis

They suggested a hypothesis which

The hypothesis suggested by ...

The hypothesis of ...

Their hypothesis that ...

B is (quite) attractive

is (quite) interesting

seems (rather) helpful

seems (rather) stimulating

is not (quite) likely

is not (quite) plausible

does not seem (quite) reliable

is valid

seems wrong

is not (quite) an attractive hypothesis

does not seem a (very) interesting hypothesis

is (quite) a stimulating hypothesis

is a (very) fascinating hypothesis

seems (quite) a helpful hypothesis

seems a (very) useful hypothesis

句型 111 某假说(没有)为××所证实

A The hypothesis of ...

The previous hypothesis advanced by ...

The hypothesis that ...

The previous hypothesis to the effect that ...

- B** has been checked
 - was tested
 - has not (yet) been verified
 - was not confirmed
 - (still) has to be corroborated
 - must (still) be proved
 - remains to be supported
 - remains to be substantiated
- C** (by further studies)
 - (in experiments with ...)
 - (by N)

句型 112 进行实验,以检验某假说

(1)

- A** We (have) made a number of experiments
 - We (have) performed more than one set of experiments
 - We (have) carried out several sets of experiments
 - We (have) initiated many sets of experiments
 - We (have) attempted many sets of experiments
 - We have undertaken special studies
 - They undertook many studies
 - They undertook a number of studies
- B** to check our hypothesis
 - to verify this hypothesis

to test the validity of ...
to substantiate the hypothesis that ...
to support the hypothesis which ...
to prove the hypothesis which ...
to disprove the hypothesis that ...

(2)

- A** A number of experiments
More than one set of experiments
Several sets of experiments
Many sets of experiments
Many studies
Special studies
A number of studies
- B** have been made
were performed
will be carried out
must be initiated
have to be attempted
will have to be undertaken
- C** to check the hypothesis of ...
to verify the hypothesis that ...
to test the hypothesis which ...
to substantiate that hypothesis
to support that hypothesis
to prove that hypothesis of ...
to disprove that hypothesis of ...

句型 113 某假说已(未)被接受

- A** The hypothesis of ...
- B** is (generally) adapted nowadays
is (generally) followed (as a true one) at present
can be regarded as a true one (nowadays)
can hardly be regarded as a true one (nowadays)
cannot be regarded as a true one (nowadays)

句型 114 某假说已不再成立

- A** This hypothesis
The hypothesis of ...
- B** is no longer valid
is not valid any longer
is not followed at present
did not hold good nowadays

句型 115 某假说须予以否定

- A** This hypothesis
- B** has been
will be
must be
should be
ought to be
has to be
- C** disproved
refuted

given up
renounced
rejected
repudiated
turned down

修饰“假说”的形容词:

① 肯定方面

correct, true, valid, plausible, probable, reliable, satisfactory, good, helpful, stimulating, promising; interesting, attractive, fascinating, peculiar

② 否定方面

incorrect, untrue, invalid, improbable, unreliable

③ 其他

basic; alternative; tentative, working

十、假设

句型 116 ××仅是个假设

A This

Ours

What we believe(d)

What we proceeded from ...

B is (only) a tentative assumption

has been (no more than) a preliminary assumption

was (merely) a further assumption

句型 117 某工作是基于××假设

- A** There is an assumption that
We start(ed) from an assumption that
The authors proceed(ed) from an assumption that
The theory is based on an assumption that
Our basic assumption is that
The authors assume(d) that
These data lead us to assume that
- B** a totally different mechanism may (might) be ...
morphogenetic changes are brought about by ...
DNA is the major chemical responsible for ...
density variations are responsible for ...
the changes are due to ...
such effects depend largely on ...
the effect persists much longer than ...
the substance involved is ...

句型 118 某结果与××假设(不)矛盾

(1)

- A** What we observed (observe)
What the authors report(ed)
- B** does not contradict
(fully) contradicts
(fully) agrees with
does not agree with
is in (good) agreement with

is in disagreement with

is not (fully) consistent with

is not (totally) inconsistent with

- C** the basic assumption (that ...)
- their previous assumption (that ...)
- our earlier assumption (that ...)
- our preliminary assumption (that ...)
- our recent assumption (that ...)

(2)

A These data

Our findings

Some of our findings

B do not contradict

fully agree with

are in (good) agreement with

are in disagreement with

are not (fully) consistent with

are not (totally) inconsistent with

C the basic assumption (that ...)

our previous assumption (that ...)

their earlier assumption (that ...)

our preliminary assumption (that ...)

their recent assumption (that ...)

句型 119 某假设在××程度上被证实

A This assumption

Our recent assumption

- What we assumed
- B** is (further) confirmed
 was (fully) supported
 has been (substantially) corroborated
 is (partly) confirmed
 has been (fully) substantiated
- C** by N
 in studies with...

句型 120 某假设是(不)正确的

- A** This (earlier) assumption
 The author's (previous) assumption
 What we (have) assumed
 What has been assumed
 What we assumed earlier
- B** is true for all steps of ...
 was true
 has been valid
 seems to be wrong
 seemed to be erroneous
 is not the case
 was not the pattern
 was not the true situation
 has not been true for all steps of ...
 does not seem to be true
 did not seem to be valid
 holds true for ...

seems to hold true for ...
seemed to hold true
does not hold true
did not hold true
does not seem to hold wrong
did not seem to hold wrong

修饰“假设”的形容词:

① 肯定方面

correct, true, valid

② 否定方面

incorrect, untrue, invalid, wrong, erroneous

③ 其他

earlier, previous, preliminary, recent, further; basic, chief; tentative

十一、证据

句型 121 现有证据说明(支持)××

A There is some evidence

There is now enough evidence

There is (now) sufficient evidence

At present there is much evidence

At present there is much further evidence

At present there is good evidence

At present we have very good evidence

At present we have strong evidence

At present we have compelling evidence

We have at present convincing evidence

We have at present conclusive evidence

We have at present unequivocal evidence

- B** showing that the system is adversely affected
suggesting that the process is slowly-occurring
indicating that the change is temperature-dependent
which shows correlations between ...
which suggests that the delay is due to ...
which indicates the extent to which ...
to show the extent to which ...
to suggest a structural change in correlations between ...
in favour of the above hypothesis
favouring these views
supporting that assumption
bearing out the theory of ...

句型 122 尚无证据说明(支持)××

- A** There is little
Until now there is insufficient
So far there is not enough
Until now we have not much
We have not any
We still have no
We (still) do not have sufficient
We (still) do not have enough
We (still) do not have much

We (still) do not have any

- B** (direct) evidence
- (clear) evidence
- (convincing) evidence
- (conclusive) evidence
- (compelling) evidence
- (further) evidence
- (such) evidence
- C** (in literature) showing ...
- (in literature) suggesting ...
- (in literature) to show
- (in literature) to suggest
- (in literature) to indicate
- (in literature) which would show ...
- (in literature) which would suggest
- (in literature) of ...
- (in literature) for ...
- (in literature) in favour of ...

句型 123 作者提供证据说明(支持)××

- A** The author has given
- The authors have presented
- The authors have provided
- The authors have reported
- These workers gave
- These workers presented
- These workers provided

These workers reported

- B** good evidence showing ...
- good evidence suggesting
- strong evidence indicating ...
- strong evidence which shows ...
- convincing evidence which suggests ...
- convincing evidence which indicates ...
- unequivocal evidence for ...
- conclusive evidence in favour of ...
- sufficient evidence supporting ...
- sufficient evidence bearing out ...

句型 124 从某项实验(研究)中取得××证据

- A** Some evidence (of ...)
- Sufficient evidence (for ...)
- Further evidence (in favour of ...)
- Good evidence (against ...)
- B** is obtained in experiments with ...
- has been obtained from experiments with ...
- was obtained from the studies of ...
- was then obtained by measuring the lifetime of ...
- can be obtained with this technique
- could be obtained as to the effects of ...¹⁾
- is provided in experiments with ...
- has been provided by these experiments ...
- can be provided with the above technique
- could be provided as to the true nature of ...¹⁾

is observed in experiments with ...²⁾
has been observed with the light microscope²⁾
was (then) observed with this technique²⁾
can be observed with the new method²⁾
is seen in experiments with²⁾
has been seen in the electron microscope²⁾
could be seen using this method²⁾
is found in experiments with ...
has been found with that technique
was found using the new method
can be found as to the way in which ...¹⁾
is reported in literature
was then available
can (could) be available
has come from experiments with ...
has come from the studies of ...

注：1) 选择 B 项中的“as to”造句时，则需略去 A 项中的括号部分。

2) 选择 B 项“observed”和“seen”造句时，则需使用 A 项中的“evidence of”。

句型 125 从某项实验(研究)中没有取得××证据

- A No (clear) evidence (of ...)
No (direct) evidence (for ...)
No (further) evidence (for ...)
No (experimental) evidence (in favour of ...)
No (such) evidence (against ...)

B is (so far) obtained in studies of ...
has (so far) been obtained from experiments with ...
was then obtained with this method
can be obtained by using the technique
could be obtained as to the action of...¹⁾
is (so far) provided in experiments
has (so far) been provided by these experiments
was then provided with the above technique
can be provided as to the true nature of ...¹⁾
is observed in experiments with ...
has (so far) been observed with the new method
was then observed using this method
can be observed as to the role of ...¹⁾
is (so far) seen in the electron microscope
has (so far) been seen using this method
is (so far) found in experiments with
has (so far) been found with that technique
was then found using the new method
can be found as to the way in which¹⁾
is (so far) reported in literature
has (so far) been available in literature
has come from the studies of ...

1) 选用 B 项中“as to”造句时,应略去 A 项中的“of”,“for”,“in favour of”,“against”。

句型 126 从××取得的证据支持××

- A** The evidence obtained from ...
The evidence provided by ...
The evidence we (have) obtained
The evidence we (have) reported
The evidence thus obtained
The evidence thus provided
Our evidence (obtained from ...)
Our evidence (provided by ...)
- B** favours the current concept of ...
supports the theory of ...
confirms the previous findings
bears out the results reported in literature
suggests a much higher amount of ...
indicates a different mechanism of ...
points to the presence of ...
indicates that the change is irreversible
indicates that this protein is very stable in structure
indicates that the substance acts selectively on the brain
seems to favour this conclusion
seems to support the earlier observations
seems to confirm the current opinion as to ...
seems to bear out the hypothesis that ...
seems to suggest some interaction between ...
seems to indicate some differences in ...
seems to point to a certain coexistence of ...

句型 127 认为某证据是可靠的

- A** This evidence
Their evidence
- B** may (therefore) be regarded in terms of molecular interactions
may (therefore) be considered from a different angle
may (therefore) be viewed as quite reliable
may (therefore) be viewed as fully consistent with ...
can (therefore) be interpreted in terms of current concepts
can (therefore be) taken to mean that the cohesion is strong enough to ...
can (therefore) be taken to indicate that this is a true situation

句型 128 我们要根据其它××考虑这证据

- A** We can (therefore)
We must (therefore)
- B** regard this evidence as quite conclusive
consider this evidence in terms of our previous findings
view this evidence from another standpoint
interpret this evidence

句型 129 有理由认为某证据可靠

- A** There is (every) reason (therefore) to
We have (every) reason (therefore) to

We can (therefore)

B consider this evidence

regard this evidence

look at this evidence

treat this evidence

C as quite reliable

as quite conclusive

as quite definitive

as quite unequivocal

as quite consistent with the existing views

as fully reliable

as fully consistent with the theoretical predictions

修饰“证据”的形容词:

① 肯定方面

sufficient; clear, clearcut; good, strong, compelling, convincing, conclusive, definitive, straightforward, unequivocal; comparable

② 否定方面

indirect; insufficient; ambiguous, equivocal, unconvincing; inconclusive, undefinitive, incomparable

③ 其他

earlier, previous, recent, further, direct, experimental

十二、数据

句型 130 某数据(结果,发现)是十分重要(有说服力)的

(1)

- A** The data available in literature
The data reported by Dr. N
The results presented in the paper
The data obtained from recent studies of ...
The result we (have) obtained from ...

- B** are
seem

- C** (rather) convincing
(very) interesting
(quite) important
encouraging
promising
reliable

(2)

- A** What you have reported here

- B** is
seems

- C** quite amazing
(very) striking
(very) remarkable
(quite) fascinating
(quite) dramatic
(quite) clear
(quite) clearcut
(quite) straightforward
fairly convincing

fairly consistent
fairly interesting
particularly interesting
particularly important
particularly striking

句型 131 某数据(结果,发现)在××程度上是重要的(不重要的)

- A** These data
These findings
Their results
The data reported in ...
The data they have obtained from ...
The results which have just been presented
- B** are of some
are of much
are of great
are of particular
are of little
seem to be of no
seem to be of not
seem to be of any
seem to be of no great
seem to be of no particular
do not seem to be of much
do not seem to be of great
do not seem to be of any particular

- C (theoretical) importance
(practical) interest
(experimental) value

句型 132 某数据(结果,发现)是相当不可靠的(不清楚的)

- A These data
These preliminary results
Our experimental findings
- B are (rather) ambiguous
seem to be (somewhat) vague
seem to be (very) confusing
seem to be (quite) puzzling
are rather conflicting
are somewhat fragmentary
are (very) uneven
are (quite) unreliable
are not (very) reliable
are not (very) encouraging
are not (very) promising
do not seem (to be) convincing
do not seem (to be) (quite) ambiguous
do not seem (to be) (quite) vague
do not seem (to be) particularly interesting
do not seem (to be) particularly important

句型 133 关于某项内容有很多(不多)资料

- A There are

There seem to be

B sufficient data

some data

numerous data

many data

few results

not many results

not any results

no results

C in current literature about ...

in recent publications concerning

regarding the effects of ...

relating to the origin of ...

concerned with the isolation of ...

on the influence of ...

句型 134 关于某内容有少量(没有)资料

A Some data

Few data

Very few results

No results

B are available

are found

are to be found

can be found

C in (current) literature on ...

at present regarding the influence of ...

about the origin of ...

concerning the mode of action of ...

句型 135 某数据是从××获得的

A The above results

Most of these data

Some of our data

B are (chiefly) obtained from recent studies of ...

are (chiefly) provided by experiments with ...

were (largely) furnished by large-scale experiments
on ...

have been (largely) contributed by the laboratory of ...

have been based on electron microscopic studies ...

句型 136 某数据(不)说明××

A The data obtained

The results presented

The data thus obtained

The data obtained with this technique

Our data

Our findings

All these findings

B (do not) suggest that the amount depend on ...

(do not) show that the organisms are effected by ...

(do not) indicate that the organisms are affected by ...

(do not) point to the fact that the disturbances lead
to ...

(do not) strongly suggest that the changes are due to ...
(do not) seem to suggest that the changes are due to ...
show a highly specific mechanism of ...
suggest a different factor of ...
indicate the same values for ...
point to specific sites of ...
strongly suggest the same values for ...
seem to suggest specific sites of ...

句型 137 某结果(发现)与××相一致

A Our results

These findings

The data obtained from ...

Recent data furnished by ...

Some of these data

We (have) obtained some results which

Dr. R. (has) reported (some) data which

B are (very) similar to those obtained by ...

are (almost) the same as those reported earlier by ...

appear(ed) to be (much) the same as those presented
by ...

appear(ed) to be (exactly) the same as those published
in ...

are (a little) different from those available in ...

are (somewhat) different from those available in ...

appear(ed) to be (altogether) different from those avail-
able in...

are coincident with those reported by ...
are comparable with those published in ...
are compatible with those available in ...
are consistent with the theory of ...
are in (good) agreement with theoretical predictions ...
are in keeping with the current concepts about ...
show (good) agreement with the views expressed by ...
agree with the findings by ...
coincide with the previous findings
compare (favourably) with most other data about ...
fit (in) with the assumption that ...

句型 138 某结果(发现)与××不一致

- A** The data thus obtained
These workers obtained some results which
I have presented here our recent data which
- B** do not agree
do not coincide
do not compare
do not fit
do not harmonize
are compatible
are incomparable
are inconsistent
are not coincident
are not compatible
are not comparable

are not consistent
are not in agreement
are not in keeping

- C** with the findings reported by ...
with the views shared by ...
with the theory supported by ...
with those available in literature

句型 139 某数据(不)证明(支持)××

- A** These and other findings
All these data
The results we report here
We can present some data which
I would like to demonstrate some results which
- B** prove(d) the hypothesis that ...
support(ed) the view that ...
confirm(ed) the previous assumption that ...
bear out the previous observations that ...
corroborate(d) the theory suggested by ...
offer(ed) (further) support of ...
do not prove the hypothesis that ...
did not support the view that ...
fail to confirm the previous assumption that ...
failed to confirm that this is really (truly) the case
do not bear out the earlier suggestions concerning ...
did not bear out that there is an interaction between ...
fail to corroborate that this is really so

句型 140 某数据使我们得出××结论(假设)

(1)

- A** These data
These findings
These results
The above findings
The above results
The above data
- B** lead
(have) led
- C** us to the assumption
us to a conclusion
them to assume
them to conclude
the authors to believe
the authors to think
- D** that there is a kind of interference in ...
that there is a correlation between ...
that there exists some interaction between ...
that the substance is not involved in ...
that noradrenaline acts on ...
that such particles do not interact

(2)

- A** From the above data
From our data

From the results we have obtained

On the basis of these results

On the basis of our findings

B we conclude(d)

it can be concluded

one can conclude

C that the substance can react with ...

that there is no occurrence of ...

that the influence is due to ...

句型 141 某数据(结果)说明了××

A Our data

These results

All our preliminary results

All these findings

B throw (some) light

throw (new) light

shed (some new) light

C on the role of ...

on the nature of ...

on the behaviour of ...

句型 142 某数据(结果)排除了××

A Our data

These results

All our preliminary results

All these findings

- B** rule out
exclude
- C** a possibility for nitrogen compounds to participate in ...
any such possibility for these organisms to evolve in ...
the mechanism suggested earlier by ...

句型 143 某数据可用当前的定理(不同观点)解释

- A** The above findings
All these data
Some of these results
Some of the authors' findings
- B** have been interpreted as follows
can be viewed in terms of the existing theory
could be viewed in terms of the current concepts
have been approached from a different angle
can be viewed from another standpoint
have been taken to mean that the genus originated in ...
can be taken to mean that the environment is strongly
affected by ...

句型 144 某数据(结果)可以从××考虑

- A** We can look at
We can interpret
One can consider
One can approach
- B** these data
- C** as fully reliable

as fully consistent with ...
as quite promising
from a different angle
from another viewpoint
in terms of new concepts of ...
in the light of new ideas about ...

句型 145 仅有一种方法解释某数据

- A** There is
There may be
There seems to be
- B** a different approach to
an alternative interpretation of
one way of approaching
no other way of interpreting
- C** these data
our results
the above findings
all these findings

句型 146 某人得到的数据与××有关

- A** Dr. N has presented
We have presented
The authors have presented
- B** (some) data
- C** which have a bearing on ...
which have a direct bearing on ...

- which seem to have an important bearing on ...
- which seem to have no (direct) bearing on ...
- which seem to have no (important) bearing on ...

句型 147 某数据(可)总结为××(示于图表中)

- A** These data
 - Our results
 - The basic results
 - Our experimental data
 - The result reported above
- B** are briefly summarized as follows
 - have been shown in Figure 1
 - may be presented in tables
 - can be summarized in tables

句型 148 某图(表)概括了从××得到的结果

- A** Figure 3 shows the results
 - Table 1 presents the data
 - The table summarized the data
- B** obtained from studies of ...
 - obtained from recent observations of ...
 - obtained in experiments with ...
 - provided by the authors
 - provided by the experiments on ...
 - collected in expeditions to ...
 - collected during the summer of ...
 - collected from several sets of experiments

修饰“数据”的形容词:

① 肯定方面

basic, chief, main; essential, important; precise; sufficient; significant; even; clearcut, explicit; straightforward, unequivocal; definitive, conclusive; convincing; comparable, consistent; reliable; valid; amazing, striking, dramatic, remarkable, fascinating; encouraging

② 否定方面

inexplicit, equivocal; confusing, puzzling; undefinitive, inconclusive; unconvincing; incomparable, incompatible, inconsistent; insufficient; insignificant, inessential, unimportant; uneven, fragmentary; discouraging; unreliable, invalid

③ 其他

preliminary, previous, recent, new, further; old, out-of-date

第二篇 科技写作句型Ⅱ 按功能划分

本篇是根据科技论文经常出现的句型实例,筛选出使用频率较高的部分。从词的功能上加以归纳分类,共80类。以多种例句形式表明句型的使用方法。从例句中读者可以了解到该类句型中经常使用的词与词组以及词的搭配关系。每类句型下附有注释,说明词的真实涵义、词的细微差别、使用范围及习惯用法,用以增强读者对词与词组的正确使用和灵活运用能力。

词类按功能性质分为七方面,计:科技文献常用的语法方面,句型方面,省略方面,问题、叙述和分析方面,运动与功能方面,计量和测量方面,设计与试验方面。读者如计划写“目的”,可先在“科技文献常用的语法方面”查到“目的”栏的页码,即可读到有关“目的”的各种例句表达法。根据注释找到适当的条款;或结合读者专业略加修改,即可运用到所要表达的内容中去。这样写出的句子会达到用词正确、搭配自然、条理清晰、表达方法符合习惯,对于青年科技工作者写作时选用、借鉴或参考,将可起到事半功倍的作用。

一、科技文献常用的语法方面

1. 一般现在时

在所有的时态中,一般现在时形式最简单,使用最普遍,在科技写作中使用广泛。用法如下:

a. 不受时间限制的客观事实和永恒的真理

The sun *shines* during the day.

The earth *moves* around the sun.

The river Nile *rises* in Central Africa.

Horses *are* animal.

Twice two *is* four.

b. 表达主语的能力、性格、特征等

My cat *likes* fishes.

Your sister *speaks* English well.

Charles *writes* scientific papers.

He *prefers* studying mathematics to studying physics.

c. 习惯性动作或延续性状态

These changes *take place* every day.

If we *do* the experiment over and over again, we always *get* the same result.

Earthquakes often *interfere* with underground drainage.

We usually *use* symbols to represent elements.

Once about every 28 days the moon *makes* a complete trip round the earth.

d. 介绍图表、定律、文摘、提要时

In the article the author *points out* : "all the materials stud-

ied behaved similarly”.

This article *describes* semiconductor construction and operation of a thyristor.

The diagram *shows* the electrovalent bonding in ordinary table salt.

The table *gives* the dates of eclipses of the sun and moon from 1970 to 1980.

The law of conservation of matter and energy *states* that the total amount of matter and energy in the universe does not change.

The newspapers *say* it is going to be cold today.

The author of the book *tells* that the current increases with every increase of resistance.

He *writes* to say he can't visit our laboratory this week.

The BBC weather report this morning *said* that we should have rain.

注意：引述过去的言语，这过去的言语至今仍然真实有效时，用现在时，所用动词有 *say, tell, write, learn, hear, see* 等。上面最后一句用过去时态，因为广播不是继续存在。书写和印刷的东西是持续存在的。

e. 在时间状语、条件状语从句中，表示将来的动作

If we *compress* a gas, it will become hotter.

When you *look* into this mirror, you will see an enlarged erect image.

当 *if* 或 *when* 从句不作状语而作宾语从句时，则不用现在时代替将来时，如：

We do not know when he *will come* .

I do not know if it *will rain* .

f. 表示安排好或计划好的将来的动作

常用的动词有: go, come, leave, start, begin, sail, arrive, return, be, 并带有明确表示将来的状语。

We *start* for Beijing next Monday.

The next train *leaves* at 6:30.

I *am* in my office from 3 to 6 tomorrow afternoon.

School *begins* the day after tomorrow.

The Cuban delegation *arrives* in Beijing tonight.

g. 有些非结束动词不能用现在进行时(或用了进行时含意改变), 在这种情况下要用一般现在时。这种非结束动词有:

① 有关心理状态和心理活动过程

agree, believe, differ, disagree, disbelieve, distrust, doubt, find, foresee, forget, guess, imagine, know, mean, notice, recall, recognize, recollect, regard, remember, see, suppose, think, trust, understand

② 有关感情状态

abhor, adore, astonish, desire, detest, dislike, displease, feel (that), forgive, hate, hope, like, love, mind (= object to please), prefer, want, wish

③ 其它

appear (= seem), belong, consist (of), contain, depend, deserve, equal, have, matter, possess, resemble, result (from), seem, suffice

注意: 非结束动词用进行时态时, 改变了原有的含意。如:

I am *seeing* a friend off. (送行)

The Judge is *hearing* the case. (审案子)

We are *having* a meeting now. (开会)

2. 现在完成时

现在完成时的形式:

主动语态: have (has) + 过去分词

被动语态: have (has) been + 过去分词

在科技写作中被动语态比主动语态出现得多。常用的现在完成时有以下四种:

a. 一件事在以前发生而没有确切的时间

Work has been started on the new system of motorways.

Research has shown a probable connection between smoking and lung cancer.

b. 一件事或一系列的事连续发生直到现在

Various types of reactor have been designed for different purposes.

Engineers have encountered many problems with this material.

c. 与 already¹⁾, (not) yet¹⁾, for²⁾, since²⁾ 等词连用时

Work on the motorway has not been started yet.

Work on the motorway has already been completed.

Work on the motorway has been going on since 1986.

This machine has worked for 48 hours.

Test borings so far have indicated the presence of large oil deposits.

d. 与 just, recently, lately 相关联时(也可用其它时态)

The company has just developed a new type of aircraft.

Recent research has shown a connection between smoking and cancer.

Work on the motorway *has recently been held up* owing to bad weather.

注 1) already 和 yet 都可作“已经”解,常和现在完成时连用。already 一般用于肯定句(见 c 中第 2 句);yet 用在否定句(见 c 中第 1 句)和疑问句中,如: Has he returned yet? 有时 already 也用于疑问句表示惊奇,如: Has school begun already?

2) 介词 for 表示时间延续多久,因此后面是“一段时间”,如“for three years”,“for a long time”等。而 since 表示一段时间的起点,因此后面是确定的“时间点”,如 since 1937, since liberation 等,而不能是“一段时间”。例如不能说 since a year, since two months。

for 短语或 since 引出的短语或从句作时间状语时,不能与 go(去), come(来), open(打开), leave(离开), give(给), buy(买)等表示短暂动作的动词连用。如不能用 He has come to Beijing for two years,而要用 He has been in Beijing for two years。但这类动词有时却用于否定结构,如: I haven't bought anything for three month.

for 短语作时间状语时,有时可以省略 for,如: He has been here (for) three hours.

since 表示时间作介词、副词用时,谓语通常用现在完成时(见 c 中例句);作引导时间状语从句的连词用时,从句中通常用一般过去时,主句用现在完成时,如: This machine has run well since it was last repaired.

如果主句谓语动词是 be 或 seem 等系动词,则可用一般现在时,如: It is a long time since he left Beijing.

现在完成时与一般过去时的不同:

许多作者在使用现在完成时的时候常与过去时相混。一般过去时仅仅表示过去的事实,与现在情况没有联系;而现在完成时强调过去动作和现在的联系,主要表示现在的状况。一般过去时往往强调动作在过去某一时刻发生,因此常和表示确定的过去时间连用;而现在完成时强调和现在的联系,因此不能和表示确定的过去时间连用。同理当 when 作为疑问副词时,也不能和现在完成时连用。如可以说 When did you meet him? 而不可说 When have you met him? 也不要说 Where have you met him? 而说 Where did you meet him? 因为问者关心的还是过去的事实。

3. 短语动词

短语动词即“动词+副词”(如 look over, throw out 等)在口语里用得很多。有些短语动词具有严密的含意,有些具有抽象的含意,有些既具有严密含意又具有抽象含意。

在谈论科技事物时,常使用短语动词。在科技写作中,科学家们更偏重使用一个正式的动词,使文章更准确、更严肃。有些正式的动词在它的前缀中包含了副词的概念,例如前缀 ab-, ap-, circ-, com-, cor-, de-, ex-, ob-, per-, pro-, re-, sus-, trans-, ...

但是仍有些短语动词在口语体与书面体都普遍使用,没有正式的动词代替它们。例如:

In this chapter we shall *deal with* different fuel oils.

The terminal voltage *falls off* as the load increases.

The current in the conduct or *sets up* a magnetic field.

The fire in the engine *sets off* a series of explosions.

The fly-wheel *gives up* some of its stored kinetic energy.

Sulphuretted hydrogen *gives off* a peculiar smell.

The motor is quickly *run up* to normal speed.

When this type of battery *runs down*, it cannot be re-charged.

The aircraft will *run out of* fuel in another hour.

The stretch on the belt must be *taken up* or it will slip.

He *took over* the management of the factory on his father's death.

The aircraft will *take off* at ten o'clock.

The ship will stop at Shanghai to *take on* passengers and mail.

A film of oil is put between the metal surfaces, so that they do not *bear on* each other.

The supply to the motor is suddenly *cut off*.

The insulation is *cut back* to expose the wire conductor.

The boiler has to be *shut down* for inspection and repair.

The metal bar is *cut down* to the right size.

The metal is allowed to *cool off* slowly.

This line of enquiry is promising and should be *followed up*.

If the engine is allowed to run without oil it will *seize up*.

The rain-water is *run off* by means of ditches at the side of the road.

The building was *jacked up* with powerful hydraulic jacks.

The waterproof paper is *spread out* on the compacted base of the road.

The excess steam is *blown off* through the valve.

The temperature is *kept down* by providing a large cooling

surface.

The gases are *forced out* through the exhaust valve.

The crew *cast off* the ship's mooring lines as it leaves the dock.

The two ends of the tunnel *link up* in the middle.

The rivet-holes are *opened out* to the correct size with a drill.

The weld should be *smoothed up* after it has been made.

The tool is *fed in* until it just touches the work-piece.

“动词+副词”的短语词组有时有割裂的现象：

Please *take out* your book. (短语词组没有割裂)

The reaction can be speeded up by *taking* some of the rods of cadmium *out*. (割裂)

We should *wipe out* this box. (没有割裂)

We struggle with imperialism in order to *wipe* it *out*. (割裂)

They *take* an active *part in* scientific experiment. (割裂)

“动词+副词”的结构在英语中有数百条。下面 25 个例句中,斜体部分是普通英语的写法,括弧内是相应的科技写作中使用的正式动词。使用正式动词是科技写作中的一个主要组成部分,作者在写作中要掌握。

The heat *coming out of* a body can be measured by a pyrometer. (emanating from)

Large area of land in Holland have been *won back* from the sea by dykes. (reclaimed)

Most synthetic fibres do not easily *take in* moisture. (absorb)

Multi-stage pumps are *made up* of several impellers on one

shaft. (composed)

New methods of construction have gradually been *brought out* through long years of experience and testing. (introduced)

A number of modifications were *built into* the machine. (incorporated in)

Tests were *carried out* on many specimens of soil. (performed)

The emission of neutrons always *goes with* nuclear fission. (accompanies)

The concrete is *stirred up* continuously while it is being transported. (agitated)

The spokes of a wheel *spread out* in all directions from the center. (radiate)

The lever must be *pushed down* to start the motor. (depressed)

The turbine blades are liable to be *worn down*. (abraded)

The two towers were *put up* in less than a year. (erected)

At very high speeds the resistance of the air *takes on* a much greater importance. (assumes)

The machine can easily be *taken to pieces* and *put together again* after they have been *looked at*. (dismantled; reassembled; examined)

The compaction should be *spread out* all through the area of the concrete. (distributed)

It should be possible to *find out* the necessary thickness of the concrete from the formulae. (discover)

The whole weight of the deck is *held up* by the four cables.
(supported)

The railway lines seem to *go further apart* as they *come towards* the observer. (discharge; approach)

The light is *spread out* by dust particles in the air. (diffused)

Work on the bridge was *started again* after the strike was over. (resumed)

The aircraft is *driven forward* by thrust from air screws.
(propelled)

The unprotected pipes are being *eaten away* by exposure to the air. (corroded)

The cold water *goes round and round* inside the tubes of the condenser. (circulates)

High speed steel *keeps up* its hardness well, even at high temperature. (maintains)

注意:大多数的正式动词多是一个词,也就是说它将“动词+副词”结合成一个词,例如:take in=absorb;但是当它后面跟随一个名词时,仍需要一个介词,如:draw out of=extract from。The kidney *draw out of* (=extract from) the blood certain constituents to be eliminated.

4. 无人称被动语态

科技写作中被动语态使用十分广泛。凡是需要着重说明谓语动词和它的动作对象之间的关系,或行为发出者没有必要说明,以及难以说明时,往往使用被动语态。而多数被动句中并没有行为的发出者,如果需要表示行为的发出者,则用介词by引出。

This is shown in Fig. 2. (无行为发出者)

Electricity was discovered two thousand years ago. (无行为发出者)

Cars are driven by engines. (行为发出者前要有 by)

在被动语态中, by 短语有时表示方式、方法或手段, 而不是行为发出者。此点读者要注意:

Electricity is produced by various methods.

The temperature of the liquid is raised by the application of heat.

Useful facts may be collected either by making careful observations or by setting up experiments.

5. 不省略行为发出者的被动语态

受谓语动词的用法支配, 不及物动词不能用于被动语态的结构, 因为它们没有宾语, 没有东西可充当被动语态谓语动词的主语。英语基本句型中有三个句型是用及物动词, 即: 主语 + 及物动词 + 宾语; 主语 + 及物动词 + 间接宾语 + 直接宾语; 主语 + 及物动词 + 宾语 + 宾语补足语。被动语态也适用于这三个基本句型。被动语态的公式是: 代名词(名词) + be + 过去分词 + (by 名词)

(主动) Vibrating matter produces sound.

(被动) Sound is produced by vibrating matter.

(主动) His father gave him an English book.

(被动) An English book was given (to) him by his father.

(主动) People call currents from electric batteries direct current.

(被动) Currents from electric batteries are called direct current.

假如宾语补足语是不带 to 的动词不定式,句子变成被动结构时,作为主语补足语的不定式 必须带 to,如:

(主动)Last Sunday, I saw him visit the exhibition of new products.

(被动)Last Sunday, he was seen *to visit* the exhibition of new products.

大多数及物动词以及一些相当于及物动词的不及物动词词组,可用于被动语态。相当于及物动词的不及物动词词组有:act on, look at, meet with, carry out, give off, speed up, make use of, pay attention to 等。如:

Every body *is acted upon* by forces.

As the match burns, heat and light *are given off*.

These data *have been made full use of*.

有些及物动词只用于主动语态,不用于被动语态,如:fit, have, lack, resemble 等。

有些表示状态、位置等变化的动词,例如:change, rotate, turn, transform 既可用作及物动词,也可用作不及物动词。这时主动句与被动句含意基本相同。如:

Energy may change from one form to another.

Energy may be changed from one form to another.

6. 条件

a. if 是最普通的表达方式,表示一件事依赖于另一件事的发生,条件是公开的。所用的时态是:if + 现在时,主语 + 将来时或现在时。

unless = if ... not.

*If*¹⁾ the supply of coolant fails, emergency controls will op-

erate immediately.

If current is passed through a solenoid, a magnetic field will be set up.

If the water is pure, it will not need further treatment.

*Unless*²⁾ the water is pure, it will need further treatment.

Unless the steam is superheated, higher pressures will be necessary.

Harmful radiations will result *unless* the isotopes are shielded properly.

b. 除了用 *if* 表达条件外, 我们还可以用较限定的方式表达条件, 如 *providing (that)*, *provided (that)*, *on condition that*, *only if*, *given* + 名词, *in case*, *so (as) long as*。

I will set the machine to pieces once again *providing that* I have enough time.

Motors will run well *providing* they are greased.

We shall do this test *provided*³⁾ the weather is fine.

The design is likely to be accepted *provided that* the cost is reasonable.

We will let you operate this new machine *on condition that*⁴⁾ you follow the operating rules.

I will come home *only if*⁵⁾ you come with me.

A reactor can be used to produce power *only if* an efficient heat-transfer system is employed.

*Given*⁶⁾ plenty of labour, the job can be completed on schedule.

Given sufficient turbulence in the combustion chamber, detonation is unlikely to occur.

I had better take the document along *in case*⁷⁾ someone wants to hear it verbatim.

Add more coal *in case* the weather is cold.

Break the circuit first *in case of* fire. (假使, 万一)

It is hard to avoid mistakes; *so long as*⁸⁾ you correct them conscientiously, it will be all right.

So long as we do not lose confidence in our cause and carry on a dauntless struggle, then we are sure to reach our destination and realize our ideal.

The operation can proceed indefinitely *on condition that* the controls are pre-set correctly.

注 1) *if conj.* 假使。*if* 作“假使”解引出的从句, 虽然指将来, 动词却用现在时, 不用将来时。例如“*If you see him tomorrow, give him my new address.*”里用 *see*, 不用 *will see*。“*If you will see him tomorrow*”作“假使你明天要见他”解。

2) *unless = if ... not*, 但语气比 *if ... not* 重, 如“*unless it is fine tomorrow*”语气比“*if it is not fine tomorrow*”重。在以 *unless* 引起的从句中, 动词用现在时, 不用将来时, 如: “*unless it is fine tomorrow*”里用 *is*, 不用 *will be*。“*unless you will see him tomorrow*”里的 *will* 表示意志。

3) *provided conj.* 只要。*provided* 原来是 *provide* (规定) 的过去分词, *provided ...* 或 *provided that ...* 作“规定...”解, 也就是“以...作条件”的意思, 有时也可用 *providing* 或省去后面的 *that*。*provided ...* 或 *provided that ...* 也可以说等于 *if ...* (通常用在比较正式的英语里), 例如: *I will go provided (that) you will go with me. = I will go if you will go with me.* 但并不是一切可以用“*if*”的场合都可以用 *provided*

或 provided that 来代替。因为 provided 原来作“规定”解，它所引起的从句应是一种“规定”，而且那“规定”应是那“规定者”所认为该实现的，如“I will go provided (that) you will go”里的“you will go”是“规定”，“I”是“规定者”，“I”认为那“规定”该实现（就是说“I”认为“you will go”该是事实）。若用“I will not go provided (that) you will not go.”便不对，应把 provided that 改作 if，因为这里的“规定者”“I”并不认为那“规定”“you will not go”该实现。

4) on condition that 如果。在从句内规定一个主句必须倚恃的“条件”，口气比较严肃、正式，that 在口语中可省略。在用 on condition that 时，提出条件者必须是要求或坚持该条件的实现。这个规律也同样适用于 provided that, if 则不受此限制。

5) only if “必须在 … 条件上”，“非在 … 条件上不可”。注意：only if 不要与 if only 相混，if only 作“只要能 …”解。

6) “given + 名词”表示条件，given 为 give 的过去分词，意“假设”，“已知”。

7) in case “在 … 情况下，遇到 … 的情况”。后面接从句，从句中不用 will 或 would 表示将来，如 In case he comes, let me know 中 come 不可改作 will come。in case 除作“假设”解外，还指“防备”、“借以避免”、“希望”等。

8) so long as 有时与 on condition that 大致同义。只是 so long as 具有较强的时间意义，意即：在从句的动作进行时间，主句可以成立；一旦从句的动作结束，主句立刻被推翻。这种主从句同时并存的概念是 so long as 的主要特色。so long as 有时同 as long as 相互换用，但 so long as 语气较强，as long as 在口语里用得较多。

c. 有时我们不知道某些事件是否真实,但是为了某种目的,我们将假设它是真实的,例如一个假说(hypothesis)是一种假设,我们用它作一系列推理的起点。

Ancient geographers *assumed*⁹⁾ that the world was flat.

It is *assumed* that petroleum originates in marine deposits.

为了作某些计算或作某个实验,我们假设某些事,这些可能不是真实的,但假设它们是真实的时,可简化计算。

The medium is *assumed* to be atmospheric air only.

The cylinder is *assumed* to be a perfect non-conductor of heat. The heat loss is taken to be negligible, and is disregarded.

The *assumption* is made that the cylinder is a perfect non-conductor.

The *assumption* is made that there is no heat loss from the cylinder.

Assuming (that) there is no loss of speed over the blades, we calculate the outlet velocity of the steam.

Assume (that) v is the velocity of the steam, then d is the relative velocity.

*Suppose*¹⁰⁾ (that) the rise in temperature of the water is 15 degree—How much water must be delivered to the condenser?

Suppose that you wished to move an object; you would have to apply a force.

Let us *presume*¹¹⁾ (that) the weight of an object in space is not the same as its weight on the surface of the earth.

From the available data it may be *presumed* (that) there is

no sharp dividing line between conductors and insulators.

注 9) *assume v. t.* 假定,设想。强调未经证实或把有分歧的事作为论断的基础的一种假设,一般含有“武断”的假定意味。*assume* 后面通常有 *that*。

assuming 不必属于固定的某词。*assumption* 为名词。

10) *suppose v. t.* 假定,猜想。为一般用词,意义用法广泛,既可表示有一定根据的“猜想”、“假定”,也可以表示陈述本人的意见、看法,也可译作“想”、“认为”。*suppose* 后的 *that* 可省也可不省。

11) *presume v. t.* 推测,假定。着重于过去经验或符合道理的、有理由的推测和假设(尽管其结论可能错误)。*presume* 后的 *that* 经常省略。

I *assume* that you can do it. (我假定你能作它。)

I *presume* you can do it. (我相信你能作它。)

7. 目的

表示“目的”的词与词组有:不定式, *in order to*, *so as to*, *in order that*, *that*, *for fear that*, *in case*, *lest*, *for*, *aim*, *therefore*, *object*, *intention*, *intend* 等。现分别举例如下:

Heat is required *to change*¹⁾ ice to water.

We are working hard *to build* socialism in China.

We use electricity *in order to*¹⁾ run machine.

We do that *so as to*¹⁾ save time.

Water is reacted with many of the oxides *so readily as to*¹⁾ form important compounds.

*To get*²⁾ the best results, follow the directions carefully.

*In order to*²⁾ measure matter we must have units of weight,

volume, and length.

What is needed *in order that*³⁾ electrical charges may move?
In order that work can be done, in scientific sense, a force must move an object through some distance.

Thirty copies of the book were bought *so that*⁴⁾ each boy in the class should have one.

Some supplies of water must be treated *so that*⁴⁾ they can be used.

They gave their lives *that* we might live a happy life.

He is working hard *for fear that*⁵⁾ he should fall behind.

You had better take your tools *in case*⁵⁾ some machines require repairing.

He placed the instrument carefully on the table *lest*⁵⁾ it should fall down.

What do you use that *for*⁶⁾?

We use a hammer *for*⁶⁾ knocking in nails.

This tool is used *for*⁶⁾ tightening bolts.

The announcement was put up on the notice-board *for everyone to see*⁷⁾ (*so that* everyone might, should, could see it).

He brought some papers *for me to sign*⁷⁾ (*in order that* I should sign them).

Smith *aims*⁸⁾ to become a computer expert. (*v.*)

Smith has a high *aim* in becoming a computer expert. (*n.*)

Our *purpose*⁹⁾ is to apply science and technology to the solution of practical problems.

We can easily make plastics into any shape for different *purposes*⁹⁾.

Each *object*¹⁰⁾ of them is the same, that is, to get the oxygen of the air into the blood.

We have become all the more suspicious about their purposes and *intentions*¹¹⁾ in certain areas of scientific research.

A library is a service organization *intended*¹²⁾ to serve people.

注 1) 在回答“why”的问句时,表原因用 *because*,表目的常用不定式,此句 *to change* 即表目的。*in order to* 比单独用 *to* 的语气要强,文体也较正式。如果兼有“结果”的意思可用 *so as to*。

2) 不定式短语修饰全句,要放在句首。

3) 用从句代替不定式。如果主句同从句的主语相同,用不定式较从句为好。

4) *so that* 常常兼有“目的”和“结果”,一般表“目的”。*so that* 前无逗号。

5) 表示某种恐惧或可能性的 *in order that...not* 和 *so that...not* 有时可用 *for fear (that)*, *in case*, 或 *lest*。

6) *for* + 名词或动名词表示“目的”。

7) *for* + 名词(或代词) + 不定式 = *so that...*。或 *in order that...*, 都可表示“目的”。

8) *aim* *n.*; *v.* 目标,目的。指抱有一种明确的目的并意味着为之实现而竭尽全力,强调以一个人的全部精力去达到目标。*aim* 作不及物动词时,英国多用 *aim* + *at* + 动名词,美国多用 *aim* + 不定式。对于上面例句英国则用 *Smith aims at becoming a computer expert*。但在 *aiming* 后即使英国也通常接不定式,用以避免“... *ing at ... ing*”。

take aim 前没有 *an*。

9) *purpose* *n.* 目的。指心中有打算,并对所作的打算有较大的决心。*for practical purposes, for instruction purposes, for purposes of medicine* 等短语里用复数 *purposes*。

10) *object* *n.* 目的,目标。为比较具体的目的,往往指在我们的行为中需要或希望直接达到的目的。

11) *intention* *n.* 目的,动机。指有意进行某事,强调其动机,但不强调有无决心去实现某种计划。*intention* 在独用时,后面通常接不定式,如: *intention to help everybody*。*intention* 前用 *my, your, no, the, an, some, any, all, every* 等词时,后面通常接 *of + 动名词*,如 *my intention of going, no intention of doing so, some intention of trying again*。

12) *intend* *v.* 打算,计划。指心里已有某事为确定的目标或计划。*intend* 后接不定式比接动名词普通。*intend* 后接 *that* 从句时,从句中用 *subjunctive present*,如: *I intend that he do (不用 does) it at once*。

8. 原因

在表达原因时可使用连词 *because, since, as, for*。

because 表示原因和理由,一般放在主句后。*since* 意义与 *because* 极近,但稍更随便、松弛,所说明的有时不是根本或直接原因,而是一种“附带原因”,往往放在句首。*as* 表达的原因也较 *because* 为弱。*as, since, seeing that* 作连词,其作用较多强调结果(主句所述),少强调原因。*since* 比 *as* 较令人注意到原因。*for* 作“因为”解时,不能放在句首。它将表示结果的主句同表示原因的从句连接起来,语气比 *because* 弱。回答 *why* 时,不能用 *for*,要用 *because*。*why* 和 *because* 之间有着紧密的联系。

This is *because* the direct current flows in a wire always in one direction.

The fuel must be finished, *for* the engine stopped.

Since displacement has direction, velocity also has direction.

As heat makes things move, it is a form of energy.

Owing to the fact that he was tired, he went to bed early.

In view of the fact that the situation is changed, our construction plan should be improved.

On account of the fact that there is friction, we always get less useful work out of a machine than it could have given.

Seeing (that) you have come, we will settle this problem together with you now.

Theory is valuable *in that*¹⁾ it can provide a direction for practice.

以下三种句型,在表示原因时也是常用的:

a. The *reason why* he went to bed early *was that* he was tired. (why 有时可省略, The reason why ... was 后不要用 because, 要用 that.)

He was tired. This *explains*²⁾ *why* he went to bed early.

b. He was tired. This *accounts for*³⁾ his going to bed early.

c. The *cause*⁴⁾ of the accident is still not known.

注 1) *in that* 是从狭隘的一面或几方面来说明原因或理由, 只能放在主句后。

2) *explain v. t.* 指将某事解释清楚, 使过去对此不了解的人变得有所了解。

3) *account for* 说明, 证明, 是...的原因。

4) *cause* 和 *reason* 含意都是原因、起因, 为名词。cause

用于后果迟早发生的事物、人、局势、行为等,reason 指在逻辑上能引出某种结论的原因、理由。

以下四个表达原因的词组可引导一个短语或一个词。

Alloys are important *because of* their usefulness in industry.
On account of the velocity of the steam, the blades are caused to rotate.

The force *due to* gravitation causes objects to have weight.
Owing to the provision of heat exchangers, the efficiency was increased.

The steam pressure falls *on account of* condensation in the cylinder.

Although these particles are very light, their energies are considerable *because of* their high speeds.

Friction is *due to* the roughness of two surfaces that are in contact.

Owing to the high temperature, special alloys are used.

下面两个词组由于含义限制,没有上面的四个词组使用得普遍。

In view of its high resistance the metal can not be used as a good conductor. (鉴于,由…看来)

A body may have chemical energy *by (in) virtue of* its chemical composition. (靠,因,靠…的力量)

注 词组 *because of*, *on account of*, *due to*, *owing to* 表达原因都有“因为”的含义,起介词作用。*because of* 只能引导副词短语,在修饰主句中的一部分时,中间不用逗号。*on account of* 为介词短语,表示原因的理由,可引导副词短语和形容词短语。*due to* 只能引导形容词短语。*owing to* 可引导副词

短语也可引导形容词短语,但常用来引导副词短语,修饰全句,因此应用逗号同主句隔开。

9. 结果

表示“结果”的词与词组有:consequence, in consequence of, consequently, consequent upon, as a result of, with the result, result from, outcome, therefore, hence, so that, lead to, effect 等。

The rise in lung cancers is usually a *consequence*¹⁾ of cigarette smoking.

*In consequence of*²⁾ having to use after-burners more fuel is consumed.

The temperature of the gas rises. *Consequently*³⁾ it expands in the cylinder.

*Consequent upon*⁴⁾ its limited speed the aircraft is now obsolete.

This book embodies the *result*⁵⁾ of his own original research.

*As a result of*⁶⁾ its rises in temperature the gas expands.

The aircraft is limited in speed, *with the result*⁷⁾ that it will soon become obsolete.

A rise in the temperature of the gas, *results in*⁸⁾ its expansion.

The disease can, *result from*⁸⁾ the spread of pathogenic organisms.

The *outcome*⁹⁾ of the scientific experiment has come out.

After-burners have to be used. *Therefore*¹⁰⁾ fuel consumption is heavier.

The aircraft speed is limited. *Hence*¹¹⁾ it will soon become obsolete.

The temperature of the gas rises, *so that*¹²⁾ it expands in the cylinder.

This experiment *leads to*¹³⁾ the conclusion that unlike charges attract each other.

The *effect*¹⁴⁾ of chemical changes either absorb energy or give off energy.

注 1) consequence *n.* 结果。表示间接结果或不良结果,意味着一定的逻辑推理演变或发展。和“原因”的关联不如 effect 密切。

2) in consequence of 含意为“由于…的缘故”。consequence 前不可加冠词 the。

3) consequently *adv.* 结果。与 as a result 同义,表示直接的结果。常用于论文、小说中,特别表示因果关系或条理的作用。

4) consequent upon (或 on) 由于…结果,跟着…发生的。为定语。

5) result *v. ; n.* 结果。指由某一原因而引起的或按某计划所产生的结果。

6) as a result of 由于…的结果。用 as a result of 比用 as the result of 普通。近几年来,也有人用 as result of, result 前不带冠词。

7) with the result 结果就,从而。后面通常接以 that 引起的从句。

8) result in 表示某种原因产生某种结果。

result from 表示某种结果是由某种原因而产生的。

9) *outcome n.* 结果, 结论。表示某一种事情的最终结果或结论, 因此不可写 *the final outcome*, 要将 *final* 删去。*outcome* 含意与 *result* 较近, 它往往指竞赛或悬而未决的事最后“见输赢”、“见分晓”。

10) *therefore adv. ; conj.* 由是, 因此。最正式的用语, 常用于数学、伦理学和其它精细的议论中, 特用以表示严正的推理。*therefore* 前没有 *and* 时, 前面最好用分号, 有 *and* 时用逗号。

He was busy; therefore he could not come. (也有在 *therefore* 前用逗号的)

He was busy, and therefore could not come.

11) *hence adv.* 放在句首含义为“如此”, 主谓语的位置有时可颠倒。如: *Hence comes the name magnet.* *hence* 作“所以”解时, 后面可接名词成为一个句子。如: *Hence the book.* (所以有这本书。) *Hence the advisability of try again.* (所以再试一下是好的。)这两句中的 *Hence* 后面间或加上逗号。

five years hence (五年以后), *two months hence* 是较正式的说法, 不及 *five years from now*, *in two months* 等通俗。

12) *so that* 表结果时含义为“以致于”、“使得”、“因此”。有时 *that* 可以省略, *that* 在从句中不能作宾语和主语。*so that* 前有逗号。

13) *lead v.* 指“引导”之意, 比喻意用作“导致”解。

lead ... to 把 ... 引向: *This road will lead you to our office.*

14) *effect n.* 结果, 效果, 后果。指直接的结果。作动词意“影响”, “作用”。

cause and effect 因果。

以下是表示“结果”的常用结构：

The increase in population is *so* rapid *that* there is a food shortage.

The population is increasing *so* rapidly *that* there is a food shortage.

The country has *so* many natural resources *that* it can support itself easily.

The country has *so* much coal *that* it can export large quantities.

The problem is *so* complex *that* it can only be solved by computers.

The increase in population is *so* rapid *as to* cause a food shortage.

There is *such* a rapid increase in population *as to* cause a food shortage.

The country has *so* little coal *as to* make it necessary to import large quantities.

注 *so that* (或 *so ... that*) 同 *so (such) ... as to* 两个词组即可表目的也可表结果。一般 *so that* 引导的从句内没有出现情态动词, *so that* 前有逗号, 且动词是现在时、过去时或现在完成时的时候多表示结果。表目的时从句多出现 *can, may, should* 等情态动词。*so (such) ... as to* 表示目的或表示结果无法根据语法结构, 只能根据上下文的内容来判断。

10. 虽然、不管

It is raining, *but*¹⁾ I am going out for a walk.

Insulators in reality conduct electricity *but* their resistance is very high.

All electronic computers consist of five units *though*²⁾ they are of different kind.

Oxygen, *though* it is plentiful in the earth's crust, is not in a free state.

*Although*²⁾ it is raining, I am going out for a walk.

Common salt, *although* it is dissolved in water, does not change its chemical properties.

*While*³⁾ sounding bodies vibrate in a manner similar to that of the pendulum, they vibrate from a different cause.

The TV product, *while*³⁾ (it is) nearly constant at a given temperature, does vary somewhat with the pressure.

*Notwithstanding*⁴⁾ its age, the machine was in excellent condition.

Notwithstanding that it was raining, we went to the workshop.

*In spite of the fact that*⁵⁾ it is raining, I am going out for a walk.

In spite of the fact that at first you did not succeed, you must try again.

*In spite of*⁶⁾ the rain, I am going out for a walk.

They fulfilled the task in time *in spite of* all difficulty.

注 1) *but* 同 *though* (*although*) 不能用在同一个句子中。有些作者喜欢用“*though ... but*”, 这是错误的, 因 *though* 和 *but* 同为连词, 只能选用二者之一。

but 为并列连词, 上下句在总的意义上要构成一个对

比,如:He is not stupid, but clever.

2) although 和 though 在作连词时,是相同的,只是 although 在语气上稍正式些。但 although 不能用作副词,也不能用在 as though 短语中。though 连接的让步状语从句有时有词序颠倒现象,如:Close though the union of small particles is, we have found ways of breaking it. though 放在主句后,它的前面要加逗号,如:It is cold, though (it is) sunny.

我们可以用 may 和采用-ever 形式的复合词代替 though 或 although。如:

Although James has lived for five years in France, he does not speak French well. = James *may* have lived for five years in France, but he does not speak French well. (may 形成语气较重的转移,说话者较强调句子前部的“让步”含意,然后再引人注意到尽管在法国住了五年,却不能说好法语这一事实。) may 的这种用法与表“可能性”的 may 不同。

However often I try (=although I often try), I can not find the answer. (由-ever 复合词引导的从句,也含有可能性的意思)

Whatever we may think of the wisdom of his plan (=although we may have our doubts about their wisdom), no one can deny that they are bold and imaginative.

3) while 是主从连词,这里引导一个让步状语从句,意“虽然”、“尽管”。while 还可引导时间状语从句,作“当…时候”解;还可引导对比状语从句。

4) notwithstanding *prep.* 尽管,虽然。可与 in spite of, despite 换用,但语气较弱;in spite of 语气较强。还可用 regardless 和 disregarding 来替换,如:I will go *regardless* of

the weather. (意“不管…”,多作副词)

Disregarding all the difficulties, we stuck to our plan and worked on unflinchingly. (不顾)

5) *in spite of the fact that* ... 后接从句。

6) *in spite of* 是介词词组,意“尽管”,后接名词或代词。有时也将 *in* 省略。*in spite of* 后面的含义与主语主观意图无关。

despite 同 *in spite of* 意义相同,是较老的写法;可用 *in spite of* 就不必用 *despite* 和 *in despite of*。

11. 虚拟语气

科技写作中,很多内容是有关科学家对事物或现象的论证、推测和探讨,经常涉及各种条件。条件中有些事会发生,事实上又未必发生,或并没有真发生。所假设的条件是与事实相反的,主句所表示的结果属于不可能的事,因此是非真实条件句,这时谓语采用虚拟语气。在虚拟条件从句中谓语动词没有人称和数的分别,即 *should*, *were* 适用于一切人称和单复数;主句中必须要有 *would*, *should*, *could*, *might*, *ought* 等。谓语动词同样可分为现在、过去、将来三种类型。

a. 当主句和从句所指的时间一致时,大体上可以概括如下:

① 非真实的(即与现在事实相反的假设)

句型:

从句: *if* + 主语 + 过去时

主句: 主语 + *would* (*should*, *could*, *might*) + 动词原形

If there were no gravity, there would be no air around the earth.

If he were to do the test, he might do it in some other way.

② 不可能或某些事确实没有发生(即与过去事实相反的假设)

句型:

从句: If + 主语 + 过去完成时

主句: 主语 + would have + 过去分词

If more water had been used, the temperature change would have been smaller.

If we had not seen the notice, we should have switched on the unit and great damage would have been brought forth.

③ 不可能实现或可能性较小(即与将来事实可能相反的假设)

句型:

从句: if + 主语 + should (could, might) + 动词原形

或 if + 主语 + were + 带 to 的不定式

主句: 主语 + should (would, could, might) + 动词原形

If she should come to us, she would answer this question.

If he were to do this test, he might do it (in) some other way.

b. 非真实条件句中, 主句和从句可以指不相同的时间, 这时它们的谓语动词形式应按时间作适当调整。

If you had taken your medicine yesterday, you would be well now. (从句与过去事实相反用过去完成时, 主句与现在事实相反用 would + 动词原形)

If he were not so careless, he would not have confused benzine and benzene. (主句与过去事实相反用 would have + 过去分词, 从句指主语过去和现在都具有的性格特征用过去时)

c. 虚拟条件有时不用条件句而用介词短语来表示。

Without electricity, there would not be modern industry.
In the absence of friction, belted machinery would not be used.

d. 假设条件也可去掉 if, 把从句中 were, had, should 提到从句之前。

Were there no gravity, there would be no air around the earth.

Had he time, he would help us to solve these questions.

Should they come to us, I would ask them some questions.

Had the checking up of the experimental data not taken so much time, we should have completed our work long ago.

12. 指示和说明(祈使句)

祈使句的动词是表达指示或说明的一种较直接的形式, 在实验或作指示时经常使用它。

祈使句经常用在第二人称, 主语 you 一般省略, 谓语动词用原形, 否定式为 Do not (don't) + 动词原形。

祈使句用于第一、三人称时, 其公式为 let + 第一、三人称 + 动词原形。

祈使句的用法:

a. 表示指示, 建议, 说明, 命令

Note the polarity of the voltage drop across R.

Now *reverse* the magnet in your hand and repeat the experiment.

Carefully *fill* the rest of the tube with alcohol.

Be careful not to mix the liquids.

b. 否定式的祈使句

Do not replace fuses when standing on a moist floor.

Do not handle the base of the valve.

c. 第一、三人称祈使句

Let us see how it works.

Let an uncharged conductor BC be introduced into the field of a charged body A.

Let there be no mistake about it.

d. 表示条件或设想

- ① 以下例句中,祈使句部分表条件或假设, and 以后部分表示由此得出的推论或结果。

Weight it again, and you will find no difference.

Open the key, and an induced current in the opposite direction will be obtained.

- ② take, imagine, assume, suppose, let 等动词,其祈使句可以表示设想、假定、譬如等含意。

Let AB equal CD. (设,假设)

Let AB and CD be perpendicular to AD. Then AB and CD are parallel.

Suppose a crystal of sodium chloride is placed in water. It begins to dissolve immediately. (假定,如果)

Imagine a tuning fork whose vibration frequency is 256 per second. (设想,想象)

Let us imagine a blow is given the spring at the end that quickly compresses a few turns of the spiral near the end.

Assume that the input voltage from the power supply remains constant but that the load current starts to increase. (假设,假定)

Now *let us assume* that although the load current remains constant, the input voltage from the power supply starts to rise.

Take, for example, a motor-car plant. (以…(为例))

Let us take, as another familiar everyday illustration, a train at rest on the rail.

13. 表示结果的不定式

用不定式说明前面所谈到的行动的结果。这种动词不是很多,例如 *produce, form, make, let, leave, give, too ... to, enough + 不定式, so as to, in such a way to*;较常用的是 *form, produce, make*。

The anions unite with the copper of the plate *to produce* new copper sulphate.

Hydrogen and oxygen combine chemically *to form* the molecule H_2O .

The unstable isotopes undergo radioactive decay *to form* other isotopes.

Molecules of gas at reduced pressure may be bombarded with electrons *to produce* light.

Many elements combine with hydrogen *to form* combustible liquids.

A number of piles are driven into the ground *to form* a solid foundation.

Air is ejected through nozzles underneath the hovercraft *to produce* a cushion of air on which the craft rides.

The sand and gravel are mixed in suitable proportions *to*

make a satisfactory aggregate.

The mixture of cement sand and stone hardens *to make* concrete.

Another ten feet of concrete was added to the wall *to make* a total thickness of 25 feet.

This metal acts on water *to set* hydrogen free.

The wax former is melted out *to leave* the hollow electro-formed component.

Two thousand more workers were taken on *to give* a total labor force of 80000 at the height of operation.

Atoms are *too small to see*¹⁾.

Hydrogen is *too inflammable to be* safe for this purpose.

He is *too careful not to have* noticed it.

During combustion the oxidation takes place rapidly *enough to be accompanied*¹⁾ by light and heat.

Long steel bridges expand *enough to make* an expansion allowance necessary

The temperature is high *enough to change* water into steam.

Such instruments are *so well known as not to require* detailed description here.

We do that *so as to save*²⁾ a great deal of time.

Metallic surfaces should be greased *so as to decrease*²⁾ friction.

These two compounds react *in such a way as to liberate*²⁾ oxygen.

注 1) 不定式作结果状语时,或者单独表示,如上面的 *to form, to produce* 等;或者常用于“too+形容词或副词+不定

式(含有否定意义)”及“形容词或副词+enough+不定式”句型中。

2) “such 或 so+as+不定式”可以表示目的也可表示结果,这种状语从形式上无法区别,只能根据上下文来判断。

14. 或然性和近似性

可用形容词 *probable* 和 *likely*, 副词 *probably*, 名词 *probability* 等。

It is *probable* that their suggestion is reasonable to a certain degree.

It will *probably* rain tonight.

The *probabilities* are in our favor.

In all *likelihood*, it will rain.

There is a *chance* that he should do this test.

daresay 用来暗示近似性(除第一人称外很少用),在口语中为两个词 *dare say*,在书写和印刷中常拼在一起。

The absolute zero is taken to be -273°C , I *daresay*.

must 可以表示强度的近似性或或然性。

They *must* have swept off the dirt.

Since air has weight, it *must* press down on the surface of the earth.

ought 和 *should* 同 *must* 有同样的用法,二者都意味着:“根据已知的事实和情况等,很可能…”,*ought* 语气比 *should* 强。

The author is a well-known expert, so his book *ought* to be (*should* be) reliable.

It *ought* not to be (*should* not be) allowed.

going to + 不定式这种结构用于无生命的主语或用于非人称代词 it, 如 It is going to rain. 这种结构表示讲话者觉得或认为大概会或似乎会发生的事。

The table *is going to collapse* one of these days; the legs are very weak.

The ice *is going to melt* when the sun comes out. (= will probably melt)

This work *is going to be* more difficult than I (had) expected.

用 will 指单纯将来时间, 没有或然性的因素。当 going to + 不定式的结构的主语是有生命时, 则可以表示意图或说话者感到似乎会发生的事。

I think *I am going to have* flu.

I had not worked very hard this term, I am afraid *I am not going to pass* the exams.

will 和 would 也用来表示或然性、近似性或揣测。

This *will be* the book you are looking for. = This is probably (or this is likely to be) the book you are looking for.

You *will have* read the article. = You have probably read the article.

He *would be* a scientist. = He is probably a scientist.

15. 名词作修饰语

一个名词可用作另一个名词的修饰语。这种名词词组可以很自由的组成。在印刷或书写中, 这两个名词可以分开, 如 the weather forecast (天气预报); 可以用连字符, 如 pay-day (发薪日); 也可以连在一起, 如 airmail (航空邮件), 变化很

多。如一校之长可以是 a headmaster, head-master 或 a headmaster。用不用连字符没有固定的规则。

重读方式可以随情境与上下文而变化。

This garden has a 'brick wall; that garden has a 'stone wall.
重音落在 brick 和 stone 上,用来表示明显的对照。

名词用作修饰语的例子还有:

steam jackets = jackets containing steam

heat treatment = treatment with or by heat

metal tube = tubes made of metal

steam consumption = the consumption of steam

cooling tower = tower for the purpose of cooling

butt weld = weld of the type called "butt"

friction losses = losses caused by friction

cylinder head design = design of the head of the cylinder

generator power output = output of power from the generator

cylinder condensation losses = losses from the cylinder by condensation

当两个名词中的第二个是带 -er 表示行为者的名词时,主重音落在第一个名词上,如 a 'language teacher。

单数的可数名词用作修饰语,即使意义上是复数的,形式上也要用单数,如 a seed catalogue, tooth decay, an armchair; 但 man, woman 例外,如 men (women) teachers。有的名词通常是以复数形式出现的,如 trousers, 用作修饰语时却常用单数形式,如 trouser pockets, pyjama cords, a billiard table; 也可以用复数形式,如 a sports car, a savings bank; the arms race (arms 总是用复数,意思是武装力量)。

物质名词常用作修饰语。如果名词有相对应的带 y 或 -en 的形容词, 比如 silky (silken), 则必须按照上下文及意义进行选择; 如果表示的是做成某一件东西的物质, 在某些情况下用名词, 在其他场合则用形容词。

用名词: silk stockings, lead pipes, a gold watch, brass buttons

用形容词: silky hair, a wooden leg (box), woolen stockings, a stony road, a leaden sky, a golden opportunity

上例表明, 带 y 和 -en 的形容词常用于比喻, wooden 和 woolen 不用于比喻, 如: a wood fire (不用 wooden fire) 是指烧木柴的火, a wooden box 是指木头做成的箱子, a wood box 可以是一个装木柴的箱子。

16. will, can, may

此三词最主要的用法现说明如下:

a. will 表示将来(在科技英语中很少使用 be going to 表示将来)

Production of the new machine *will* commence next year.

Work *will* shortly begin on the new motorway.

The new aircraft *will* fly for the first time on Monday.

b. will, can, capable, are able to 可表示能够

These planes $\left\{ \begin{array}{l} \textit{will} \\ \textit{can} \\ \textit{are able to} \end{array} \right\}$ fly at 750 miles per hour.

He carried on the research on new materials *capable of* withstanding strong stresses.

c. will 表示经常发生的事物

This solid *will* vaporise when we heat it.

Friction *will* cause the bearings to become heated.

Good lubrication *will* reduce the friction.

d. *may, can* 表示有时发生的事物

Metal which cools rapidly	} <i>may</i>	{ fracture.
Unguarded belts or chains		
The testing of new planes		
	} <i>can</i>	{ cause accidents.
		{ take a long time.

注 以上的表达可以用主动语态,也可用被动语态。下面的表示则几乎多是被动语态。

e. *can, may* 表示可能性

Low-speed bearings	} <i>can</i> be	{ lubricated with greese.
This problem		
The steel	} <i>may</i> be	{ approached in several ways.
Thermo-couples		
		{ quenched in either water or oil.
		{ used to measure high temperature.

able 与 capable 的区别:

① 在作定语时 *able* 包含“能干”的意思比较强, *capable* 较弱。

② *able* 后接不定式, *capable* 后接 of + 名词(或动名词)。

③ *able* 一般用在正面意义; *capable* 可以指好事,但在有些场合也指坏事,如: He was capable of the basest tricks.

④ *able* 指“有此能力”, *capable* 指有此可能性。如: He is able to catch every word the announcer says, however fast the latter may speak. The theme is capable of enlargement.

⑤ *able* 指暂时现象, *capable* 指经常现象。如: I shall not be able to take part in the experiment tomorrow. He is incapable of manual labor.

17. **this (these), that (those)**

作代名词时有以下几点应当注意：

a. *this*(这个)和 *that*(那个)是对称的。除了所指对象有远近之不同外,在写作中 *that* 是承上的,用来指说过的事情,有“如上”或“那样”之意;*this* 是启下的,用来指将要说的事情,有“如下”或“这样”之意。如:

That is the end of the news. (新闻到此结束。)

This is the news of the past twenty-four hours. (以下是过去24小时的消息。)

What I want to propose is *this*. (启下)

The ultimate result amounts to *this*. (启下)

This is the question; how to avoid the trouble.

You say that you have not enough time and that you are frequently disturbed by visitors. But *that* doesn't mean that you have any excuse for making such a mess of the work entrusted to you. (*that* 指上句,承上)

We studied physics for many years, and *that* under a well-known scientist. (and *that* = and we studied physics for many years)

Computers are of great help to our technicians. *That* is why we widely use them in different branches of science and engineering. (*That* 代表前面一句)

b. *this (these)*指后者, *that (those)*指前者

Work and play are both necessary to health, *this* (play) gives us rest and *that* (work) gives us energy.

Health is above wealth, for *this* cannot give us much happi-

ness as *that*.

Dogs are more faithful animal than cats, *these* attach themselves to places and *those* to persons.

c. *that* 和 *those* 常用来避免重复, *that* 指单数, *those* 指复数。
The study of idiom is as important as *that* of grammar. (*that* = study)

The first task was *that* of surveying the routs. (*that* = task)
Roads built here are narrower than *those* built in Germany.
(*those* = roads)

In *that* case the best grades of steel are *those* containing high percentage of carbon. (*those* = grades of steel)

The volume of the sun is much larger than *that* of earth.
(*that* = volume)

that 只可代表名词前冠有“the”的部分,不可代表名词前冠有“a”的部分。下例是错误的:

This is a point of idiom rather than *that* of grammar. (把 *that* 换为 *one* 即可)

I prefer a street in a small town to *that* in such a large city as Shanghai. (把 *that* 换成 *one* 即可)

d. 汉语“这些”、“那些”、“这一些”、“那一些”,当不是指一个具体事物而带有总结意味时,在英语里只能用 *all this* 和 *all that*,不用 *all these* 和 *all those*。如:

China must be industrialized and *that* as soon as possible——*all this* I understand. (*that* 代替前面的整句, *all this* 不能换作 *all these*。)

You may have *all these*. (*these* 指具体的书、文件等等,不可换为 *all this*。)

this 作代名词又作“今天”，“此地”(this time, this place) 解。如：

What day of the month is *this*? (this=this time)

I shall leave *this* on the 12th. (this=this place)

this (these), that (those) 也可作为形容词。these days 指现今, those days 指往昔。these days 往往用作副词短语, 如: These days everybody talks of socialization. 但 those days 通常不用作副词短语, 如不说 Those days we knew very little about Marxism, 最好在 those days 前加 in。而 in these days 不及 these days 普通。

18. as

as 是一个比较常见、用法繁多的词, 它和其它词的搭配关系也极广泛, 现介绍几种常用的写法:

a. known as 被认为是 ...

This type of motor is *known as* an induction motor.

A particle of gama radiation is *referred to as* a photon.

The efficiency of the engine is *expressed as* a percentage of the ideal efficiency.

Electric current may be *regarded as* a flow of electrons through a medium.

The drag force acting on the fluid can be *considered as* being limited to the boundary layer closed to the walls.

These materials may be *classified as* conductors.

The conductivity of copper wire is *accepted as* the standard for all measurements of conductivity.

A hollow tube is often *used as* a conductor of current.

b. = in the form of

The condensate is returned to the boiler *as* feed-water.

The carbon in cast iron is present partly *as* free graphite.

c. *as* + 过去分词

一般构成定语、状语、宾语补语、主语补语。

Natural uranium, *as obtained* from the refining plants, is a solid. (定语)

The bridge, *as originally planned*, would have been too expensive. (定语)

The nucleus is heavy *as compared* with electrons. (状语)

We can think of an atom *as made up of* a nucleus and electrons. (宾语补语)

Matter is spoken of *as electrically constituted*. (主语补语)

If the separator is out of order, check and clean *as (it is) required*. (省略句为状语)

d. *as such* 像这样的人、事、物,作为这样的人、事、物,因而
He is our teacher, and *as such* must be respected.

The earth is a conductor of electricity and *as such* may form part of an electrical circuit.

History *as such* was often neglected.

A simple governor is dependent on gravity *as such* it must be kept vertical.

e. *as* + 介词短语

这种结构前后多半有逗号,作“如”、“像”解。

The flow of current in a semiconductor can be formed by a flow of negative charges, *as in the case* of conductors.

As in the first method, the gas must be preheated to 150°C.

f. *as* 可以有主动态和被动态

① 主动态

As we have just proved ...

As we have stated in the previous chapter ...

As the illustration on p. 246 shows ...

② 被动态

As is shown in the illustration ...

As has been stated in the previous chapter ...

As has been just proved ...

As is well known ...

As was mentioned a short time ago ...

在主动态中,*as* 作为连接词,引导副词从句,作“正如”解。在被动态中,*as* 作关系代词,指主句所表示的意思,这时动词为第三人称单数。

③ 被动态的省略式

As shown in the illustration ...

As stated in the previous chapter ...

As just proved ...

As mentioned a short time ago ...

As pointed by Prof. Zhang ...

④ 其它省略式

As above ...

As before ...

As follows

19. **should** 的用法

在科技论文写作中,时常使用 **should** 这个词,**should** 包

含几种不同含义,现分述如下:

a. 对操作者的指示或说明

These machines should be handled with great care.

Safety precautions should be observed at all times.

The results of the experiment should be plotted on a graph.

注意: should 有时为表示礼貌而代替 must be。

b. 说明书中使用(某些东西需要些什么)

The steel should not contain more than 0.5% of carbon.

The maximum internal diameter should be 40 thousandths of an inch.

c. 预期要发生的事

The process of cooling should be continue for several hours.

This building should be completed by the end of next year.

d. 作“应该”解

We should complete our test in time.

In sum, theory should be combined with practice.

e. 表示建议、要求、决定、命令等意义的主从复合句内,从句谓语一般是“should + 原形动词”

They propose (demand, insist, decide, order) that you should read the rules carefully.

It is necessary (important) that the result of an experiment should be checked.

They agree to the suggestion that our laboratory should be re-equipped.

Our demand is that accurate measurement should be made.

f. 用于 for fear that..., (for fear) lest ..., for fear (lest) ... 中

He is working hard for fear, that he should fall behind.

He places the instrument carefully on the table (for fear) lest it should fall down.

I must write down the name of the machines lest I should forget them.

Take an umbrella with you for fear (lest) it should rain.

g. 表示谦逊、客气、委婉语气等含义,常用于第一人称

I should say it would be better to try it again.

We should like to do another experiment.

h. “should + have + 过去分词”表示过去该做而实际上尚未做的动作,其否定式则表示过去不该做而实际上已经做的动作

Those cells should have been kept in some dry places.

You should not have kept those cells in the damp place.

i. 作 shall 的过去时

We said that we should check up and repair those machines.

j. 在表示惊奇和欣喜的句子中意为“竟然”、“居然”

It is strange that the wheel should turn so slowly.

We are rejoiced that our calculations should be so accurate.

20. 句尾带-ing 的短语

在科技写作中常使用句尾带-ing 的短语,这类句子可有三种用途:

a. 独立主格(即一个名词和分词修饰词在语法上同句中其它部分没有关系)。用它代替 and,是对主句的简单补充,第二部分的主语与第一部分主语不同。

The starter motor is switched off, *the engine accelerating*

under its own power. — The starter motor is switched off and the engine is accelerating under its own power.

The normal type of crankshaft is used, *the upper pistons being operated* by cross-heads.

An oil-pump delivers oil to the bearings, *the oil then draining* into a sump.

b. -ing 部分代替 since, 用它说明前面, 后部 -ing 的主语与主句主语相同, 因此省略掉。

The proton is the opposite of the electron, *being a particle* of positive electricity.

Mercury is most commonly used in thermometers, *having a constant* coefficient of expansion.

Small roughnesses on the surface of the pipe have no effect on the fluid flow, *being restricted* to the sub-layer closed to the wall.

c. 表示主句的结果。句尾 -ing 的主语与主句的主语相同, 因此省略掉。

The rivet contracts as it cools, *drawing* the plates together.

The compressor may not be able to maintain the delivery pressure, *causing* a reversal of flow.

常常在-ing 前加用 thus 或 thereby, 以加强语气。

The rivet contracts as it cools, *thus drawing* the plates together.

The compressor may not be able to maintain the delivery pressure, *thereby causing* a reversal of flow.

21. 主动的关系词(-ing)

以下各句中都有关系从句并都是主动语态现在时,这时可用主动的关系词-ing 写作省略式。主动语态过去时较主动语态现在时出现得少。

The molten iron which comes from the furnace is cast into pigs or ingots.

= The molten iron *coming from the furnace* is cast into pigs or ingots.

There are enormous oil deposits which lie under the surface of the earth.

= There are enormous oil deposits *lying under the surface of the earth*.

Some of the heat of combustion is absorbed by water-tubes which line the walls.

= Some of the heat of combustion is absorbed by water-tubes *lining the walls*.

The steam impinges on moving blades which lie along the periphery of the wheel.

= The steam impinges on moving blades *lying along the periphery of the wheel*.

The engineers who designed the motorway had many problems to overcome.

= The engineers *designing the motorway* had many problems to overcome.

This glass container, which has a base of 80 cm², is 15 cm high.

= This glass container, *having a base of 80 cm²*, is 15 cm high.

Comrade Wang and his friend, who were conversing earnestly together, ceased as you approached.

= Comrade Wang and his friend, *conversing earnestly together*, ceased as you approached.

注 关系从句 which, that, who 等前有逗号时为非限定性定语从句, 改为省略句-ing 时也要加逗号; 无逗号时为限定性定语从句, 省略句也不加逗号。

22. 带有介词的 which

在科技英语写作中, 许多定语从句是由“介词+ which”引导的。其中 which 可代表主语中某个词、某个短语或主句的整个意思; 介词是从句本身所要求的。介词经常放在 which 前面, 而不在句末。有时使用 where (= in which), where by (= by means of which) 引导定语从句。

The exhaust steam is passed to a condenser *where* it is condensed.

10 degrees is the limit *at which* the nozzle can control the steam flow.

There are a number of tubes *through which* the water circulates.

Radial flow turbines differ in the manner *in which* the steam flow is arranged.

This depends on the purpose *for which* the exhaust steam is used.

Cold water *with which* the condenser is supplied circulates in

these tubes.

There is an expansion period *during which* after-burning of the fuel may take place.

Resistors are devices *whereby* a resistance is interposed in a circuit.

注 1) 例句中,“介词+which”前面都无逗号,为限定性定语从句。“介词+which”前有逗号时,为非限定性定语从句,如:
As an electron fills the hole, it leaves another hole behind, into which another electron can fall. The point or axis, about which the pendulum vibrates is called the center of suspension.

2) which 有时可以省略:

i) 作介词宾语,且介词放在句末(有例外)。如: They study the machine (which) we are making use of.

ii) 当 in which 修饰 direction(方向)和 way(方法、途径)时, in which 可省略。如: The direction (in which) a force is acting can be changed. The way (in which) this matter can be used depends on its properties.

iii) which 用于不定式短语中,该不定式短语作前面名词的后置定语。注意这个 which 常可省略。因有时不宜用介词结尾,也有将介词同 which 一并省略的。

There is no key with which to open the door.

或省略 which: There is no key to open the door with.

He must have some time in which to make the necessary preparations.

或省略 in which: He must have some time to make the necessary preparation.

3) 分裂式定语从句:介词+which 跨过主句谓语说明前面的主句主语。多用在主句有被动语态中。如:

Some elements are known the atoms of *which* usually do not combine with more than one atom of any other element. (which 指 some elements)

23. 两个或两个以上状语的词序

a. 如果有两个时间状语,一般表示时间的某一点(如三点钟)或较短的时间状语常在前面,但有例外。

We are having a conference at seven o'clock this evening.

假若较大的时间单位更为重要,较小的时间单位仅是一种追想或补述,则上述词序也可以倒换过来。

We arrived yesterday about three o'clock.

表示一段时间的状语为了加强语气、突出重点或进行对比而放在句首。

Yesterday we arrived at five o'clock, but tomorrow we shall arrive at four.

有两个时间状语时,表示时间某一点的状语不能孤立地放在句首;但两个时间状语合在一起时,可放在句首。

At three o'clock I shall meet you tomorrow. (误)

At three o'clock tomorrow I shall meet you outside the library.

b. 两个地点状语同样是小的放在前面。如果句中有一个地点状语或方向状语和一个时间状语,则时间状语放在后面。

Please return the books to the library before Monday.

这种词序是可能变动的,时间状语可居句首,而地点或方向状语通常不放在句首。

On Monday they sailed from Southampton; on Saturday they landed in New York.

例外:

Please return before July 4th all books that you have borrowed from the library. 此句时间状语例外地放在动词和宾语之间。因为这时间状语如放在句末,可能会误认为修饰 borrow,而不是修饰 return。

c. 地点和方向状语常用在频度状语之前,频度状语又常在时间状语前。

He gave lectures at the college three days a week last term.

d. 地点状语同状态状语同时出现时,地点状语在前。

He went there immediately.

但短语状语出现时,往往单词状语在前,短语在后。

He is now in the laboratory. (地点状语为短语,放在最后)

二、句型方面

1. Enable, allow, make 等 + 宾语 + 不定式

使(听任)… 能够作什么

The microscope *enables*¹⁾ scientists to examine very small objects.

A thermometer *enables* the doctor to measure body temperature.

Helicopter *enables* passengers to land in the city centre.

Good production method *enables* the factory to manufacture more cars.

Expansion joints *permit*²⁾ the pipes to expand or contract.

Safety valves *permit* the steam to escape from the boiler.

We *allow*²⁾ the metal to cool slowly.

The heat *caused*³⁾ the metal to melt.

Weakness in the metal *caused* it to fracture under tension.

The heat *made*⁴⁾ the metal melt.

Weakness in the metal *made* it fracture under tension.

注 1) enable 的真实含义是“使能”，但常与 allow, permit 同义。let 在讲话时也是此含义，而在书写上则不作此义。用 let 和 make 时，不定式要省略 to。

2) allow 和 permit 在很多情况下意义是相同的，可以通用。但确切地说 allow 侧重“听任”或“默许”，也就是说仅仅“不加阻止”，而 permit 则含有积极地、从正面地“允许”的意义。如：He held the lens in his hand and allowed the rays of the sun to go through it.

The guard permitted her to pass after she showed him her credentials.

Smoking in the auditorium is not allowed (permitted).

3) cause 后不可接宾语和形容词，如不可说 That caused me happy. 应在 happy 前加 to be, 即不定式。cause 可以接双宾语，如可以说 That caused him much inconvenience.

4) made 为 make 的过去式，后面的不定式省去 to, 因此它后面的 melt 同 fracture 都是不定式省略了 to。但在被动语态中则不省略 to, 如：Objects are made to expand by heat.

2. It is + 形容词 + to

这个句型可以说是科技体裁的一个特征。一个句子用了

这个句型就可以避免使用人称代词。例如科学家说“测量温度的变化是可能的。”可以表示为 *It is possible to measure temperature changes.* 而不用 *We can measure temperature changes.* 我们也可以把它改成被动语态,写成: *Temperature changes can be measured.*

再例如:

非科技 *We do not want to allow cold water to enter the boiler.*

科技 *It is undesirable to allow cold water to enter the boiler.*

非科技 *There is no difficulty in pumping out the water from the condenser.*

科技 *It is not difficult to pump out the water from the condenser.*

非科技 *We must eliminate as far as possible eddy currents in the magnet core.*

科技 *It is necessary to eliminate as far as possible eddy currents in the magnet core.*

非科技 *We normally connect the generator to a pair of feeding points.*

科技 *It is usual to connect the generator to a pair of feeding points.*

非科技 *We prefer to obtain higher pressures by having more compression stages.*

科技 *It is preferable to obtain higher pressures by having more compression stages.*

以上的句型又可具体地写成:

It	is was seems appears proves becomes	+	easy (difficult)	+不定式
			possible (impossible)	
			necessary (unnecessary)	
			essential	
			advisable (inadvisable)	
			preferable	
			useful (useless)	
			instructive	
			desirable (undesirable)	
			advantageous (disadvantageous)	
			practicable (impracticable)	
			common (uncommon)	
			usual (unusual)	

3. It + **be + 形容词** + **that 从句**
动词

这是另外一种不使用人称代词进行叙述的句型,科技论文中使用较多。

It is possible that none of the tenders for the contract will prove acceptable.

It is likely that eddy currents will be produced in the core of the magnet.

It is clear that the introduction of a variable resistance requires a more expensive wound rotor.

It is obvious that a large volume of coolant is required to keep the temperature down to a reasonable level.

It is evident that these currents will generate heat in the core.

It is desirable that the machine should be tested under conditions which approximate as closely as possible to normal.

It is essential that these currents should be eliminated as far as possible.

It is known that the distribution of current through the conductor is not uniform.

It is assumed that the temperature remains constant throughout the experiment.

It will be seen that the mass of the nucleus represents almost the whole mass of the atom.

It will be noticed that the energy cannot be destroyed, only changed into other forms.

It can be proved that current can be induced in a conductor by a moving magnetic field.

It should be noted that some of the electric energy is expended in producing light.

It has been arranged that production should begin in a few months.

此外还经常使用 *It must be admitted that*, *It appears (或 seems) that*, *It happened that*, *It follows that* 等。

注 在 *it is desirable that* 同 *it is essential that* 里用 *should* 或 *subjunctive present*。it 在句型中充当形式主语, 而将真正的和逻辑上的主语即 *that* 从句(也可用不定式短语和动名词短语)移到后面。又如:

It takes much time to carry out a test.

It will be useless learning a theory without practice.

it 表示后面的动名词不及不定式普通。it 还可表示后面的一个以 how, what, when, where, whether, why 等词引起的从句, 例如:

It is not true what he said yesterday.

It does not matter for the generation of an induced emf whether a conductor moves across a magnetic field or vice versa.

三、省略方面

1. 省略、忽略

表示“省略、忽略”常用的词和词组有: neglect, ignore, disregard, disregarding, omit, abandon, take no account of, make little account of, set aside, pass over 等。

That tractor was in a state of *neglect*¹⁾.

If we *neglect*²⁾ the prevention, the attract rate of grip will be higher.

It can not *be neglected* that friction is important in controlling the motion of any machine.

They *ignored*³⁾ the fact that those mathematical puzzles had some important applications.

The fact that some engineering materials contain energy can not be *ignored*.

The machine needs repairing badly, it is not to be *disregarded*⁴⁾.

*Disregarding*⁵⁾ variations in specific heat, the air tempera-

ture will be raised from T_1 to T_4 .

Not a single one can be *omitted*⁶⁾.

You may *omit* the second paragraph from the article.

The scientist *abandoned*⁷⁾ his research *for* lack of fund.

He *abandoned*⁷⁾ the attempt to make a machine of perpetual motion.

The day is gone forever when the imperialists could *take no account of* the people's revolutionary struggle. (不重视, 不加以考虑)

He *makes little account of* such objection. (轻视)

Don't try to *set aside* an issue; face it squarely and settle it. (搁起, 撇开, 略去)

We had better *set aside* the problem.

The matter is so serious that we cannot *pass it over*. (忽略, 放过)

I shall *pass over* the first paragraph, and not read it.

注 1) neglect *n.* 忽略, 疏忽。有该做而不做的含意。

negligence *n.* 疏忽, 粗心大意。有“经常不注意”的含意, 如 negligence of dress (不修边幅)。

2) neglect *v. t.* 疏忽, 不留心。意指对工作或责任疏忽或没有给予注意, 含有忽视或不愿作某事之意。neglect 后面接不定式比接动名词普通, 如 He neglected to reply to my letter. 比 He neglected replying to my letter. 普通。

3) ignore *v. t.* 忽视, 不计, 置之不理。ignore 强调有意识地“无视”、“不顾”他人的劝告、批评等。

4) disregard *n. ; v. t.* 不理, 不顾, 漠视。为普通用语, 指从思想上、行动上完全“忽视”、“不顾”一种建议、一项劝告等,

其含意比 ignore 弱。某人可 disregard 某事,但不一定完全 ignore 此事。disregard 含有“漠视”上级政策、规章等的含意。

5) disregarding 是现在分词用作介词,因此与主语关系较密切,说明有意识的“不理睬”。

6) omit *v. t.* 省略,删去。omit 后面接不定式或动名词都可以。如: She omitted to give the speed of sound. /She omitted giving the speed of sound.

7) abandon *v. t.* 放弃。指绝对的放弃,强调永远和完全放弃。

abandon for 放弃。

abandon an attempt to do 放弃…企图。

2. 时间状语从句的省略形式

两个句子主语相同时,在时间的说明上可写作:

Before the *steam* enters the nozzle, *it* is at very high pressure. /Before *it* enters the nozzle, the *steam* is at very high pressure. (it 的先行词为 steam)

这种写法可压缩成省略式:

Before entering the nozzle, the steam is at very high pressure.

公式: on, when, while, in, 等 + -ing,

(主语不同时,不可用此式)

Before entering the nozzle, the steam is at high pressure.
(=before it enters,)

Prior to entering the furnace, the fuel is pulverised.

When passing through the blades, the steam is deflected.
(=when it is passing through ...)

While rising, the piston carries the exhaust gas upwards.

In rotating, the shaft splashes oil up into the bearings.

On leaving the furnaces, the molten metal is channelled into moulds.

After leaving the blades, the steam passes out to the atmosphere. (=after it leaves ...)

两个句子的主语不同时,则不能使用省略式,而要加入适当的连接词。如:

As soon as steam in the boiler reaches a certain pressure, the safety valve is lifted.

As the fuel travels along the conveyor chain, the flame ignites it.

While combustion proceeds, the temperature of the mixture rises.

Before the steam engine was invented, water could not be pumped out of coalmines.

Once the critical temperature is exceeded, the steel undergoes structural changes.

By the time the second world war was over, jet engines were in common use.

After the gas leaves the turbine blades, expansion takes place in the jet-pipe.

请看下面的说明:

John finished the work. John went home.

The steam leaves the boiler. The steam enters the turbine.

上面两组例句中,主语是相同的(John 和 steam),它们都是在一个时间顺序中描述两件事,因此可写成:

After John finished his work, he went home.

After the steam leaves the boiler, it enters the turbine.

两句主语相同,可将一个主语换用代名词,加入适当的连词:

Before the steam leaves the boiler, it is passed through a superheater.

While the metal is still molten, it is poured into moulds.

Once the machines are tested, they may be put into service.

As the products of combustion circulate, they heat the feed water.

As soon as the steam passes over the metal tubes, it is condensed.

Until the machines are properly tested, they must not be used.

When a bearing is properly lubricated, it will last much longer.

3. 简练式

在科技英语中,常常用定语从句 *which is*, *which was* 等修饰一个名词, *which* 后的动词是被动式时,可以省略 *which is (was)*, *which are (were)*, 成为一个过去分词作后置定语,使句子简练。

- ① The power *which is demanded from modern turbines* is continually increasing.

简练: The power *demanded from modern turbines* is continually increasing.

- ② The efficiency of an engine is the ratio of the work

which is done to the heat which is received.

简练: The efficiency of an engine is the ratio of the work *done to the heat received.*

- ③ The research *which is being carried out on this subject* is extensive.

简练: The research *being carried out on this subject* is extensive.

- ④ The steam *which is extracted from the turbine* is passed through a condenser.

简练: The steam *extracted from the turbine* is passed through a condenser.

- ⑤ The torque *which is exerted on the crankshaft* should be even.

简练: The torque *exerted on the crankshaft* should be even.

- ⑥ Generators *which are not required for service* are stopped.

简练: Generators *not required for service* are stopped.

四、问题、叙述和分析方面

1. 考虑

表示“考虑”常用的词与词组有: consider, consideration, reconsider, study, weigh, think, reflect, on reflection, take into account, contemplate, deliberate.

The more fully the proposal is *considered*¹⁾, the better it would be.

A number of factors must be *considered* when designing a

road.

We have submitted these suggestions for your *consideration*.

A little *consideration* will show that the policy is not right.

You write very well *considering*²⁾ your age.

I am going to *reconsider*³⁾ my decision.

Since the climate conditions are very important, we should *reconsider* them.

He has *studied*⁴⁾ the method of operation.

Man sends spaceships into outer space to *study* conditions there.

Before the test, one plan should be *weighed*⁵⁾ against another. (权衡一个计划与另一个计划的优劣)

We should *weigh* the advantages and disadvantages before making a decision.

We'd better have another *think*⁶⁾ before giving up the experiment. (n.)

It isn't worth *thinking about*.

He *thought* a lot *about* how to improve the generators.

He has been *reflecting on*⁷⁾ how to solve the problem of internal corrosion. (v. i.)

We *reflect* how to fulfil the task. (v. t.)

On reflection, I can not decline his offer of technical reform. (考虑以后,熟虑之下)

In order to arrive at a correct conclusion, all factors involved should be *taken into account*.⁸⁾

You must *take into account* the distance and bad weather.

We should not be afraid of difficulties, but we ought to *take*

them *into consideration*.⁹⁾

This is not a heavy stone, its size being *taken into consideration*.

Certain losses should be *taken into consideration* to estimate the efficiency of the engine.

It sounds as if they were *contemplating*¹⁰⁾ a change in their plan.

A new scheme is *under contemplation*.

The ministers *deliberate*¹¹⁾ what to do.

He *deliberated* with me on his future course of conduct.

注 1) *consider* *v.* 考虑, 研究, 认为。强调经过考虑而达到某一结论。作“考虑”解时, 指在决定前细加考虑。*consider* 后面接动名词, 不接不定式。

2) *considering* *prep.* 鉴于, 就…来说。由现在分词转为介词。

3) *reconsider* *v. t.* 重新考虑。

4) *study* *v. t.* 考虑, 细想, 细看。意指“慎重而仔细地考虑, 想出计策”。也可作名词, 用作不可数名词指一般学习或研究, 用作可数名词指研究工作或研究成果, 后面接 *of* 或 *in*。如: This article is a penetrating study of the Rosenberg case. The book is a study in Chinese culture.

5) *weigh* *v.* 考虑, 权衡。意指在心中权衡、考虑某一想法或行动之各方面, 着重考虑其得失、利害。

6) *think* *v.* 想, 思索。为一般用语, 指根据某事实进行“思索”, 以形成某种看法, 并作出结论。*think about* 考虑。

n. 想, 考虑。

7) *reflect* *v. i.* 反射, 考虑, 思考。后接 *on* 或 *upon*。

强调对已存在的问题进行仔细地、认真地、反复地思考。

on reflection 考虑以后,熟虑之下。

8) take into account 加以考虑,照顾到。

9) take into consideration 考虑到,顾及。在此词组内 consideration 前不可加入 my, your 等词。

under consideration 在考虑中。如: The proposals they submitted to the committee are still under consideration.

in consideration of 考虑到。consideration 前没有 the。

10) contemplate *v. t.* 熟虑,沉思。指用连续的注意而加以考虑,有“运用思想地”考虑的意味,多用于大事,不用于日常小事。

under contemplation 考虑中, in contemplation 在计划中的。

11) deliberate *v.* 仔细考虑。指“细细地”思考,有“考查其理由”的意味。

2. 需要

表示“需要”常用的词与词组有: need, require, must be, necessary, essential, necessitate, requisite, want, desire 等。

The bearings *need*¹⁾ lubricating (to be lubricated).

The bearings *require*²⁾ some lubrication.

The machine *needs* repairing (to be repaired, a new clutch).

The tool *requires* regrinding (to be reground, a regrind).

The scale in the tube *needs* removing (to be removed, removal).

The bearings *must be* lubricated.

It is *necessary*³⁾ (*essential*)⁴⁾ for the bearings to be lubricated.

Friction *makes necessary* a good lubrication system.

Increased wages *necessitates* an increase in prices.

The use of plastic pipes *makes necessary* (*obviates the need for*¹⁾) protection against corrosion.

Superheating the steam *dispenses with the need for* (*does away with the need for*) very high pressure in the boiler.

The furnaces rapidly reaches the *required* (*requisite*⁵⁾, *necessary*) temperature.

Technology is the application of scientific method and knowledge to industry to satisfy our material needs and *wants*.⁶⁾ (*n.*)

This steam engine *wants* cleaning. (*v.*)

It *wants* to be done with great care.

Electricity is a convenient source of heat, which can be localised at any *desired*⁷⁾ point.

There is always a strong *desire* for automation in factories.

注 1) need *v.*; *n.* 作动词意“必须”,“需要”,后面可接动名词和不定式。接动名词时形式是主动式,含意是被动的;接不定式时,be+过去分词才是被动的。

need 作名词意“需要”,“要求”,“…的必要性”; need for “对…的需要”。

2) require *v.* 需要,要求。强调需要所要求的東西,为普通用语,语气较弱。

3) necessary *adj.* 为普通用语,“必要的”、“必须的”,强调“无法避免”、“必须具有”,有时也可表示“不可缺少”的含意。不可说 This work is necessary to finish within the week.

(用 *work* 作主语, *finish* 要用被动式 *be finished*), 也不可说 *We are necessary to finish the work within the week.* (不可用 *We* 作主语, 要用 *It is ...*.) *It is (was) necessary* 后常接 *that* 从句, *that* 从句中要用 *should* 或 *subjunctive present*. 如: *It is necessary that he should come here every Sunday. It is necessary that he come (不用 comes) here every Sunday.*

4) *essential* 与 *necessary* 同义, 但强调“基本的”、“本质的”、“不可缺少的”, 若缺少其必要部分, 某物就无法生存或无法形成其应有的状态等。同样后可接 *that*, *that* 从句中用 *should* 或 *subjunctive present*. 如:

It is essential that the change should be made. It is essential that the change be (不用 is) made.

5) *requisite* *adj.* 必要的, 不可少的。

requisite *n.* 需要物。如 *A pen and a piece of paper are the requisites.* *requisite* 含有“决不可缺”的意思, 通常指自然的或客观上的需要物。后接 *of*, *for*, 间或接 *to*, 如 *a requisite of (for) life, the requisites to success.*

6) *want* *n. ; v.* 要, 需要, 缺少。*want* 表示“要”时意义与 *desire* 相近, 在口语和书面语中常使用, 后面连接名词或不定式, 不连用动名词; *want* 作“需要”解时, 后面可连用动名词, 与它作“要”解时不同。

7) *desire* *v. ; n.* 要求, 需要, 欲望。正式的用词, 感情色彩比较强烈, 表示强烈的愿望和要求。常用于主语想得到某一事物, 或达到某一目的时, 兼有“需要尽力争取”的意味。*desire* 后可跟从句, 从句用 *subjunctive present* 或 *should*, 如: *We desire that the problem of ecocline should be brought to our attention.* 也常以 *it* 作形式主语用在被动语句中, 如 *It is de-*

sired that the problem of ecocline should be brought to our attention. desire 后还可接不定式、宾语+不定式、名词,但以接不定式最普通。

3. 要求

因需要或权利而要求或请求。常用的词有: claim, demand, require, ask。

He *claimed*¹⁾ to have first invented the apparatus.

The problem of energy conservation is a matter that *claims* our attention.

Prof. Sun has no *claim* on the patent for his invention. (n.)

The work *demand*s²⁾ great skill.

The launching of rockets *demand*s great power.

With the development of industry, there is a great *demand*²⁾ for petroleum. (n.)

The patient *requires*³⁾ immediate treatment.

The law *requires* all the drivers to observe traffic rules.

The case *asks*⁴⁾ hemostatic measures.

He came here just because you *asked* him to come.

注 1) claim *v. t.* 要求,主张。强调有权利或宣称有权利得到所要求的东西。claim 作动词后不可接 for,接不定式时,在英国有时作“把…看作自己所应该得到的而要求它”,有时又作“要求他人承认…”;接不定式所表示的是有利于自己的。如: He claims to have succeeded. 美国虽也有这两种解释,但不定式后可以表示不利于自己。如 He claims to have failed. claim 后接 that 从句时,从句中的谓语动词用 shall, should 和虚拟语气现在时。

2) demand *v. t. ; n.* 强调坚持得到某种东西或做某件事, 提要求的一方认为有权这样做。语气颇强烈, 有时还表现一种专横跋扈的态度, 比 require 表示更为积极。demand 作名词时, 后接 for。作动词不可接 for, 因是及物动词。demand 作名词或动词, 都可接 that 从句, 从句谓语动词用 shall, should 或虚拟语气现在时。作动词时不可把被要求的人作宾语, 如不说 I shall demand him for an answer. 也不可说 I shall demand him to answer. 而说 I shall demand of him to answer. (在人前加介词) demand 作动词后接不定式, 不接动名词。如: He demanded to see our library. (不可用动名词 seeing)

3) require *v.* 强调需要所要求的東西, 是普通用语, 语气较弱, 较不傲慢。有时同 demand 同义。后接 that 从句时, 谓语动词同样用 shall, should 和虚拟语句现在时。如: He required that the direction shall (should) be pointed out accurately. require 后可接不定式, 也可接动名词。但表示被动含义时, 不定式要用被动式, 动名词则用主动式, 如: The matter requires to be thought over. = The matter requires thinking over.

4) ask *v.* 请求, 要求。最普通的用语, 可以有直接宾语和间接宾语, 如: I asked him his name. ask 同 ask for 都作“请求”解。ask 通常用于无形的东西, 如 ask a favor, ask advice, ask permission 等; ask for 可用于有形的或无形的东西, 如 ask for bread, ask for ticket, ask for help, ask for information 等。

作“请求”解时, 后可接 that 从句, 从句的谓语动词用 shall, should 或虚拟语气现在时, 如: I asked that he call (不是 called) that evening.

4. 可能性

有许多方法可以用来表示可能性,形容词 *possible*, 名词 *possibility*, 副词 *possibly* 和 *perhaps* 是显而易见的表示方法。

A suitable lever makes it *possible* to exert a large force by the use of a small force.

It is entirely *possible* for us to fulfil the task ahead of schedule.

I see great *possibilities* in the experiment.

If I could by any *possibility* manage to do it, I would.

He may *possibly* recover.

Could he *possibly* agree?

Perhaps they are in need of our help.

Perhaps this steel is strong and tough.

当疑惑或不确定和可能性混合一起时,常用 *may* 或 *might*。

May I use the instrument to measure?

It *may* not take too much time to solve the problem.

In most cases the calculations *might* not be accurate.

Under open sky, the coefficient *might* range from 3 to 5.

may 或 *might* 在某些场合还可表示根据合情合理的期待或希望看来是可能的事物。

The weather has been excellent, so we *may* expect a good harvest.

He said he thought we *might* expect a good harvest.

may 也可以用来表示某种自然发生或由安排结果所产生

的可能性,在这种情况下就很少有或没有不确定的成分,因此否定句要用 *cannot* 或 *be impossible*, 不能用 *may not*。

Specimen copies of the textbooks *may* be obtained on application to the publisher.

A plan of the new housing estate *may* be seen at the offices of the Town Council.

may, might, can, could 常表示可能。

You *may (might, can, could)* walk for miles through the forest without meeting anyone.

当“可能性”和“非确定性”同时存在时,用 *may*。

The news *may, or may not, be true*.

在问到“可能性”的问句里,要用 *can*。

Can the news be true?

以下两种句型表示可能发生的事,此事多是不如意。

It is (just) possible that ...

There is a remote chance that ...

下面三种句型也是很有用的,表示在一个不受欢迎的机会可能发生的事(常是不如意的事)。

① *if* 从句 + *should*

If there *should* be a fire, all workers will leave the building.

If the boiler pressure *should* rise too high, the safety valve will blow off.

If a high level radiation *should* escape, it can be very dangerous.

② 使用 *in the event of*, 或 *in case of* + 名词

In case of fire, all workers will leave the building.

In the event of a power-breakdown, the emergency genera-

tor can be switched on.

③ 使用 *in case*

An emergency generator is provided *in case* there is a power breakdown.

A safety valve is fitted *in case* the pressure in the boiler rises too high.

5. 类似

表示“类似”常用的词与词组有: *alike*, *as*, *identical*, *like*, *parallel*, *similar to*, *same*, *same to*, *comparable* 等。

These computers are very much *alike*¹⁾ in size and weight.

Measles and chickenpox are similar diseases, but they are not *alike* in certain respects.

The compression ratio in a jet is not constant, *as*²⁾ in the reciprocating engine.

The line AB is as long *as*²⁾ the line CD (is).

The cylinders must be machined with great care so that they are all *identical*³⁾.

The engine is *identical* with the other one in every respect.

D. C. machines, *like*⁴⁾ A. C. machines, have an A. C. voltage generated in the armature.

Particles bearing *like* charges tend to repel one another, whereas particles bearing unlike charges tend to attract one another.

The electronic computer *parallels*⁵⁾ the one we saw yesterday.

Your new sample is not a close *parallel* to our sample. (n.

相似之物)

This lathe is *parallel* to that one. (a.)

A blast furnace is *similar*⁶⁾ to a cupola, except that it is bigger.

This matter looks quite *similar* to that matter in appearance.

The two machines are the *same*⁷⁾ in most respect.

This machine is exactly *the same as* the other one in design.

Transistors and vacuum tubes are quite *comparable*⁸⁾ in many respects.

注 1) alike *a.* 指“相似的”、“类似的”、“同样的”，强调部分的“相似”，或“类似”的意味。只能用作表语形容词。不可用 very alike，而用 much alike, very much alike。如：They are much (very much, exactly, somewhat) alike in appearance.

2) as 作 *conj.* 和 *prep.* 时，可以有多种解释。

在作“类似”、“象”解时，as 同 like 容易混淆。其区别在于：as 是连词，后面的动词或整个谓语部分往往可以省略；like 是介词，后接名词或代词作它的宾语。like 侧重比较，不意味着属于一类或完全相似；as 侧重同一性，意味着属于一类或完全相似。如：

He speaks English like an Englishman. (意味着讲的与英国人有些相象)

He speaks English as an Englishman. (意味着讲的与英国人一样好)

as ... as “和...一样”。第一个 as 是副词，作“一样”解；第二个 as 是连词，作“相同”、“象”解，用于肯定句。

3) identical *a.* 强调事物之间的“完全相同的”、“同一的”,语气较强,后面通常接 *with*, 间或接 *to*。

4) like *prep. ; a.* 普通用语,表示全部特点的完全类似或仅有一点的偶然相同。*like* 放在表语的位置时,可以作表语形容词,位于系动词 *be*, *look*, *feel*, *become* 等后面。如: *It looks like raining. I cannot see what it is, but it feels like some kind of metal.*

5) parallel *v. t. ; n. ; a.* 强调事物在发展、结构、历史、趋向、外观等方面“相似”或“相同”。作形容词多指两条直线无论如何延长总是保持平行。

6) similar *a.* 强调事物之间的“相象”或“类似”,其中的差异可以暂时忽略。在句中只能作“定语”或“表语”,后接 *to*。

7) same *a.* 强调方向、数量、种类、性质、方式等方面的“相同”或“无差别”。*same* 前要冠以 *the* 或 *this*, *that* (口语例外)。

8) comparable *a.* 强调某一点或有限几点的相似性。

6. 例外

表示“例外”常用的词有: *except*, *except that*, *excepting*, *exception*, *but*, *but for*, *without*, *besides*, *apart from*, *in addition to* 等。

The whole of the energy of the exhaust gases, except¹⁾ a small amount required to derive the compressor, is used to provide thrust.

Nowaday all except¹⁾ the smallest aircraft have power-assisted controls.

This second atom has exactly the same properties as the

first, *except that*¹⁾ it is twice as heavy.

All of us not *excepting*²⁾ the most mature cadres, should study politics constantly.

All my brothers come here every day, always *excepting* the youngest.

There is an *exception to*³⁾ the rule.

With the exception of its high cost, this type of machine would be very suitable.

*Except for*¹⁾ iron and steel, aluminium is the commonest metal used in the workshop.

I have written all my letters *but*⁴⁾ one.

They could do nothing *but* wait for the doctor to arrive.

*But for*⁵⁾ the leadership of our Party, we would not have succeeded.

But for air and water, nothing could live.

A carburettor will not give correct mixture strength at high speeds *without*⁶⁾ a compensating jet.

The bearings would rapidly become worn *without* proper lubrication.

The constructions of the dam cannot be started *without* a thorough investigation of the problem involved.

*Besides*⁷⁾ Eros, there are numerous minor planets in the solar system.

The lathe can perform a variety of other operations *besides* turning.

Several other losses must be taken into account *apart from*⁸⁾ friction-loss at the blades.

There can be no knowledge *apart from* practice.

*In addition to*⁹⁾ its use in accumulators, lead is also used as the base for lead joint.

They have one hour to read newspapers *in addition to* their ordinary work.

注 1) *except prep.* 把…从整体中排除出去。因为所说的道理或叙述的事实不适用那一部分。*except* 用作介词后面不但可以接名词或代词,也可接介词、副词或由 *that, when* 等引起的从句,再如:

He has always been in good health *except in* the past few days. (接介词)

He has always been in good health *except quite recently.* (接副词)

He has always been in good health *except when* he had a slight headache. (接 *when* 从句)

2) *excepting prep.* 除…外。现只用于短语 *not excepting, always excepting, without excepting* 或放在句首。

3) *exception n.* 例外,除外。后面接 *to*。用 *without exception* 或 *without any exception*, 比用 *without an exception* 普通。*with the exception of* 介词短语,意“除…以外,其余的都…”。

4) *but prep.* 除了,除外。作介词用时与 *except* 意义相近,一般只用于 *all but, nothing but* 或其他含否定意义的结构中。*but* 着重意义的几乎完整性;相形之下,*except* 更着重后面的例外。

5) *but for* 与 *except for* 的区别是:*but for* 一般用于虚拟语气,*except for* 用于陈述语气。

6) without *prep.* 没有。常作条件状语用。

7) besides *prep. ; adv.* 此外, 还有。后面间接没有 to 的不定式, 如: That afternoon I had nothing to do besides answer letters. answer 为不定式省略了 to。besides 后还可接以 that 引起的从句, 如: Besides that he explained the theory, he gave us several examples.

8) apart from 除了... 以外。也可作“离”解, 如: They stood far apart from us.

apart 还可同其它词搭配, 如:

put...apart 单放; keep ... apart 保持分开;
tell ... apart 辨别; quite apart from 更不用说。

9) in addition to 介词短语, 意“除... 以外, 还有...”。

7. 不同

在表示“不同”时, 要注意介词的使用。

Nuclear power stations *differ*¹⁾ *from* ordinary power stations in their source of heat.

This typewriter *differs from* the other one in shape.

*Different*²⁾ organisms have been dominant at *different* times and places.

Heat waves are *different from* light waves only in their *different* wave lengths.

The main *difference*³⁾ between light waves and radar waves is in length.

Today's engines are of much greater *difference* from those used in the past.

This machine can be *distinguished*⁴⁾ from the other one by its shape.

We normally make a *distinction*⁵⁾ between those substances which are good conductors of current and those which are not.

Can you tell the *distinction* between these two plants of the same genus?

It is useful to *distinguish* between a boiler and liquid pump.

This shows the *diversity*⁶⁾ of plants.

The low-pressure compressor has four stages of compression, *unlike*⁷⁾ the high-pressure compressor, which has eight stages. (unlike 为介词)

The engine *as opposed to*⁸⁾ the earlier one, has six cylinders.

Jet aircraft can fly at supersonic or hypersonic speeds *as against*⁹⁾ the 600 m. p. h. maximum speed of a propeller driven aircraft.

The strength of the alloy *varies*¹⁰⁾ according to the substances it contains.

Apparent distance (by eyes) *varies* with the weather, background, etc.

There are *various*¹¹⁾ mineral specimens in the geological museum.

The surface of a metal is attacked by *various* gases in the atmosphere.

注 1) differ *v. i.* 与…不同,与…不一样。强调种类、特性或观点的不同,并不表明差异的范围或程度。在用作“不同”解时,后接 from;在用作有“不同意见”或“表示异议”时,后接

with 或 from 都可以,但用 with 更普通一些。如:As we know,they differ with (或 from) you in this subject. He differs with her from you. (他和她同样地跟你有不同意见。)

2) different *adj.* 不同的。后接 from, to 或 than, 以接 from 最普通。接 to 主要用在英国,接 than 在美国较英国多一些。different 是普通形容词,可以说 very different,但也有用 much different 的。有人认为 no different 不及 not different 正当,事实上 no different 比 not different 普通,二者还包含有“一模一样”、“毫无不同”等意思。例如:Your plan is no different from mine. (你的计划跟我的计划是一样的。)

3) difference *n.* 不同,差异。是普通词,泛指“不同”、“差异”。

4) distinguish *v. t.* 显示…的特色。常用被动式。distinguish A and B 和 distinguish between A and B 都可以,在主动语态里用 between 普通些,在被动语态里用 and 普通些。如:We must carefully distinguish between the present participle and the gerund. The present participle and gerund must be carefully distinguished.

5) distinction *n.* 不同,界限。强调应该加以分辨、不容混淆的一面,又指外表上的细微区别。

6) diversity *n.* 差异,多样性。就字义而论,指大的根本的区别,又指差异的多样性。

7) unlike *prep.* 和…不同,不像…。也可作形容词,意“不同的”、“异”,如:

The experiment leads to the conclusion that unlike charges attract each other.

8) as opposed to 与…相反。as 后省略了 it is, oppose 后

接 to, to 为介词, 不可使用不定式。

9) as against 中, against 为介词, 意“违反”, “对比”, “对照”。as 后省略了 it is。

10) vary *v. i.* 不同, 变化。有时可与 differ 通用, 它主要表示已经存在的差异, 并常表示差异的范围。vary from 着重指变化后产生的差异, 如: Right before liberation the market prices varies from hour to hour。

11) various *adj.* 各种各样的。指同一范畴内的不同种类, 后面只用复数名词。如: Representatives from various parts of the country have arrived in Beijing. various 有时强调不止一个。

8. 决定

表示“决定”常用的词与词组有: decide, determine, determination, resolve, settle, make up one's mind 等。

We have *decided*¹⁾ to tap oil resources in order to meet the demand of energy in our growing industry.

I do not like to *decide* hastily upon such an important matter, as we are not sufficiently acquainted with the data provided.

Mass and speed are the two factors that *determine*²⁾ the kinetic energy of a moving object. (*v.*)

The hardness of the surface of a gear *determines* its resistance to the wear.

He carries out a plan with *determination*. (*n.*)

He *resolved*³⁾ to do better scientific work in the future.

They *resolved* upon designing a new lathe.

I will keep my *resolve* until my graduation. (*n.*)

The designers of the engineering took proper steps to *settle*⁴⁾ satisfactorily on the matter without any friction.

The problem of the assembly line will be *settled* in the course next year.

I have *made up my mind*⁵⁾ to do it.

The workers of this institution have *made up their minds* to have all the walls whitewashed.

注 1) *decide v.* 决定。着重经过考虑或商议,在几种可能中“作出一定的选择”。*decide* 后面可连用不定式如第一句,或名词从句,或介词 *on*(*upon*)如第二句;当接 *that* 从句时,从句谓语动词用 *shall*, *should* 或虚拟语气现在时,如: *We have decided that the meeting (should) be held on Saturday.*

用 *decide* 容易犯双重被动的错误,如不可说 *He has been decided to be helped.* 应改作 *It has been decided to help him.* 用 *it* 作主语、*decided* 作被动式,用以表示一种客观的、较正式的决定,这在科技写作中也是常使用的。

“决定不…”要用 *decide not to do*,如: *The physician decided not to continue the drug therapy owing to the severe allergic reaction.*

decision n. 指迅速地、具体地决定,如: *He made a prompt (wise, wrong) decision.* *decision* 后可接不定式,如: *my decision to apply for further particulars.*

decisive adj. 决定性的。*decisive evidence* 确证;

a decisive answer 明确的回答。

2) *determine v.* 原意是“确定”,引伸为“决定”,指决心做一件事,任何其他因素都不能动摇这一决心。作决定解时,

可用过去分词 *determined* 作形容词, 相当于 *resolved*, 说明一种状态, 即坚定不移的决心, 如: *We are determined to get the work done before October 1.*

determine 后接不定式比接 *on (upon) + 动名词* 普通; 当接 *that* 从句时, 从句谓语动词用 *shall, should* 或虚拟语气现在时, 如: *He determined (或 was determined) that he should have a good education.*

同样 *determination* 后接 *that* 从句时, 从句谓语动词也用 *shall, should* 或虚拟语气现在时。*determination* 或 *a determination* 后接不定式, 如: *my (a) determination to go*, 但 *my (your) determination* 和 *the determination* 后也可接 *of + 动名词*。

3) *resolve v. ; n.* 决定, 决心。指已作出做某事或不做某事的决心。*resolve* 作名词, 表示个人的“决心”, 如 *That is an admirable resolve. He is still keeping his resolve.* 句中用 *resolve* 比用 *resolution* 普通; 表示“决定性”用 *resolution* 比用 *resolve* 普通。

resolve 作动词, 后接不定式较 *on (upon) + 动名词* 普通。*resolved* 为过去分词表示一种状态, 后接 *that* 从句时, 谓语动词用 *shall, should* 或虚拟语气, 如: *We have resolved that our school should have a laboratory.*

4) *settle v.* 指已经作出了决定或得到了解决办法, 例如确定事件、战争问题、目的、信仰、继承、住所、时日等。

Our plans are now settled.

I have settled to go abroad.

settle 又指“由…运动而渐渐静止在稳固的地方”, 如: *The dust particles will settle down in the short run.* 又指沉

降、(使液体等)沉淀。

5) make up one's mind 是与 hesitate(迟疑), waver(动摇), be puzzled(困惑,不知所从)等相对的说法,意味着“打定主意”。make up one's mind 后面可不接任何词,有时接不定式,如上面的例句,有时接 what, when, that, 间或接 to, for 和名词。如:

He has made up his mind.

He has made up his mind what to do.

He has made up his mind when to start.

He has made up his mind that she should work more.

He has made up his mind to a certain course of action.

He has made up his mind for the worse.

在 made up our minds (your minds, their minds) 中 mind 要加 s。

9. 问题、困难、解

表示“问题、困难、解”常用的词与词组有: problem, question, issue, difficulty, solve, solution, resolve 等。

These *problems*¹⁾ were approached (tackled) by a study of the air flow in the choke.

Various *problems* were solved (were dealt with) by the provision of a compensating jet.

Whether the materials could stand the test remains a *question*²⁾.

The *question* is how to properly put the shuttle into orbit.

Automation is not a *question* of machines replacing man, but largely a question of extending man's faculties by machines.

The main point *at issue* is whether one can be really “expert” without a thorough knowledge of Marxism-Leninism. (争辩的问题)

Before we take the step, we must consider carefully all the *issues*³⁾ involved.

Various *difficulties*⁴⁾ were encountered in the development of a satisfactory carburettor.

The *difficulty* was overcome (avoided, got round) by providing a compensating jet.

Knowing certain values enables us to *solve*⁵⁾ the equation.

The diagram will help to *solve* (in the *solution* of) some of these problems.

The problem is quite incapable of *solution*⁶⁾. (insoluble)

We have *resolved*⁷⁾ all doubts and difficulties in the experiment.

The solar energy converter will surely help us to *resolve* many industrial problems in area lacking fuel.

注 1) problem *n.* 问题。指客观存在的等待解决的“问题”，强调疑难的或困难的问题。用作形容词时，含意为 difficult (难对付的)，restless (动荡不安的) 或 distressed (受灾难的)。

2) question *n.* 问题。为普通用词，指要求回答或解决的问题，尤指重大的政治问题、社会问题等，着重疑惑和不能断定。

There could be no question of是不可能的。

There is no question that是没有疑问的。

3) issue *n.* 问题。指意见不能达到一致的问题，着重分歧

和争论。*at issue* 为词组,意“争辩的问题”。*issue* 含意较多,作名词还可指报章刊物的一“期”,“后果”、“结果”等。作动词时,含意为“流出”、“出来”、“发出”等。

4) *difficulty* *n.* 困难。*adj.* *difficult* 多意味着“复杂”、“难于处理”、“需要智慧或技巧”。与 *difficult* 常通用的有 *hard* (*adj.* 困难),且较口语化;但 *hard* 作“困难”解时无相应的名词形式,不能用 *hardness*。

5) *solve* *v. t.* 解,算出,解答。指只要一找到途径或公式,便能很容易地找到一个答案,尤指解答难题等。

solve with 指“通过…解决”,如:*A good share of the problem of energy shortage can be solved with energy conservation.*

6) *solution* *n.* 解,解决。后面接 *of*, 或 *to*, 或 *for*, 如:*There is the solution of (to, for) the problem. He offered what he considered a temporary solution of (to, for) my problem.*

7) *resolve* *v.* 解决,消除。指找到一个最合适的办法解决矛盾,消除疑难,解决难题等。又作“分解为”、“解析”、“〔光〕分辨”解。

10. 表明、指出

表示“表明,指出”常用的词与词组有:*express, voice, show, show up, display, indicate, reveal, point out, exhibit* 等。

In binary scale, 2 is expressed¹⁾ as 010; 3 is given as 011; 4 is represented as 100, etc.

The distance can be expressed in light years.

The worker's speech voiced²⁾ the feelings of the masses. (表达,吐露)

They *voiced* their approval of the machine design.

Radiographs *show*³⁾ no great changes after surgery. (表明, 表示)

This diagram *shows* the solar eclipse and the lunar eclipse in 1975.

The foreign body can be *shown up* on a barium swallow. (显示出)

Radar information is not always *displayed*⁴⁾ on the radar screen.

The machinist *displayed* his first-rate technique in his work. Precise measurements by instruments *indicate*⁵⁾ that our land is constantly rising and sinking. (表明, 表示)

The reading of the voltmeter *indicates* 220 volt A. C. (指示)

The astronomical study *revealed*⁶⁾ that the earth is but a small depended body within the orbit of the sun.

Chemical and X-ray analysis *reveal* the composition of minerals.

It has been *pointed out*⁷⁾ that his suggestion is reasonable to a certain degree.

Andre Marie Ampere was the first to *point out* the electrical nature of magnetism. (指出, 表明)

Our peasants have *exhibited*⁸⁾ great creative power in improving their tools. (显出)

The Institute of Archaeology *exhibited* unearthed cultural relics in Beijing. (展览)

On *exhibit* are new products of industry and agriculture.

注 1) *express v. t.* 表示。为常用词, 指以某人的思想、感情

来表达他的经验、想象。

2) *voice v. t.* 表达,吐露。科技上用作“表示”,既指用声音表示,也指用文字表示;作名词用时,通常指人声,有时指“动物声”,不指一切声音(*sound*)。

3) *show v. t.* 表示,指出。为普通用词,用法广泛,指给某人显示某物或表现出某物进行的某种变化;作及物动词用时含义较多,主要有:显示、指出、表演、证明、引导等。

作不及物动词比较少,指“露出来”的意味较强,如: *Do you think the stain will show?* *show* 后面接反身代词时表示“呈现”。

4) *display v. t.* 表现,陈列。指某物清晰地出现或展示出来,含有供人观看之意。

5) *indicate v. t.* 指出,指示,表示。即粗略地指出字面意义是什么,指某物表示的思想是什么,或表示症状、现象、原因等。名词为 *indication* (指示,表示)。“*Indications are that there will be a good harvest.*”里 *indication* 习惯用复数式,且前面习惯不用冠词 *the*。

6) *reveal v. t.* 揭示,揭露。用法较广,本意为揭露、披露,指揭露隐藏或隐秘不为人所知的事等。

reveal itself 表现出来,出现。

revealing 指“有所显露的”,“揭露真相的”,后接 *of*, 如: *The author gives a revealing picture of the Negroes' life in America. Little things are often revealing of one's character.*

7) *point out* 指出。常用于直接用手或其它的东西指出一种东西。例如将一本书给人家看称为 *show*; 指出该书的特点称为 *point out*。*point out* 也可用双宾语,如: *They pointed us out the building. = They pointed the building out to us.*

8) exhibit *v.* 显示,显出,展览 *n.* 展览品,展览会。
exhibit 作名词指一件展览品或一宗展览品,构成 exhibition (展览会)的一部分。exhibit 有时也作小型展览会解。

11. 讲述

表示“讲述”常用的词与词组有: say, tell, speak, talk, report, state, mention, inform 等。

He *said*¹⁾ the human brain can store information in various forms.

I'll stay here, *say*, three days. (*say*=let's say 大约,好比说)
Madam Curie's experiments seemed to *tell*²⁾ her that in the mineral she was examining there was some form of radiation man knew nothing about.

The experiment *tells* us that semiconductors have a lesser conducting capacity than metal.

Properly *speaking*³⁾, not all substances exist in all three states.

She can *speak* Russian fluently.

Many deaf-mutes began to *talk*⁴⁾ after acupuncture treatment.

The minister *talked* about the prospects for industrial development in our country.

Another big oil field was *reported*⁵⁾ to have found in China.
He *reported* upon the accurate observation applied by a scientist at the meeting.

The law of conservation of matter and energy *states*⁶⁾ the total amount of matter and energy in the universe does not

change.

Coulomb's law *states* the electro-static force acting between two charged bodies.

As already *mentioned*⁷⁾, petroleum is a mixture of many substances.

All the compounds *mentioned* above are organic substances.

The engineer made no *mention* of the new grinding machine he had just designed. (*n.*)

I *informed*⁸⁾ the post-office of a change of address.

He *informed* a student of the facts of history.

注 1) say *v. t.* 说,说出。着重说的内容。一般用于引出直接、间接引语,或说出具体的事物,不可换用其它词;在直接引语时,尤须注意,不可使用 speak, talk 或 tell 等词。say 用于虚拟语气和祈使句中时,含意为“比如说”、“即使说”、“大约”,如:Let's say, say it were true, what then?

2) tell *v. t.* 讲述,说。有时兼含“嘱托”或语气较轻的“命令”等义。除了较少的情况,如:tell the truth(讲实话),tell a lie(说谎),tell a story(讲故事)等外,一般后面接双宾语,即直接宾语与间接宾语,如上面例句中有 her, us 为间接宾语,that 从句为直接宾语。有时 tell 后可以保存间接宾语,用介词 about 引出所说的事。如:Has he told you about the conference last night?

英语永远不可说 He told that..., told 后必须接人。

3) speak *v.* 讲,说。着重开口发声,不着重所说的内容,也可指正式场合的演讲。一般用作不及物动词,在用作及物动词时宾语只能是各种语言、truth(真话)等少数的词,不能接 that 从句。

4) talk *v.* 谈话, 谈论。talk 与 speak 意义接近, 也是着重说话的动作, 而不着重所说的事物。一般多用作不及物动词, 用作及物动词时宾语只能是某种语言、nonsense、business 等少数词, 不能接 that 从句。

talk 与 speak 的主要不同在于: talk 是对某个人讲的, 有较强的对答、讨论的意味, 有时 talk 表示“说个不休”。

5) report *v.* 报告。为正式用语, 不作“向…报告”解。如说“我向你报告”不可用“I shall report you”, report 后要加 to。“I shall report you”作“我将告发你”讲。report 后有时可接表语, 如: The situation is reported serious.

6) state *v. t.* 陈述, 说明。是正式用语, 指详细陈述、详细说明原因、理由。

7) mention *v. ; n.* 提到, 讲到。强调提到、提起、说过某人、某事, 也指说明、表明某人的观点、看法等。

8) inform *v.* 告知。为一般用语, 不及 tell 通俗, 不可有双宾语。如不可说 He has informed me his new address, 要在 his 前加“of”。inform 后要有宾语才可接 that 从句, 如不可说 I have to inform that I have removed to the above given address, inform 后要加宾语 you 才正确。

12. 举例

在举例时, 有时会使用 as 和 like, 其实最普通和最好的表达是使用 such as。such as 可连用也可分开, 不可只用 as。此外常用的还有 for example, for instance。

Like all moving mechanical devices, automobile can not escape from the effect of friction. (*prep.* 象…, 跟…一样)

We know waves in water move *like* the waveform moves a-

long a rope. (*conj.* 同…一样, 象…那样)

Some substances, *such as*¹⁾ tungsten, emit electrons when heated in a vacuum.

Projects, *such as*¹⁾ this one, require a great deal of planning. *Such* substances *as*²⁾ tungsten emit electrons when heated in a vacuum.

Such projects *as*²⁾ this one require a great deal of planning. The metal must be able to withstand very high temperature *such as*³⁾ (= of the kind which) is encountered in the high pressure compressor.

Soldering is one way of making joints in wire *such as*³⁾ occurs in electrical work.

The temperatures at the turbin blades are as high as 500°C. *Such* temperatures (as these) need special materials.

Some materials offer a very great resistance to the flow of current. *Such* materials are called insulators.

We have planted many kinds of vegetables—*for example*⁴⁾, beans and cabbages.

The Commercial Press will bring out in the coming year several very useful dictionaries, *for example (instance)*⁵⁾, an up-to-date Chinese-Korean dictionary.

For example, twice two is equal to four.

Take, *for example (instance)*, our factory. The vice-manager is a worker.

But there are marked exceptions to this rule, *for instance*⁶⁾, with the rabbit.

For instance, the lion and the tiger are beasts of prey.

注 1) such as 作“例如”解, such 为代名词。在第3、4句中, such as 前有逗号, 逗号前是复数名词, such as 后的 tungsten 和 this one 是逗号前名词的同位语。

such as 举例时, 只要举出一部分, 不要举出全部。例如可以说: He knows six languages, such as Chinese and English. 不可说: He knows six languages, such as Chinese, English, Russian, French, Spanish, and Portuguese. 此句要将 such as 改为 namely (namely 后加逗号)。用了 such as 最好不用 etc., 最好不说 He knows six languages, such as Chinese, English, etc. . (但也有认为必须加 etc. 的)

2) 第5、6句中的 such 在名词前, 为形容词, 其后的 as tungsten 和 as this one 为省略了动词 is 的定语从句, 以进一步说明 such。

3) 第7、8句中的 such 为代词, such 后面跟随 as, as 引出定语从句, 修饰 such。用了 such, 不可用关系代词 which, who, that, 也不可用关系副词 where, 如: Do not talk about such things which (或 that) you do not understand. 一句中要将 which 或 that 改作 as, 或将 such 改作 those 或 any 才对。Do not associate with such young men who do not work hard. 一句中要将 who 改作 as, 或将 such 改作 those 或 any 才对。Do not go to such places where there is no fresh air. 一句中要将 such 改作 those 或 any 才对。

4) example 意为“例子”, 指一种具有代表性或说明性的例子, 又可作“范例”。for example 是举出例子作为说明的意思。

5) 有时 for example 和 for instance 相互替用。在举例说明某一论点或情况时, 两者没有什么区别。有时两者都可以作

为独立语、插入句,不影响句子其它部分的语法关系。

6) instance 的意思也是例子,指用以证实的例子。*for instance* 意“例如”,是举实例以说明的意思,它比 *example* 更多个别的意味,较少代表性。*instance* 指单独的例,必须没有同样的例时使用。通常用 *example* 作为说明 (*illustration*),用 *instance* 作为证据 (*proof*)。

13. 依赖于(不依赖于)、可靠的

表示“依赖于,不依赖于,可靠的”常用的词与词组有:*depend on*, *dependent on*, *dependence*, *dependable*, *reliable*, *according to*, *according as*, *rely on*, *reliance upon*, *independent of* 等。

The aircraft *depends on*²⁾ its wings and engines to provide lift. (依靠)

We *depend on* the sun's rays for light and warmth that keep us alive. (依靠)

The size of the copper conductors will *depend*¹⁾ primarily *on* the current to be carried. (取决于,随…而定)

The steel will be mild or hard *depending on* the proportion of carbon it contains. (取决于,随…而定)

Sweden is *dependent on* the hydro electric resources for power.

The hardness of the steel is *dependent on*³⁾ the proportion of carbon it contains.

The *dependence*⁴⁾ of parts one *on* another is quite close.

He has found out the *dependence* of theory *on* practice.

The aircraft is *dependable*.⁵⁾

The *dependable* feature of the new instrument assures the rate of change of the momentum of a body being in proportion with the force acting upon it.

With transistors, all kinds of electronic equipment could be made more *reliable*⁵⁾.

Application of radio is the most *reliable* way to detect a man-made satellite and to determine its orbit.

The metal will expand or contract *according to*⁷⁾ whether the temperature rises or falls.

The crops may be good or bad, *according as*⁸⁾ the weather is good or bad.

When doing the experiment, she must *rely on*⁹⁾ her own effort.

You can't *rely upon* the weather.

Our *reliance* should be *on* our own effort.

We place *reliance upon*¹⁰⁾ your judgment.

The climate remains the same, *independent of*¹¹⁾ the season of the year.

A unit is a component of a machine that may be assembled *independently of* the other components of the machine.

These factors are not *independent of* each other.

He wrote book *independently of* convention.

Using Kummer's theory, we have from the multiplicative *independence of* a_1, \dots, a_n that $Q > C_n q^n$.

The American colonies declared their *independence of* Great Britain.

注 1) depend on *v. i.* 取决于, 随...而定。指内心的犹豫不

决而无法预告。

2) *depend on* 依靠。*depend* 为不及物动词。一般不及物动词不能构成被动语态,但 *depend+on* 即相当于一个及物动词,在介词后面用先行词 *it*,然后引出一个由 *that* 引导的介词宾语从句。如: *We may depend upon it that they will support your proposal.*

3) *dependent a.* 后面接 *on*。

4) *dependence n.* 依赖,依靠。用于抽象的事物。

5) *dependable adj.* 可靠的。表示在需要或紧急时刻的稳定性和可信赖性,含意与 *depend* 略有不同。

6) *reliable adj.* 可靠的,确实的。指其所形容的人或物能信得过、靠得住的。

7) *according to* 依照,随...而定。后接名词或代名词。

8) *according as* 依照,随...而定。后接从句。

9) *rely v. i.* 信赖,依赖。指依赖某人或某事物,得到所需要的效果。后接 *on* 或 *upon*。*rely* 虽是不及物动词,但同 *on* (*upon*) 连用,可当作及物动词,并可用于被动语态。如: *He can be relied on to finish the task single-handed.*

10) *reliance n.* 信赖,依靠。后接 *upon, on, in* 都可以。

11) *independent adj.* 不依赖于。与 *dependent* 意义相反,后接介词 *of*。副词 *independently* 和名词 *independence* 后都接介词 *of*。此词没有动词形式。

14. 发生

表示“发生”常用的词与词组有: *happen, arise, befall, occur, take place* 等。

If anything should happen¹⁾ to the panel, the alarm light

would illuminate immediately.

Since the installation of the new device, not a single accident has ever *happened* in the pit.

The new problem *arose*²⁾ from the changes in temperature.

Development *arises* from the contradictions inside a thing.

If such a calamity *befalls*³⁾ us again, we shall be ruined.

A succession of misfortunes has *befallen* us.

Cholera *occurs*⁴⁾ sporadically in the world now.

A violent earthquake *occurred* there last night.

In such laceration, healing usually *takes place*⁵⁾ within a week.

Energy has to be exerted to make a chemical change *take place*.

注 1) happen *v. i.* 是一般用词,尤指偶然发生,或不能预见的客观事物和情况的发生。不能用于被动形式,其过去分词也不能用作形容词。

2) arise *v. i.* 发生,出现。多指疾病、新问题、困难、疑问、结果等的“发生”、“出现”。主要用在无形的东西的发生;有形的东西通常用“rise”。

3) befall *v. t.* 经常指不愉快的事发生,而 happen 多指愉快或不愉快的事的发生,befall 比 happen 更强调命运的摆布。befall 只用第三人称作主语,又常和间接宾语连用,如上面例句。

4) occur *v. i.* 常指意外事或计划中某事的发生,可用具体事件或抽象的事物作主语。在表示具体事物时,occur 可同 happen 互换。一般 occur 比 happen 更正式,强调“呈现”于人的知觉、心、脑时不能用 happen 代替。

5) take place 作“发生”也可作“举行”解,指某种确定的事照常实施,并无偶然之意。

15. 疾病

表示“疾病”常用的词与词组有:disease, illness, sickness, complaint, trouble, affection, ailment, indisposition, infirmity 等。

The patient has reached the crisis of his *disease*¹⁾.

This medicine has no efficacy in that *disease*.

In case of serious *illness*²⁾, the doctor is called in.

He was recovering from his *illness*, but has been thrown back by catching cold.

Workers in capitalist countries are constantly threatened by *sickness*³⁾ and unemployment.

He is confined to bed by *sickness*.

It is a chronic *complaint*⁴⁾.

I have a *complaint* in chest.

I have heart *trouble*⁵⁾.

He has a *trouble* in his eyesight.

He has an *affection*⁶⁾ of the skin with pustules.

I have a nervous *affection*.

He is free from some *ailment*⁷⁾ or other.

She has a trifling *ailment*.

He has been complaining of *indisposition*⁸⁾.

His sister was again invited to join the little Wardlaw circle, but declined upon the plea of *indisposition*.

Tuberculosis is not a terrible *infirmity*.⁹⁾

Rheumatism is a terrible *infirmity*.

注 1) *disease* *n.* 疾病。一般用语, 是用以指各种病的术语, 特指沉重的、长期的并足以引起机体的变化的疾病, 如肺病、心脏病等。

2) *illness* *n.* 疾病。最普通的用语, 不管病期的长短、病势的轻重, 凡是病都可称作 *illness*。*illness* 的形容词是 *ill*, 可作表语, 意“有病的”, 如 *He is ill*。*ill* 放在名词前, 如 *ill health*, *ill manners*, *ill breeding*, *ill humour* 时, *ill* 作“坏”解。

3) *sickness* *n.* 疾病。比 *illness* 较为庄重, 直到十八世纪还经常被使用。现今它限于船晕、胃病之类, 不用以指一般的疾病。指一般疾病时多用 *illness*。但在美国, 它同于 *illness*。形容词是 *sick*。另 *sickly* 是虚弱的意味, 不一定是指生病。

在英国 *He is sick*. = *He vomits*. (他呕吐), 但在美国 *He is sick*. = *He is ill*. 用 *the sick* 表示病人, 而不用 *the ill*。

4) *complaint* *n.* 疾病。为“慢性病”的通俗用语, 严格说应指使人阵阵作痛的“病”。但在医生口中, 常泛指一般大小毛病, 例如一个医生可以问病人: *What is your complaint?* 但 *complaint* 不如 *trouble* 常用。

5) *trouble* *n.* 病。在口语中较普通, 是较随便的说法, 不用在严肃的或科学性的写作中。

6) *affection* *n.* 病。指一定的器官的病态, 和 *disorder* 相同, 指限于局部的病。

7) *ailment* *n.* 病。指慢性的而又不甚严重的病, 不用在急性病上。

8) *indisposition* *n.* 不舒服。大体和 *disorder* 相同, 指轻微的疾病。

9) *infirmity* *n.* 病弱, 病。指天生的虚弱。

“疾病”在英国称 *illness*, 在美国称 *sickness*; “轻病”称 *indisposition, ailment*; “不健”称 *ill health, failing health*; “病症”称 *a disease, a malady, an evil*; “局部的病”称 *a complaint, a trouble, a disorder*; 专家们称病为 *a case*。在作形容词时英国用 *ill*, 美国用 *sick*。

16. 如何提出问题

一般带问号的直接问句多用在口语中, 反问疑问句在科技写作中几乎很少看到。在科技写作中多是用一些词或短语来表达问题, 实际上它们并不是问话, 因此没有问号, 不用颠倒主语和动词。

现将科技写作中常使用的一些词组举例如下:

It is necessary to *determine (examine, investigate, estimate, discover, test) whether*¹⁾ these results are accurate (*how much*²⁾ fuel will be consumed).

Information is needed *as to*³⁾ which type of fuel is most suitable.

A decision will be taken *as to* how the waste can be disposed of.

It is *doubtful (not clear, unknown) how* accurate the results are.

The progress of the work will *depend on what*⁴⁾ the weather conditions are like (*how efficient the organization is*).

It is necessary to *decide on which*⁵⁾ type of fuel is most suitable (*how powerful the engine should be*).

The type of pump used will vary *according to what* type of liquid is being pumped (*how much liquid is being pumped*).

注 1) whether 一般用来表示犹疑两可、包含正反两面的问题。在引导名词从句表示是否时, whether 同 if 相同, 可互换, 如: They have not decided whether (if) they should repair the machine or whether they should design a new-type machine. 但用 whether 时, 正反两面的选择意义较强; 用 if 时, 比较强调单方面。比较下面两句:

He asked me if he could come. (暗含“他很想来”, 因此问我是否可以来。)

He asked me whether he should come (or not). (他个人对来不来是无所谓的, 仅仅是问或请示是否应该来。)

2) how much 用于不可数名词, how many 用于可数名词。how 可构成主语从句、表语从句、宾语从句、同位语从句, 从句内主、谓词语序不颠倒。如:

It is clearly known how these elements are combined. (主语从句)

The question is how much one cubic foot of air weighs under normal conditions. (表语从句)

I do not know how many English words you have learned for two years. (宾语从句)

He answered the question how resistance is affected by temperature. (同位语从句)

3) as to 介词短语, 在句首作“至于”解, 在句中作“关于”解, 此处 to 为介词。作“至于”解时也可用 as for, 但 as for 不可放在句中。如: As to (As for) this watch, it can be guaranteed for one year.

A question arises as to how we shall refit the equipment. (as to 在句中引入一名词从句, 不能用 as for)

as to 这样用作“关于”解很普通,有些英美人不赞成它,认为意思模糊。但用得适当,并不模糊。不过要注意在可能用确切些的介词时,最好不用 as to。如下面的介词不宜用 as to: my plans for the future, a keen interest in science, his views on education, her objections to the scheme, their attitude towards us。

4) what the weather conditions are like 为名词从句作 depend on 的宾语。what 为连接代词作 like 的宾语,what 作“什么”或“什么样的”解。what 可引出主语从句、宾语从句、表语从句。如:

What we usually call metals are not metals but alloys.

Do you know what the British unit of power is called?

This is not what I mean.

5) which type of fuel is most suitable 为名词从句作 on 的宾语。which 为连接代词引导名词性从句,在句中保持一定的词义,担任一定的句子成分,使用时应尽量把它放在从句开头处,意为“哪一个”、“哪一些”,再如:

Tell us which of the tests you will carry out first.

They came to know with which substances oxygen can combine.

五、运动与功能方面

1. 用

使用(或利用)某物进行工作。常用的词与词组有:apply, apply to, employ, use, utilize 等。

If we want to increase the motion of the molecules, we can

*apply*¹⁾ heat.

The laws that *apply to* air *apply to*¹⁾ all other gases.

These principles *apply to* learning botany.

The thermocrete technique *employs*²⁾ a special lightweight concrete for the construction of apartment buildings.

The miling machine is *employed* to cut helical gears.

I have been for over five years in the *employ* of this firm.

(*n.*)

His hands were diligently *employed* in the work. (*v.*)

This instrument has been widely *used*³⁾ in the laboratory now.

Indian students often *use*³⁾ “before” when they should use “ago”.

My books of reference are in daily *use*. (*n.*)

Underwater oil deposits had no value before science taught us how to *utilize*⁴⁾ them.

Different types of electronic computers are *utilized* for various purposes.

注 1) *apply v. t. ; v. i.* 可以有几种含义。作“用”解时，及物动词后可接宾语；不及物动词后接 *to* (*to* 为介词)，不能接不定式。如第3句，不可写作 *apply to learn botany*。

apply 的形容词为 *applicable*，名词为 *application*，作“用”解时都接 *to*。如：*The formula for kinetic energy is applicable to any object that is moving. The application of new technology to printing is carried out in this factory.*

2) *employ v. t.* 用，雇用；*n.* 雇用。为较正式用语，常和 *use* 通用，但 *employ* 特指为达到某特殊的、固定的目标而使

用。可用于人或物。作名词时也可使用 *employment*。

3) *use* *v. t. ; n.* 为普通用语, 强调把某人或物当作工具使用, 以达到某种目的。指人时含轻蔑之意。如: *Indian students often use "before" when they should use "ago"*。

used to 意“惯常”, 表示过去的习惯, *to* 为不定式, 不可用 *use to*。如可以说“*He used to come by train*”不可说“*He uses to come by train*”。*used to* 有“一向这样, 跟现在不同”的意思。如: *People used to think that the earth was flat*”。在疑问句里, 可以把 *used* 用在主语前, 如同助动词一样。如: *Used he to come by train?*

of use 有用的; *in use* 被用着的; *use for* 需要。

useful *adj.* 指“有用的”, “有益的”。如: *all sorts of useful farm tools*。

4) *utilize* *v. t.* 利用。强调某事物有用而利用它, 或为一项具体的用途而利用。与词组 *make use of* 相当。

2. 作、作用

表示“作、作用”常用的词与词组有: *perform, do, exercise, act, action, exert* 等。

Automation may mean linking together a group of automatic machines performing¹⁾ different operations to form an automatic production line. (作, 执行)

The doctor performed autopsy on the cancer victim. (对... 进行)

Engineers perform experiments to obtain information about the strength of materials.

The peasant is doing²⁾ research work on rice cultivation.

(作)

The computer can *do* millions of calculation in a minute.

(作,完成)

The success of experiments depends on the *exercise*³⁾ of thoroughness and carefulness of the experimenter and also on his ingenuity. (*n.* 使用,运用)

By *exercising* his ingenuity he devised a time-saving method.

(*v.* 运用,使用)

In order to make a body move, we must *exercise* a force on it. (*v. t.* 施加)

A body will move if a force *acts*⁴⁾ on it. (*v.* 作用于)

A body at rest will remain at rest unless it is *acted on* by an external force.

We may see the *action*⁵⁾ of the acid on glass. (*n.* 作用)

The locomotive is *put out of action*. (停止作用)

Weight is a pull *exerted*⁶⁾ on an object by the earth. (作用在,施加)

The medicine will *exert* a restraining effect on the action of the heart. (对...起作用)

注 1) *perform v.* 作,执行,完成。指精细地、严密地进行某事,所作的对象或事物具有一定的困难和复杂性。比 *do* 正式,后面可接 *duty*(职务)、*operation*(手术)等词。

2) *do v.* 作。是一般的用词,一般用作及物动词,特别是指具体事情或工作。在 *do nothing but* (或 *except*), *do anything but* (或 *except*) 和 *do less than* 三词后面的不定式省略 *to*。

have done 后面有时不接任何词,有时接动名词。如:

I have done. I have done writing.

do away with 和 do away 都作“除去”解,现在通常用 do away with,不用 do away。

3) exercise *n.*; *v.* 一般作“体格锻炼”和“习题”解,科技英语中常用作“使用”、“运用”、“施加”解。exercise 与 influence 连用作“起(…)影响”解。

exercise + in + 科目名称指“习题”,如 an exercise in English grammar(英语语法习题)。

4) act *v.* 作,作用于。为常用词。

作名词时,指动作的结果,暂时性的、简单的和个人的动作;与 action 有时混用。

5) action *n.* 作用,行为。用于抽象的、时间较长的、包括不同步骤的、可以连续或重复的行为。

act 用于已完成的行动;action 有时用于 act 的完成过程或该过程中起的作用,如: The accident was due to the action of acid on the check nut. 有些地方或者只能用 act,或者只能用 action,例如: in the (very) act of ... ing(正在作...的事), act of God(天灾), take action(有所举动,取某种行动), the action of the machine(这机器的作用)。

6) exert *v. t.* “施加”,“用(力)为”。为科技用词。

3. 功能或作用

功能(或作用)在科技写作中是常出现的,它与“目的”的概念比较相似,但它强调使用方面胜过目的。以下斜体字是表达功能方面较普通的结构。

The *function*¹⁾ of the superheater is to raise the temperature of the steam.

The *duty*²⁾ of the governor is to control the speed of the engine.

The *duty* of the spring is to keep the weights depressed.

The superheater has the *function* of raising the steam temperature.

The governor performs the *duty* of controlling the engine speed.

The spring performs the *duty* of keeping the weights depressed.

The superheater *serves*³⁾ to raise the temperature of the steam.

The governor *serves* to control the speed of the engine.

The spring *serves* to keep the weights depressed.

The superheater *serves as* a means of raising the steam temperature. (用作, 作为)

The governor *acts*⁴⁾ as a method of controlling the engine speed. (起…作用)

The spring *is used as* a way of keeping the weights depressed. (被用作, 把…用作)

The balls *serve as* weights.

The firebricks *act as* insulators to prevent heat radiation.

The slide-valve *are used*⁵⁾ as a means of admitting steam to the cylinder.

*Can*⁶⁾ you come to the meeting tomorrow?

These conditions *can* give an impetus to science.

He *used to be able to* speak German well.

He *seemed*⁷⁾ to be unable to give up his research.

This *appears*⁸⁾ to be able to explain the rule.

Tom *succeed*⁹⁾ in passing the examination.

We will *manage*¹⁰⁾ to offer you other brands of the Chinese black tea.

I *manage* to get (*succeed* in getting) the chemical apparatus into the box.

注 1) function *n.* 机能。指器官的作用,如胃的消化食物、舌的谈话、足的步行都是胃舌等的 function。

2) duty *n.* 职务,任务,责任。指对他人应当尽的本分或依据道德法律(moral law)应当尽的职务,自己对自己的义务也叫 duty。duty 后面通常接 of + 动名词(或名词)很少接不定式,如很少说: The governor performs the duty to control the engine speed.

3) serve *v. i.* 充当,起…作用。

serve for 起…作用,如: The tool serves for many purposes.

serve…with 把…供给,如: The coke chemicals plant serves the city with gas.

serve *v. t.* 对…有用,符合,适用。如:

The scientists are trying their best to make the work serve the needs of the technologists.

4) act *v. i.* 起作用,行动。是常用词。

act as 起…作用

act on (upon) 依照…行动,如: We act upon this plan.

5) use *v. t.* 用,应用。为普通用词,强调把人或物当作工具使用,以达到某种目的;指人时则含有轻蔑的意味。

be used as (or use … as) 被用作(把…用作)

be used in 用于,用来

make use of 利用,应用

use up 用尽

used (+inf.) 过去习惯于

be (get) used to (prep.) 习惯于

6) can 可以用来表示由环境所造成的能力,这种用法的 can 可以释义为“be in a position to”。因为 can 没有不定式,所以在 used to, seem, appear 后要用(to) be able to。

7) seem *v. i.* 看起来,似乎。指暗示有一定根据的判断,这判断往往接近事实。后可接表语,如: The problem seems very complicated.

It seems that ... 看来,似乎;

seem to be 似乎是;

seem to have + p. p. 看来已经。

It would seem 比 It seems 婉转。seem 后不可接 as,但可接 as if。

He seemed (to be) unable to give up his research 中的 to be 也可省略。

8) appear *v. i.* 呈现,好象。不指物质的明确背景或来源,仅指能够看得见或显得出的含义。强调外表上给人某种印象,有时含有实质上并非如此的意思。

9) succeed *v.* 成功。用来表示成就。后接 in + 动名词,不接不定式,例如:

〔正〕 I hope he will succeed in solving the problem.

〔误〕 I hope he will succeed to solve the problem.

succeed to 为继续, succeed 也可作继续解。

10) manage *v. t.* 管理,支配,控制。强调技术控制、管理某事并突出其成功的结果,但有困难需要加一把劲。

manage with 设法对付,如:I shall manage with what tools I have.

manage without 不用…而对付过去,如:I shall be able to manage without help.

manage 后可接不定式。

4. 一致(指和谐一致)

表示“一致”常用的词有:coincide, agree, correspond, concur, conform 等。

A temperature of 25°C on the Centigrade scale *coincides*¹⁾ with one of 77° on the scale of Ferhrenheit.

These two triangles *coincide*.

A verb *agrees*²⁾ with its subject in number and person.

If the water is heated, the particles move more quickly, which *agrees*²⁾ with our theory.

The result of the experiment *corresponds*³⁾ to my expectation.

The mathematical equations *correspond* to the principle.

The arms of a man *correspond* to the wings of a bird.

Everything *concurred*⁴⁾ to make him successful.

I *concur* with you in your opinion.

We *conform*⁵⁾ ourselves to reason.

Teachers advise us to *conform* to the rules.

注 1) coincide *v. i.* 一致,符合。表示各特殊点上的一致,可以说是全然相同的一致。多用于形状、面积、意见、境遇等方面,与 with 连用。

2) agree *v.* 不仅指所有主要部分均一致而和谐,且强

调其间无矛盾或冲突。agree with 可作一致,同意,适合解; agree to 作同意,允许解。

3) correspond *v. i.* 指各主要部分或就其整体而言是一致的、相当的,虽然有其相异处。后接 to, correspond to (也可用 with), 又作“跟…相符合”。如: Does the description correspond to (with) the thing?

4) concur *v. i.* 一致,同意。指大体上一致。多用于意见或动作,后接 with。

5) conform *v.* 一致,单指外形的一致。不用在思想或原理的方面,而用在思想的方式(mode)方面。作及物动词与不及物动词时,后面都接 to。作不及物动词间接 with, 但不很普通。

5. 传送

a. 机械上的传送

The power from the engine is *transmitted*¹⁾ to the machine through the belt.

The piston movement is *communicated*²⁾ to the wheels through a crankshaft.

The movement of the spindle is *communicated* to the lead-screw through gears.

b. 无线电的传送

The broadcasting station *transmits* (*broadcasts*³⁾) television and radio programmes.

c. 转换

The molten metal is *transferred*⁴⁾ from the ladle to the mould.

The heat from the reactor is *transferred* to the heat exchanger by a liquid coolant.

d. 传送

The warm air is *conveyed*⁵⁾ upwards and displaces the cold air.

The heat from the engine is *carried*⁶⁾ away by the air stream.

The heat from the engine is *transmitted* by convection into the air.

e. 传导

The heat from the furnace is *conducted*⁷⁾ through the cylinder walls.

The heat of the soldering iron is *transmitted* to the metal of the joint.

Power from the generator is *transmitted* through cables to every house.

f. 辐射

The heat of the sun is *radiated*⁸⁾ to the earth by radiation.

Heat from the fire is *transmitted* to the walls of the furnace.

g. 搬运或拿取

Boiler tubes *convey* the water from the upper drums to the lower drum.

Lorries *convey* the machinery to the docks ready for loading.

The exhaust steam is *conducted* through a blast pipe.

The steam is *led*⁹⁾ through nozzle onto the blades.

注 1) transmit *v. t.* 后接 to, 指“输送到”, 强调传送手段(而且传送手段保持不动)。如流体、电报、汇款等的传递和递

送。

2) communicate *v. t.* 后接 to, 指“传”; *v. i.* 后接 with 指“通信”、“相通”。

3) broadcast *v.* 指“广播”、“播送”、“撒播种子等”。也可作名词。

4) transfer *v.* 输送。强调从一处转移到另一处, 如热传导等, 不强调输送的工具。

5) convey *v.* 含有把东西引渡到目的地的意味, convey 是比 carry 较为正式的用语。

6) carry *v.* 运。由 car 一词转变而来。指一般的搬运, 没有引渡的意味在内。

7) conduct *v.* 传导(热等), 导电。

8) radiate *v.* (光、热等)辐射、散发, 发射光线。如:

The sun radiates strong light and heat.

9) lead *v.* 通向、通到, 引起、导致。如: The use of electronic computer has led to a complete change in production processes。

6. 运动

不同的物质在运动中使用不同的词。请注意下面的斜体字。

A trip-lever *actuates* (*operates*) the valve. = make the valve move.

A flexible belt *drives* the motor. = make the motor move (turn, work).

The piston *moves* forwards (*travels* backwards, *slides* up, *runs* down). = a(n) *forward* (*backward*, *upward*, *down-*

ward) movement of the piston

The piston *reciprocates* (*moves*). = a *reciprocating* movement (engine)

The pendulum *ascillates* (*swings*). = an *ascillating* (*ascillatory*) movement.

The cross-slide *traverses* (*crosses*) the carriage. = a *side-ward* (*transverse*) movement.

The wheels *rotates* (*turn, revolve*). = a *rotational* (*rotary*) movement.

The liquid (The steam, The air) *circulates* through the pipe. = a *circulating* movement through a circuit.

The machine is *at rest* (*stationary*).

The machine is *in motion* (*moving*).

7. 运转

表示“运转”常用的词与词组有: operate, work, behave, run, in operation 等。

The machine does not *operate*¹⁾ properly. (v. 运转)

Solar energy is now being used to *operate* communication satellites.

The science students should learn how to *operate* electronic computers.

The new power station has been *working*²⁾ smoothly since its trial run last June.

The pump *works*²⁾ smoothly.

Even if we achieve great success in our *work*, we should not be conceited.

Water *behaves*³⁾ in different ways when it is heated and when it is frozen. (v. 变化)

How is the new machine *behaving*? (运转)

All the machines in the workshop *run* on electricity. (运转)

Heat energy *runs*⁴⁾ airplanes, automobiles and ships. (运转)

The water-works are now *in operation*. (n. 运转着)

The plant has been *in operation* for several weeks. (操作中, 运转着)

During a *run* of eight hours, the factory produced a *run* of 1000 cars. (n. 机器等的运转时间; 此时间内的生产量)

注 1) *operate* v. 运转, 动作, 工作。为一般用语, 可指机器等本身在运转, 也可指靠外界力量, 或被操作、运转等。*operate* 强调一种有效的活动。*operate* 作“对…施行手术”解时, 后面接 *on* 或 *upon*。如: My right eye was operate on (upon) for the detachment of the retina (视网膜剥离) on the afternoon of 20 October 1990.

注意不可说: The doctor operated on the detachment of the retina. 或 The detachment of the retina was operated on. 应说: The doctor operated on me (或 my right eye) for the detachment of the retina. 和 I (或 My right eye) was operated on for the detachment of the retina.

operation n. 作外科手术解时, 后接 *on* (*upon*) + 指人或身体的某部分的词, 也可接 *for* + 指病的词。如: an operation for the detachment of the retina.

2) *work* v. 其用法和 *operate* 相仿, 含有“运转”或“工作”的顺利正常或更有成效之意。*work* 作不及物动词意为“工作”, 还可表示“成功”、“行得通”或“起正常作用”。

The stratagem *worked*. (成功)

I don't think such a plan will *work*. (行得通)

The clock isn't *working* properly. (起正常作用)

作及物动词时,可表示:

i) 使(别人,自己)工作: Our mathematics teacher works us very hard.

ii) 操作、开动: 见前面第4、5句。

iii) “产生”某种效果: This report says this new drug can work wonders.

iv) 缓慢仔细地“转动”、“拨开”、“拧开”: I need some instrument to work the screw loose.

3) *behave* *v.* 表现,变化,运转。在科技英语中主要指机器本身“工作得”、“运转”、“性能”如何等,也指某种物质(如钢、水)在外界的某种压力或影响下所产生的“作用”、“变化”和“表现”。如:

How does the thyroid gland *behave* during emotional excitement? (表现)

4) *run* *v.*; *n.* 作动词指机器等开动、运转、运行、驾驶,还可作“变得”、“变成”解。如:

Supplies for walking tractors are *running short*. (变得短缺)

We can't have the motor *run idle*. (空转)

与介词搭配,常使用的有:

The clock has *run down*. (停下来)

Our workshop has *run out of* oxygen. (缺乏)

The experimenter *runs* the water *off*. (使…放掉)

The white-hot liquid iron runs *off* through the tapping hole.
(流出,使…流出)

At this moment our automobile is *running against* the wind.
(撞上, 碰见)

The plant has *run to seed*. (花谢结籽)

run 作名词时, 科技英语中常作“操作”, “运转”解。如: A trial run is needed before the machine is put into operation.

词组有 *in the long run* (归根到底, 结局)

8. 改变

表示“改变”常用的词与词组有: *change*, *alter*, *turn*, *vary*, *convert*, *modify*, *transform*, *transmute*, *variety*, *variation*, *variance* 等。

Making a solution causes a physical *change*¹⁾, since the molecules are not *changed*. (*n.*; *v. t.*)

The mechanical energy can be *changed* into electrical energy again by a generator.

Changes of matter in state take place with *changes* in temperature. (*n.*)

We can *alter*²⁾ the kitchen enough to put in a freezer if we *change* the door. (*v.*)

The design of the lathe must be *altered* to meet the new requirement of the customers.

When the temperature decreases, the water *turns*³⁾ into ice. Electric power is *turned* into mechanical power.

The solution of hydrogen chloride will *turn* blue litmus red. In the electric motor, the conductor consists of coils of many *turns* of wire wound around a core. (*n.* 一圈, 一转)

The length of metal wire *varies*⁴⁾ with the temperature.

(*v. i.*)

As shown in the figure, electric current *varies* in the form of a sine wave. (*v. i.*)

He *varies* the treatment according to the conditions of the patient. (*v. t.*)

Water is *converted*⁵⁾ into steam at 100°C. (*v. i.*)

In 1971, Great Britain *converted* her currency to the decimal system. (*v. t.*)

Heat *converts* water into steam.

Since the condition of the patient *varies*, you should *modify* the programme of treatment.

The equipment was *modified*⁶⁾ to produce locomotives

The pupa *transforms*⁷⁾ into the image.

A generator is a machine that *transforms* mechanical energy to electrical energy.

We can *transmute*⁸⁾ water power into electrical power.

The young scientist *transmutes* coal into diamond.

Besides rice and wheat, other many food plants give *variety*⁹⁾ to our meal.

The lathe is capable of performing *varieties of* machining operations. (种种, 各种)

It is subject to a *variation*¹⁰⁾ of several degrees.

The *variations* of temperature in this area is always very great.

You should carefully observe the *variances*¹¹⁾ in temperature.

He was at *variance* with us in the energy problem.

注 1) *change* *v.*; *n.* 变化, 改变。为常用词, 强调一个人或一件东西在本质上的基本差异, 或使之前后完全不同。在作不及物动词时, 与 *alter* 意义近, 可通用, 一般情况下, 以用 *change* 为宜。

2) *alter* *v.* 改变。比 *change* 的语意弱, 指部分的或某特殊方面的改变。在作及物动词时, 人或物发生部分改变后仍基本保持原状; 而 *change* 作及物动词时, 则往往表示本质的、彻底的或以新代旧的改变。

3) *turn* *v.*; *n.* 义同 *change*, 但较通俗, 又含有 *alter*, *convert*, *transform*, *transmute* 等词的意义。再例如把水变酒, 把青色变绿色, 甲病变乙病, 蚕化为蚕蛾等, 用 *turn*。

4) *vary* *v.* 改变。指不规则的或断续的改变, 含有“把物改成不同的样式或随时改变一物”。再如: 我们换穿一件外衣叫作 *change*, 店铺修改不合尺寸的外衣称 *alter*, 缝制方法随时改变叫 *vary*。例如: *Good artists vary their methods according to their subject and materials.*

5) *convert* *v.* 改变, 转变。指外形的变化。再如把水化为热气, 把荒地变为沃野, 把野蛮民族化为文明民族, 把手杖变成武器; 又如改变信仰、意见等均可使用 *convert*。

6) *modify* *v.* 变更。指部分的改变, 变更计划、观察、方法、制度、意见、条款等, 不用于具体事物。例如: *You must more or less modify your method to suit the disposition of each child.*

7) *transform* *v.* 指在性质或形态上发生彻底或基本的变化。在遗传学上指“转化”, 数学上指“变换”。

8) *transmute* *v.* 正式用语, 指在性质或本质上发生完全变化, 常指变为更高级者。

9) variety *n.* 可作可数和不可数名词用。作可数名词时指“种类”、“种种”、“同类的不同品种”；作不可数名词时指“变化”、“多种性”、“多样化”。

10) variation *n.* 指温度、程度、价值等方面的“变化”，也指在生物学上的“变种”、“变异”，在音乐上作“变调”解。

11) variance *n.* 既指“变化”、“变异”(如温度等)，也用来表示“差异”、“不一致”、“分歧”等。

9. 阻止(妨碍)

表示“阻止”常用的词有：prevent, keep ... from, hinder, avoid, obviate, eliminate, obstruct, obstacle, block 等。

An insulator *prevents*¹⁾ escape of electricity.

Lack of capital *prevents*¹⁾ the company *from* buying the new machinery.

Good lubrication *keeps*²⁾ the bearings *from* being damaged.

The non-return valve *keeps* (*prevents*) the steam *from* escaping.

The filter *keeps* (*prevents*) grit *from* getting into the engine.

Technical integration does not *hinder*³⁾ the specialization of industrial production.

The instrument has been *hindered* by the high temperature *from* delivering his best performance.

We normally *avoid*⁴⁾ having two similar metals sliding over each other.

Working in shifts *avoid* shutting down the boilers at night.

Before they made the experiment, they *obviated*⁵⁾ the possi-

bility of a mistake.

The use of helium rather than hydrogen *obviates* the possibility of explosion.

The young doctor *eliminates*⁶⁾ toxins *from* the instestine.

By taking precautions in the factory we can *eliminate* the risk of accidents.

The car accident *obstructed*⁷⁾ the traffic.

No difficulty can ever *obstruct* the advance of the revolutionary people.

Short radio waves will be reflected back if they are sent out and meet an *obstacle*.⁸⁾

In our scientific research work there are many *obstacles* to overcoming.

A big crowd gathered around the bus, almost *blocking* up the traffic.

The sewing machine should be *blocked*⁹⁾ in position inside the case. (v. 塞住)

I have been detained by a *block* in the street. (n.)

点 1) prevent v. 阻止, 防止。指有意识地以某种阻碍物阻止或防止人或物做某事或往前进行, 并表示阻止有效, 阻止获得成功。若阻止不成功或无效时, 则需加 try to 即 try to prevent ... from。如:

She tried to prevent him from going, but he still went.

2) keep ... from 阻止, 使免于。后接现在分词表示动作或接动名词。

3) hinder v. 阻碍, 妨碍。语气较轻, 有时含有“掣肘”、“添麻烦”等含意。常用于较抽象的情况, 强调使速度减慢。

4) avoid *v.* 避免。表示避免成功了。企图避免而不得成功时,不可用 avoid,如不可用 I avoided meeting him, but somehow bumped against him. 应把 avoided 改作 tried to avoid。avoid 后接动名词,不可接不定式。

5) obviate *v. t.* 消除,预防。

6) eliminate *v. t.* 排除,消除。着重于驱除已存在于某处之某物或使之不受注意。

7) obstruct *v. t.* 妨碍,阻碍。强调设置具体的障碍物,以“妨碍”、“阻挡”、“阻塞”,以免通行等。

8) obstacle *n.* 障碍,障碍物,妨碍。指在前进中或行动中所遇到的障碍或情况,含有“若欲向前进,非克服或除去不可”之意。这种障碍或障碍物可以是物质上的或是精神上的。又指一个一个的障碍。不是抽象名词,如可以说 He has conquered a great many obstacles. 不可说 He has conquered a great deal of obstacles.

9) block *v. t.* 阻止,阻塞。语气比 obstruct 更重,意味着完全“堵塞”住去路。

六、计量和测量方面

1. 零

表示“零”的常用词有:zero, naught, ciphre, nil, nothing 等。

An object at rest has no kinetic energy, since its velocity is zero¹⁾.

Zero plus any number gives that number again, while zero times any number gives zero.

You should put a naught²⁾ to the number.

Three thousand is written with a three and three *naughts* (*noughts*).

There is a number of five *ciphers*³⁾.

Place three *ciphers* after one and you will get 1,000.

The profits are *nil*.⁴⁾

The input current should be *nil*.

Multiply 4 by *nothing*, and the result is *nothing*.⁵⁾

China won two to *nothing*.

注 1) *zero* *n.* (数)零。为普通用语,常用于科技英语中,强调“零”的数目,也指“数值”、“数字”。*zero* 也用以表示正负量间的“零点”或“零位”(如温度计等),如: In some cases the needle fails to remain at zero.

zero 为可数名词,如 a zero, two zeros,但不能用定冠词 the。

zero *adj.* 零的,一点也没有。如: Our trade cooperation with them so far has been seen zero growth.

2) *nought* *n.* 零,无。也可写作 *naught*, *naught* 为英国人的写法;*nought* 为美国人的写法。

nought 和 *naught* 都指“零”这个数字,不表数值,为可数名词。

3) *cipher* *n.* 零。也可写作 *cypher*。此词不常用,仅指“0”这个符号,也指阿拉伯数。

zero 同 *cipher* 的区别举例如下:

Put three ciphers (or zeros) after ten, and the number becomes 10,000.

Ten multiplies by zero (不可用 cipher) is zero.

4) *nil* *n.* [物理,数学]零,无。*nil*=*nothing*,如: The re-

sult of the game was 3:0. (读作 three-nil 或 three-nothing)

5) nothing *n.* (数学, 体育) 零。常作“没有东西, 什么也没有”解。

2. 多和少

a. 多

To avoid *excessive*¹⁾ friction losses, the bearings must be efficiently lubricated.

The boiler consumes an *undue*²⁾ amount of fuel.

Too much air (*an excessive amount* of air) enters the furnace.

The temperature was *excessively* high (*too*³⁾ high).

The metal was *too hard to*⁴⁾ machine (*to be machined*).

Vehicles are not permitted to *exceed*⁵⁾ a speed of 30 m. p. h. in built-up area.

The machine required an *exorbitant*⁶⁾ quantity of fuel.

This is a professional book of *inordinate*⁷⁾ length.

The temperature in the combustion chamber *was in excess of* 2000°C degree.

The silk industry in Suzhou and Hangzhou is *surpassed*⁸⁾ by none of foreign countries.

The speed of airplanes *transcends*⁹⁾ that of any former means of transportation.

When supply *is greater than* demand for any product, the prices are liable to fall.

The temperature was *high enough*¹⁰⁾ (*sufficiently high*) to melt the metal.

The boiler should be *strong enough* to withstand the pressure inside it.

The world supply of petroleum is *sufficient*¹¹⁾ for all foreseeable demand.

An *adequate*¹²⁾ overflow pipe should be fitted to carry away the *excess* water.

An *adequate amount* of heat must be supplied for the metal to melt.

b. 少

The heat generated is *not enough* to raise the steam to a high temperature.

The heat was *inadequate*¹³⁾ to melt the metal.

Too little grease may cause bearing failure because of *insufficient* lubrication.

The diet of many undernourished people is *deficient* in protein.

*Deficiency*¹⁴⁾ in one or more elements in soils will be harmful to crops.

Nuclie which *do not have enough* neutron are unstable.

注 1) *excessive adj.* 过多的, 过度的。意为“超过应有或正常的数量或范围”。

2) *undue adj.* 过度的, 过分的。

3) *too adv.* 放在形容词与副词前, 意“太”、“过分”。

4) *too...to* 太...以致不能。有时不用不定式而用 *for + noun* 表示否定的含意, 如: *Hardened steel is too hard and too brittle for many tools.*

too...to 前加 *only* 或 *but* 则为肯定含意, 如: *They are but*

(only) too glad to do so.

5) exceed *v. t.* 超过, 越过。指根据规定的标准, 在尺寸、数量、程度等方面的超过。

6) exorbitant *adj.* 意为“超过甚多”或“超越了适当或合理的数量”, 多用于索取上。

7) inordinate *adj.* 意为“超出应有的范围”, 同时指“缺乏节制的”。

8) surpass *v. t.* 超过, 超越。常用于取代 exceed, 特别是用在比规定标准占优势的条件下。

9) transcend *v. t.* 凡用 exceed 的地方都能使用 transcend, 但它更强调超出规定或度量等时的不断增加。

10) enough *adj., adv.* 作形容词时放在所修饰的名词前或后都可以, 如: We have enough manpower. 同 We have manpower enough 都可以。作副词时则多放在所修饰的形容词或副词的后面。enough 又常用在形容词与不定式之间如 strong enough to withstand the pressure。

11) sufficient *adj.* 足够。指数量之多能足够满足特种需要或目的。enough 同 sufficient 在许多情况下可以通用, sufficient 较多用于正式书面语言中, enough 可放在所形容的名词后面而 sufficient 不能。在两者不易确定时, 可尽量用 enough, 少用 sufficient。

12) adequate *adj.* 足够。表示数量之多或质量之好, 足够符合特定要求。前面可带不定冠词 an。

13) inadequate = in + adequate, in-为前缀, 表示“不”、“非”、“无”。如: insufficient = in + sufficient。

inadequacy *n.* 指某些达不到标准的情况, 也指作主观评价或臆测。如: The weather has been peculiarly dry and

hot, so the water seems to have inadequacy to the needs of the city.

14) deficiency *n.* 缺少, 不足。指由于缺乏某物而不能达到某种目的。

3. 量的多少

表达数量的形容词有可数和不可数, 这要随后面的名词可数或不可数而确定。

很少或几乎没有:

The earth contains *few*¹⁾ precious metals. (可数)

The earth contains *little* uranium. (不可数)

有若干(有些):

The earth contains *not many*²⁾ (*a few*¹⁾, *some*³⁾) precious metals. (可数)

少量:

The earth contains *a small*⁴⁾ (*moderate*⁵⁾, *certain*) number of precious metals. (可数)

The earth contains *a small* (*moderate*, *certain*) amount of uranium. (不可数)

The engine produces *a certain* (*negligible*¹⁰⁾, *small*, *moderate*) amount of power. (不可数)

大量:

The earth contains *a large* (*great*, *considerable*) number of⁶⁾ useful substances. (可数或不可数)

The earth contains *a great many*⁷⁾ (*a lot of*⁸⁾, *plenty of*⁹⁾) useful substances. (可数)

The earth contains *a great deal of* (*a lot of*, *plenty of*) iron

ore. (不可数)

The motor produces *a considerable*¹¹⁾ (*large, great*) *amount of power.* (不可数)

A certain proportion (a moderate part, a considerable quantity, a large amount) of the world's coal lies in this country.
(不可数)

注 1) *few adj.* 少。有“几乎没有”的意思。用于可数名词前,其含义是否定的。*a few* 若干,有“颇有几个”的意思。

few 与 *a few* 的不同不在于实在数目的大小,却在于说者的含意不同,如: *There are few mistakes in it.* (很少错误,含义是说它好。) *There are a few mistakes in it.* (有若干错误,含义是说它不好。)

only a few 或 *but a few = few*

few 不可修饰 *number*。

2) *not many* 少的。

3) *some adj.* 一些,若干。后接可数名词复数。

some 接可数名词单数时,表示“某一”,如: *I saw the answer in some book.*

some 接不可数名词时,表示“若干部分”,如: *There is some water in the container.*

4) *small adj.* 小。侧重度量、面积、数字等。在用于不可数的量时,后面一定要接 *amount of*。

amount n. 指“量”,“总量”,很少用复数形式,复数时多用 *sum*。

little 指“少量的”,用于不可数名词。

5) *moderate adj.* 适中的,强调“不过分”。常用来形容数量、程度。

6) a number of 一些。后面接可数名词复数。

7) a great many 许多。后面接可数名词复数。

8) a lot of 大量, 许多。后面接可数名词或不可数名词。

9) plenty *n.* 多, 丰富。plenty 使用的动词单数或复数随 of 后的宾语来决定, 例如:

There are plenty of books on the shelf. (用复数动词)

There is plenty of food on the shelf. (用单数动词)

plenty 只用在肯定句里。在疑问句和否定句里, 通常用 enough, 如: Have you books and paper enough? Yes, I have plenty. No, I have not enough.

10) negligible *adj.* 指“少”得可以不去考虑它。

11) considerable *adj.* 指“多”得可观的。

4. 最大、最小、平均

表示“最大, 最小, 平均”常用的词有: maximum, upper, minimum, lower, average, range, from ... to 等。

The *maximum*¹⁾ temperature in this country is about 35° centigrade.

The *upper* temperature limit in this country is about 35° centigrade.

The *minimum*²⁾ temperature in this country is about 5° centigrade.

The *lower* temperature limit in this country is about 5° centigrade.

The *average*³⁾ temperature in this country is about 14°C.

The temperature *range*⁴⁾ in this country is about 35°C.

The temperature in this country *ranges*⁴⁾ (*varies*) *from* 55°C

to 0 C.

In summer the temperature *rises* (*increases*). There is a rise (an increase) in temperature.

In winter the temperature *falls* (*drops, decreases*). There is a fall (drop, decrease) in temperature.

By heating (cooling) a substance, we can *raise*⁵⁾ (*lower*) its temperature to boiling (freezing) point.

The *maximum* pressure in the boiler is 500 lb/in².

The *maximum* speed of the aircraft is 700 m. p. h. (mile per hour).

The *maximum* fuel consumption of the engine is 25 m. p. g. (mile per gallon).

The *maximum* speed of the turbine is 7500 r. p. m. (revolution per minute).

The *maximum* diameter of the tube is 6 inches.

注 1) *maximum* 除作形容词外也可作名词,意“最大量”、“最高点”、“最大限度”,如: exceed the maximum, reach a maximum, record the maximum, be at its maximum. 复数为 *maxima*, 前要加冠词。

2) *minimum* 除作形容词外,也可作名词,意“最小量”、“最低限度”,如: spend a minimum of time, the irreducible minimum, at the minimum of cost. 复数形式为 *minima*, 前要加冠词。

3) *average* *adj.* 寻常的,一般的,平均的。后面名词用单数比用复数普通。后用单数名词时,前用 *a* 或 *the* 都可以。

average *n.* 平均。如: above (below) the average, on an (=the) average, up to the average.

4) range *v. i.* 迄, 届, 延及。要同 from...to 连用。

5) raise 为美国语, 英国用 rise。

5. 数的增减和倍数表示法

a. ... + 数字(或倍数) + 比较级 + **than** + ...

本句型中的数字或倍数多半是净减的数、净增加的倍数或减到 $\frac{1}{n+1}$ 。

X is two more than Y.

Y is two less than Z.

A is two times longer than B.

Wheel A turns twenty percent faster than wheel B.

C is twice less than D. ¹⁾

有时仅增加 $n-1$ 倍, 要根据上下文。如:

Mt. Jolmo Lungma is 8,882 m high, about two and a half times higher than Mt. Fuji. (two and a half times 在此处表示一倍半)

b. ... 倍数 + **as** + 形容词或副词 + **as** + ...

本句型中实际上净增加 $n-1$ 倍或减少到 $\frac{1}{n}$ (或减少 $\frac{n-1}{n}$)。

A is twice as long as B.

In 1959 we produced *a hundred-fold as much steel as*²⁾ we did in 1949.

W is ten times as light as R. ³⁾

This substance reacts three times as fast as the other one.

c. **as** + 形容词(如 high, many, much 等) + **as** + 具体数字
表示高(多)达... (具体数字)。

The temperature is as high as 6000 °C.

Some layers between the third and last layers of an atom contain as many as 32 electrons.

d. ...**as much (many, fast) again as** + ... 表示净增加一倍。

Wheel A turns *as fast again as*⁴⁾ wheel B.

e. ... + **by** + **数字或倍数** + ...

当本句型中有比较级出现或有表示增减意义的动词或分词出现时,by 后表示的都是净增减的数或净增加的倍数。

A is longer than B by 2 inches.

The prime cost decreased by 60%.

This year the value of our industrial output has increased by half (or by twice) as compared with that of last year.

This year the value of our industrial output has gone up half (or twice) *over*⁵⁾ that of last year.

100 increased by 200 is 300. (=100+200=300)

300 decreased by 100 is 200. (=300-100=200)

f. **增减意义的谓语** + **by a factor of** + **倍数**

只表示增加 $n-1$ 倍或减小 $\frac{n-1}{n}$ 。

The error probability of binary AM *is greater than* for binary FM *by a factor of at least* 6⁶⁾.

The speed *exceed* the average speed *by a factor of* 2.5⁷⁾.

The equipment under development will *reduce* the error probability *by a factor of* 7⁸⁾.

g. ... **倍数(或分数)** + **数词或名词** + ...

本句型中实际数值是倍数(或分数)乘上后面的数词或名词所表示的值。

Four times two is eight.

The earth is 49 times the size of the moon.

The mass of an electron is 1/2850 that of a hydrogen atom.

The velocity of sound in water is 4,900 ft. per second, or *more than four times its velocity in air*⁹⁾.

The depth of water in the first tube is less than half that in the other.

h. 增减意义的动词或分词 + to + 数字

本句型表示增加(减少)到某个数字。

The members have increased (decreased) to 1000.

i. 增减意义的谓语或词组 + 倍数

表示增加 $n-1$ 倍或减少 $\frac{n-1}{n}$ 。

The output of coal *has been increased three times*¹⁰⁾ as against 1972.

The sales of industrial electronic products *have multiplied six times*¹¹⁾ since 1950.

Switching time of the new-type transistor *is shortened 3 times*¹²⁾.

The principal advantage over the old-fashioned machine is a *four-fold reduction*¹³⁾ in weight.

There is a 50% increase of steel as compared with last year.

j. 用 too 时的数量增减情况

It is *too long by half*¹⁴⁾.

He has given me *six too few*¹⁵⁾ (many).

This rod is *3 inches too long*.

注 1) C 是(小到)D 的1/3。

2) a hundred-fold 一百倍。

- 3) W(比 R 轻)是 R 重的 $1/10$ 。
- 4) as fast again as 快一倍。
- 5) over 作“超出”解。
- 6) 至少大五倍。
- 7) 超过1.5倍。
- 8) 降低了 $6/7$ 。
- 9) 比空气中的声速大三倍多。
- 10) 增加了二倍。
- 11) 增加了五倍。
- 12) 缩短了 $2/3$ 。
- 13) 减少了 $3/4$ 。
- 14) 过长一半。
- 15) 少六个。

6. 计算和测量

a. 计算(在数学方面)

*Calculate*¹⁾ the brake horse power developed by the engine at 2000 r/min.

*Work out*²⁾ the amount of air required for complete combustion of the fuel.

Determine the mass of copper deposited in 40 minutes.

b. 测定,求

The constituents of the fuel *can be determined* by chemical analysis.

The purpose of the test is *to determine* the calorific value of the fuel.

It is necessary to *determine* the effect of the particles on the

flow.

Other type of thermometer must be used for accurate *determination* of very high temperatures.

c. 用表计量

The rate of flow *can be metered* by a variety of *metering* devices.

The luminous flux from a light source *is measured* in lumens.

The current flowing in a conductor *is measured* in amperes.

The pressure of the steam *is measured* in lb/in².

Measurement of temperature should be taken every ten minutes.

d. 估计, 测量

The temperature of the metal *may be estimated* from the color of the oxide film.

The age of a rock *may be judged* from the fossils embedded in it.

A pressure gauge(计) gives an *indication* of the pressure in the boiler. (n.)

A plug gauge in a tool used to *measure* dimensions accurately. (inf.)

A micrometer is a gauge which gives a very exact *measurement* of size. (n.)

The surveyor *estimates* the quantity and cost of the materials. (v.)

In the *estimate* produced by the surveyor, the cost of each item is noted down. (n.)

The *estimated* time of arrival of the aircraft is 11:00 today.
(p. p.)

It *is estimated* that the world's oil resources will last for 100 years. (v.)

e. 推导, 推断

From the information given, we can *deduce*³⁾ the specific heat of the oil.

From the fossils embedded in it, we *deduce* the age of the rock.

注 1) calculate(计算)后面还可接以 that 引起的从句, 例如: He calculated that he had written 24 articles during the past year.

2) work out 除了作“算出”解外, 还可作“制定”、“达成”、“开发”等, 含义很广。如: to work out a plan(制定), to work out a compromise(达成), to work out a mine(开发)。

3) deduce 同 from 连用, 如 to deduce a conclusion from premises。

deduce 后面可以接以 that 引起的从句, 如: He deduces that these techniques will be of greater value in cryogenic switching circuits.

deduce 比 infer 严谨, 在科学和哲学上比 infer 普通。

7. 比较

形容词和副词在说明事物和动作的特征时, 常有程度上的差别, 这种差别可用形容词和副词的原级、比较级和最高级来表示。

a. 相等的比较

- ① 肯定方面:两方程度一样,如“象…一样…”,“象…那样…”。

可用公式:**as + 原级形容词(原级副词) + as**

第一个 as 是副词,放在形容词或副词之前;第二个 as 是连词,引导一个完整的或省略了一些成分的比较状语从句。

Cast-iron is as useful (almost as useful a material) as steel.

Molecules of a gas are moving as fast as bullets.

The emitter may be made as long as is necessary to handle the intended current.

- ② 否定方面:双方对比,一方所具有某种性质的程度不及另一方,如“不如…那样…”,“不象…一样…”或“和…不一样”。

可用公式:**not so(as) + 形容词原级(副词原级) + as**

Line AB is not so long as line CD.

Iron oxide is not as strong as iron.

The work did not go so smoothly as we hoped.

- ③ 倍数的比较:双方比较,一方为另一方的若干倍。

可用公式:**倍数 + as ... as**

Jupiter is 5 times as far from the sun as is the earth.

The speed of sound in water is about four times as great as in air.

b. 不相等的比较

- ① 两个事物进行比较,一方超过另一方。

可用公式:**比较级 + than**

than 引导一个完整或省略了一些成分的比较状语从句。

The steam turbine is more efficient than the reciprocating engine.

The proton has more mass than the electron.

Heavy water molecules weigh more than ordinary water molecules.

The Pacific alone covers an area larger than that of all the continents put together.

- ② 两个事物进行比较,一方的程度或数量不及(或少于)另一方。

可用公式: **less ... than**

Sodium is less dense than water.

Sound travels less fast than light.

In liquids, the force of attraction between molecules is less than it is in solids.

不过通常还是用 not so ... as 好一些。如上面第一句可写成:

Sodium is not so dense as water.

- ③ 比较级双方相差的数量也可用“by + 数词”来表达。

The wire needs to be longer by two feet.

He is taller than I by an inch.

比较级可以与表示倍数的词连用,说明双方相差的倍数。

The sun is 330,000 times larger than the earth.

This diode produces about 10 times more radiant power than that one.

- ④ 一事物所具有某种性质的程度,随另一方的变化而变化,如“越...,就越...”。

可用公式: **the + 比较级..., the + 比较级...**

The higher the resistance, the lower the conductivity. (主句和从句的动词 is 都省略,主谓颠倒)

The hotter the body, the more energy it radiates. (从句省略了动词 is, 倒装)

The harder you push a body, the faster it moves.

⑤ 词源为拉丁文的形容词如 inferior, superior, junior, senior, prior, 后接 to, 不用 than。

This task is prior to all others.

A is inferior to B in quality.

The socialist system is superior to the capital system.

c. 最高级比较

即三个以上人物之间进行比较。形容词最高级前一般用定冠词 the, 副词最高级前用与不用均可, 句中常用 in ..., of ..., among ... 等介词短语来限定范围, 有时也可省去比较范围。

China is one of the largest countries in the world.

He is the least (最少) experienced among the teachers here.

She said that this type of radio set was the newest. (省略了比较范围。)

Timber seasons best when exposed to the weather.

8. 比率、比例、正比、反比

a. ratio

There is one professor to every ten students. They are *in a ratio of* 1 to 10.

There are 16 parts of air to every part of fuel. They are *in a ratio of* 16 to 1.

The professor/student *ratio*¹⁾ is 1:10.

The air/fuel *ratio* is 16:1.

The *ratio of* the clearance volume *to* the swept volume in a cylinder differs in different type of engine. (...与...之比)

A compression *ratio* of about 4:1 can be obtained with a turbo-compressor.

The efficiency of a cyclic process is the *ratio of* the work done *to* the heat received.

The experimental result is *in reverse* (or *reciprocal*) *ratio to* that. (成反比, 逆比)

b. proportion

The *proportion*²⁾ of student to professor is 10 to 1.

The *proportion* of air to fuel in the combustion chamber is 16 to 1.

The air and fuel are mixed *in a proportion of* 16 to 1.

Manganese and magnesium are present *in equal*³⁾ *proportions* in duralumin.

The linear speed of rotation of a pulley is *proportional*⁴⁾ *to* its diameter.

The power of an engine is *directly proportional to*⁵⁾ the area of cross-section of the cylinder.

The insulation resistance of a cable is *inversely proportional to*⁶⁾ its length.

As the demand for power increases, the supply is *proportionately*⁷⁾ increased.

The machine is simple but much too heavy. It is *disproportionately*⁸⁾ heavy.

c. rate

Different liquids have different *rates*⁹⁾ of evaporation. (速度、

速率)

By power is meant the speed, or *rate*, of doing work. (比率、时率)

In the oil refinery, we use electronic devices to control the flow *rate* and the compositions of oil products. (速度、速率、率)

Oil production in our country is increasing *at a high rate*. (at a (the) rate 以…速率)

The wheel was turning *at the rate* of sixty miles an hour. (以…速度)

d. 其它

The bridge will be very costly *in relation to*¹⁰⁾ its limited usefulness.

The machine is very heavy *for*¹¹⁾ its small size.

注 1) *ratio* *n.* 比例。强调数目和计算上的“比例”、“比率”。
a ratio of ... to ... 意“... 与 ... 之比”，还可说 *in ratio to* (相比)，如：The air becomes cooler *in ratio to* the height of the ground.

2) *proportion* *n.* 科技术语，强调各部分之间的相称，成比例。

3) *equal* 指同性质的事物相比，表示在大小、性质、数量、数目、程度等方面均相同。

4) *proportional* *adj.* *proportional* 同 *proportionate* 可以说没有区别。

5) *directly proportional to* 意“正比”，也可用 *direct ratio to*, *vary directly with* (as), 或 *in proportion as* “与...成正比”。

6) inversely proportional 意“反比”，或用 in inverse (or reciprocal) ratio to “反比”，“逆比”。

7) proportionately *adv.* 比例地。

8) disproportionately *adv.* 不相称地。

9) rate *n.* 为一般用语，用法广泛，指速度、人口出生的速率、借款利息、两种货币间的比率等。

10) in relation to 关于，就…而论，与…有关。

11) for *prep.* 含义很多，这里作“对…”，“对…而言”讲。

9. 对比

while, whilst, although, whereas, whereas on the one hand, on the other hand, in contrast to + noun, 这些词与词组是两件事对比或两件事相反时，经常使用的。

Some substances are soluble, *while*¹⁾ other are not.

While this is true of some, it is not true of all.

At high speeds the turbo-jet is more efficient, *whilst*²⁾ at low speeds the propeller is more efficient.

Whilst energy is the capacity to do work, power is the quantity of work done in unit time.

He is not stupid *but*³⁾ clever.

Steel is not brittle, *but* strong.

Theory is something *but* practice is everything.

A hot engine will run on a weak mixture, *while on the other hand*⁴⁾ a cold engine requires a richer mixture.

They have been blamed *on the one hand*⁵⁾ and lauded *on the other hand*.

*Whereas on the one hand*⁶⁾, a hot engine will run on a weak

mixture, a cold engine requires a richer mixture.

Begin well, and it will be easier and easier as you go on. *On the other hand*, if you make a false start, it is far from easy to retrieve your position.

*In contrast to*⁵⁾ the rich mixture needed to start a cold engine, a weak mixture is sufficient to keep a warm engine running.

The mass of the proton is about 1840 times greater than that of the electron *although*⁶⁾ (= *though*) the diameter of the electron is many times larger than that of the proton.

Common salt, *though* (= *although*) (it is) dissolved in water, does not change its chemical properties.

I thought it was gold, *whereas*⁷⁾ it was only a brass.

Some people like organic chemistry, *whereas* others don't like it.

注 1) *while conj.* 而, 虽然, 尽管。书面语表示对比, 常用作同类两事的对比, 有 *although* 的意思。

2) *whilst conj.* 而, 同时。是英美古语 (= *while*)。

3) *but conj.* 而是, 倒是。连接两个词、短语、从句时, 必须注意上下词句的逻辑关系, 必须在总的意义上构成一个对比, 如果总的意义趋向一致时就不能使用 *but*。如: He is not stupid but clever. 为一简单句, 对比的是 *stupid* 和 *clever*, 是正确的。若改为 He is not stupid but he is clever. 则 *but* 用法错误。因他不笨同他聪明是一致的, 没有构成对比, 应改为: He is not stupid; he is clever. 或 He is not stupid; on the contrary, he is clever.

4) *on the one hand ... , on the other hand* 一方面... 另

一方面。为一习惯用语,能起连接并列句的作用。on the other hand(在他方面,反之)在一个句点后,可单独使用。while, whereas 同 on the one hand 或 on the other hand 连用时可更强调对比。

5) in contrast to 和 in contrast with 都作“和…作对比”或“和…大不相同”解,但 in contrast to 用的较多较普通。在用作“对比的东西(就是相反的东西)”解时,contrast 后面通常接 to,间或接 with。如: Black is a contrast to (或 with) white.

contrast 也可作动词,后接 with。

6) although 和 though 在作连词时,完全同义。although 稍正式些,但不能作副词,though 可作副词,although 也不能用在 as though 短语中。用了 though 或 although 不能再用 but,可以用 yet,但最好不加任何词。汉语“虽然…然而”写成英语时,有时最好保留 but,不用 though 或 although。如:

[误] Though I told him many times, but he wouldn't listen.

[正] I told him many times, but he wouldn't listen.

7) whereas conj. 然而,其实。在科技英语中 whereas 不可用作“因为…”或“鉴于…”解。

10. 可变量

a. the…the¹⁾

The higher the velocity of steam, *the* greater (is) the turbine speed.

The further the flame-front travels, *the* greater (is) the detonation risk.

The thinner the layer of solder, *the* higher (must be) the

soldering temperature.

b. as...so, just as...so

这里 so 的含义相当于 in the same proportion, in the same manner, in the same way, 说明前后两个概念在程度和关系上相类似, 含意为“正如”。

As the velocity of the steam increases, (so) the turbine speed increases.

As the flame-front advances, (so) the risk of detonation increases.

As the temperature of a solid rises, (so) the molecular agitation increases.

Just as²⁾ two is to three, so is four to six.

Just as water is the most important of liquids, so air is the most important of gases.

c. as

这里的 as 为连词, 意为“随着...”, “一面... 一面...”。

As the piston moves down, the pressure in the cylinder decreases.

The volume varies as the temperature increases.

d. with, vary, vary with, vary as, vary according to, vary inversely as, etc.

The specific heat of ice decreases with⁴⁾ a reduction in temperature.

With the increase of pressure the molecules get closer and closer.

The magnetic field increases with current.

As shown in the figure, electric current varies⁵⁾ in the form

of a sine wave.

The saturation pressure of a vapor *varies with*⁵⁾ temperature.

The melting point of brass *varies with* its composition.

Friction losses in the pipe *vary as*⁷⁾ the square of the velocity of flow.

The number of blades in each wheel *varies according to*⁸⁾ the size of the turbine.

The strength of the alloy *varies according to* the substances it contains.

During expansion **the** pressure *varies inversely as*⁹⁾ the volume.

The pressure of a gas *varies inversely as* its volume, with the temperature being constant.

Figure 1 shows that the pressure of the gas *varies directly as*¹⁰⁾ its volume.

The electric current *varies directly as* the voltage.

The pressure of a gas is *inversely proportional to*¹¹⁾ its volume if its temperature is kept constant.

The vapor pressure *changes with*¹²⁾ the temperature, the pressure, and the kind of liquid.

The pressure of a gas is *directly related to*¹³⁾ its absolute temperature when the volume remains constant.

In a constant resistance direct current circuit the current will *be in direct proportion to*¹⁴⁾ the voltage.

It must be noted that the current *increases proportional to*¹⁵⁾ every decrease of resistance.

You gain skill *in proportion as*¹⁶⁾ you practice.

The price of a product is *in proportion as* the labour costs in it.

You gain skill *according as*¹⁷⁾ you have ability.

The mechanical energy can be *changed*¹⁸⁾ into electrical energy again by a generator.

e. remain, constant, variable

The temperature of the water film in the condenser *remains*¹⁹⁾ constant at 50°C.

So long as vapour is being produced, the temperature *remains* constant.

Air passes through the pre-heater at a *constant*²⁰⁾ pressure.

R is a *constant*, and has a *constant* value for any particular gas.

Water has a *variable coefficient*²¹⁾ of expansion. It varies with temperature.

The flow of heat through a condenser tube involves many *variables*²²⁾.

The ratio h/x is replaced by h , a *variable* known as the film coefficient. (n.)

注 1) the ...the 越... 越...。在 a 中三个例句里,逗号前是比较状语从句,逗号后为主句;逗号有时可以不用。此句型中比较级前的 the 不是冠词,是副词。前面的 the 为关系副词,有 by how much 含义,后面的 the 为指示副词,有 by so much 含义。有了关系副词 the,必须也有指示副词 the,通常关系副词 the 多在前,指示副词 the 多在后(但有例外)。关系副词 the 用在从句开头,不可用在从句主语的后面,如 a 中第二句

不可写成 *The flam-front travels the further, the greater (is) the detonation risk.* *the...the* 常用在省略句内,如 *The sooner the better.* a 中三个例句括弧中的动词可以省略。

2) *just as* 同 *as* 含意相同,加了 *just* 表示加强语气。

3) 从句的动作与主句的动作同时发生。此句可译为:活塞下移,汽缸里的压力即减小。

4) *with prep.* 随着。

5) *vary v. i.* 改变,变更。指不规则的连续的改变。有时可同 *change* 互换,含有“把物改成不同的样式”或“随时改变一物”的意味。

6) *vary with* 随... 而变。

7) *vary as = vary with*

8) *according to* 依照,依据... 而不同。*according to* 不可作形容词短语,如不可说 *This information is according to an expert.*

9) *vary inversely as* 成反比。

10) *vary directly as = vary directly with* 成正比。

11) *inversely proportional to* 成反比。

12) *change with = vary with* 随着... 而变化。

13) *directly related to = directly proportional to* 成正比。

14) *be in direct proportion to = vary directly proportional to* 和... 成正比。

15) *increase proportional to* 与... 成比例地增加。

16) *in proportion as* 与... 成比例, *as* 为连词。

17) *according as* 依照,随... 而定。*according as* 与 *according to* 不同, *according as* 后接从句, *according to* 后接名

词。如：The thermometer rises or falls according as the air is hot or cold.

The thermometer rises or falls according to temperature.

18) change *v.* 改变。在用作不及物动词时，与 alter 相近，可通用，一般以用 change 为宜。用作及物动词时，表示本质的、彻底的或以新代旧的改变。

19) remain *v. i.* 留待，逗留。可作系动词，意为“继续是”，“依旧是”，含有“强调继续停留于一处或停留于某种情况，而不改变其情况、性质或形式”的意思。虽为不及物动词，后面往往加表语，如前面的例句。

20) constant *n.* 不变，常数、常量。

21) variable coefficient 常系数。

22) variable *n.* 变量，变元，变数，可变性；*adj.* 易变的，可变的，常变的。强调随着某物而进行不同的变化。

11. 准确(精确)

指与事实、标准或真象相符合。下面斜体字表“准确”。

The information on which his report is based is perfectly *accurate*¹⁾.

He is *accurate* in his calculation.

Is your watch *accurate*?

The calculations are *correct*²⁾ in the astroballistics.

It is the *correct* thing to do.

We must *correct* the proof-sheets before sending them to the press. (*v.*)

You must give the signal at the *exact* moment specified.

The *exact*³⁾ wave length assigned to a transmitting station

must always be maintained.

The definition he gives is not *precise*⁴⁾ enough to be really of any use.

The assembling of the parts of a watch must be *precise*.

He has made an *accurate* (*exact, precise, correct*)⁵⁾ measurement of our laboratory.

注 1) *accurate a.* 正确。反义词是 *inaccurate*。accurate 强调准确性,要求与事实没有出入。

2) *correct a.* 是一般用语,指符合一定的标准或规则的准确,没有偏差;又指“纠正”、“改正”不正确、不真实、不完全、有错误、有缺点的东西,使达到一定程度的准确或完善。也可作排除(故障)、消除错误、医治疾病,如:

This medicinal herb *corrects* stomach trouble.

I *correct* my own mistakes.

3) *exact a.* 精确。反义词是 *inexact* (不精确)。exact 强调度量、数量和质量的高度准确性,要求丝毫不差。

4) *precise a.* 明确,精确。反义词是 *vague* (含混)。precise 强调范围界限的鲜明性或细节的精密,有时微带“过分吹求”的贬义。

5) 在实际应用中,四个词有时可通用。

12. 间隔

a. 空间的间隔

A shaft is supported by bearings *spaced*¹⁾ at *interval*²⁾ along it.

The expansion joints of a concrete road are *spaced* at regular intervals of perhaps 200 feet.

The fuel rods are inserted in the moderator *at intervals*.

The crankshaft of an engine rotates through 360°, and each of the pistons imparts its torque at equal angular intervals of say 90°.

A *gap*³⁾ is left between consecutive rails of a railway to allow for expansion.

There may be a *gap* of 2 inches between the slabs of concrete on a road.

The current sparks across the *gap* between the electrodes of a spark-plug.

A *clearance space*⁴⁾ is left between the piston and the cylinder head.

The *clearance volume* is made as small as possible to resist combustion.

The *clearance ratio* is the ratio of the clearance volume to the swept volume.

There is a certain *clearance* between the blade-tips and the casing of a turbine, through which steam is liable to leak.

The train passing through the tunnel has a *clearance* of only one foot on either side.

b. 时间间隔

The lighthouse flashes its signal at *interval*²⁾ of 5 seconds.

There is one signal *every 5 seconds*.

The temperature of the water is read *every two minutes*. It is read at *two-minute intervals*.

Combustion of an inflammable mixture is not *instantaneous*⁵⁾. There is a short interval between initiation and com-

pletion of combustion.

A certain amount of time *elapses*⁷⁾ or *passes* between the passing of the spark and expansion of the gases.

This *delay*⁸⁾ is known as the *time lag*.⁹⁾

The current in an inductive circuit *lags* 90° *behind*⁹⁾ the voltage applied.

The compression in the cylinders of an engine must be checked *from time*¹⁰⁾ *to time*. It must be checked *periodically*.¹¹⁾

The power plants are designed to run *continuously*, without stopping.

Other plants are designed for *intermittent*¹²⁾ use, frequently starting and stopping.

注 1) space *n.* 为普通用语,指空间,指未被占据的空地、空间。space 也为科技术语,指太空、宇宙中的空间。注意,下面例句中,space 用单数形式,不用复数:

The letter is typed in single space with double space between paragraphs.

space *v. t.* 把...分隔开; *v. i.* 留间隔。

2) interval *n.* (时间的,空间的)间隔。指两件相似事物之间存在的时、空差距。

at intervals 时时地,处处地;

at frequent intervals 时间的间断。

3) gap *n.* 间隙,裂口。主要用指由于天然或人为手段而形成的一个开口或间隙。

4) clearance *n.* 间隙,间距。clearance space 余隙空间。

5) every *a.* 每隔…的, 每…中的。

6) instantaneous *a.* 即刻的, 一刹那间的。

instant 是“一刹那以后的”, 即“立刻的”。

instantaneous explosion 是“极快的爆炸”;

instant explosion 是“立刻发生的爆炸”。

7) elapse *v. i. ; n.* (时间)消逝, 过去。elapse 用作名词, 现在很不普通。如一般不说 the elapse of half a year, 最好将 elapse 改作 lapse。

elapse 作动词是正式的用语, 指静静地过去 (silently pass away), 特指时日的过去。它的含义比 pass 狭些, 指从某一定时间到其他一定时间的经过。而 pass 为一般用语, 可指时间、人、物、车、船、日、月等的过去。

8) delay *v. ; n.* 延误, 迟缓。作动词时, 后接动名词比接不定式普通。如 I have to delay answering his letter, 比 I have to delay to answer his letter, 普通。

作名词时后面可接 in + 动名词, 不接不定式, 也不接 of + 动名词。如 Excuse me for my delay in answering your letter, 里的 in answering 不可改作 to answer 或 of answering。

9) lag *v. i. ; n.* 滞后, 落后, 迟延(的时间)。

time lag 时滞;

lag behind (in) (在…方面)落后于, 迟延, 赶不上。

10) from time to time 时时, 时常。

11) periodically *ad.* 周期地, 按时, 间歇地。

12) intermittent *a.* 间断的, 断续的。指有规律地发生或中断。

13. 界限

limit, bound, boundary, border, confine 都有界限的含义, 这些词有些可用作名词, 有些可用作动词, 有些二者皆可。名词 confine, bound, limit 在表示界限范围时, 通常用复数形式。

Articles submitted for the contest must be *limited*¹⁾ to 500 words. (v.)

Foreigners are not permitted to pass beyond the city *limits*. (n.)

I have only a very *limited*²⁾ knowledge of science and technology. (p. p.)

It is within the *bounds*³⁾ of possibility that you may pass the examination. (n.)

The tyre burst out, because it was beyond the *bounds* of its rated pressure. (n.)

Europe is *bounded* on the west by the Atlantic. (v.)

Biophysics is *boundary*⁴⁾ science. (adj.)

We need to have a common *boundary*. (n.)

This line is the *border*⁵⁾ between the USSR and Finland. (n.)

India *borders* on Burma. (v.)

He was not allowed to pass the *confines*⁶⁾ of his room. (n.)

The pure scientist *confines* his attention to explanation of how and why events occur. (v.)

注 1) limit 作动词意“使…局限于”, 有“预先定下标准、界限, 不许越过”的含意。可以指有形的东西, 也可用以指无形的

东西,多用在比喻上,如用在欲望、议论、时间、都市等的界限上。*limit* 的宾语后接 *to* + 名词或动名词,不接不定式,如:

You ought to limit your activities to recording the fact.

2) *limited* 意“有限的”、“贫乏的”。

3) *bound* *n.* 常用复数形式 *bounds*, 表示境界。*bounds* 常同 *boundary* 换用,但指宇宙的境界时,不用 *boundary*, 须用 *bounds*。*bounds* 可作比喻用词,如表示行为的限度等。

4) *boundary* *n.* 境界。表示境界线或界限,多被用作地理上的术语,常用作比喻。例如国、县、州、田、欲望、知识等的境界。

5) *border* *n.* 边境。指沿境界线的一带土地,指边疆的地域,不指分界的界线。 *v. t.* 接近。

6) *confine* *n.* 表示比 *border* 较狭的边界,是庄重的和文学上的用语。

confine *v. t.* 使...局限于。在使用 *confine* 时,一个常犯的错误是在应用被动语态时用主动语态。如:His talk is confined to two topics. 句中的 *to* 为介词,不可省略。*confine* 后不可接不定式。

14. 中心(中间)

表示“中心(中间)”常用的词有:*center*, *middle*, *midst*, *heart*, *core* 等。

The temperature at the *center*¹⁾ of the sun is about 10,000,000°C.

The city is the commercial *center* of the whole country.

After the work is *centered* (*v. t.* 定好中心点), we use a *center* drill to start the hole.

In the *middle*²⁾ of the room stands a table.

The plant blooms about the *middle* of July.

I was disturbed in the *midst*³⁾ of my work.

The orangutan lives in the *midst* of the rain forest.

The institute is in the *heart*⁴⁾ of the city.

Paris, the *heart* and soul of France, is a beautiful city.

The pear is rotten at the *core*⁵⁾.

You must get at the *core* of a matter.

注 1) center *n.* 中心。指某种有确定边缘或确定形状的东西的中心点,如圆、球体、方形的中心点。转指集合的中心,场所的中心,学术、工业、商业的中心。center 还可作动词,见上面例句。

2) middle *n.* 正中,中部。指离开两端相等的部分,或指一段时间、行动始末的中间部分。不能用作比喻。in the middle of 里用“in”,如:in the middle of the street (the night, his work, ...)。但在 month 和 year 前,间或用 at,如: at the middle of the present year。

3) midst *n.* 中央。比 middle 稍不确定些,即不如 middle 强调正中的部分。一人围在人丛中时,虽不处于正中,也可说他属于人丛的 midst。此词常用作比喻。

4) heart *n.* 心脏,中心。指位于中心的部分。

5) core *n.* 心,核心。如苹果、梨的核心,铁芯,核心等。

v. 装心,去心,取岩心。

七、设计与试验方面

1. 调查研究

表示“调查研究”常用的词与词组有:investigate, in-

quire, search, research into, making a research into 等。

We are *investigating into* the cause of the earthquake.

Biologists *investigate*¹⁾ cell membrane.

He went to *inquire*²⁾ for data at the institute.

The young scientists always *inquire* why and how the universe works.

I want to *search*³⁾ into matter once more in the laboratory.

(v.)

The cotton growers *searched* the cotton plants to trace the aphids. (v.)

He joined with us in our *search* for a new material. (n.)

Seismologists have engaged in *research into*⁴⁾ the causes of earthquake. (n.)

Professor Li has *researched into* the causes of the cancer of the liver for years. (v.)

Scientists are *making a research into* new application of atomic power. (n.)

注 1) *investigate v. t.* 指有组织的和精细的调查研究,含有探究性之意。

2) *inquire v.* 指一般事态、情况的探询和调查。可作及物动词也可作不及物动词。作及物动词时不可用人作宾语,如必须用人时,可在 *inquire* 后加 *of*, 改为不及物动词,如:

He *inquire of* me the best way to go.

3) *search v.* 指审慎的和持续的查找或调查。除作及物与不及物动词外,也可作名词。作名词时后面通常接 *for*, 间或接 *of*。*search + 宾语 + for* 表示“搜索…为了要找到…”。

4) *research n. ; v. i.* 指审慎的或批判性的探究,特指各

个学科范围的科学研究。

research 作名词时,作“一般的调查、研究、探讨”解时,是不可数名词;作“深入仔细的调查、研究、探讨”解时是可数名词。可用不定冠词表示一项调查研究,或用复数名词,但不能用 many 或数词。research in 着重研究一个特殊的方面, research on 着重一门学科,用 into 更加着重深入地研究。如:

The faculty and staff members of the Metropolitan Hospital are carrying out a research into the cause of cancer.

Our researches on the reform of farm tools have been successful.

We are doing research in chemical fertilizer.

2. 安排或准备

a. 计划

We *plan*¹⁾ to finish the adjustment of the equipment before Sunday.

We *planned* to have made this experiment yesterday.

We draw up a *plan*¹⁾ for increasing production.

The government will *arrange*²⁾ to employ the redundant workers elsewhere.

We went to England to *arrange* for the matter of exhibition.

*Arrangements*³⁾ have been made to install safety devices on all machines.

He is making an experiment and *designing*⁴⁾ to find out the difference between the two substances.

I don't know whether he did it by accident or by *design*.

b. 处置

The orbiting electrons are *arranged* in shells at varying distances from the nucleus.

The engines can be *disposed*⁵⁾ radially round the crankshaft.

His experience *disposed* him to be careful.

The *disposition*⁵⁾ of the tubes at an angle over the furnace ensures good water circulation.

c. 体系

A *system*⁶⁾ (*arrangement*) of gears connects the turbine shaft to the air compressor.

Everybody should work with *system*.

The heating *arrangement* in the factory are quite inadequate.

d. 安排

The city was *set*⁷⁾ with handsome parks and buildings of modern construction.

You may *set* the thermostat at 10°C.

The traditional logic was a logic for clarifying and *organizing*⁸⁾ that which was already known.

They *organized* a little club for the study of the history of science.

The cooling system of the reactor must be so *disposed* (*ordered*) that the steam generators are not exposed to radiation.

However versatile the robots are, they should be *ordered*⁹⁾ by man.

It took three months for the data to be collected, *arranged*, and analyzed.

注 1) *plan* *v.*; *n.* 为普通用词,指事先做出的办事程序的

方法,经过仔细考虑有组织的计划。plan 作动词用时后接不定式,在口语里往往接 on + 动名词;作名词用时后接 for (或 of) + 动名词比接不定式普通,如第三句。

according to plan (按照计划地)里不用 the;同样, Everything went according to plan. 在 plan 前无 the。

2) arrange *v.* 指归入相宜的顺序、关系,或指调整得恰到好处,在这层意思中 arrange 比 order 用得更为普遍。又可作制定计划解。arrange for 后只能接事不能接人,接人时要用 with。如:

Let's go and arrange with them for the exhibition.

arrange 作及物动词可以接以 that 引起的从句,从句里用 shall, should 或虚拟语气现在时。如:

We have arranged that he shall (should) start work next Monday.

We (have) arranged that he start work next Monday.

3) arrangement *n.* 在用作“计划”或“办法”解时,习惯用复数式。如:

The arrangements have been made in good time.

作“安排”、“预定”解时,后可以接以 that 引起的从句,从句中用 shall, should 或虚拟语气现在时。如:

We have made an arrangement with him that he shall (should) start work next Monday.

We have made an arrangement with him that he start work next Monday.

4) design *v. ; n.* 计划,打算。指审慎的、有意图的意向,强调有确定的计划,并有以达到其目的或计划的准备。design 后面接不定式或动名词都可以,例如:They design to go (或

going) at once. 也可接以 that 引起的从句, 从句中用 shall. 如: They design that the classroom shall be redecorate in the summer.

These handkerchiefs are (of) a very smart design. 里的 of 往往省略。

5) dispose *v.* 安排, 处置。常用指人的气质、心境、秉性或态度的倾向。dispose 同 dispose of 都可作“处置”、“处理”解。如: You may dispose it as you please. 和 You may dispose of it as you please. 现在多用 dispose of。

disposition *n.* 处置, 安排。at your disposition (听任支配) 与 at your disposal 意思相同, 现在多用 at your disposal。

6) system *n.* 体系。指同类事物按一定的协调关系所组成的一个整体, 也指一套完整的、比较复杂的装置或设备。

7) set *v.* 放, 调整。指一般放置, 强调放成垂直的位置。set 后可以接不定式, 也可接动名词。“set myself (或 yourself 等) to... (不定式)”作“决意”解。如:

He has set himself to read through the long novel.

8) organize *v.* 组织。意将所有人或事都组织成一体, 并令每个部分都起到一定作用或功能。

9) order *v. t.* 整理, 安排, 命令。可以有复合宾语。如: My doctor has ordered me cod-liver oil.

3. 意图

表达“意图”可以采用动词 intend, plan, mean, 以及名词 intention, plan 等。

I *intend*¹⁾ (*plan, mean*) to conduct this experiment some day.

It is my *intention* (*plan*) to conduct this experiment some day.

I have made *plans*³⁾ to calculate an eclipse.

A library is a service organisation *intended* to serve people.

To do scientific work *means*⁴⁾ to know, to have knowledge of and to search for the truth of the natural world.

I *plan*³⁾ to make a new suggestion.

注意在 *intend* 和 *intention* 后面的 *that* 从句里, 要用 *shall* 和 *should*。

We intend (*Our intention is*) that this Bill *shall* become law by the end of this year.

going to+不定式的结构经常用来表示意图:

The tree *is not going to* be cut down. (= *We don't intend* to cut this tree down. 或 *We don't intend* to allow anyone to cut this tree down.)

*We are going to*⁵⁾ grow more vegetables this year.

注 1) *intend* 意欲。是正式的用语, 指心里已有某事为确定的目标或计划, 因此不宜对尊敬的人使用。对长者(或尊敬的人)可用 *want*, 如: *What do you want me for, Sir?* *intend* 后接不定式较接动名词普通, 如第一句较 *I intend conducting this experiment some day.* 普通。

2) *intention* 在独用时, 后通常接不定式, 如: *intention to be useful* 和 *intention to help everybody*。 *intention* 前用 *my*, *his*, *the*, *no*, *an*, *any*, *some*, *every* 等词时, 后通常接 *of* 和动名词, 如: *my intention of doing so*, *no intention of going*。 *intentions* (复数) 后接 *of* 和动名词, 如: *intentions of doing good*。 *intentions* (复数) 并不专指“多个意图”, 例如:

Everybody believes in the good *intentions* of the promoters of the plan.

Philip meditated a fresh attempt, but concealed his *intentions*.

I don't doubt your *intentions*; but I wonder whether you are doing it in the right way.

3) plan *n.* 指实行某事之前所立的方案,常是用心极深的有组织的方案。如:

This book is arranged on a different plan.

I have made *plans* to spend the holidays with you.

He had intended to visit us, but the bad weather made him change his *plans*.

Her illness upset her *plans*.

以上各句,习惯用复数 *plans*,没有“多少计划”的意思。*according to plan*(按计划地)里不用 *the*,如:Everything went *according to plan*.

4) mean“意欲”,和 *intend* 所指极为相近,目标没有 *intend* 那么明确,后接不定式,不接动名词。*mean* 有时有两个宾语,如:They mean us no harm.(他们并不想害我们。)

5) 用 *to be going to* 时意图的观念比将来时间的观念更为显著。注意,如一个人的计划可能受到外面情况的影响,最好用 *will* 或 *shall* 的结构。

4. 分类

“分类”中常使用的词有 *type, sort, class, variety*, 这些词均指部分个体由于共有一个或若干显著特点而被视为同组或同类。

The new *type*¹⁾ of automobile engine makes great contributions to the rural transportation.

Petroleum is a *kind*²⁾ of liquid found in the underground deposits.

Hovercrafts and steamers of all *sorts*³⁾ have been widely used for transportation.

Bearings are of many *classes*⁴⁾.

The lathe is capable of performing *varieties*⁵⁾ of machining operations.

There are two *types* (three *kinds*, four *sorts*, several *classes*, many *varieties*) of bearings.

We can *classify*⁶⁾ bearings according to the position on the shaft (according to whether they take the load on the shaft or the end thrust).

We can *divide*⁷⁾ the bearings into several *classes* (*categories*⁹⁾, *groups*⁸⁾) according to the position on the shaft (according to whether they take the load on the shaft or the end thrust).

注 1) *type n.* 指在所有物体中,那些界限最为明确,且具明显类似之处的一类。其后面的 *engine* 用单复数都可以。
some new types of bus 中 *bus* 用单复数都可以。

2) *kind n.* 类,种类。特指一种性质相同,且有极相似的性质,足以用某种方法或分类中置于一起而作为一类者。
a kind of rose, *the best kind of pen* 中 *rose*, *pen* 为单数,用复数不普通;用复数时,多写作 *roses (pens) of this kind*。
kinds of “是“几种…”,不是“几个…”。

3) *sort n.* 通常可与 *kind* 交换使用,但较为含混,有时

仅仅表示“大概此种”之意。表示轻蔑时也用 sort。如：

I'll never do this sort of thing.

What sort of book do you want?

4) class *n.* 种类,还可作等级、阶级。也可作动词,意“为…分类”、“归类”。如:a class of sea-seed (或 sea-seeds), some new classes of sea-seed (或 sea-seeds)。

5) variety *n.* 种种,各种。可作可数和不可数名词。作可数名词时指“种类”、“种”、“同类的不同品种”,作不可数名词指“多种性”、“多样化”、“变化”。如:Besides rice and wheat, other many food plants give variety to our meals.

6) classify *v. t.* 为…分类,分…的等级。
classified as 被分类为。如:Manufacturing processes may be classified as unit production and mass production.

7) divide *v.* 分,把…分成。强调依据一定的尺度、规则或计划,把整体分为若干部分、类别等,含有审慎的分离。

8) group *n.* 群。通常指有组织的一群,有时指较小的人群。如:I saw groups of students doing gymnastics on the athletic ground.

9) category *n.* 种类,类目,范畴。

5. 得、获得

表示“得、获得”常用的词与词组有:gain, get, obtain, yield, follow, arrive at, give rise to, write down, acquire, generate, have 等。

The actual mechanical advantage *gained*¹⁾ due to the difference between input and output forces is always lost somewhere.

The factory has *gained* some advances in making use of solar energy.

Magnets *get*²⁾ the ability to attract things from the moving electron.

We *get* light and heat from the sun.

Oil can be *obtained*³⁾ from peanuts.

Li Sze-kuang *obtained* excellent results in his detailed study of his seismic geology.

Methane unites with oxygen to *yield*⁴⁾ carbon dioxide and water.

As we all know, gold and copper will *yield* electron.

An application of Fatou's lemma *yields* (3. 1) for every $t > 0$.

From the same deduction as above, the second conclusion of Lemmas *follows*⁵⁾.

From our few years' experience we have *arrived at*⁶⁾ the conclusion that we can overcome the difficulty.

We *arrived at* the conclusion.

Reflection of sound *gives rise to*⁷⁾ echoes.

Substitution of (2. 4) into (6. 1) *gives rise to* the closed-loop optimal control.

Using the transformation operator T defined in (3. 6), we *write down*⁸⁾ the third order Burger equation equivalent to equation (4. 3).

Sugar *acquires*⁹⁾ a brown color by being burnt.

How did she *acquire* her skill?

In this chapter we relax the assumptions on F and show that

it still *generates*¹⁰⁾ a unique semiflow.

If we replace S with S_* in Lemma 5, then again F *generates* a unique semiflow.

If the value $f(x) = g(x)$ holds on $D \cap D_2$, then we *have*¹¹⁾ $f(x^*) = g(x)$.

If the resistance is reduced, we shall *have* a stronger current.

注 1) *gain v. t.* 得, 获得。指经过努力、劳动或斗争后而获得, 并指所获得的东西有实际好处。

2) *get v. t.* 得, 获得。普通用语, 具有较广泛的用法和意义, 常可以替换其它同义词。

3) *obtain v. t.* 获得。书面用语, 指获得所希望的事, 也常指通过努力而获得的东西, 强调达到的目的。

4) *yield v. ; n.* 产生, 得出。指成长出作物, 结出果实等等。含有绝对的、无条件的产生的意味。

5) *follow v.* 随着, 伴随, 接着发生。是一般用词, 指随之而来或随之而去。

6) *arrive at* 得出。有得出结论、决定、解决的办法的意思。

7) *give rise to* 产生, 引起。

8) *write down* 记下来。比喻意指“得到”。

9) *acquire v. t.* 获得。特指依据自己的努力而得到, 指用不断的努力慢慢地并渐次地获得智力、才能等, 一经获得即变成永久的所有物。*acquire* 后面有时接两个宾语, 作“使…得到…”解, 如:

His character acquired him a good name.

10) *generate v. t.* 产生, 生成。

11) have *v. t.* 获得。为普通用词,用法广泛,指一般“获得”、“具有”之意。常用来强调某人某物,某物具有某种特征等。

英美对 have 用法上略有不同:

{ I have got to do it. (英)

{ I have to do it. (美)(have to+不定式:只得,不得不)

{ Do you have any data?(美)

{ Have you any data?(英)

6. 选择

表示“选择”常用的词与词组有: alternative, either ... or, or else, otherwise, or, else, or alternatively, whether or not, choice 等。

An *alternative*¹⁾ method of reducing the risks of detonation is by adding dopes to the fuel.

The use of *either* aluminium *or*²⁾ magnesium alloys is now quite common.

The heat which is required for welding is produced by an oxy-acetylene torch *or else*³⁾ by an electric arc.

Either a centre *or* a chuck is fitted into the spindle depending on *whether* turning' or boring work is being done.

What *else*⁴⁾ can I do for you?

The temperature must not exceed 600°C, *otherwise*⁵⁾ the metal will melt.

Matter is anything like air, water *or* metals.

Bearings can be lubricated either by gravity feed *or alternatively* by forced feed.

The type of condenser we use will largely depend on *whether or not*⁶⁾ there is a plentiful supply of pure water.

She is scrupulous in the *choice*⁷⁾ of words.

注 1) *alternative* (ly) 通常作“两者任择其一的(地)”或“两不相容的(地)”解, *not alternative* (ly) 作“并非两不相容的(地)”或“也许两者都是的(地)”解。*alternative* 也可用作名词。

alternative 是两条道路中的一条; 很多道路或事物中的选择则要用 *choice*, 如上面第10句中 *the choice of words* 是许多词的选择。因此英语可以说 *my first choice, second choice, third choice*…。*alternative* 只能用来指路线、办法, 不能指具体事物。在两本书中选择一本时, 应该说“Which is your choice?”, 不能说“Which is your alternative?”

alternative (*n.*) 后接 *to*, *to* 为介词。如: *The only alternative to going to see him is to write to him.*

2) *either*…*or conj.* 或…或, 是…还是…, 不是…就是。

注意写作时, *either* 同 *or* 后面的词类是相同的, 上面第2句中连接的都是名词, 再如:

These instruments were made either in Tianjin or in Beijing.
(介词词组)

Current theories, either empirical or electronic, do not appear to account for this result. (形容词)

Either come in or go out. (动词)

两个主语在“数”上不一致时, 动词随接近名词的数而变动, 如:

Either the section head or his assistants have received the notice. (在 *assistants* 后用复数动词 *have*)

Either the assistants or the section head has received the notice. (在 section head 后用单数动词 has)

一般,这种句子可改写为 Either the section head has received the notice or his assistants have.

在现代英语里,副词 either 用于否定句或否定词组中,以加强语气。either 放在否定的动词或形容词后面,如: This new product is of high quality and is not expensive either.

or 也具有选择性,用在选择性较弱的口语体。either... or 则选择性强一些。either... or 的反义词为 neither... nor。

3) or else 作“否则”,“要不然”解,有时还用 either... or else... 作“不是... 否则就是...”解。or else 前可不加逗号,如第 3 句;但经常加逗号,如: The steel parts of the machine should be covered with grease, or else they will rust.

4) else *adj.* 其他的。作 *adj.* 的 else 与 other 同意,但 else 放在它的关系词之后,关系词一般是代名词或 anything, nothing, everything, something, some one, all, much, little, a great deal。

5) otherwise 在此处为连词,作“否则”解,与 or else 和 if not 同意。

作副词意“取别的方式”、“除此以外”、“从其它方面讲来”,如 Otherwise expressed, the current varies directly with the voltage。作形容词意“别样的”、“其它性质的”,如: Some of the methods are successful, some are otherwise.

6) whether *conj.* 是否。可引导主语从句、表语从句、宾语从句、同位语从句、让步状语从句,有 whether or not, whether... or not, whether or no; whether... or no 等形式。

whether or no 引导一从句时,作“是否”解;不引导从

句时,作“无论如何”解。whether 有时可以省略,省略时谓语用动词原形,主语和谓语句颠倒,例如: All magnets behave the same, be they large or small. (= All magnets behave the same whether they are large or small.)

whether 引导从句时,一般用在动词 see, ask, say, learn, wonder, know, understand, doubt 等之后,如:

The section head asked whether the mail had come in.

They had all been wondering whether the messenger would get there in time.

whether ... or not 常常分开,中间插入其它的词; whether or no 常常连用,有时也可分开。如:

I cannot say whether it is possible or not.

I don't know whether or not the report is true.

I don't know whether or no the report is true.

7. 容纳与构成

表示“容纳与构成”常用的词与词组有: contain, container, content, consist of, comprise, to be composed of, be made up of, component, composition, constitute, make up, include, comprehend, hold, accommodate, element, form 等。

The gas *contains*¹⁾ about 4% of carbon monoxide.

The alloy *contains* 4% nickel and 4% iron.

A tank is a large *container* for holding liquids. (n. 容器)

The moisture *content*²⁾ of the cylinder increased. (n.)

Part of the heat *content* of the gas is lost. (n.)

He emptied out the *contents* of the box. (n.)

The class *consists of*³⁾ 24 students.

Concrete *consists of* cement, sand and gravel, mixed with water.

The atmosphere *comprises*⁴⁾ a number of gases.

Our curriculum *comprises* politics, mathematics and physics.

The machine *is composed of*⁵⁾ several different parts.

Cast-iron *is made up*⁶⁾ of about six different substances.

It is a preparation *composed of* camphor and quinine.

All bodies *are made up of* atoms.

The factory produces *components*⁷⁾ for aircraft.

The resultant force acting on an aircraft wing may be received into a vertical *component* and a horizontal *component*.

The wing and tail assembly are important *component*⁸⁾ parts of an airplane. (*adj.*)

The *composition*⁹⁾ of cast-iron is different for different purposes.

A *composition* has gold in it.

24 students *constitute*¹⁰⁾ the class.

Ferrite and carbon *make up* mild steel.

Ferrite and carbon are the *constituents*¹¹⁾ of mild steel.

The students in the class *include*¹²⁾ three from Germany and four from France.

The gases in the atmosphere *include* oxygen and nitrogen.

The mixture in the furnace *includes* certain amount of limestone.

Our design has *comprehended*¹³⁾ your suggestions.

Modern computers are capable of *holding* a large amount of information.

The meson is one of the particles that *holds*¹⁴⁾ the atoms together.

The university auditorium can *accomodate*¹⁵⁾ over three thousand people.

This hotel can *accomodate* 500 guests.

Oxygen and hydrogen are the essential *elements*¹⁶⁾ to constitute water.

A number of gases *form*¹⁷⁾ the atmosphere.

The flow of current in a semiconductor can be formed by a flow of negative charges, as in the case of conductors.

注 1) contain *v. t.* 含有,载有。着重于其中实在包含有的成分或部分,后接全体的一部分。

2) content *n.* 单数时表“容量”或“要旨”,复数时表“内容”,“内容物”,“目录”。

3) consist of 由…构成。强调结果是一个统一整体。与 contain 不同,consist of 后面接全体的各部分,但在表示容积或重量时,二者意思相同。如:A gallon consists of (contains) four quarts.

4) comprise *v. t.* 包括,由…组成。强调由许多部分组成集中一起以构成一个整体。和其他动词的区别在于:

i) 它可以用复数的“部分”、“成分”作主语,表示“构成”;

ii) 它可以有“包括”和“由…组成”两个意义。

5) to be composed of 由…组成。

compose *v.* 组成,由…组成。

compose oneself 镇静。

6) make up 组成,常用被动式。

7) component *n.* 成分,组成部分。意为某物的这一部分

与他物混合时成一混合物或化合物。

8) component *adj.* 组成的,合成的。

9) composition *n.* 组成,结构,混合物。

10) constitute *v. t.* 组成,构成。试比较:

24 students constitute the class.

The class consists of 24 students.

11) constituent *n.* 成分,要素。常与 component 互用。

12) include *v. t.* 包括、包含。它的宾语是整体的一部分。

13) comprehend *v. t.* 包含,包括。是正式的词,强调包括在整体范围之内,应用于观念(idea),陈述(statement),纲要(outline)等。

14) hold *v. t.* 容纳,储存,占有。着重于“能够容纳或有足够的容量”,常与 contain 互用。

hold together 结合。

15) accomodate *v. t.* 接纳,容纳。意为很舒适地容纳。

16) element *n.* 成分,要素,元素。指不能化简的基础部分。指物质时,指不能再细分的组成部分;指构成一个整体的零件、物料或原料的某一部分时,element, component, constituent 三词同意。

17) form *v. t.* 形成,组成。be formed from 由...构成,形成。be formed of 由...组成,构成。

8. 设计

design, scheme, project, plan 用来表达完成预定结果的一套设计。

The engineer made a *design*¹⁾ of the hydroelectric power sta-

tion for the commune. (*n.*)

An electronic brain can solve the difficult *design* problem.

(名词作定语)

Our scientists are now *designing* some robots for doing the dangerous work. (*v.*)

We have made a *scheme*²⁾ for manufacturing paper from straw. (*n.*)

An irrigation *scheme* was worked out. (*n.*)

They *scheme* out a new method of bridge building. (*v.*)

A *project*³⁾ for developing local industries is going on smoothly. (*n.*)

We formed a *project* to build a new laboratory building. (*n.*)

The new railway has been *projected*. (*v.*)

Our scientists have made *plans* for several space explorations. (*n.*)

The First Five-Year *Plan* was overfulfilled successfully. (*n.*)

We *plan*⁴⁾ to finish the adjustment of the equipment before Sunday. (*v.*)

注 1) *design* *n.*; *v.* 强调根据目的、目标而进行周密的“计划”、“设计”和“安排”;作动词也可指“想要”、“拟”,后面接不定式或动名词都可。如: They *design* to go (或 *going*) at once. 也可接以 *that* 引起的从句,从句里用 *shall*。如: He *designs* that the engine shall be made in the summer.

design 与 *project* 相比是较为确定 (*more definite*) 的用语。

2) *scheme* *n.*; *v.* 策略、计划。指公务上的与有系统的计

划,常被用表格的形式表示出来;又指图谋利益的策略,因而含有奸诈的意味在内,指坏的与卑鄙的企图。

3) *project* *n.*; *v.* 为正式用语,强调一种为试验或实验而提出的计划,尤指大规模的规划,但也可指不切实际的脑中臆造出来的计划。与 *design* 或 *plan* 相比,较为暧昧,但较为庄重。

4) *plan* *n.*; *v.* 为普通用语,指事先作出的办事程序的方法,经过仔细考虑有组织的计划。*plan* 作名词后面接 *for* (或 *of*) + 动名词(名词)比接不定式普通。如 *a plan for (of) developing heavy industries* 比 *a plan to develop heavy industries* 普通。*according to plan* (按照计划地)里不用“*the*”,例如: *Everything went according to plan.*

plan 作动词时,后面接不定式。

He is busy planning out a new book. 中 *planning out* 作“正在为…预先拟就一个计划”解。

9. 试验

表示“试验”常用的词与词组有: *test*, *experiment*, *trial*, *try out* 等。

Wasserman and Neiser developed a test¹⁾ for the antibody produced by persons infected with the Spirochaeta pallida.

They have undergone another underground nuclear test.

The machine parts should be tested before installation. (v.)

We can use different methods to test for its allergies. (v.)

Mendel attempted to test his theory derived from the garden peas by experiments with other plants, but failed.

The students need some more organic chemicals for their ex-

periments.

He is *experimenting* to get a new substance.

He *experimented* in ploughing by steam power.

The new machine was put to *trial*³⁾ yesterday morning.

It was my first *trial*.

They have *tried out*⁴⁾ a new kind of walking tractors again and again.

We have *tried* this new farming method *out* many times.

注 1) test *n.*; *v.* 试验, 测验。指经过实验、化验、检查等手段对物质性能、性质、效能等进行试验, 或对尚存在的可疑之处进行试验。较 *trial* 意味强且更具特殊的意味, 含有探究 (*searching*)、判断 (*decisive*) 的意思, 如 *mental test* (智力测验) 等。

2) *experiment v.*; *n.* 进行实验 (试验), 实验, 试验。指对未获得结果的或尚不可知的事物进行实验或试验, 如进行某项科学试验等。作名词时, 动词可用 *make*, *try*, *conduct*, *carry out*。*make* = *try*, 但用 *make* 较通俗、普遍。*experiment* 有时用作抽象名词作“作实验”解, 如 *a great deal of experiment*, *ten years of study and experiment*。这两个词组中的 *experiment* 可以改作 *experimentation*, 但通常用 *experiment*。

experiment 作动词通常是不及物动词, 除接 *in* 外还可接 *on* 和 *with*。如: *The students are experimenting on (with) a piece of metal.*

3) *trial n.* 试验, 考验, 尝试。为一般用词, 指某物的性能、价值、效果、力量等进行试用。

4) *try out* 试验, 彻底试验。也作“参加选拔赛”解。如

try out for the football team.

tryout *n.* 试验。多用在口语中。

10. 方式

方式状语表示主句中动作或状态发生的方式或方法,可以用副词、分词、词组、复合结构以及表示方式的状语从句(用连词 *as, just as, as if, as though, according as*)等来表示。

She was examining a fossile *microscopically*¹⁾. (副词)

They were *categorically*¹⁾ told that no more oil would come from the wreck.

A lot of students gathered around the engineer *assailing him with questions*. (现在分词短语)

*Held tightly*²⁾, the electrons are not easily lost to other atoms to form ionic bonds. (过去分词短语,过去分词表示的被动行为对象是句中主语)

The pressure vessel is *designed in such a way* that it will withstand the blast of an explosion.

The wast products are stored *in such a way* that they cannot contaminate their surroundings.

The houses are made of wood. Houses *so*³⁾ constructed are much cheaper to build. (=Houses which are constructed *in this way*)

Shareholders' dividends will be cut, and the money *thus*³⁾ saved will be used for plant modernization. (=the money which is saved *in this manner*)

She likes to have it *her own way*. (词组)

Boundless enthusiasm should go *hand in hand with scientific*

analysis. (词组)

He entered the laboratory, *calculator in hand.* (复合结构)

He sat *with his head thrust forward so as not to miss any word.* (复合结构)

副词方式状语通常可用 *in a...manner* 或 *in a...way* 来解释。如果有副词存在,一般用副词,而不用带有 *manner* 或 *way* 的相应的同源介词短语,因此 *He always writes carelessly.* 比 *He always writes in a careless manner (way).* 更为普通。但是当方式状语要求有修饰成分时,则多用后一种迂回说法,以避免连续使用 *-ly* 结尾的副词。这一部分是出于文体上的考虑,一部分是因为几个副词一起出现会使人们以为第一个副词是第二个副词的修饰语,因此不用 *He always writes deliberately carelessly.* 而用 *He always writes in a deliberately careless way.* 不用 *He spoke stupidly frequently.* 而用 *He frequently spoke stupidly.* (这个形式也比连续使用副词好。)

以下是方式状语从句:

A balloon floats in the air *as a boat floats on water.*

In the early days people could not count *as we do now.*

Most plants need sunlight *just as they need water.*

Just as water is the most important of liquids, so air is the most important of gases.

Some rocks sparkle with an unusual brilliancy *as if they contained gold.*

The molecules of a gas behave *as though they were perfectly elastic bodies.*

The thermometer rises or falls *according as* the air is hot or

cold.

The shadow cast by an object is long or short *according as the sun is high up in the sky or near the horizon.*

注 1) 在写主动语态句子时,方式状语放在句末;在写被动语态时,方式状语置于句中,而不放在句末位置上。

2) 过去分词作方式状语,一般用逗号与句中其它成分隔开,但个别也有不用逗号的情况。

3) *so constructed* 和 *thus saved* 明显修饰前面的 *houses* 和 *money*, *so* 和 *thus* 都放在分词的前面。如果不用 *so* 和 *thus* 而换用 *in this way* 和 *in this manner*, 则也可以放在从句最后(见括号)。

11. 方法

表示“方法”常用的词有: *method*, *means*, *way*, *manner*, *mode*, *fashion*, *process* 等。

Welding is one method¹⁾ (means²⁾, way³⁾) of joining pieces of metal together.

This is a different mode of operation.

There are many methods (means) of joining pieces of metal together.

There are several ways to solve this question.

One of the best methods (ways, means) of joining pieces of metal together is to weld them.

New methods of production were adopted (were put into practice, were employed, were installed, were introduced) a few years ago.

You will pack the materials after the manner⁴⁾ of your last

shipment.

Can all the liquid products be transported in this *manner*.

Heat is a *mode*⁵⁾ of motion.

This is a different *mode* of operation.

You should not settle the problem in summery *fashion*⁶⁾. (方法, 方式)

There are two basic *processes*⁷⁾ which are used to produce the required shape, i. e. forming and machining.

The new *process* has yielded good result.

注 1) *method* *n.* 方法, 办法, 方式。强调按程序、步骤进行, 常指有理论的、系统的方法, 后接 *of* 或不定式普通。

2) *means* *n.* 手段, 方法。作名词时, 单复数相同。*means* 前带有 *a, such a, this, that, every* 时, 后用单数动词, 带有 *all, such, these, those* 时, 后用复数动词; *means, the means* 和 *no means* 用单复数动词都可以。*means* 后通常接 *of* 或 *for* + 动名词, 间或接不定式或 *to* + 动名词。

by this means 用这种方法, 如: *By this means the solid impurities in the boiler are left behind.*

by means of 用, 以, 如: *To weld metals is possible by means of heat produced by a current.*

by different means 用不同的方法, 如: *We made transistors by different means only to get the same effect.*

by no means 必不, 如: *By no means shall I misunderstand you.* (注意颠倒词序用 *shall I*)

3) *way* *n.* 方法。后面接不定式或 *of* + 动名词都可以。如:

There are several ways to solve this question. 也可以写作:

There are several ways of solving this question.

在 this way, that way, which way, your own way, his way, the hard way 前习惯没有 in。如：

Please come this way.

Which way do they look?

You may do it your own way.

Opportunity came his way more than once.

English writing has to be learned the hard way.

way 有时可同 process, method 互换。

4) manner *n.* 方式, 样式, 方法。主要指行动的特殊方式, 可指好的, 也可指坏的; 可以指一般的方式和方法, 也可指某种特殊的方式和方法。较 way 庄重, 但意义广泛。作“办法、方式”解时, 习惯上不用复数。需要复数时可用 ways, 如 in these ways, the different ways of doing it。

5) mode *n.* 方法, 方式, 状态。通常指一定的、习惯性的或具有独特的方式、方法或形式。

6) fashion *n.* 方式, 方法。为普通用语, 强调一时或某一单位、国家流行的某种形式或习惯、风俗等, 也常用以指做某事的一种方式、方法。较 way 庄重。

7) process *n.* 方法。特指制造、印刷、照像等的工作方法、程序或过程, 也指不局限于加工处理的过程。如对数据进行分析处理的“过程”或用于指办理各种手续的“过程”。

方法的表达还可用“by + 名词或 -ing”:

by 除在被动语态中使用表示行动者外, 一个更重要的作用是表明作某件事或取得某些成果时所使用的方法。在主动语态与被动语态中都可使用 by, 并常在词组 by means of 中出现。有时在名词前可用 with 代替 by。with 主要表示行为使

用的工具,也可表示材料、手段或方法,比较具体。

The production is separated *by* distillation into gasoline and gas oil.

Heat losses can be reduced *by* the use of firebrick.

We can reduce heat losses *by lining* the furnace with firebricks.

We can get heat energy *by burning* fuel.

This can be done (effected, achieved, accomplished) *by means of* firebricks.

Water can be softened *by adding* washing soda to it.

By lining the furnace with firebricks, heat losses can be reduced.

We can see the stars in the sky very clearly *with* a telescope.

The type of dam is built *with* earth.

Change of state is explained *with* moving molecular.

by 同 with 的区别, 试着:

The room is lit *by* electric light.

The room is lit *with* five electric lights.

“electric light”(单数)指电力,“five electric lights”(复数)指五盏电灯。*by* 表示无形的手段,*with* 表示有形的工具;*by* 有主动力量,表示力量的行使者,*with* 只起工具的作用。*by means of* 不能用在动名词前,*by* 可用在动名词前。

12. 力

表示“力”常用的词与词组有:force, drive, impel, push, exert on, act, act on, react, repel, repulsive force, attractive force, balance, counterbalance 等。

The impeller blades *force*¹⁾ the water forwards.

The expanding gases *drive*²⁾ the piston down the cylinder.

The wind *impels*³⁾ the boat to shore.

*Push*⁴⁾ the button and the machine will start.

The weight *exerts* a turning force *on* the lever.

The fluid *exerts* a pressure *on* the walls of the container.

The force *acts*⁶⁾ perpendicular to the axis of the spindle.

The two forces *act* in line with each other (in opposition to each other, against each other).

The force of gravity *acts on* all objects vertically downwards.

Friction *acts on* moving bodies and brings them to a stop.

One substance *reacts*⁷⁾ with another in a chemical reaction.

Bodies with similar charges *repel* each other. They exert a *repulsive force*.

Bodies with opposite charges *attract*⁸⁾ each other. They exert an *attractive force*.

The weights at opposite ends of the lever *balance*¹⁰⁾ each other.

The two opposing forces *counterbalance*¹¹⁾ each other.

注 1) force *v.* 迫使, 强迫, 推动。在植物学里意味通过温室栽培等方法使植物早熟, “加速…成长”。

作名词为“力”。一般指外加的力, 外部的力, 要完成某事而实际应用的能力, 尤指在克服重大阻力后所体现出来的力。

2) drive *v.* 驱动, 推动, 发动(机器等)。为非正式用语。drive in 意“塞进…”, “钉进…”, 如: The plug was driving in

the pipe.

3) *impel v. t.* 指相当大的“作用力”,使任何物体(从物理学角度看)移动。

4) *push v.* 按,挤,压。还可作“使延长”、“发出”解,如:
In spring, plants push out new shoot. *push* 指施加一种力“推动”某物,强调与此物接触而使其移动。

5) *exert v. t.* 施加…力。为科技用词。还可作“尽力”、“行使”解,如: The scientists have exerted every effort to solve the energy problem.

to exert…on (upon) 施(力)于…。

to be exerted on (to) 施加…上,如: It is common knowledge that weight is a pull exerted on an object by the earth.

6) *act v. i.* 作用于,对…起作用,有效力。是个常用词。
act on 对…起作用。

7) *react v. i.* 反应,起作用。

8) *attract v.* 吸引。指由于本身的质量或特性或者二者间密切的关系而形成的一种吸引。

9) *repel v. t.* 排斥。为 *attract* 的反义词。

10) *balance v.* 平衡。也可作“抵销(效果,影响等)解。如: The centrifugal of the satellite balances the pull of the earth.

balance n. 天平,秤。如: In the laboratory weight of matter is measured by means of a balance.

11) *counterbalance v. t.* 均衡,抵销。