Des illusions aux hallucinations visuelles: une porte sur la perception

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Abstract

TOTO Les illusions visuelles sont des créations d'artistes, de scientifiques et plus récemment, grâce aux réseaux sociaux, du grand public qui proposent des situations souvent incongrues, dans lesquelles l'eau remonte une cascade, les personnes volent dans les airs ou des serpents se mettent à tourner. Au-delà de leur indéniable coté ludique, ces illusions nous apprennent beaucoup sur le fonctionnement du cerveau, notamment quand celles-ci se transforment en hallucinations visuelles, dépassant ainsi les limites des capacités de notre perception. En tant que chercheur en Neurosciences à l'Institut de Neurosciences de la Timone à Marseille, je vous dévoilerai des aspects du fonctionnement du cerveau qui sont souvent méconnus. En particulier, nous verrons pourquoi un magicien peut tromper nos sens ou comment des objets peuvent voyager dans le temps. Surtout nous essaierons de comprendre le fonctionnement de notre perception visuelle sur les bases d'une théorie de la vision non pas comme une simple caméra qui enregistre des images mais comme un processus actif en relation avec le monde qui nous entoure. TOTO

This manuscript is a template (aka "rootstock") for <u>Manubot</u>, a tool for writing scholarly manuscripts. Use this template as a starting point for your manuscript.

The rest of this document is a full list of formatting elements/features supported by Manubot. Compare the input (.md files in the /content directory) to the output you see below.

Basic formatting

Bold text

Semi-bold text

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Italic text

Combined italics and bold

Strikethrough

- 1. Ordered list item
- 2. Ordered list item
 - a. Sub-item
 - b. Sub-item
 - i. Sub-sub-item
- 3. Ordered list item
 - a. Sub-item
- · List item
- List item
- · List item

superscript²

subscript_{2n+1}

unicode superscripts 0123456789

unicode subscripts 0123456789

A long paragraph of text. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Putting each sentence on its own line has numerous benefits with regard to <u>editing</u> and <u>version</u> <u>control</u>.

Line break without starting a new paragraph by putting two spaces at end of line.

Document organization

Document section headings:

Heading 1

Heading 2

Heading 3

Heading 4



Horizontal rule:

Heading 1's are recommended to be reserved for the title of the manuscript.

Heading 2's are recommended for broad sections such as Abstract, Methods, Conclusion, etc.

Heading 3's and Heading 4's are recommended for sub-sections.

Links

Bare URL link: https://manubot.org

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Citations

Citation by DOI [1].

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Citation by ISBN [5].

Citation by URL [6].

Citation by tag [7].

Multiple citations can be put inside the same set of brackets [1,5,7]. Manubot plugins provide easier, more convenient visualization of and navigation between citations [2,3,7,8].

Referencing figures, tables, equations

Figure 1

Figure 2

Figure 3

Figure 4

Table 1

Equation 1

Equation 2

Quotes and code

Quoted text

Quoted block of text

Two roads diverged in a wood, and I—I took the one less traveled by, And that has made all the difference.

Code in the middle of normal text, aka inline code.

Code block with Python syntax highlighting:

```
from manubot.cite.doi import expand_short_doi

def test_expand_short_doi():
    doi = expand_short_doi("10/c3bp")
    # a string too long to fit within page:
    assert doi == "10.25313/2524-2695-2018-3-vliyanie-enhansera-copia-i-insulyatora-gypsy-na-sintez-ernk-modifikatsii-hromatina-i-svyazyvanie-insulyatornyh-belkov-vtransfetsirovannyh-geneticheskih-konstruktsiyah"
```

Code block with no syntax highlighting:

```
Exporting HTML manuscript
Exporting DOCX manuscript
Exporting PDF manuscript
```

Figures



Figure 1: A square image at actual size and with a bottom caption. Loaded from the latest version of image on GitHub.



Figure 2: An image too wide to fit within page at full size. Loaded from a specific (hashed) version of the image on GitHub.



Figure 3: A tall image with a specified height. Loaded from a specific (hashed) version of the image on GitHub.



Figure 4: A vector .svg image loaded from GitHub. The parameter sanitize=true is necessary to properly load SVGs hosted via GitHub URLs. White background specified to serve as a backdrop for transparent sections of the image.

Tables

Table 1: A table with a top caption and specified relative column widths.

Bowling Scores	Jane	John	Alice	Bob
Game 1	150	187	210	105
Game 2	98	202	197	102
Game 3	123	180	238	134

Table 2: A table too wide to fit within page.

	Digits 1-33	Digits 34-66	Digits 67-99	Ref.
pi	3.141592653589793238462 64338327950	2884197169399375105820 97494459230	7816406286208998628034 82534211706	piday.org
е	2.718281828459045235360 28747135266	2497757247093699959574 96696762772	4076630353547594571382 17852516642	nasa.gov

Equations

A LaTeX equation:

$$\int_0^\infty e^{-x^2} dx = \frac{\sqrt{\pi}}{2} \tag{1}$$

An equation too long to fit within page:

$$x = a + b + c + d + e + f + g + h + i + j + k + l + m + n + o + p + q + r + s + t + u + v + w + x + y + z + 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9$$
(2)

Special

▲ WARNING The following features are only supported and intended for .html and .pdf exports. Journals are not likely to support them, and they may not display correctly when converted to other formats such as .docx.

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Available background colors for text, images, code, banners, etc:

white lightgrey grey darkgrey black lightred lightyellow lightgreen lightblue lightpurple red orange yellow green blue purple

Using the **Font Awesome** icon set:

✓?★♠♡···

Light Grey Banner

useful for general information - manubot.org

1 Blue Banner

useful for important information - manubot.org

○ Light Red Banner

useful for warnings - manubot.org

References

1. Sci-Hub provides access to nearly all scholarly literature

Daniel S Himmelstein, Ariel Rodriguez Romero, Jacob G Levernier, Thomas Anthony Munro, Stephen Reid McLaughlin, Bastian Greshake Tzovaras, Casey S Greene *eLife* (2018-03-01) https://doi.org/ckcj

DOI: 10.7554/elife.32822 · PMID: 29424689 · PMCID: PMC5832410

2. Reproducibility of computational workflows is automated using continuous analysis

Brett K Beaulieu-Jones, Casey S Greene

Nature biotechnology (2017-04) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6103790/

DOI: 10.1038/nbt.3780 · PMID: 28288103 · PMCID: PMC6103790

3. Bitcoin for the biological literature.

Douglas Heaven

Nature (2019-02) https://www.ncbi.nlm.nih.gov/pubmed/30718888

DOI: 10.1038/d41586-019-00447-9 · PMID: 30718888

4. Plan S: Accelerating the transition to full and immediate Open Access to scientific publications

cOAlition S

(2018-09-04) https://www.wikidata.org/wiki/Q56458321

5. Open access

Peter Suber *MIT Press* (2012) ISBN: 9780262517638

6. manubot/rootstock GitHub repository

Daniel Himmelstein

GitHub (2019) https://github.com/manubot/rootstock

7. Opportunities and obstacles for deep learning in biology and medicine

Travers Ching, Daniel S. Himmelstein, Brett K. Beaulieu-Jones, Alexandr A. Kalinin, Brian T. Do, Gregory P. Way, Enrico Ferrero, Paul-Michael Agapow, Michael Zietz, Michael M. Hoffman, ... Casey S. Greene *Journal of The Royal Society Interface* (2018-04) https://doi.org/gddkhn

DOI: 10.1098/rsif.2017.0387 · PMID: 29618526 · PMCID: PMC5938574

8. Open collaborative writing with Manubot

Daniel S. Himmelstein, Vincent Rubinetti, David R. Slochower, Dongbo Hu, Venkat S. Malladi, Casey S. Greene, Anthony Gitter

(2019-04-22) https://greenelab.github.io/meta-review/