第3章　名詞（Nouns）

§3-1 特殊な複数形

	SINGULAR	PLURAL	
1.	formula	formulae	式
2.	phenomenon	phenomena	現象
3.	nucleus		
4.	maximum		
5.	hypothesis		
6.	matrix		

(Exercise 3-1) 複数形を書け。

1.	spectrum	2.	analysis
3.	quantum	4.	parenthesis
5.	momentum	6.	thesis
7.	medium	8.	axis
9.	minimum	10.	criterion
11.	radius	12.	supernova

特殊な複数形のパターンは限られている.

略称や数字の複数表記：単に **s** をつける。紛らわしい場合は **'s** を付ける。

・*His family name is spelled with two is.*→ His family name is spelled with two i's.

・1980s (1980's)　in the 1980s (in the 1980's:　see §3-7)

・Some numbers with a sequence of 3's followed a 1, such as 31, 331, 3331 and 333331, are prime numbers.

・LEDs

§3-2 小数の場合の単数・複数形

0.1 mm (zero point one millimeter),　　1.1 mm (one point one millimeters)
数字が 1 を超えたら複数。1 以下なら単数扱い。（Judy Noguchi, 井口道生）

1 以外はすべて複数形という用法もある。
English also tends to use the plural with decimal fractions, even if less than one, as in *0.3 metres*, *0.9 children*. (Wikipedia)

§3-3 数えられない名詞(Uncountable Nouns)関連

★[U] と [C] の表記のない辞書は使うな!

(1) 決して"s"を付けない名詞：[U]

1. Information [U]

W: ** *Many informations were obtained.* **　　← 文法上の誤り

R1:　A lot of information was obtained.

R2: (not common) Much information was obtained.

R3: (not common) Many items of information were obtained.

(補足) "a lot of" は　a lot of *n*([C], 必ず *pl*.),　a lot of *n*([U]) 両方使える.
　　　　　A lot of inelastic events were recorded.　　　非弾性事象

(比較) "a variety of" も同様。　a variety of *n*([C], 必ず *pl*.), a variety of *n*([U])

2. Equipment [U]

W: ** *Several equipments were installed.* **

R:　Several pieces of equipment were installed.

R:　Many items of equipment were installed.

R:　A lot of equipment was installed.

Apparatus, instrument, machine などは，普通[C]である.
(補足) apparatus は複数形も apparatus　(or apparatuses).

3. Data [U] cf. datum

   W: ** *Many datas were obtained.***

   R: A lot of data was obtained.

   W: ** *Several of the datas are shown in Fig. 3.***

   R: Several of the data are shown in Fig. 3.

   Data はすでに複数形であるので，"s"を付けることはできない(単数形は datum)．しかし，複数形であるのに関わらず最近では This data **was** analyzed by computer.のように単数的にも，あるいは These data **are** very interesting.のように複数的にも扱うことができる．各自の好みに応じてよいが，文中全体で一貫した扱いをするべきである．

(補足)以下の文を比較せよ．

   This data was analyzed **by** computer.

   This data was analyzed **with a** personal computer.

4. The following [U]

   W: ** *The followings were assumed.***

   R: The following <u>was</u> assumed: The following <u>were</u> assumed:

   R: The following assumptions were made:

   W: ** *The plasma parameters were the followings.***

   R: The plasma parameters are as follows.

  "The following"には決して"s"は付かない．"The following"は The + *adj.* で名詞的に使っている．この場合、内容によって単数・複数どちらの扱いでも可．

5. Evidence [U]

   W: ***The evidences for the broken symmetry are as follows.***

   R: The evidence for *the broken symmetry* is as follows.

   R: There are many pieces of evidence to support this conjecture.

6. Literature [U] 文献

   W: ***The literatures offer evidence to support these results.***

   R: The literature offers evidence to support these results.

7. Behavior

   W: ***The research of EuSe clarifies a complex magnetic behavior.***

   R: The research of EuSe clarifies complex magnetic behavior.

 次のような場合，うっかりと "behaviors"としやすいので注意．

   R: Likewise this ease of oxidation is shown in the chemical behavior of 1 and 2.

★最近は複数形 behaviors の使用も増えてきている。

8. Dependence

   W: ***The dependences of the conductivity on the temperature, pressure, and frequency were measured.***

   R: The dependence of the conductivity on the temperature, pressure, and frequency was measured.

（日本物理学会編：科学英語論文のすべて（丸善，1999）第 3 章．）

(補足) **behavior [U]** と **dependence [U]** は、場合によっては**複数形**でも用いられることがある．その場合でも、[U]としての原形で置き換えてもよい場合が多い．（原田豊太郎：理系のための英語論文執筆ガイド（講談社，2002） pp. 37-42.）自分で文を書く場合は必ず単数形で使う方が無難.

（2）　本来［U］だがしばしば複数形

R:　The material is paramagnetic at low **<u>temperatures</u>**, and diamagnetic at high **temperatures**.

　低温で何点もデータ・ポイントがある場合などに，各点を別々の temperature として数えている．Energy, conductivity, specific heat なども同様．

R:　The electrical **conductivities** of the two samples are completely different.

（3）一般概念には必ず複数（plural, *pl.*）をとる名詞：［C］

features, properties, aspects, characteristics, circumstances.

　これらの名詞は，<u>一般的概念</u>を意味するときは複数形．<u>一つの特別な性質</u>などをさすときにのみ単数形．

Let us examine 　［the properties/ some features/ various aspects/ the characteristics］ of this problem.

The solution (2.8) has the peculiar 　［property/ feature/ characteristic］ of being invariant under the interchange of *x* and *y*.

A disturbing aspect of this situation is that ...

The unfortunate circumstance that *f* diverges makes it impossible to ...

(補足) feature を future と間違って発音する日本人が多いのはなぜだろう？

The new model <u>features</u> the <u>future</u> technology of remote sensing.

property:　...　に関する性質　→*pl.*
　　　　　...　という性質→　→*sg.*
　transformation properties,
　Hermitian property,
　symmetry properties (対称でも非対称でもよい、対称性に関する性質)

the symmetric property (対称であるという性質)

(Exercise 3-2) 次の 2 つの違いを吟味せよ．
　1. the magnetic properties of copper
　2. the magnetic (ferromagnetic) property of iron

§3-4 抽象名詞

★抽象名詞・動詞化 で明解な文になる．

　日本人は英語を書くとき，動詞より名詞を好んで用いる傾向がある．これは「英訳」すべき「和文」がそのようになっているからかもしれない．しかし，名詞を多用しすぎると冗漫でだらだらした文になってしまう．

1. *This results in a high reduction of the resistance.* ☞スタイルの誤り
　（これが抵抗の大幅な<u>減少</u>をもたらす．）
→ 　This drastically reduces the resistance.

<u>"ーion"で終わる名詞</u>は特に致命的である．
2.*The rotation of the sample was done.*（試料の回転を行った．）
→ 　The sample was rotated.
3.*We can use this formula for the purpose of the estimation of the density.*
→ 　We can use this formula to estimate the density.

(Exercise 3-3) 　次の文を改善せよ．
1. *The temperature stability of the sample was achieved in this way.*
　（試料温度の<u>安定化</u>は．..）
2. *The oxidation of the iron was performed.*
3. *Utilization of synchrotron radiation is usually made in this way.*

§3-5 複合名詞

    a <u>neutron</u> detector = a detector of neutrons　（中性子検出器）
名詞（*n.*）の形容詞（*adj.*）的な用法.

★ハイフンが必要になる場合：
　次のように形容詞で修飾された名詞を合わせて形容詞的に使う場合はハイフンが必要.
    a high-energy particle = a particle of high energy
    the fine-structure constant

(補足) 形容詞の結合でもハイフン必要.
    a two-dimensional system　　　　　This system is two dimensional.
    a 1-cm diameter disc　　　　　　　The diameter of the disc is 1 cm.

(補足) 十分よく使われた語句は一語に結合してしまう場合がある.
    wavelength,　　eigenvalue (これはドイツ語起源だから)
    しかし: mean free path　（平均自由行程）

    first-<u>principles</u> calculation　　　　第一原理計算
    least-<u>squares</u> method　　　　　　最小二乗法

★三つ以上の名詞の結合は好ましくない.
    The sample temperature control unit is shown in Fig. 1.
    →The unit for controlling the sample temperature is shown in Fig. 1.

§3-6 代名詞

  W: ** 　　*The electrical resistivity of sample 1 is approximately the same as sample 2.* **

  R: 　　The electrical resistivity of sample 1 is approximately the same as **<u>that of</u>** sample 2.
  R: 　　The resistivity of sample 1 is quite different from <u>that of</u> sample 2.
  R: 　　The resistivity values of sample 1 and sample 2 are quite different.
  R: 　　This method of measuring conductivity is as versatile as <u>the one</u> described in reference 1.

§3-7 所有格 's か 定冠詞 the か

アポストロフィー　's を伴う場合、それだけで特定する働きがあるので、定冠詞 the はつけない.

Maxwell's equations 　　（the Maxwell equations）　 one of Maxwell's equations
Ohm's law

the Maxwell distribution
the Pauli exclusion principle 　(cf. *principal* axis) 原理（排他律）、主軸
a Feynman diagram
a Poisson ratio

(Exercise 3-4)
  <u>Underline</u> grammatically incorrect words and <u>write</u> down the correct words.
　以下の文中で文法的に誤った部分に下線を引き、正しい語句を示せ.
　（**は文法的に間違った文であることを示す。）
1. ***Many evidences for an unusual nonlinear behavior have been found in a variety of physical property.***

2. ***These phenomenon can be experimentally studied using these two equipments and theoretically analyzed in terms of a product of two matrix.***