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How to paraphrase sentences

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Data Scientist and Neuroscientist

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How to paraphrase effectively.

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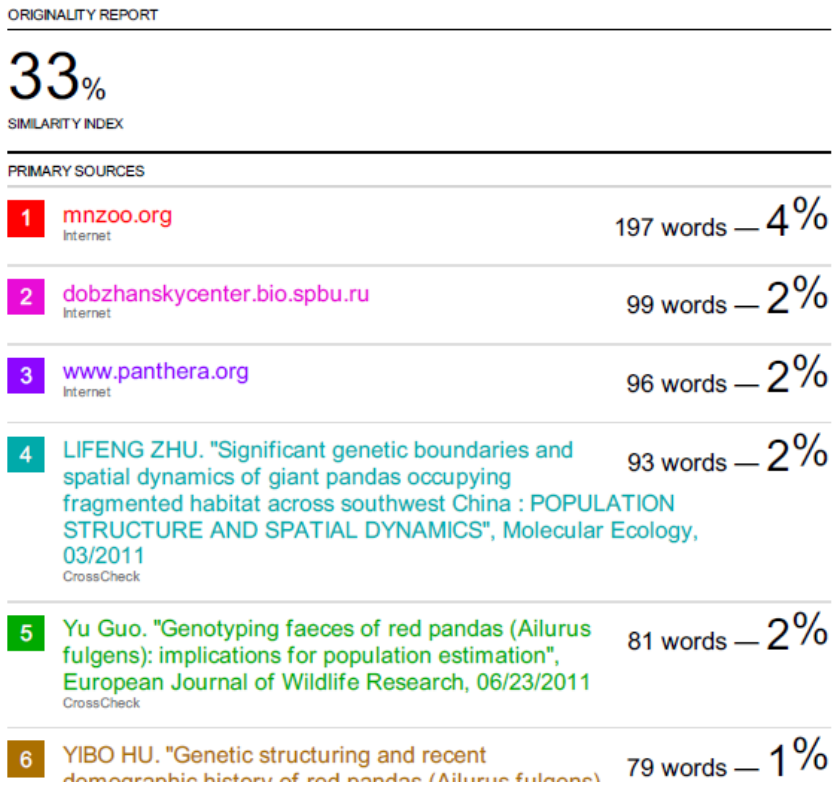
Causes of Rejection (1/3)

Editorial Screening

- ✓ Plagiarism (too much text overlap)
- ✓ Resubmission of published work, i.e., the article repeats or confirms previously published data
- ✓ Insufficient data/evidence, e.g., incomplete results
- ✓ Non-conformity to journal guidelines and scope, i.e., off-topic content

Causes of Rejection (2/3)

1. We carefully read the cover letter and determine of the article fits the journal's scope.
2. Manuscripts are submitted to iThenticate for plagiarism check and text overlap



ORIGINALITY REPORT

33%

SIMILARITY INDEX

PRIMARY SOURCES

1	mnzoo.org Internet	197 words — 4%
2	dobzhanskycenter.bio.spbu.ru Internet	99 words — 2%
3	www.panthera.org Internet	96 words — 2%
4	LIFENG ZHU. "Significant genetic boundaries and spatial dynamics of giant pandas occupying fragmented habitat across southwest China : POPULATION STRUCTURE AND SPATIAL DYNAMICS", Molecular Ecology, 03/2011 CrossCheck	93 words — 2%
5	Yu Guo. "Genotyping faeces of red pandas (Ailurus fulgens): implications for population estimation", European Journal of Wildlife Research, 06/23/2011 CrossCheck	81 words — 2%
6	YIBO HU. "Genetic structuring and recent	79 words — 1%

To assess the potential risk of resistance development in *B. cucurbitae*, from May to June 2011, a field population of 5000-6000 larvae was collected from bitter melon field in Nada. As described in detail previously [7], to establish the resistant strain, 3-5 –day -old adult flies were taken from the original colony and separated into two laboratory populations, and the median lethal concentrations (LC_{50}) of spinosad and avermectin were calculated by the residual contact method. Adult flies was selected by residual contact method. The LC_{50} insecticides were coated on the insides of 250 ml conical flasks by applying 1 ml acetone solutions and rolling the flask until the acetone had evaporated. Virgin adult flies (3-10 days old) were placed in the flask and released into a cage 1 h later. A larval dipping method was adopted for larvae resistance selection. The third-instar mature larvae of the next generation were soaked at LC_{50} solution for about 2 s and then put into wet sandy soil until emergence. Survivors were selected for continued rearing, and the LC_{50} value was being determined every three generations. Due to insufficient number of survivors and low fitness to insecticides during the lengthy laboratory-based selection procedure, resistant populations could not be continuously maintained. Therefore, two resistant strains was temporarily suspended in F_7 and then continued in F_{11}.

Cross-resistance of spinosad resistant strain to other insecticide

The same residual contact method was adopted for to determine the toxicity of avermectin, trichlorfon, beta-cypermethrin and fipronil against the generation 12 of spinosad-resistant strain. Cross-resistance was evaluated by examining a resistance ratio (RR) for each compound, which was calculated by dividing the LC_{50} of

Causes of Rejection (3/3)

During Peer Review

- ✓Low significance of the study
- ✓Insufficient data and evidence for validation
- ✓Lack of novelty: Incremental data
- ✓Improper terminology

Session Outline

1. Plagiarism: what is it and how to avoid it
2. What is paraphrasing
3. How to paraphrase effectively
4. Simple checks for plagiarism

Plagiarism (1/3)

- Plagiarism is the passing off someone else's work as your own without their permission or acknowledging their contribution.
- If detected, this can have serious consequences and therefore, must be avoided, at all costs.
- If detected post-publication, then the most extreme action a publisher may take is to retract that publication (using COPE guidelines).

Plagiarism (2/3)

Direct plagiarism
Intentional word-for-word transcription of someone else's work without acknowledging their contribution.

Self-plagiarism
Unacknowledged re-use of one's own work.

Mosaic plagiarism
Unacknowledged use of poorly paraphrased content.

Accidental plagiarism
Unintentional use of content without citing sources or misquoting them.

Plagiarism (3/3)

Tools to detect plagiarism

turnitin®

Crossref Similarity Check
Powered by iThenticate

iThenticate®
for Authors & Researchers

- A crude way to check for plagiarism is to do a Google search.
- There are several sophisticated tools used by publishers to detect similarity to previously published material.
- Similarity levels of up to 10% (mostly accidental) generally considered to be acceptable by publishers.

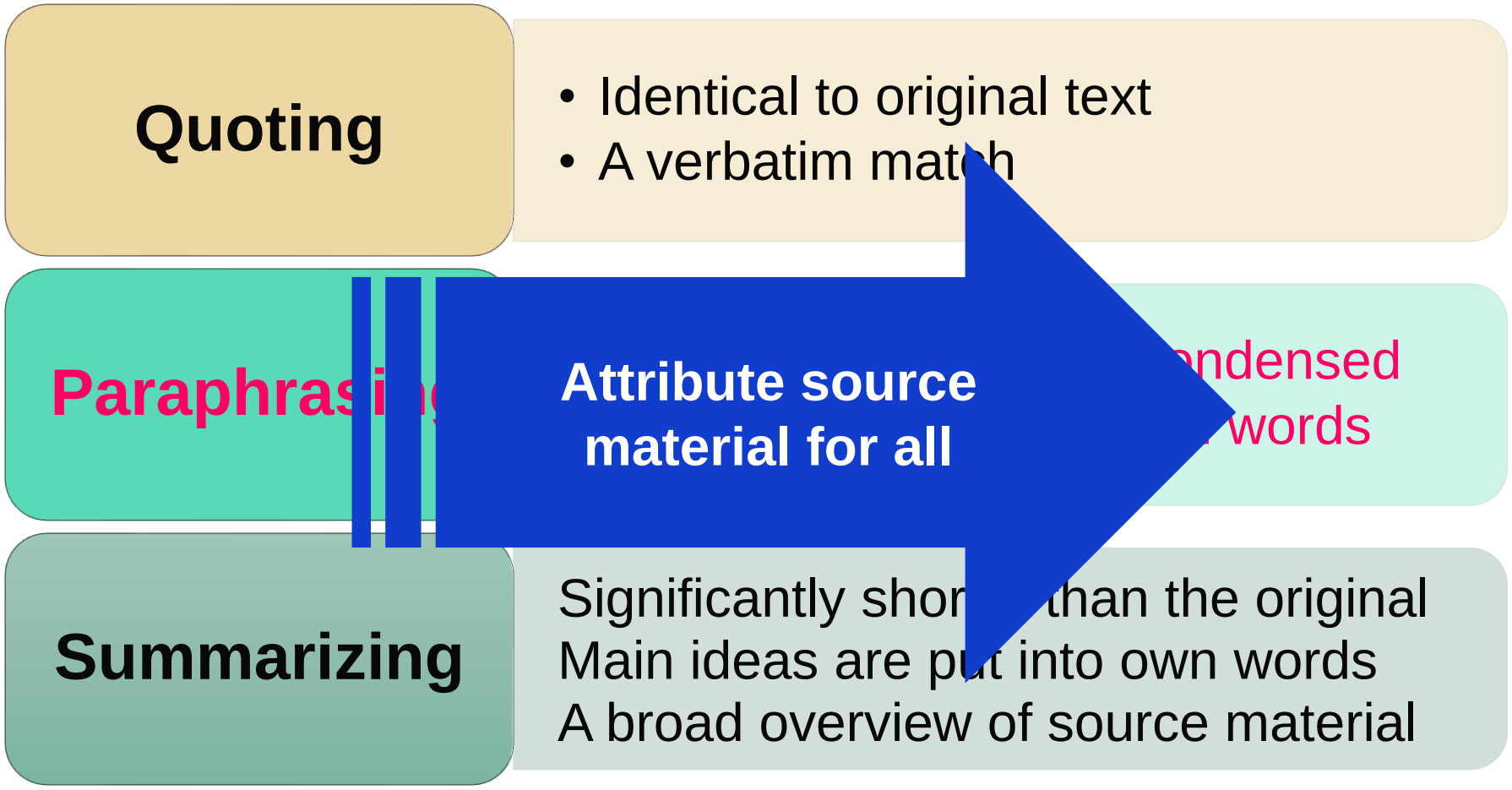
Ethical concerns of paraphrasing

- Paraphrasing becomes a problem when it is linked with plagiarism
- Causes are improper paraphrasing and lack of citation

What is paraphrasing?

Quoting	• Identical to original text • A verbatim match
Paraphrasing	• Original text is slightly condensed • A passage is put into own words
Summarizing	Significantly shorter than the original Main ideas are put into own words A broad overview of source material

What is paraphrasing?



What is paraphrasing?

- A technique that allows you to *borrow* ideas from other works
- To rewrite content from source material into your own words
- Protection against plagiarism
- You must still cite the source.

A strenuous mental exercise

- Paraphrasing is no easy exercise for ESL writers (or for native English speaking writers…)

•Must read the original text several times
•Must understand the meaning very clearly
•Must have a relatively strong command of the English language
•Must end up with a completely different sentence but one which contains the same meaning

Three simple steps

1. Change non-content words (vocabulary)
2. Change the structure of the sentence
3. Change words to different parts of speech

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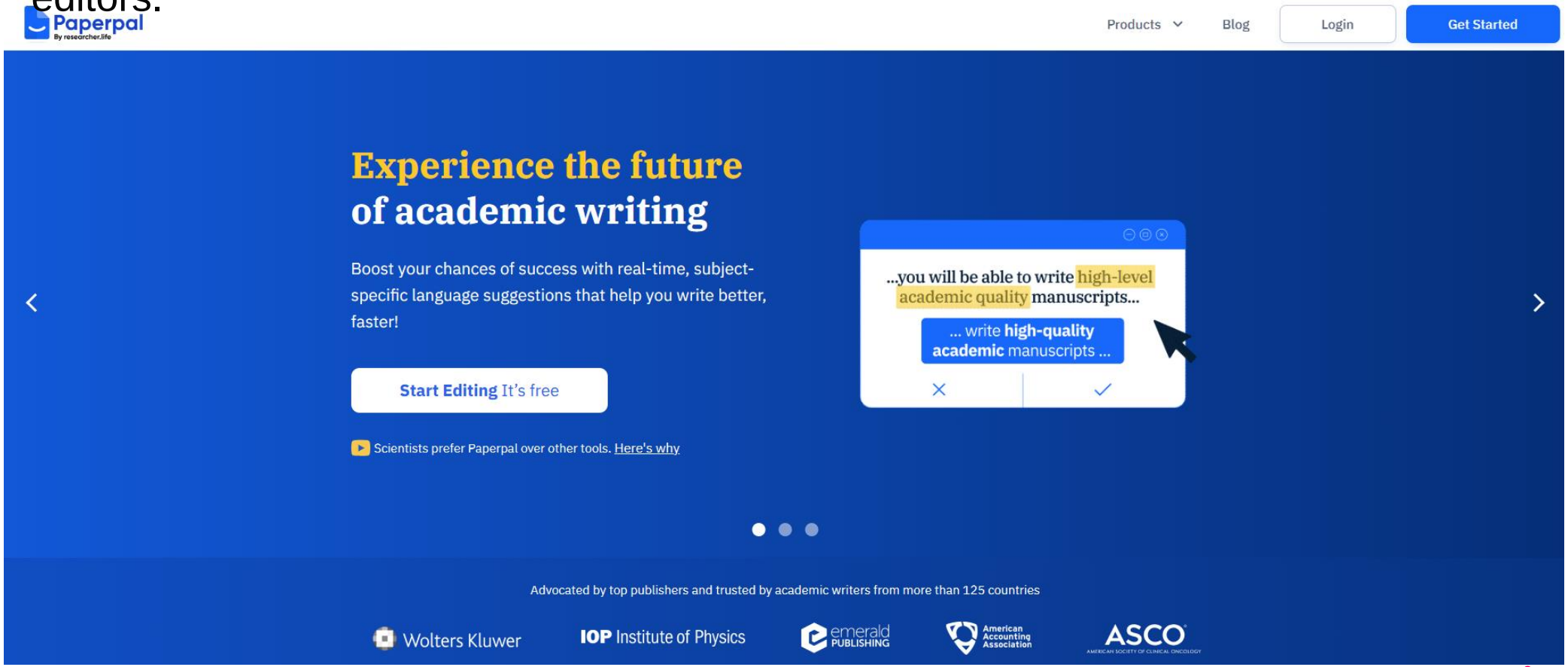
Paperpal's AI is trained on millions of manuscripts enhanced by professionals at Editage, deemed the world's leading editing brand in the 2022 Tokyo Shoko Research survey. This ensures you get precise and relevant editing suggestions that are on par with those by human editors.



Paperpal for Writing

Tailored for Research Writing

Unlike other tools (e.g., Grammarly), Paperpal is specifically designed for scientific writing. It assesses the quality of writing as per the scientific writing standards.

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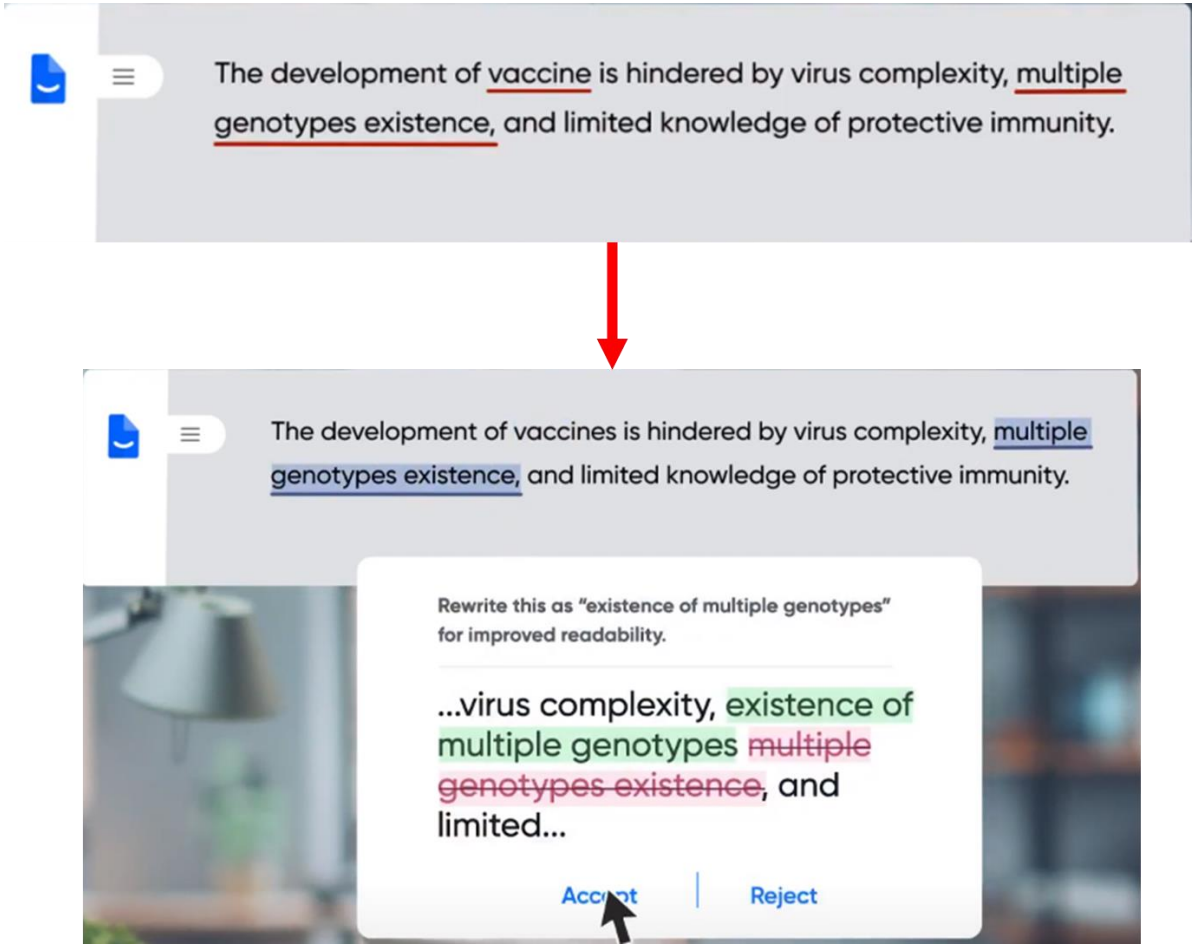
Paperpal detects basic writing errors with 100% accuracy. These errors include but are not limited to article use, punctation, and sentence structure, etc.



Paperpal for Writing

Language Translations

If English is not your first language, you can write in your native language and then Paperpal can accurately translate it to English for you. It supports more than 25 languages.

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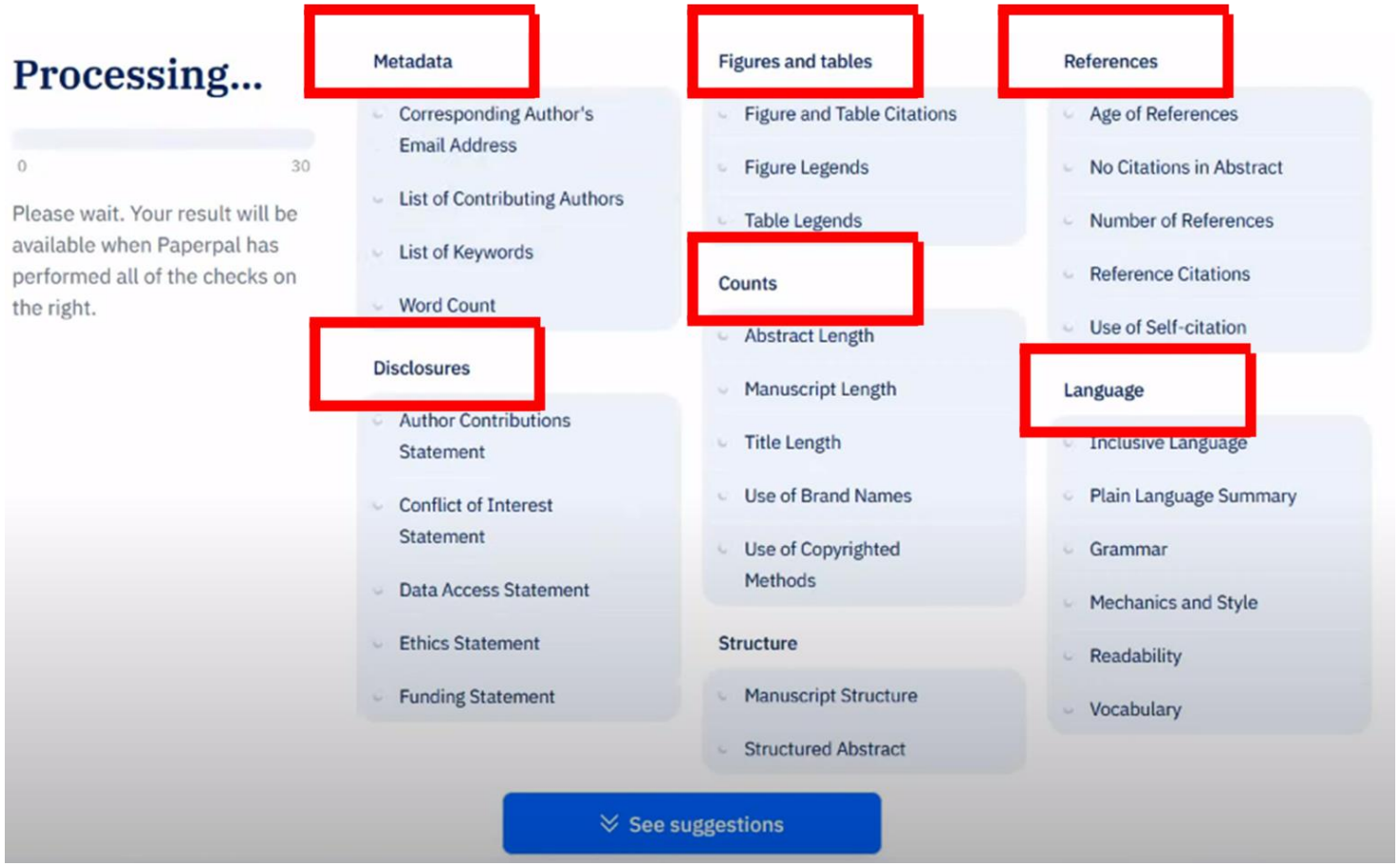
Paperpal is a very user-friendly tool. It only requires a simple user registration that hardly takes 1-2 min. Also, it's is very easy to use even for novice writers.

Paperpal for Writing

Manuscript Review

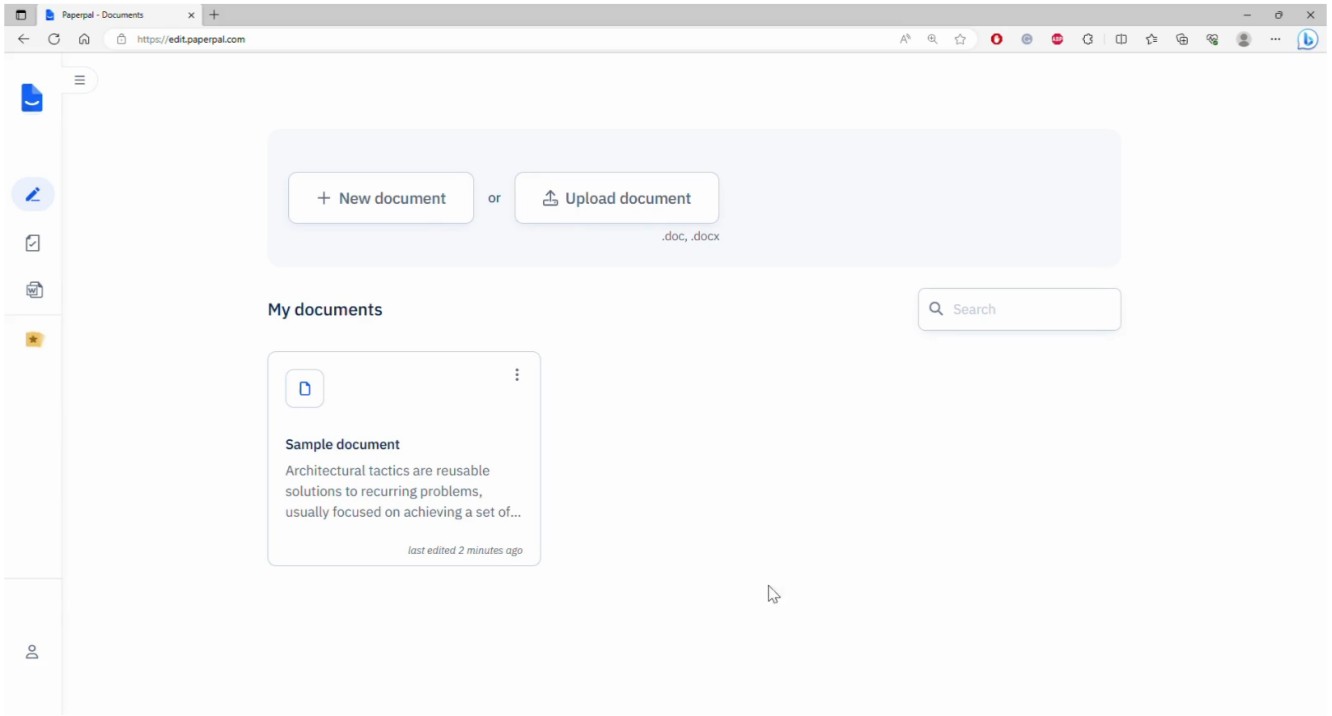
If you have a manuscript already prepared. Paperpal can review it for you with full language checks and track the changes for you. It also offers multiple free rounds of review.



Paperpal for Writing

Rewrite

Efficiently paraphrase your writing. Paperpal gives you updated version of your paragraph, which is more refined version as it adds variety and clarity to text while keeping the academic tone preserved.



Trim the text

If your paper is out of the limit, Paperpal will automatically trim it for you without affecting the meaning or tone of your writing. Paperpal can shorten the text for you by up to 30%.

Change non-content words

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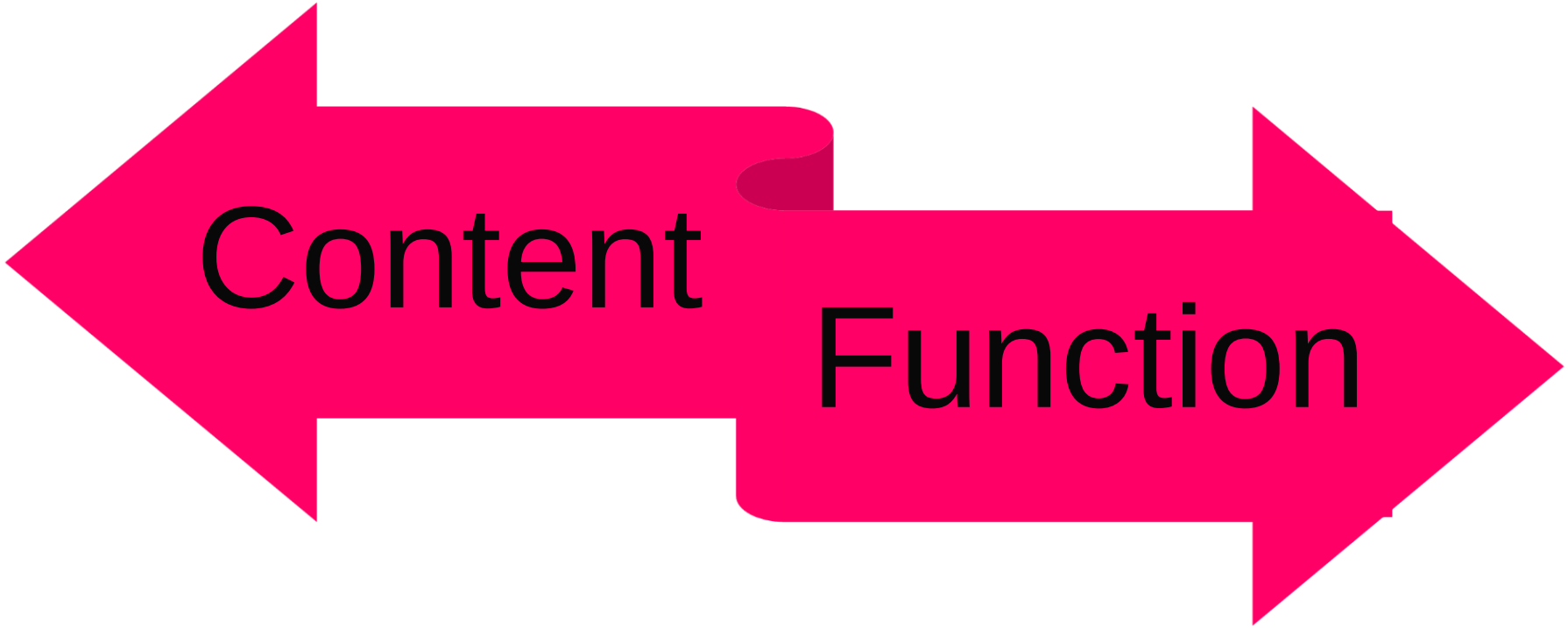
What are content words



What are content words

- Provides meaning and content
- Signaled by signal words
- Added or deleted as language changes

Nouns, verbs, adjectives, and adverbs

What are function or non-content words

- Provides structure
- Explains or shows grammar
- Does not usually change with the language

Pronouns, prepositions, conjunctions, determiners, and quantifiers/intensifiers

What are content words

- But not any nouns, verbs, adjectives, and adverbs

Key terms or **indexed terms** specific to the text in a scientific paper

Change non-content words

- An example

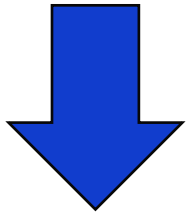
> Ninety percent of the respondents said that they were “highly satisfied” with their college experience.

Can you differentiate the **content words**?

Change non-content words

- An example

Ninety percent of the respondents said that they were “highly satisfied” with their college experience.



Nine out of 10 people surveyed described being “highly satisfied” with college life.

Change sentence structure

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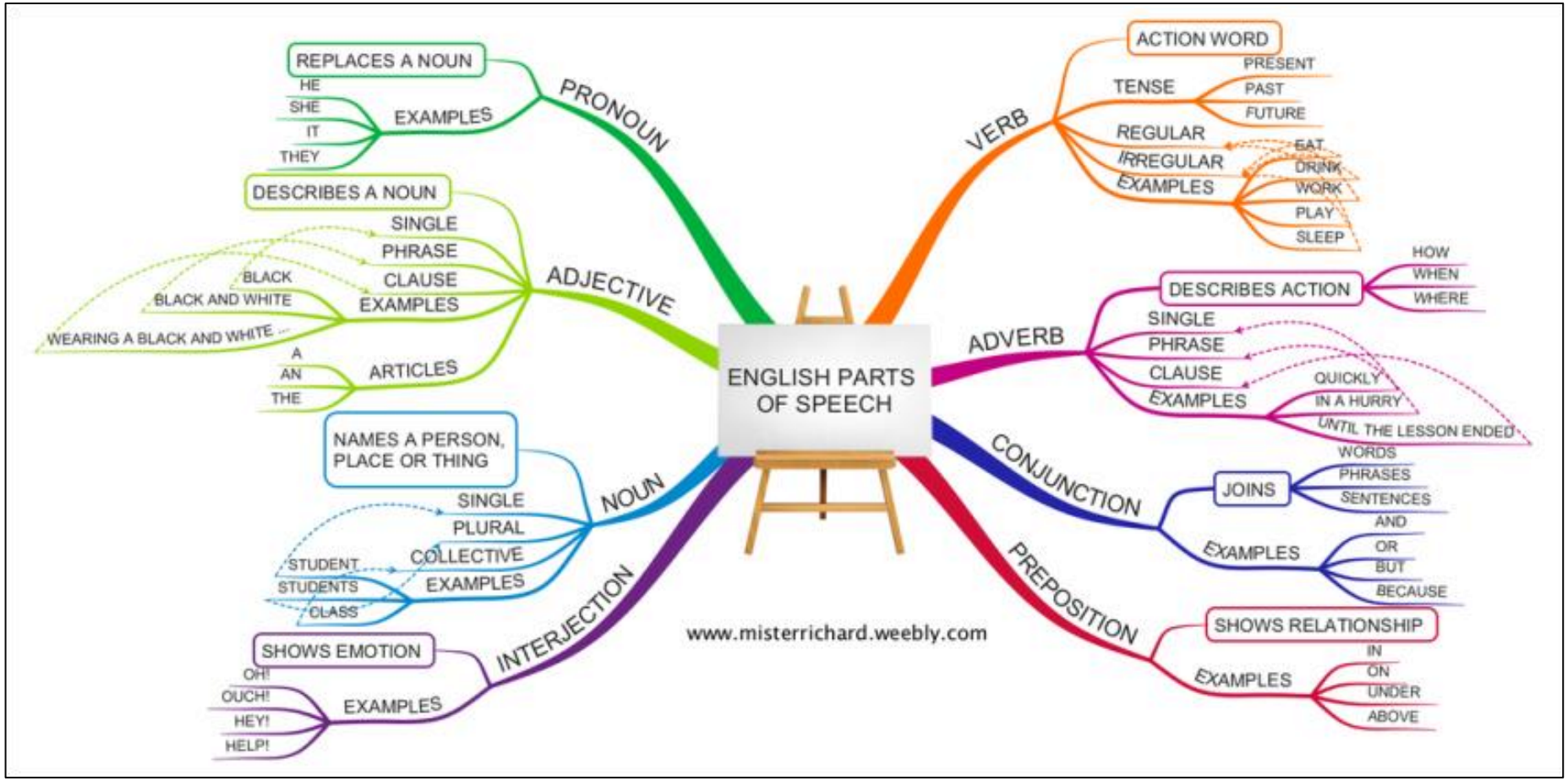
Change sentence structure

- Sentences are made up of different parts of speech



Different structures of the sentence

1. Simple sentences
2. Compound sentences
3. Complex sentences
4. Compound-complex sentences

1. Different structures of the sentence

A simple sentence

Independent sentence

The major stages of differentiation and the key genes participating in this process are now well characterized.

Moussy A et al. (2017) PLoS Biology

1. Different structures of the sentence

A compound sentence

Independent sentence + Independent sentence

We have analyzed this process, and our findings support a much more dynamic view than previously described.

Moussy A et al. (2017) PLoS Biology

1. Different structures of the sentence

A compound sentence

Independent sentence + Independent sentence

We **have analysed** this process**, and** our findings **support** a much more dynamic view than previously

Coordinating conjunctions:
For And Nor But Or Yet So

Moussy A et al. (2017) PLoS Biology

1. Different structures of the sentence

A complex sentence

Independent sentence + Dependent clause

Adverb clauses:
when, while, because, although, if, so, that
Adjective clauses: who, whom, which, whose, that
Noun clauses: wh-question word, that, whether, if

1. Different structures of the sentence

A complex sentence

Independent sentence + Dependent clause

The transcriptome of the same cell can be analyzed only once, because the cell is destroyed by RNA extraction.

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1. Different structures of the sentence

A complex sentence

Independent sentence	+ Dependent clause

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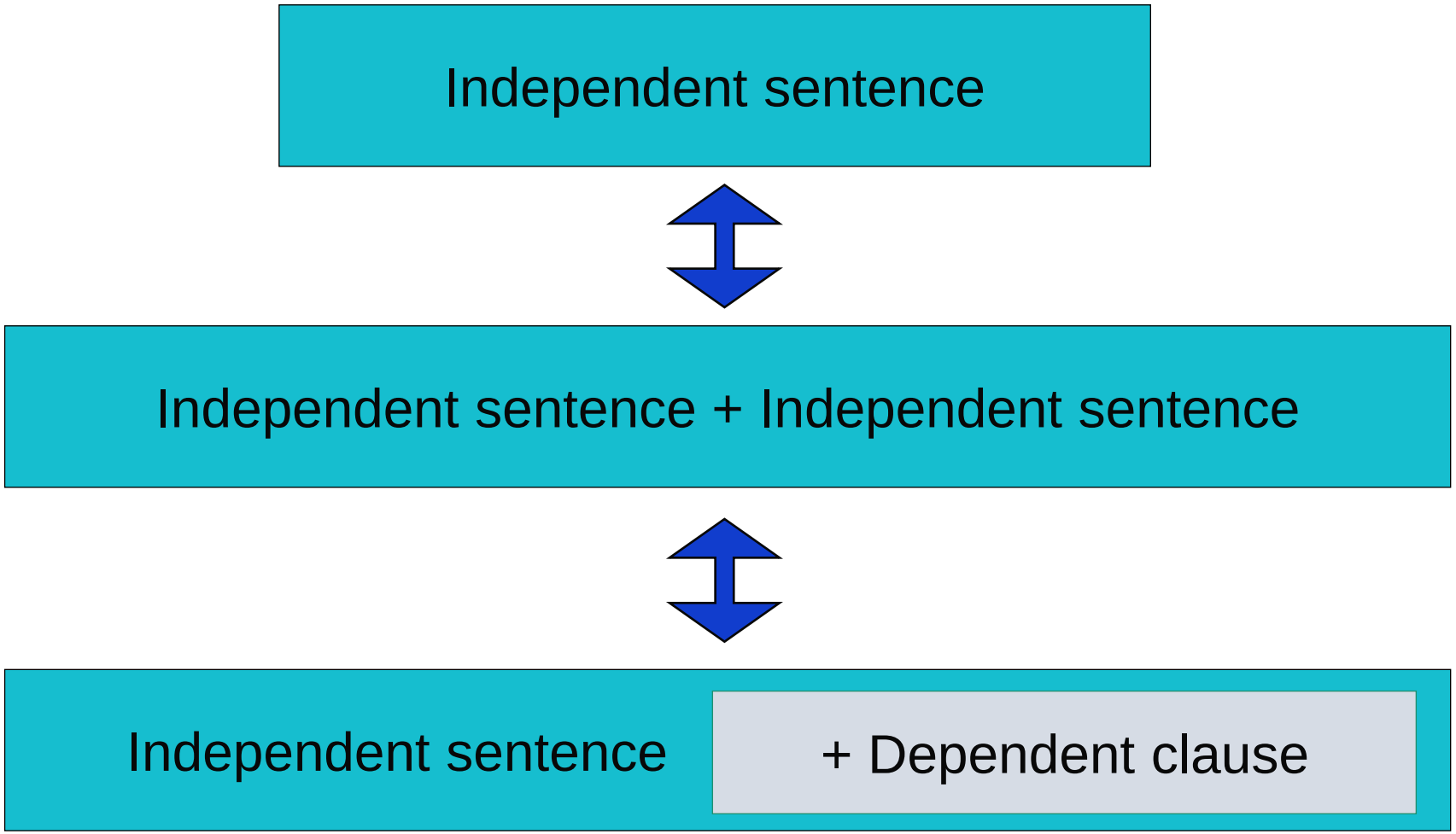
Moussy A et al. (2017) PLoS Biology

Change sentence structure



1. Change sentence structure

Although correct cell type classification is a key step in understanding the cell fate decision issue, it cannot reveal the dynamic features of the fate commitment process and leaves a number of unanswered questions.

Moussy A et al. (2017) PLoS Biology

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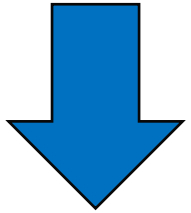

Moussy A et al. (2017) PLoS Biology

Classifying cell type correctly is vital to understand how cell fate is decided, but it provides little information on how mechanistic processes underlying fate commitment work.

1. Change sentence structure

Classifying cell type correctly **is** vital to understand how cell fate is decided**, but** it **provides** little information on how mechanistic processes underlying fate commitment work.

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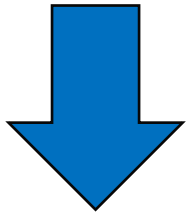

Moussy A et al. (2017) PLoS Biology

Classifying cell type correctly **is** vital to understand how cell fate is decided **but** **provides** little information on how mechanistic processes underlying fate commitment work.

Change words to different parts of speech

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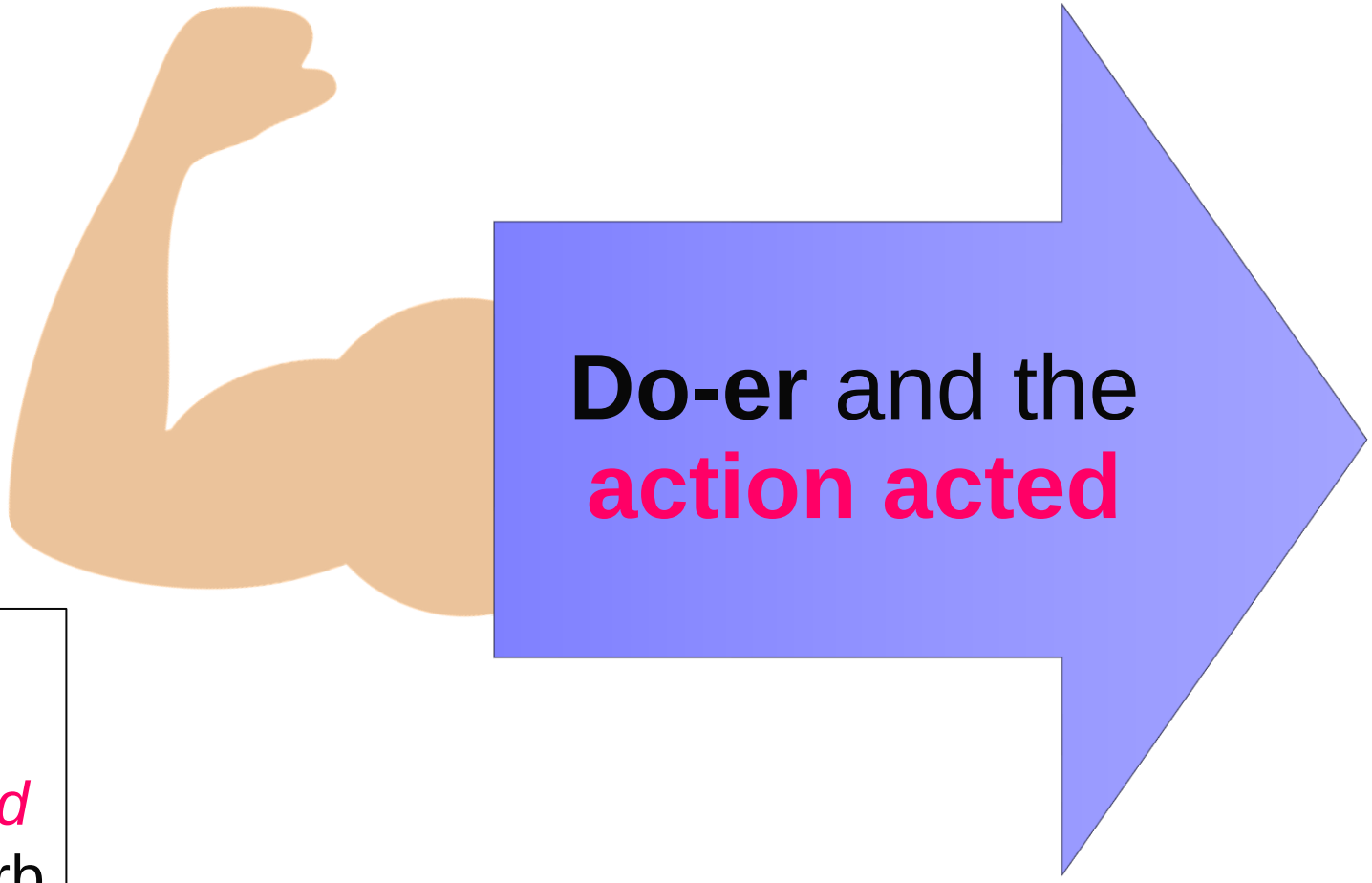
Voice in scientific writing

- The use of voice should be **selective**
- Voice should be selected on the basis of what needs to be emphasized

Main differences

Main differences



Emphasis

- The subject
- What the subject *did*
- Stronger subject-verb

Main differences

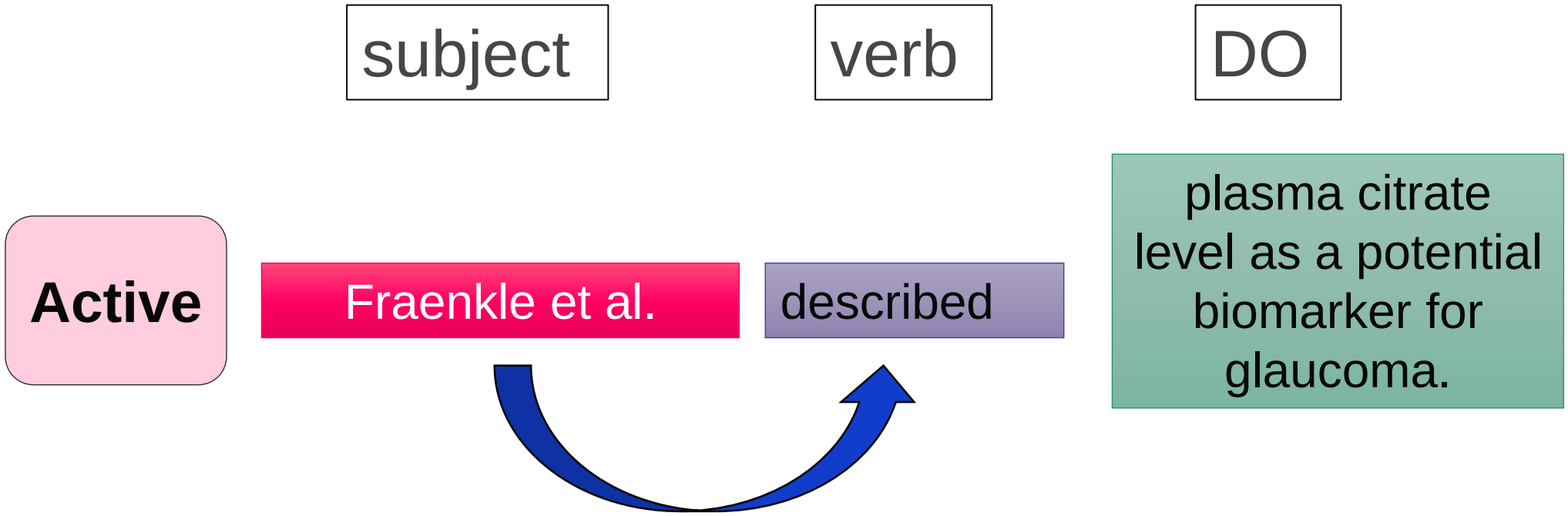
Receiver and the **action received**

Emphasis

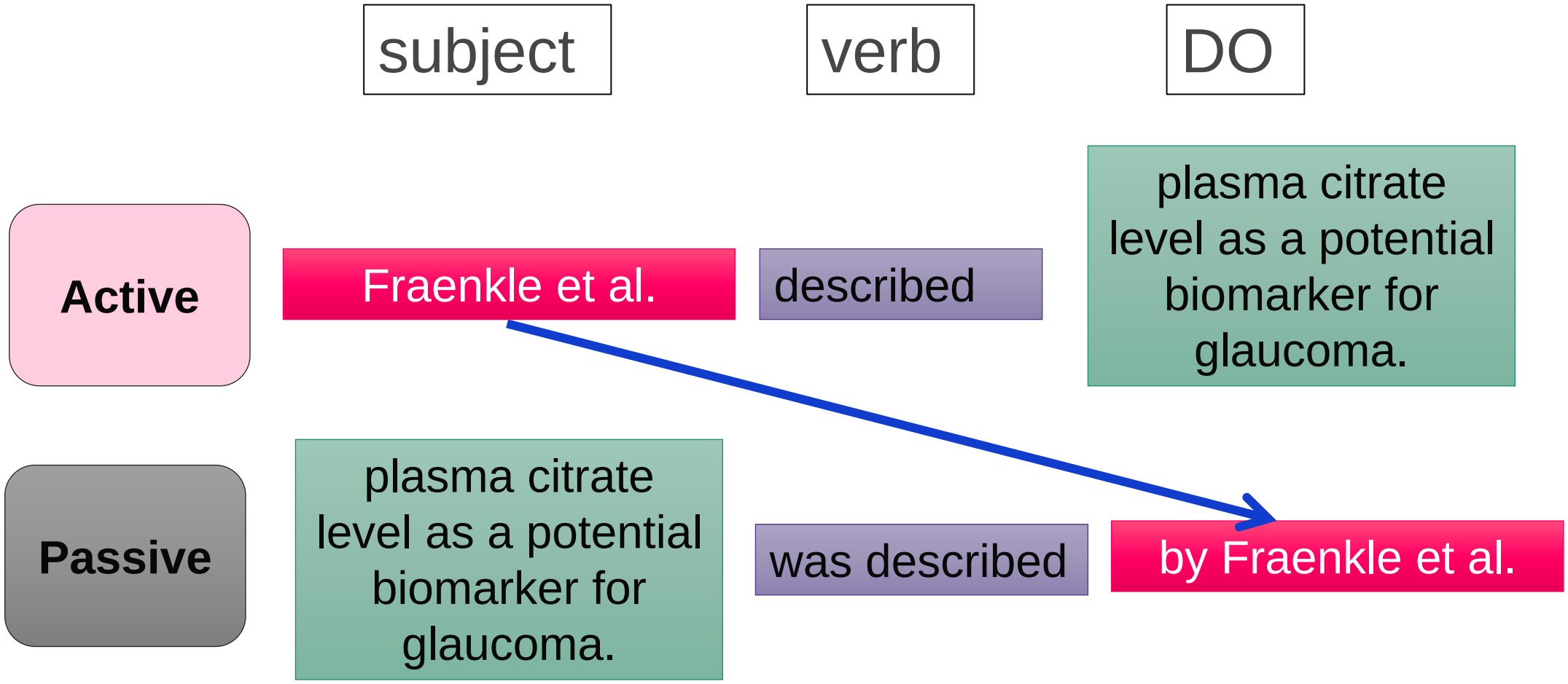
- The object
- What *received* the action
- Weaker subject-verb

Verbs followed by direct object

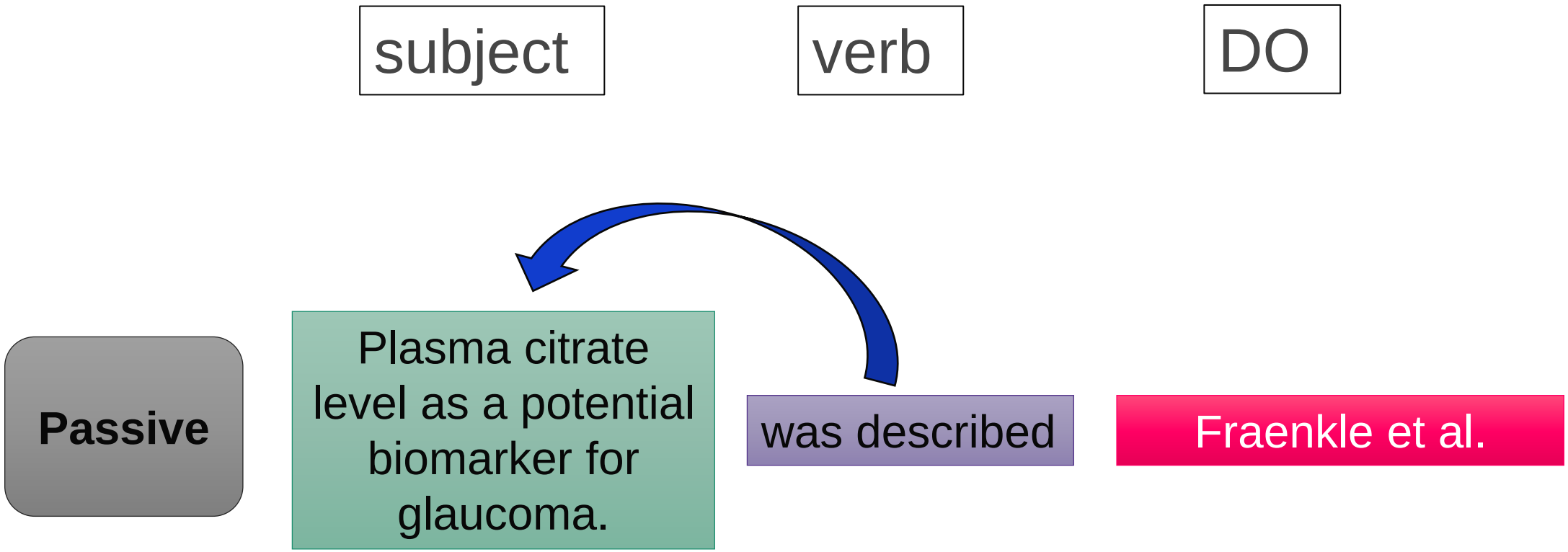
Verbs followed by direct object



Verbs followed by direct object



Verbs followed by direct object



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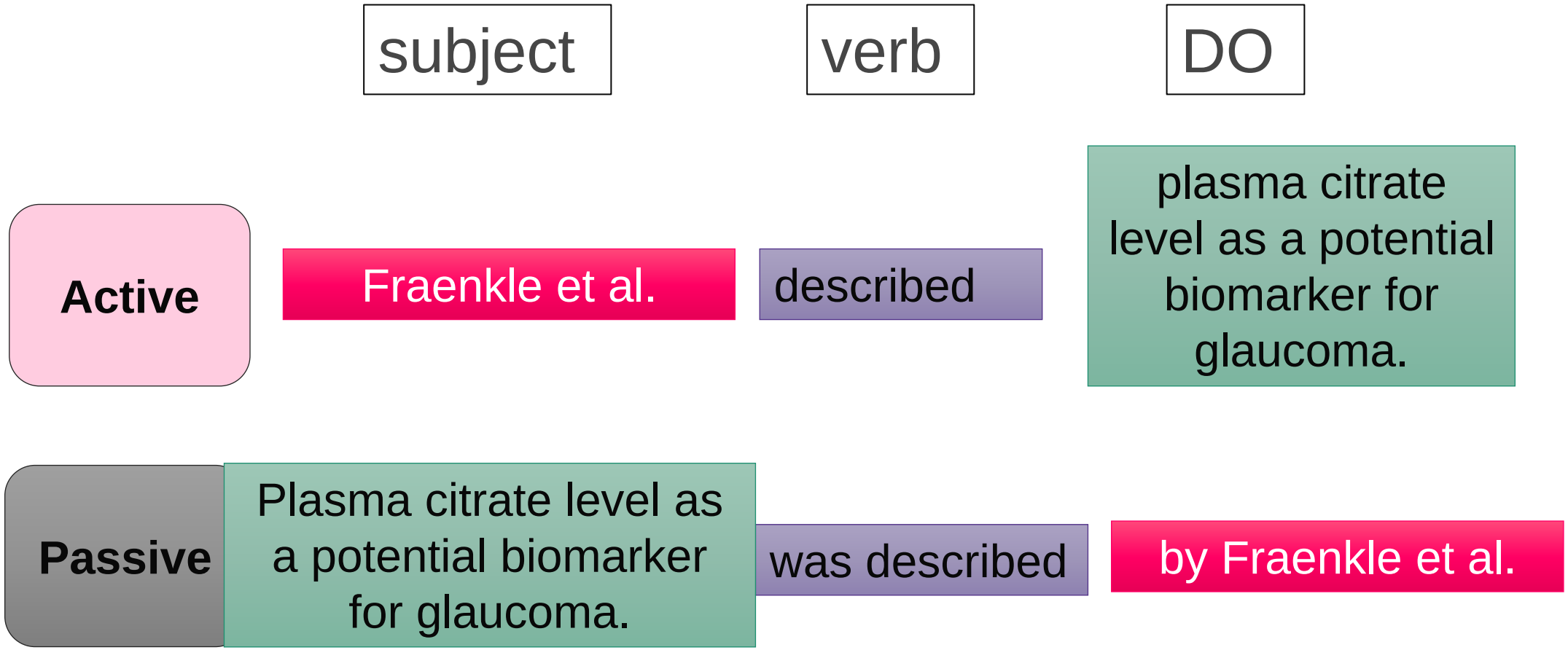


Verbs followed by direct object

- Many verbs used in reporting science only require direct objects.

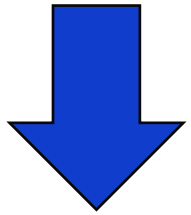
“Reporting” verbs	*announce* *demonstrate* *describe* *introduce* *report* *suggest*

Changing voice

Plasma citrate level as a potential biomarker for glaucoma was described for the first time by Fraenkl et al. who accidentally found low level of citrate in patients with glaucoma.

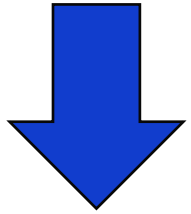
Changing voice

Plasma citrate level as a potential biomarker for glaucoma **was described** for the first time by Fraenkl et al. *who accidentally found low level of citrate in patients with glaucoma.*



Changing voice

Plasma citrate level as a potential biomarker for glaucoma **was described** for the first time by Fraenkl et al. **who** accidentally found low level of citrate in patients with glaucoma



After serendipitously **finding** that low citrate level is associated with glaucoma, Fraenkle et al. first **suggested** that plasma citrate level may be used as an indicator of glaucoma.

Main uses of the passive voice

1. When the subject is…
   A. Unknown
   B. Unimportant or
   C. Obvious
2. Emphasis and clarity

When the subject is unknown, unimportant, or obvious

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(A) The subject is unknown

Oxytocin **is released** from the posterior pituitary into the bloodstream.

(A) The subject is unknown

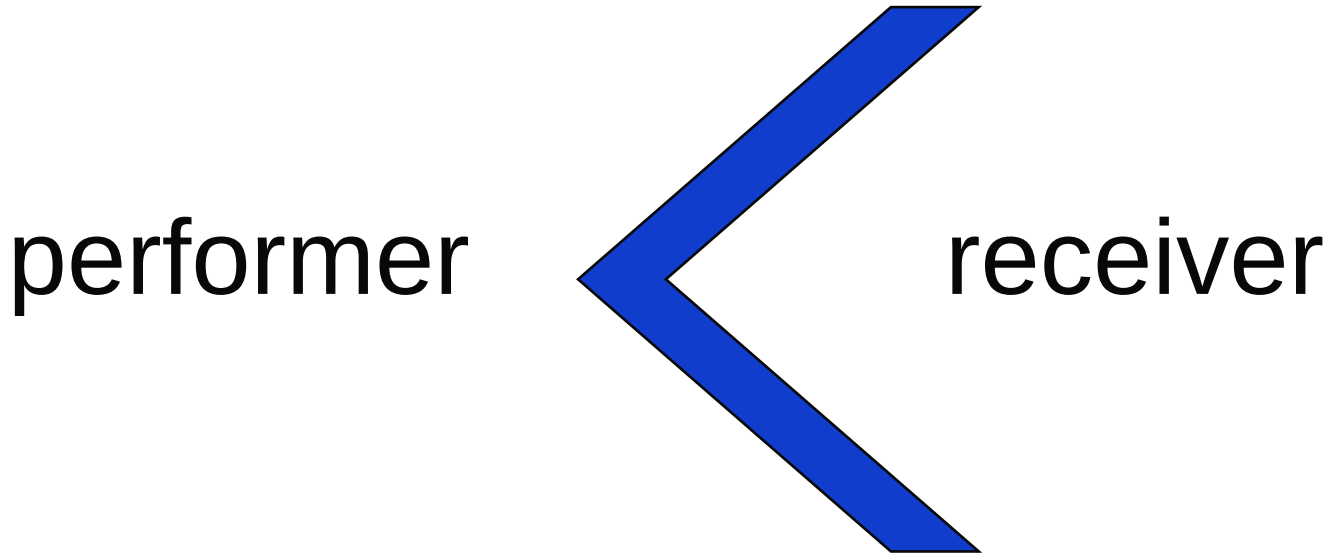
- *An undefined cause-effect relationship* requires the passive voice

We **found** that the total RSDI score **was significantly reduced** in oxytocin-treated patients.

In scientific writing, the passive voice can be used to described an effect.

The effect = a reduction in RSDI score

(B) The subject is unimportant



(B) The subject is unimportant

In the majority of cases, the disease **can be controlled** by treatment decreasing intraocular pressure.

Michalczuk M et al. (2017) BMJ Paediatrics Open

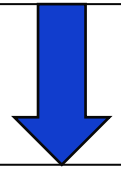
For decades, oxytocin **has been used** for the induction of labor and prevention of postpartum hemorrhage

Sack M et al. (2017) BMC Medicine

A common mistake

- It is sufficient to simply cite the papers.

However, Grus et al., Joachim et al., Duan et al., and Knepper et al. **mainly tested** non-genetic molecular markets only in adult patients.



However, non-genetic molecular markers **were mainly tested** only in adult patients.[5–40]

Tips: Reporting with passives

- Another simple way of avoiding distracting “author et al.” subjects is to use “**it + passive verb + that-clause**”

It is reported that…
It is believed that…
It is considered that…
It is regarded that…

It was discovered that…
It was shown that…
It was suggested that…
It was revealed that….

Clarity and Emphasis

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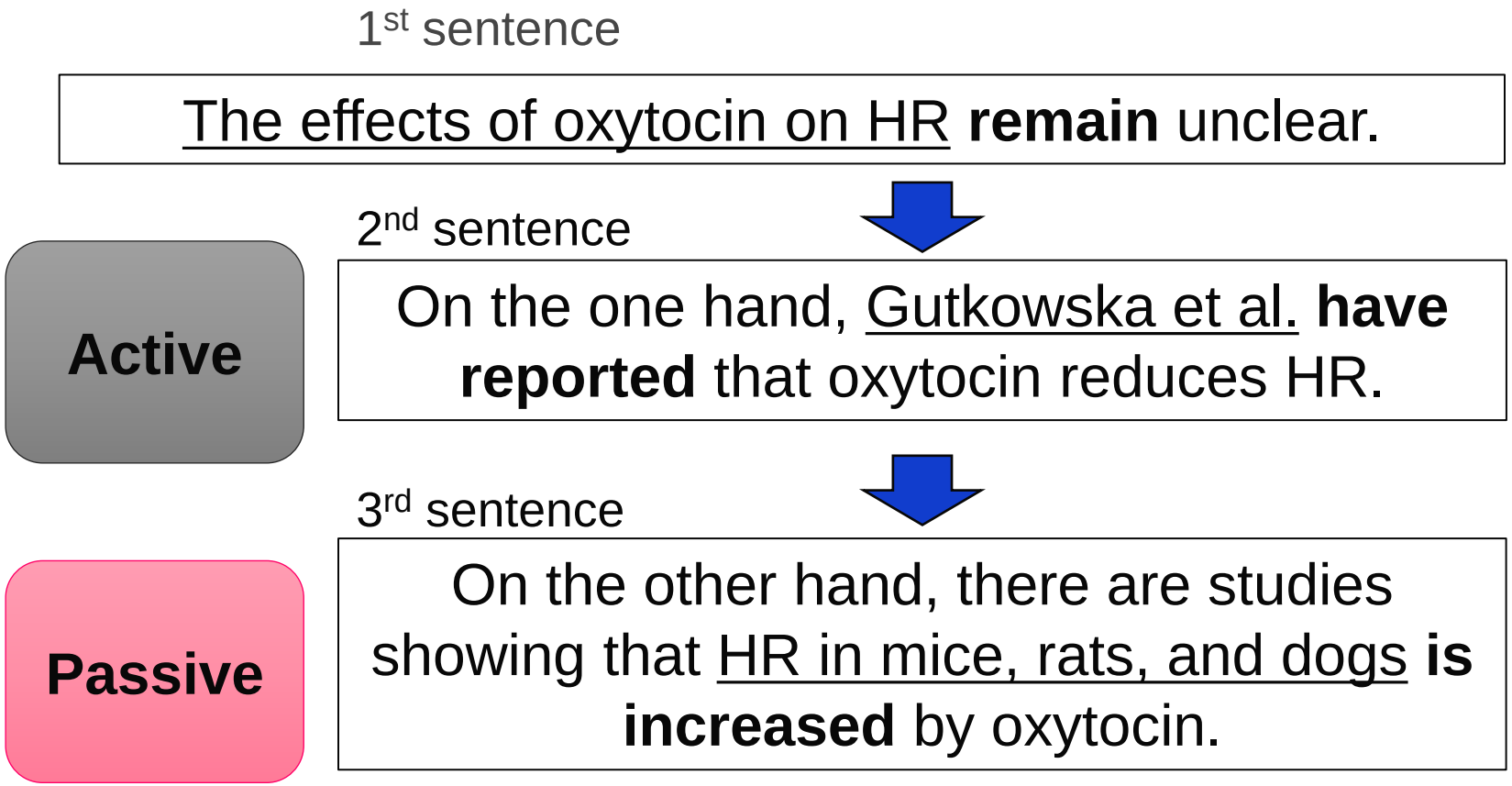
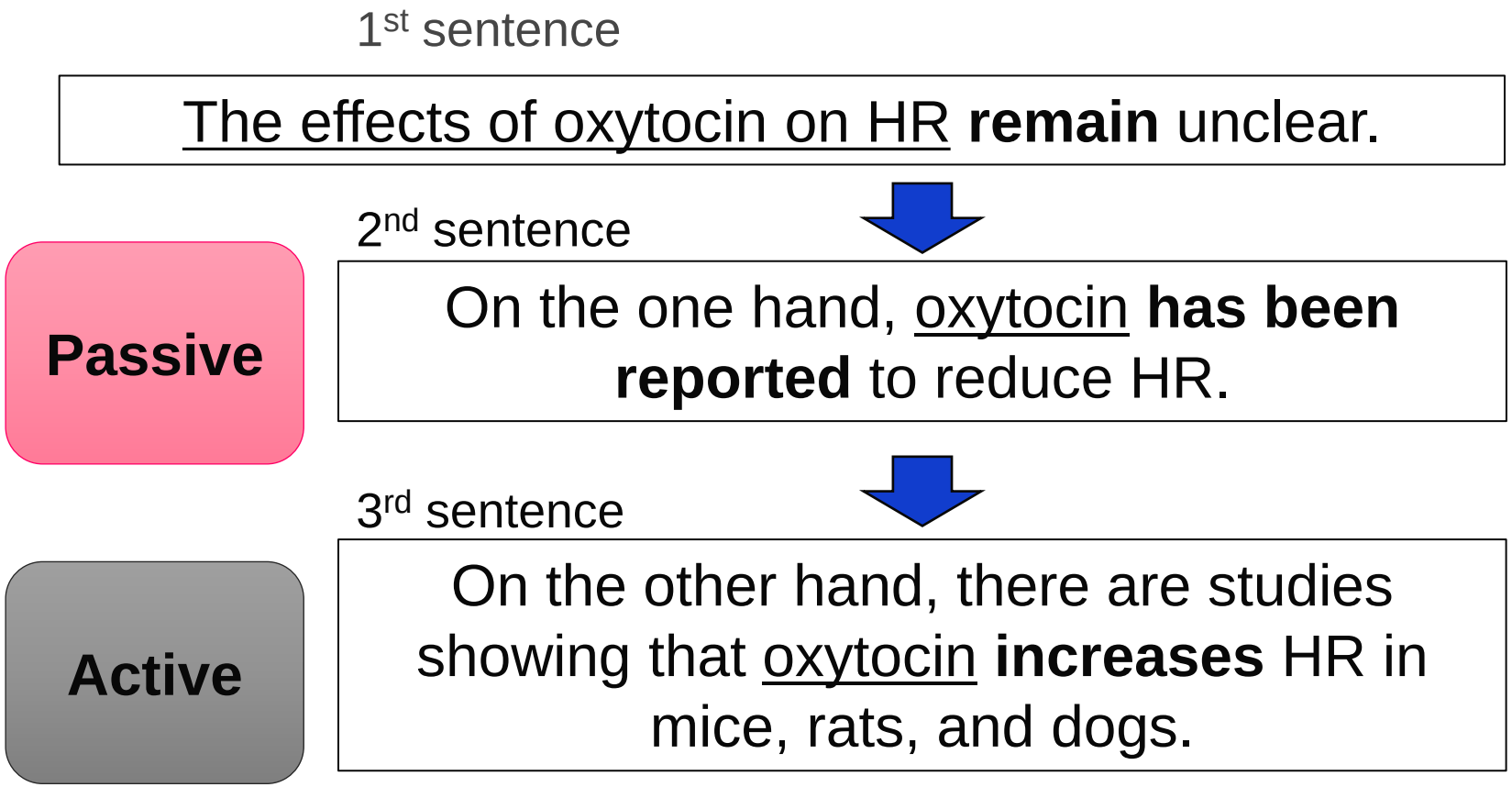
Clarity and voice

- Voice is connected to clarity
- Appropriate choice of voice is important for clarity

Clarity and voice



Clarity and voice



Emphasis and voice

- Passive Voice is selectively used to emphasize information

Always think about where you want emphasis

We used fMRI to examine the neural response in frontal and parietal cortices.

Chao LL & Martin A (2000) NeuroImage

- Where is the emphasis in the above sentence?

Always think about where you want emphasis

We used **fMRI** to examine the **neural response** in **frontal and parietal cortices**.

Chao LL & Martin A (2000) NeuroImage

- This sentence can be re-written in different ways so that in each revision the emphasis is variably placed
- The active and passive voice is chosen depending on which word is emphasized

Always think about where you want emphasis

We used fMRI to examine the neural response in frontal and parietal cortices.

fMRI was used to examine the neural response in frontal and parietal cortices.

The neural response in frontal and parietal cortices was examined through fMRI.

The frontal and parietal cortices were examined for the neural response through fMRI.

Danger signs of poor paraphrasing

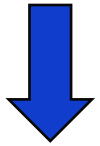
1. Inconsistency
2. Repetitiveness or excessive detail
3. Lack of cohesion

Inconsistency

- Inconsistent style or quality writing
- Inconsistent spelling, such as a mixture of UK and US spelling
- Inconsistent terminology and abbreviations

Repetitiveness or excessive detail

Different aspects of a thesis require *different* expressions, that is, a *different* word reflecting a *different* perspective on your paper's theme as it relates to *different* circumstances.



"*Different* aspects of a thesis require *their own* expressions, that is, a *certain* word chosen to reflect each *individual* perspective on the theme as it relates to *particular* circumstances."

Lack of cohesion

- Lack of cohesion between sentences or paragraphs
- Especially evident from the use of conjunction
- No scientific logic between steps of the writing

Summary

- Paraphrasing requires a lot of mental work.
- Rewriting the text does not mean it is your original work—must cite the source material ALWAYS
- There are many ways to paraphrase but remember not to lose the original meaning
- Use various techniques of paraphrasing

Writing resources & references

- Essentials of Writing Biomedical Research Papers—Mimi Zeiger
- AMA Manual of Style: A Guide for Authors and Editors
- http://www.editage.com/insights/what-are-some-techniques-for-effective-paraphrasing
- http://www.editage.com/insights/how-to-paraphrase-english-text-effectively (video)
- http://www.editage.com/insights/practical-tips-for-improving-medical-papers

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Thank you!

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