

CHECKLIST

校閲者からみた、英文論文執筆のコツ

Writing Research Papers
Tips from a Science Language Editor

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 edanz

I. Writing in General 英文作成(一般的に)

*The Better You Can Write English, the
Better You Can Edit It*

英作文の能力が高い人ほど、
校正ができる。

A. Words 単語

*Commonly Confused
and Misused Words*

(よく混同したり誤用されたりする単語)

Practice Exercise!

練習問題

Check your knowledge of commonly confused and misused words.

混同・誤用されやすい単語についてどれだけの知識があるかチェックしてみよう

1. Articles a/an vs. the

冠詞 a/an と the

- “a/an”: used when the noun can exist in more than one form or as more than one case

(“a/an”: 同種のもものが複数あってその中の一つを指す場合、不定冠詞“a/an”を使う)

“A new type of matter was identified.”

(other types of matter also exist)

- “the”: used when no more than one instance exists or is likely to exist in the future:

(“the”: 冠詞の後に来る名詞が一つしか存在しない、また今後も存在しない場合)

“The new type of matter was named a supersolid.”

(supersolid is the specific type of matter)

Experience using and reading them is the key!

(キーポイントは英語の読み書きの訓練を積むこと!)

2. affect/effect (and impact)

- “effect” as a noun is the “result of some action.”
(名詞としての“effect”は、行為の結果を表す)
- “affect” as a verb is “to influence”.
(動詞としての“affect”は、(何かに)影響を与えることを表す)

BUT・ただし

- “effect” as a verb is to “bring about a change.”
(動詞としての“effect”は「変化をもたらす」ことを表す)
- “affect” as a noun is the feeling or emotion caused by somebody’s demeanor, action, or speech.
(名詞としての“affect”は、他人の言動によって自己の感情に影響が表れることを指す)
- “impact” should be used only to describe “striking of one body against another” and should not be used as “affect.”
(“impact”は衝突・衝撃の意味を表すときにだけ使われるべきであり、“affect”「影響する」の代わりに使われるべきではない)

2. affect/effect (and impact)

例文：

“Ingesting massive doses of ascorbic acid
may **affect** his recovery.”

(influence the recovery in some way)

“Ingesting massive doses of ascorbic acid
may **effect** his recovery.”

(produce/cause the recovery)

Luckily, the medicine did not adversely **affect** the patient.
Many scientists believe that global warming is the **effect** of
greenhouse-gas emissions.

3. because/as/since

- “as” used only in temporal, not causal, sense.
 (“as” は「～している時[最中]の」、「～しながら」、「～したままで」のように時間的な関係を表す場合に使われ、因果を表すためには使われない)

“As we were completing the paper, new evidence came to light.”
- “because” used to show causal action. (“because”は因果関係を表す)

“Five participants could not complete the follow up questionnaire because they had moved out of the target district.”
- “since” used to show temporal relation. (“since”は時間的な関係を表す)

“Since we completed the study, there have been three additional successful replications of the results.”

4. because of/due to

- “due to” = **adjective (形容詞)** + preposition (前置詞), **adjectival phrase** meaning “attributable to” or “caused by” (形容詞句: ~に起因して、~が原因で)

"The problem was **due to** mechanical failure."

- “because of” = **conjunction (接続詞)** + preposition (前置詞), **adverbial phrase** meaning “as a result of” or “owing to” (副詞句: ~のために、~のせいで)

“The problem occurred **because of** mechanical failure.”

**Tip:* どちらを使うべきか迷う時は、“attributable to”と“as a result of”へ置き換え、どちらがより適切か考えてみる

5. comparable/similar (and same)

- “comparable”: adjective indicating an item lending itself to comparison with a similar term.
(形容詞:別のものと比較した結果:~に類似した、~と同様の、同程度の)

“Because the methods are different,
the statistics are not **comparable**.”

- “similar”: adjective indicating likeness
(形容詞:類似性を示す:~と似ている、~と同じようである、~と同類である).

"The mortality rates in Sweden and Chile are **similar**."

5. comparable/similar (and same)

**Tip: “Same” is sometimes mistakenly used when “similar” is the correct word. “Same” means exactly the same, or “identical,” which is not often the case when comparing scientific results, especially when comparing the results of two different studies.*

“Same” はよく“ similar”と混同されやすい。“Same”は完全に同じであることを表し、“identical”と同義語。“ Similar”は完全にはではないが、「よく似た」あるいは「同じような」という意味を表す。科学的結論や研究結果を比較する場合、Similarの場合が多い。

6. compose/comprise/constitute

- “compose”

*1) active verb meaning to form, to make up a single object, to go together. (～を構成する)

“One-hundred and seventeen elements **compose** the periodic table.”

*2) passive verb meaning the same as “comprise” ([部分]～から成る)

“The periodic table is **composed** of 117 elements.”

- “comprise” (verb) to include, contain, be made up of
(「全体が部分として～を」包む、包含する、[部分]～から成る)

“The periodic table **comprises** 117 elements.”

- “constitute” means the same as “compose.”
(“constitute”は“compose”の同義語である)

7. currently/presently/ at present (and "now")

- “currently” (preferred) and “at present” mean “now.”
(“currently”と“at present”は“now”「現在」の意味を表す)

“There are **currently** no available studies on quantum optics.”

- “presently” means “soon”, “shortly”, “in the near future.”
(“presently”は“soon”、“shortly” “in the near future”の意味を表す)

“**Presently**, we will begin the particle experiment on broken symmetry.”

- **Tip: “Now” is often mistakenly used in manuscripts when “currently” or “at present” is better.*
(科学論文では“Now”の代わりに“currently”あるいは“at present”を使うとよい)

8. demonstrate/exhibit/reveal/show

- “demonstrate” should be used only for *deliberate action* intended to illustrate an action or procedure
 (“demonstrate”は事例および研究の結果を実際に示すときに使う)
 - “The technician **demonstrated** how to operate the calculator.”
 - “exhibit” is used for *deliberate action* to make visible. (“exhibit”は実際に展示すること、示すことである)
 - “He **exhibited** the mineral specimens at the last congress.”
- **NOT used to mean passively carrying something.*
 (* 受動的立場で何かの状態を示すときには“exhibit”を使わないこと)
- × “The patient **exhibited** a rash” ○ “The patient **had** a rash.”

8. demonstrate/exhibit/reveal/show

“reveal” is an *action to make visible* what has been hidden. It is not a synonym for “report.”

(“reveal”は隠されていたものを見えるようにするという動詞である。“report”の同義語ではない。)

“The telescope **revealed** a star in the eastern part of the galaxy.”

**Tip: Non-living things cannot “demonstrate” anything; sentences like “The data demonstrated that...” should be avoided.*

(*生き物でない限り “demonstrate” という動作は出来ないので、
“The data demonstrated...” のような文章は避けること) .

9. significant vs. important/great/major/valuable

- “significant” should be used to mean serving as “pointing to,” especially in the statistical sense of reaching a numeric threshold.
(科学的文章において“significant”は何かに達するという意味であり、統計上である数値へ到達するというような意味合いで使われる。)

“The mean blood pressure was **significantly** lowered,
with a *P* value of 0.05”

“The results of this research will be of **great** value
to all nanotechnology researchers.”

- *Tip: Use other words only when statistical significance is **not** intended.
(統計的な意味での重大性を示さないのであれば、別の言葉を使うべきである)

10. employ/utilize vs. use

- “use”: adequate in most cases to mean applying or drawing on for a purpose. (“use”は通常「利用」の意味で使われ、目的のために利用することを表す)

“An autorefractor was **used** to measure refractive error.”

- “employ”: can also mean to put a person to work or put an object to use. (“employ”は雇用することや、手段を「採用」することを表す)

“All of the subjects had been **employed** at the company since 1997 or earlier.”

**Tip: There is really no reason to use “utilize” in scientific writing.
(科学論文では、“utilize”を使う必要はない)*

B. Phrases

(語句)

Be Concise
(簡潔に書くこと)

Practice Exercise!

(練習問題)

When writing science, it's important to be clear and use as few words as possible.

(科学論文を書く際は、できる限り明瞭かつ簡潔に書くことが重要である)

How did you do? (自己診断!)

- a majority of
- a number of
- at a rapid rate
- as a consequence of
- at this point in time
- based on the fact that
- completely filled
- despite the fact that
- due to the fact that
- most
- many, several, some
- rapidly
- because of
- now, currently
- because
- filled
- although
- because

- during the course of
- fewer in number
- for the purpose of examining
- has the capability of
- in all cases
- in connection with
- in the event that
- in the near future
- It has been reported by Wang
- it is often the case that
- during, while
- fewer
- to examine
- can, is able to
- always, invariably
- about, concerning
- if
- soon
- Wang reported
- often

- it is possible that the cause is
- it is worth pointing out that
- it would thus appear that
- large amounts of
- large in size
- large numbers of
- located in, located near
- on the basis of
- oval in shape, oval-shaped
- prior to [in time]
- the cause may be
- note that
- apparently
- much
- large
- many
- in, near
- from, by, because
- oval
- before

C. Sentences

(文と文章)

Short is the Key
(簡潔さがキーポイント)

Shorter Sentences (文はより短く)

The trend in scientific writing is toward
shorter sentences with less
punctuation.

(最近の科学文章の傾向：
句読点の少ない、短い文章を書くこと)

Sentence Structure

(構文)

In **1600** the average length of an English sentence was **40 to 60** words.

(1600年：一英文の長さは平均40～60語であった)

In **1900** the average length was **21** words.

(1900年：平均長さは21語であった)

Sentence Structure

(構文)

In 1970 the average length was 17 words.
(1970年:平均長さは17語であった)

Now, the average length of an English sentence is 12 to 17 words.
(現在、一英文は平均12~17語から成っている)

Sentence Structure

(構文)

Japanese uses long sentences.
(日本語では長い文がよく使われる)

English—particularly scientific English—uses very short sentences.
(英語、特に科学英語は短い文章ほど望ましい)

Sentence Structure

(構文)

Short sentences are the **NORM**.
They don't sound childish.

(短い文が基本であり、稚拙ではない)

Exercise: Break down long sentences

(練習問題: 短い文の作成)

New descriptors of local environment and atomic state, the X and Y indexes, can accurately reflect electron distribution around atoms in different chemical microenvironments, therefore when these were applied to characterize a local chemical environment and atomic self-state, a satisfactory result was obtained to simulate and predict the ^{13}C chemical shift of 22 natural amino acids and 4 non-natural amino acids.

Exercise: Break down long sentences

(練習問題回答例1: 短い文の作成)

New descriptors of local environment and atomic state, the X and Y indexes, can accurately reflect electron distribution around atoms in different chemical microenvironments. When these were applied to characterize a local chemical environment and atomic self-state, a satisfactory result was obtained to simulate and predict the ^{13}C chemical shift of 22 natural amino acids and 4 non-natural amino acids.

Exercise: Break down long sentences

(練習問題回答例2: 短い文の作成)

New descriptors of local environment and atomic state, the X and Y indexes, can accurately reflect electron distribution around atoms in different chemical microenvironments. **T**hese were applied to characterize a local chemical environment and atomic self-state. **A** satisfactory result was obtained to simulate and predict the ^{13}C chemical shift of 22 natural amino acids and 4 non-natural amino acids.

Sentence Structure 構文

Japanese sentences are very different
from English sentences
(日本語と英語の文章はとても異なる)

Sentence Structure

構文

For example, in Japanese all modifiers precede the elements that they modify.

(日本語では、全ての修飾語(句)が名詞の前にくる)

例：私が昨日渋谷で買った中古の本

Sentence Structure

構文

In English, some modifiers go in front of the noun and some are placed after the noun.

(英語では修飾語(句)が名詞の前にも後にもくることがある)

Ex: the used book that I bought in Shibuya
yesterday

Sentence Structure

構文

A modified soil's single sorption

The single sorption of a modified soil

Sentence Structure

構文

Correcting sentence structure:
(構文の校正)

If possible, don't translate from Japanese.

Write in English from the start.

(出来れば、日本語の文章を翻訳するのではなく、
最初から英語で文章を書いてみる)

Sentence Structure

構文

An important rule:

ONE SENTENCE, ONE IDEA

(重要ルール：一文で言及する内容は
基本的に一つである)

一文一事

D. Punctuation 句読法

*Punctuation Has the Power to Completely
Change the Meaning of a Sentence*

(句読法は文章の意味を完全に
変える力を持っている)

1. **Commas:** Be careful about commas with essential and nonessential information

(コンマ:重要な情報とそうでない情報へのコンマの使い方に注意すること)

Ask yourself, “Is the information essential or is it extra information that could be omitted”?

「その情報が文章の主張を伝達する上で
必要不可欠なのか、そうでないのか？」
を考えてみましょう

If the information is **essential**, do NOT
use commas.

(重要な情報にはコンマを使わないこと)

If the information is extra,
nonessential information, you **MUST**
use commas.

(情報が重要でない場合は、コンマを使うこと)

Correct:

(正しい用例)

The equipment *that we used* was made
by the XX Company.

Wrong:
(誤った用例)

The equipment, *which we used*, was
made by the XX Company.

Correct:
(正しい用例)

The equipment, *which was made in Shanghai*, was very expensive.

Basic Rule for Comma Use

(基本ルール:コンマの使い方)

Use commas + “which” for non-essential information.

(重要でない情報を文に入れるときは、「コンマ+which」で繋げること)

○ This review, *which can also be found online*, covers research that started in 1999.

× This review that can also be found online covers research that started in 1999.

Use NO commas + “that” for essential information.

(重要な情報を文に入れるときは、「that」で繋げること)

○ The research that I reviewed started in 1999.

× The research, *that I reviewed*, started in 1999.

2. Hyphens, en dash, em dash: Try not to overuse because they can slow down the reader

(ハイフン、エンダッシュ、エムダッシュは読者の読む速度を遅くするので、なるべく使わないこと)

Hyphens and Dashes Explained

- **Hyphen (-):** Connector rather than an indicator of interruption or omission. (ハイフン=連結)
well-being, advanced-level
- **En dash (–):** Means “through.” (エンダッシュ=範囲)
October 28–29; pp. 2–5.
- **Em dash (—):** Separator to create a strong break in a sentence, like parentheses. (エムダッシュ=区切り)
These two cities—that is, Tokyo and Fukuoka—are developing rapidly.

3. Colons, Semicolons (コロンとセミコロン)

- **Colon:** for listing and defining, and indicates a stronger pause than a semicolon. (コロン: 列挙、定義を述べるときに使われ、セミコロンより文章を中断する力がある)

The presentation covered three topics: grammar, punctuation, and format.

- **Semicolon:** for joining two related **complete sentences** (shows closer relationship than “.”). (セミコロン: 関連性のある二つの文章を結合するために使われる。ピリオドに比べて、二つの文章がより密接に関係していることを表す。)

The patient had no prior history of disease; however, he presented with many common symptoms.

4. Asian Symbols (全角フォントの問題)

- All Asian, full-space fonts should be **changed to Western, half-space fonts** for accurate display on other computers and for proper printing.

(原稿内全ての全角フォントを半角(西洋の言語で使われる)に変換すること。全角フォントは英語使用のパソコン上では表示されず、正しく印刷されないからである。)

The biggest offenders:

問題児

(よく使われる問題“字”は以下の通りである)

、 ， ; : () × % < > °C

Spelling (つづり)

Good **online dictionaries** to help with spelling:
(オンライン辞書などでつづりを確認すること)

- <http://www.thefreedictionary.com/>
- Webster Dictionary
<http://www.webster-dictionary.org/>

Spellcheckers

(スペルチェック機能)

but remember that it won't catch
mistakes like **from/form, trial/trail...**

(ただし、スペルチェックは「from/form, trial/trail」
のような誤用は判別できない)

Stylebooks

(科学原稿を書くためのスタイルガイド)

- *Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers, 7th edition*
- *American Medical Association Manual of Style: A Guide for Authors and Editors, 9th edition*
- *The Chicago Manual of Style, 15th edition*
- *The ACS Style Guide: A Manual for Authors and Editors, 3rd edition*

Grammar Books

(英文法書)

- *The Gregg Reference Manual*
- *The Little, Brown Handbook*

Dictionaries

(辞書)

- *The American Heritage Dictionary*
- *Longman Dictionary of American English*
- *Merriam-Webster's Collegiate Dictionary*
- *Oxford ESL Dictionary*

Online Resources

(オンライン情報源)

- <http://owl.english.purdue.edu/owl>
- <http://englishplus.com/grammar/punccont.htm>
- <http://englishplus.com/grammar/mistcont.htm>
- <http://www.thefreedictionary.com/>
- http://www.onelook.com/?d=all_sci&v=&sort=&langdf=all
- http://www.elsevier.com/wps/find/journal_browse.cws_home
- <http://scholar.google.com/>
- <http://iolani.honolulu.hi.us/Keables/KeablesGuide/Start/contents.html>

E. The Editing Process (文章校正の過程)

- Check for each category of grammatical mistake separately.
(文法は各項目別にチェックすべきである)
- Look at the punctuation.
(句読法をチェックする)
- Check for spelling mistakes. (*use Word to help you!*)
(つづりをチェックする — マイクロソフト・ワードも使用！)

The Editing Process

- Do a separate reading to check for use of articles (a/an and the) and nouns (singular/plural; count/noncount).

(冠詞および名詞(単数・複数、可算名詞・不可算名詞)のチェックは分けて行うこと)

The Editing Process

- Read the paper again for sentence structure.
(構文を再確認するために論文をもう一度読む)
- Check the sentence length. Are any of the sentences too long?
(文章の長さを確認する。長すぎる文章はないか?)

The Editing Process

- Constantly check dictionaries, style guides, and grammar books while you edit.

(校正する際、常に辞書・スタイルガイド・文法書で確認すること)

- Check that all numbers, formulas, figures, and tables are correct.

(原稿内全ての数字、数式、図表、および表が正しいことを確認する)

- Check the references.

(参考文献を確認すること)

II. Using Computers and the Internet

(コンピューター・インターネットの利用)
*The Internet has Completely Changed the Way
We Edit and Publish Science*

(インターネットは科学界における編集・出版の過
程を完全に変えた)

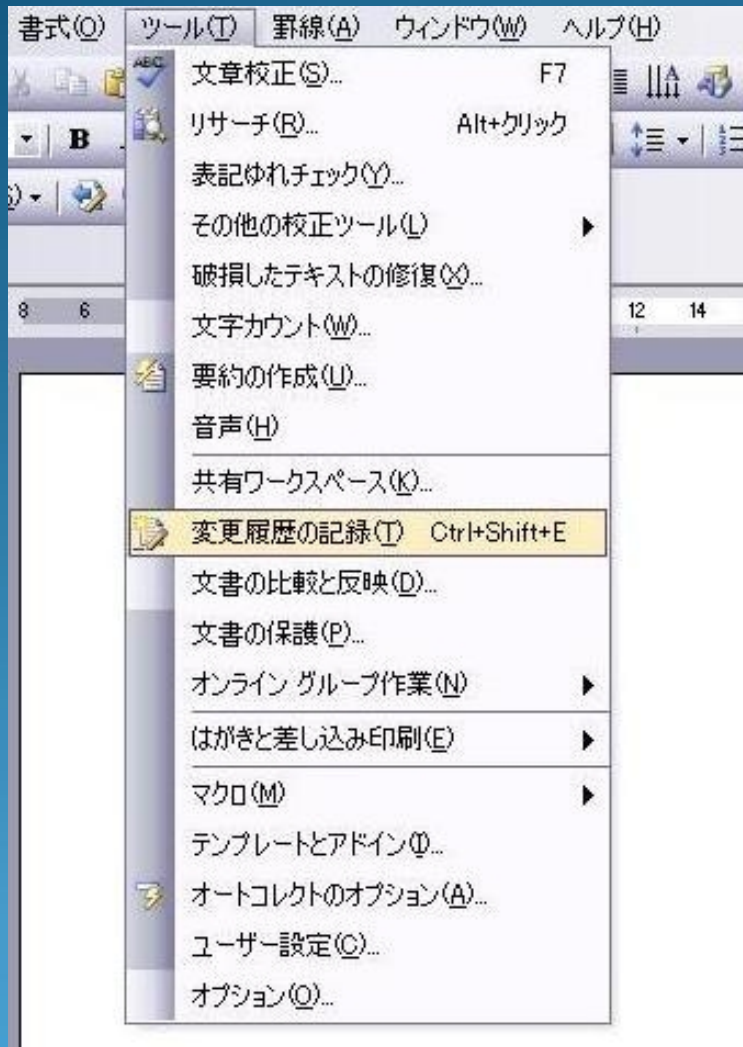
A. Computers

Microsoft Word has great editing functions:

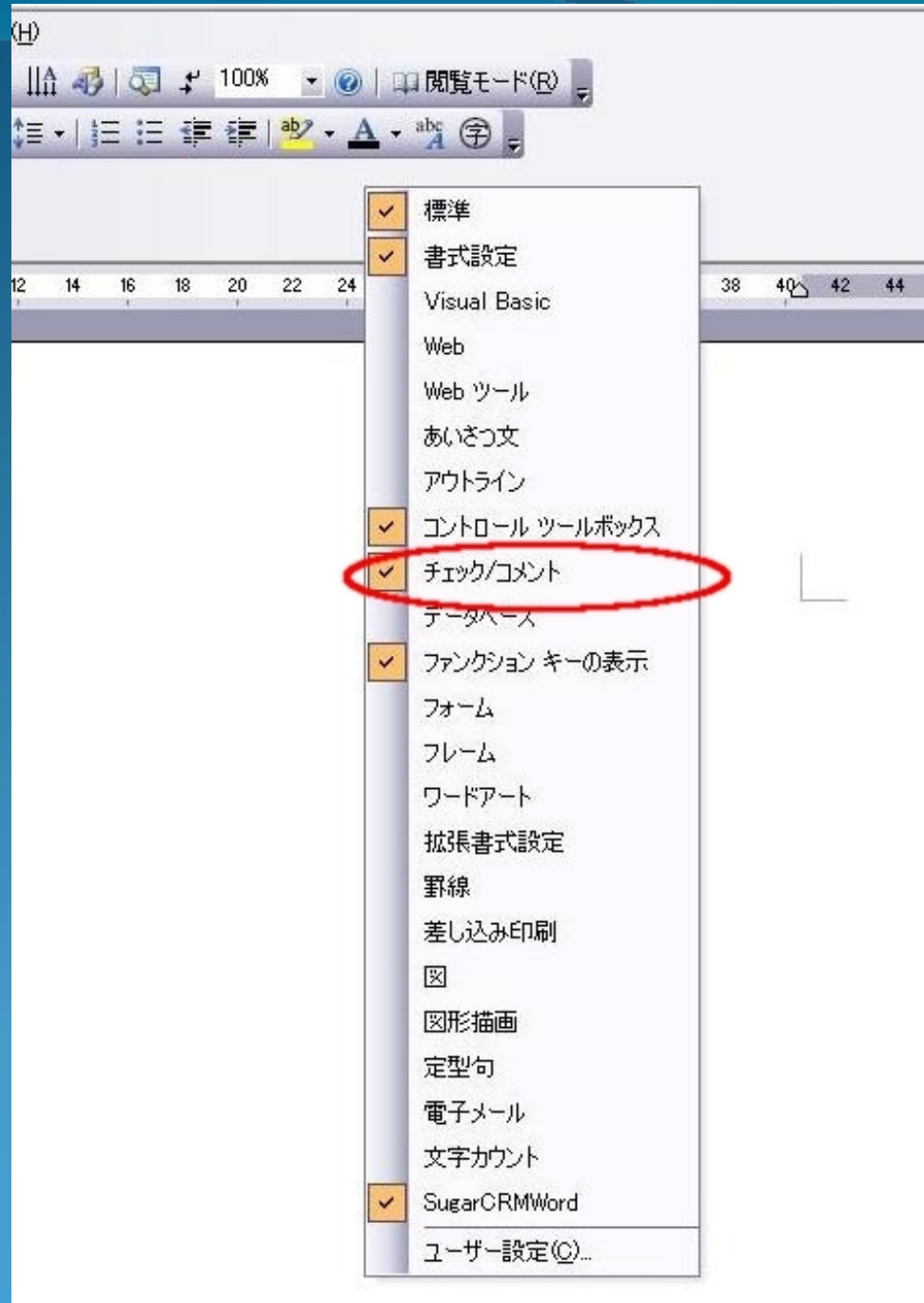
(マイクロソフトワードには優れた校正機能が含まれている)

1. Track Changes Function (変更履歴の記録機能)
2. Comment Function (コメント機能)
3. Find Function (to check for consistency)
(検索機能－文章中に使用されている単語の統一性を確認する等)
4. Word Count Function (to check sentence length)
(文字カウント機能－文章の長さを確認する等)
5. Spell Check Function (but has limitations)
(スペルチェック機能－ただし、限りがある)
6. Dictionary *customizable* (辞書機能－カスタマイズ可能)
7. Split Screen Function (to compare two sections of text)
(ウィンドウ分割機能－離れている二つのセクションを比較する等)

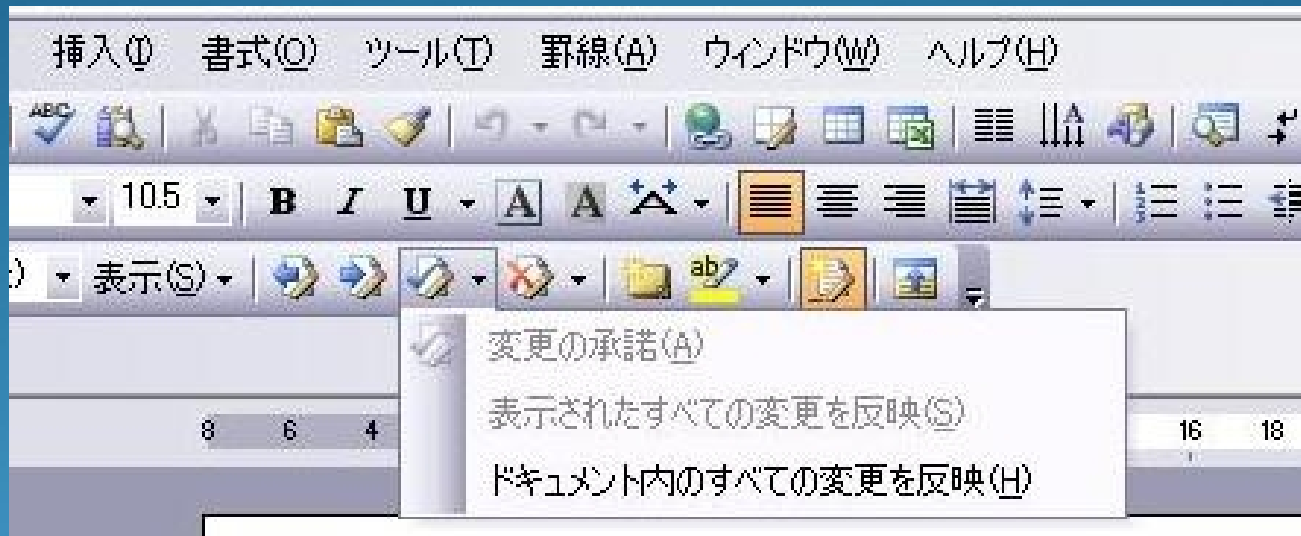
Track Changes Function (変更履歴の記録)



ツールからアクセス



Accept/Reject your Changes (変更の承諾・削除)



変更の承諾

表示されたすべての変更を反映

ドキュメント内すべての変更を反映

Microsoft Word Dictionary

マイクロソフトワードの辞書機能

- Microsoft Word has a “**Custom Dictionary**” function that is *very* useful for authors and editors.

(マイクロソフトワードにはカスタマイズ可能な辞書機能が含まれており、著者・編集者にとってとても便利な機能である)

B. The Internet

1. Search Engines: (検索エンジン)

- **Google:** for general Internet searches (通常検索)
- **Google Scholar:** for searching published research (<http://scholar.google.com>) 科学文献の検索)

Tip: If you use quotation marks (“) before a phrase when searching, **only results with that **exact phrase** will be searched.*

(検索したい語句の前に引用符を付けると、その語句がそのまま含まれる検索結果のみが検索される)

2. Instructions for Authors (投稿規程)

Online resources for **Author Instructions**:
(オンライン投稿規程)

1. Elsevier Authors Home:

(<http://www.elsevier.com/authors/>)

2. See the free resources section of the Edanz website:

原稿作成ツール

リンク

カバーレター・テンプレート

ジャーナル選択ツール

ポイントレッシン

無償ダウンロード

THANK YOU!

ありがとうございました!

Edanz Group Japan

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