Tips for Writing Psychological Reports in English

James R. Anderson

Kyoto University

Microcomputer graphics in psychological research

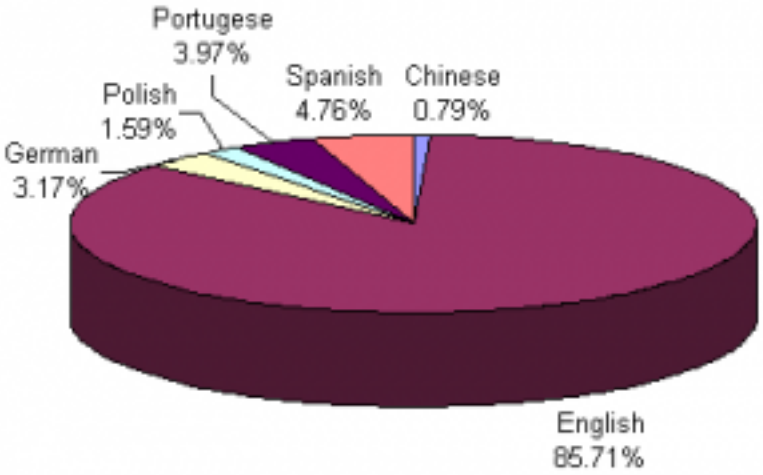
Structure

- Overview of importance of writing in English
- Some common, easily avoidable errors
- Some examples, including early drafts by Japanese researchers

English as the language of science

- In the last 100 years, English has become the dominant language in science.

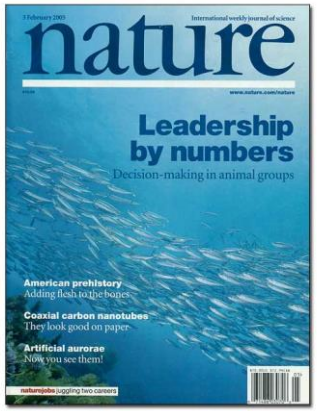
- A form of linguistic imperialism?

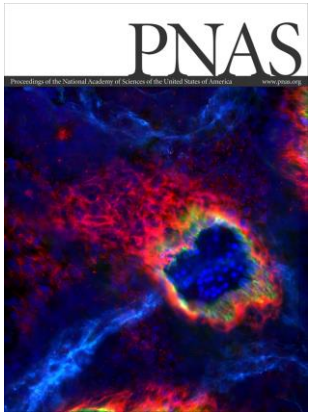


Language of scientific blogs. N= 126
(Shema & Bar-Ilan, 2014)

English as the language of science

- Many scientific journals, including the highest-impact ones (e.g., *Nature, Science, Proceedings of the National Academy of Sciences USA, Proceedings of the Royal Society of London, PLOS Biology*…) publish articles written **only** in English.





Distribution of publications by language, as covered in the Science Citation Index Expanded (Web of Science)

	1980	1990	2000
• English 95.9%	84.5%	90.5%	
• French	3.8%	1.9%	1.0%
• German	5.1%	2.5%	1.1%
• Spanish	0.7%	0.4%	0.3%
• Japanese	0.7%	0.5%	0.3%
• Total papers	554,598	689,629	956,533

(Bordons & Gomez, 2004)

English as the language of science

- Scientists publish in English to enhance their international visibility.

- English is used to facilitate international communication and collaboration.

Good scientific English is….

- **concise** (brief but comprehensive)
- **precise** (careful and exact)
- **simple** (easy to understand)

Conciseness

- A sentence should contain no unnecessary words.

- Avoid redundancy (needless repetition)!

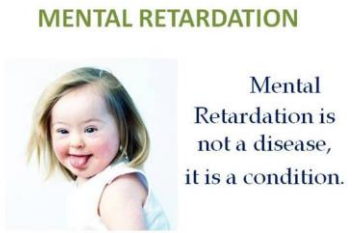
Errors in scientific writing

- 1. Long, complicated sentences instead of short, clear ones. – The reader may find it difficult to grasp the message.

Increased conciseness: example

- “The expected prevalence of mental retardation, based on the assumption of a normal distribution of intelligence in the population, is stated to be theoretically about 2.5%.”

  (26-word sentence)



(web.stanford.edu/~kcobb/writing/)

Increased conciseness: example

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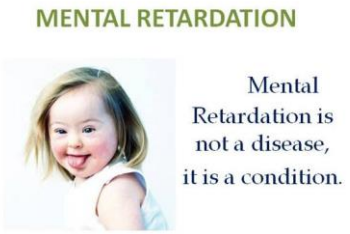
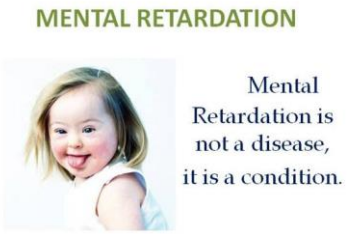


Increasing conciseness: example

- "The expected prevalence of mental retardation, ~~based on the assumption of~~ a normal distribution of intelligence in the population, is ~~stated to be theoretically~~ about 2.5%." (26 words)

- "The expected prevalence of mental retardation, if intelligence is normally distributed, is 2.5%."



Increasing conciseness: example

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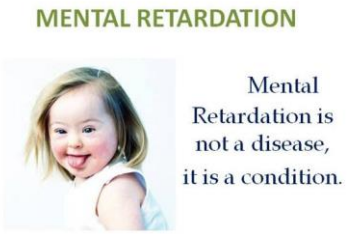
- "The expected prevalence of mental retardation, if intelligence is normally distributed, is 2.5%." (13 words)



Increasing conciseness: example

- “It is well known that increased athletic activity has been related to a profile of lower cardiovascular risk, lower blood pressure levels, and improved muscular and cardio-respiratory performance.”

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Increasing conciseness: example

- "~~It is well known that~~ Increased athletic activity ~~has been related to~~ is associated with ~~a profile of~~ lower cardiovascular risk, lower blood pressure ~~levels~~, and improved ~~muscular and cardio-respiratory performance~~ fitness."

Increasing conciseness: example

"It is well known that increased athletic activity has been related to a profile of lower cardiovascular risk, lower blood pressure levels, and improved muscular and cardio-respiratory performance."

(28 words)

Increasing conciseness: example

"Increased athletic activity is associated with lower cardiovascular risk, lower blood pressure, and fitness."

(14 words)

Or:

Increasing conciseness: example

"Increased athletic activity is associated with lower cardiovascular risk, lower blood pressure, and fitness."

(14 words)

"Increased athletic activity is associated with improved cardiovascular health."

(9 words)

“Yellow card” phrases

Yellow card phrase	Replace with
A majority of	Most
A number of	Many (or Several)
At the present moment	Now
Are of the same opinion	Agree
Fewer in number	Fewer
It should be noted that	Note that

“Yellow card” phrases

Yellow card phrase	Use
In close proximity	Near
In order to	To
Due to the fact that	Because
On the other hand	However;By contrast
In spite of (the fact that)	Despite;Even though
It is believed by many	Many believe

“Yellow card” words

Yellow card word	Use
Utilize	Use
Numerous	Many
Remainder	Rest
Assistance	Help
Enumerate	Count
Ameliorate	Improve
Methodology	Methods

“Red card” phrases:

- It seems that
- It may be argued
- In the case of
- For the most part
- In my opinion

“Red card” words:

- Very
- Really
- Quite
- Basically
- Generally
- Essentially

“Red card” words:

- Very
- Really
- Quite
- Basically
- Generally
- Essentially

- **Tip:** Try the sentence without these words; it’s usually better!

Precision

- The large majority of birds appeared to learn how to solve the problem.

- **Most** birds learned how to solve the problem.

- **Or give %!**

Original

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Concise, simple

Many studies have shown clearly how cognitive behavior therapists can elicit a positive effect on mood if clients agree to follow their instructions.

Conventional structure of a psychological report (IMRD format)

- Abstract
- Introduction
- (Materials and) Method
- Results
- Discussion
- References

Introduction

- The Introduction should **justify the reasons for the study**.

- It should briefly describe the research question, and **summarize** previous research. It should raise unanswered questions, and state what the present study will do, and how.

Introduction

- **Tip:** The present tense may be used for general statements, and the past tense for describing previous work.

  Examples:

- "From an early age humans <u>are</u> sensitive to social cues such as gaze or pointing."
- "In one study, 6-month-old infants reliably <u>looked</u> in the same direction as a model…"

Method

- **Tip:** Aim for brevity.
- **Tip:** Always use the **past** tense for Procedure.

Example:

“When the infant chose an object, the experimenter would say “Well done!”

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should be:

“When the infant chose an object, the experimenter said “Well done!”

Results

- **Tip:** Avoid **excessive** precision (too many decimal places) when reporting numbers.

- $p = 0.04562$ $p = 0.046$

- **Tip:** Always use the **past** tense when reporting results. (e.g., “Married people scored higher than single people on optimism scales.”)

Discussion

- **Tip:** Avoid vague qualifiers. Example:

“Our results seem to indicate that very young infants might be able to understand intentions.”

Discussion

- **Tip:** Avoid vague qualifiers.

"Our results ~~seem to~~ indicate that very young infants ~~might be capable of~~ understand~~ing~~ others' intentions."

Discussion

- **Tip:** Avoid vague qualifiers.

"Our results ~~seem to~~ indicate that very young infants ~~might be capable of~~ understand~~ing~~ others' intentions."

should be:

"Our results indicate that very young infants (can) understand others' intentions."

General Tips, Common Errors

- **Aim for brevity!** Omit needless words.

- Example:

“The dogs were able to solve a detour task after a certain amount of experience with the task.”

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- **Aim for brevity!** Omit needless words.

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"The dogs ~~were able to~~ solve a detour task after ~~a certain amount of~~ experience with the route."

"The dogs solved a detour task after experience with the route."

General Tips, Common Errors

- Is every "**the**" necessary?: **Can repetition be avoided?**

Example:

"The younger and the middle-aged participants completed the first and the second questionnaires only; the oldest participants also completed the third questionnaire too."

General Tips, Common Errors

~~"The~~ younger and ~~the~~ middle-aged participants completed the first and ~~the~~ second questionnaires only; the oldest ~~participants also~~ completed ~~the third questionnaire too~~."

can become:

"Younger and middle-aged participants completed the first and second questionnaires only; the oldest completed all three."

General Tips, Common Errors

- **Use the active voice whenever possible**:

- Example:

“Participants were given three questionnaires.”

can become

General Tips, Common Errors

- **Use the active voice whenever possible**:

- Example:

“Participants were given three questionnaires.”

can become

“Participants completed three questionnaires.”

General Tips, Common Errors

- **Use the active voice whenever possible**:
- Many journals now encourage first person pronouns. Example:

“Performances in the first and second sessions were compared.”

can become:

“We compared performances in the first and second sessions.”

General Tips, Common Errors

- **Do not use contractions** (e.g., don’t can’t, haven’t).

- **Data** is a plural noun. (Data were analyzed….These data show that…..)

General Tips, Common Errors

- Keep sentences short whenever possible.
- Avoid complicated words and jargon, and **exaggeration**. Example:

“In his very important 2010 paper, John Robertson reviewed a series of impressive experiments and came to the conclusion that chimpanzees show amazing metacognitive abilities. This is an extremely consequential finding.”

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- “In ~~his very important~~ 2010 ~~paper~~, ~~John~~ Robertson reviewed ~~a series of impressive~~ experiments and ~~came to the conclusion~~ concluded that chimpanzees show ~~amazing~~ impressive metacognitive abilities. This is an ~~extremely consequential~~ important finding.”

General Tips, Common Errors

“Robertson’s (2010) review provided support for strong metacognitive abilities in chimpanzees. This is an important finding.”

(From 31 words…. to 16!)

Apostrophes!

- The monkey's tail = the tail belonging to one monkey.
- The monkeys' tails = the tails belonging to several monkeys.
- The monkeys had tails. Simple plural nouns have no apostrophe.
- A few irregular plurals have the apostrophe before "s" (e.g., children's, men's, women's, people's, mice's).

Apostrophes!

- The monkey groomed **its** tail.: No apostrophe in the possessive form of “it”.

- **It’s** easy when you know how.

- **“It’s” = “It is” (or “It has”).**

Their, They’re, There

Their: The possessive form of *they*.

(Ex.: *Many men forget their wife’s birthday.*)

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They’re: Contracted form (informal) of *they are.*
(*They’re going to be sorry they forgot.*)

There: Adverb meaning “that location”. Used idiomatically with to be.

(*There is no excuse for forgetting.*)

Some common misspellings that are homophones

- *affect* and *effect*
- *ate* and *eight*
- *die* and *dye*
- *made* and *maid*
- *rose* and *rows*
- *sea* and *see*
- *sight* and *site*
- *whether* and *weather*
- *waste* and *waist*
- *allowed* and *aloud*
- *male* and *mail*
- *current* and *currant*
- *bred* and *bread*
- *break* and *brake*
- *pair* and *pear*
- *wait* and *weight*
- *knew* and *new*
- *read and red*

That or *Which*?

- "I don't like dogs *that* bark too much."
- "I don't like dogs, which bark too much."

That or *Which*?

- "I don't like dogs *that* bark too much."
- My dislike of dogs is restricted (=limited) to dogs that bark too much.
- Use *that* for **restrictive** clauses.

That or *Which*?

- “I don’t like dogs, which bark too much.”

- My dislike of dogs is **general** (i.e., it is nonrestrictive), and they bark too much.

- Use *which* for **nonrestrictive** clauses.

Errors in scientific writing

- 2. Overuse of passive voice, and repetition of material.

Japanese examples

- “The stimuli were prepared using the following method:”

Edit:

- “~~The~~ stimuli were prepared ~~using the following method~~:”…..

“Stimuli were prepared as follows:”

(From 8 words to 5)

Example

Before: 56 words

- The dogs were tested by the experimenter in two conditions. The first condition consisted of each dog being allowed to search for food in the presence of the owner, and the second condition consisted of each dog being allowed to search for food in the absence of the owner. The data were then analyzed for significance.

After: 35 words

- The experimenter tested the dogs in two conditions, allowing each dog to search for food 1) in the presence of the owner, and 2) in the owner's absence. We then analyzed the data for significance.

Example

- Methods of promoting self-regulated learning (SRL) in university courses were investigated through qualitative and quantitative analyses. Graduate students (*N* = 97) alternatively took the role of instructor or learner. Learners completed the learning self-efficacy and self-evaluation of learning scales consisted of 10 items. All the item scores on the learning self-efficacy increased after taking the course. The self-evaluation of learning was correlated with the self-efficacy for a subsequent course. Learners used SRL strategies to achieve their goals. They also rated the usefulness of 6 learning and instructional activities and noted the reasons.

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- Residual and correspondence analyses revealed the characteristics of ~~activity~~ activities by key word, and by SRL variables. The results suggested the significant role of each activity. The lecture by students was the most useful for learning, because they provided peer and multiple modeling. These findings support the significant role of SRL in improving university courses.

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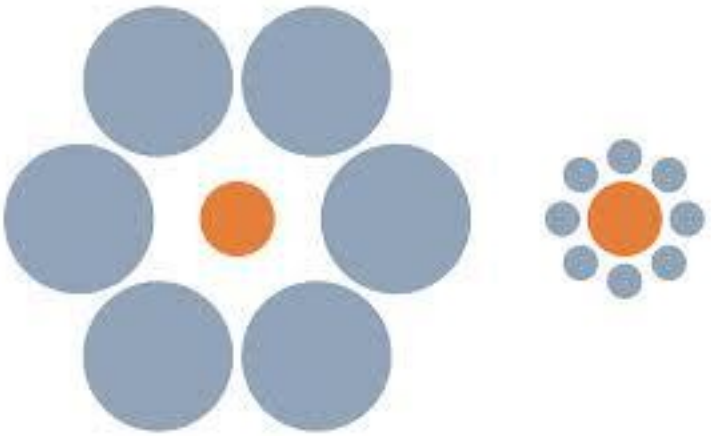
Example

- A target circle surrounded by larger inducer circles looks smaller and that surrounded by smaller circles looks larger than the reality.



- This is called the Ebbinghaus-Titchener illusion, and remains one of the strongest and most robust contrast illusions among a variety of illusory figures.

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- This is ~~called~~ the Ebbinghaus-Titchener illusion, ~~and~~ which remains one of the strongest and most robust contrast illusions among ~~a variety of~~ many illusory figures.

- Although there have been piles of studies on this illusion in humans, virtually nothing has been known on how non-human animals perceive the same figures except a few aged reports.

- Although there have been ~~piles of~~ many studies on this illusion in humans, virtually nothing has been known on how non-human animals perceive the same figures except a few aged reports.

- ~~Although there have been piles of~~ Despite many studies on this illusion in humans, virtually nothing has been known on how non-human animals perceive the same figures except a few aged reports.

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- ~~Although there have been piles of~~ Despite many studies on this illusion in humans, virtually ~~nothing has been known~~ none have investigated ~~on~~ how non-human animals perceive the same figures except for a few ~~aged~~ old reports.

- [Pigeons’] bias was the other way around of what was expected from the typical Ebbinghaus-Titchener illusion.

- [Pigeons’] bias was ~~the other way around of~~ contrary to what was expected from the typical Ebbinghaus-Titchener illusion.

- [Pigeons’] bias was ~~the other way around of~~ contrary to ~~what was expected from~~ the typical Ebbinghaus-Titchener illusion in humans.

- One may wonder that pigeons might have based their choice responses on diameters of inducers, not target circles.

- ~~One may wonder that~~ Might pigeons ~~might~~ have based their choice responses on diameters of inducers, not target circles?

- ~~One may wonder that~~ Might pigeons ~~might~~ have based their ~~choice~~ responses on diameters of inducers, not target circles?

Tip:

- Try to read the sentence with and then without “extra” words. If it sounds right, use it!

Final tip:

- Read papers in English, and use them as a template or guide for structuring your own reports.

- Good luck with your submissions!