

Images and Figures in Scientific and Academic Writing

David M. Belnap
University of Utah
July 10, 2019

What Medium Is the Best Form to Convey Information?

- Words, Figure (Illustration), Table, Equation?
- Everything you do should have a purpose in helping convey information in the clearest possible way.
- May need to draft first to see if medium conveys information effectively.
- Be willing to discard your work for a better way!

Types of Illustrations (Figures)

Line Graph

Bar Graph

Pie Chart

Drawings: line art, chemical structures, cartoons, charts, etc.

Map

Schemes and Flowcharts

Photograph

Stereopair

Movie

Preparing Figures

- Prepare at size it will appear
- Don't make lines too thin (≥ 0.5 point)
- Keep as simple as possible (no clutter)
- Label clearly (incl. axes, units, magnitudes)
- Use color only when it serves a purpose

Figure Caption Is Part of the Figure

Figure X. Title (usually not a sentence). Followed by sentence descriptions.

- Make caption clear, too!
- Make understandable without reference to anything else
- Cite appropriate references
- Credit lines at end of caption

Citing Figures within Text

- Figures numbered sequentially by order of citation in text
- Every figure should be cited in text
- Refer to figure informatively followed by parenthetical reference to figure. Don't cite indicatively. Examples:

Indicative: Fig. X shows the steps of translation in the ribosome.

Informative: Translation occurs in the ribosome and involves ten steps (Fig. X).

- What message do you want reader to get from figure? Use the answer to that question to guide how you cite the figure in the main text.

Integrity

*Do not plagiarize, violate copyright, or fabricate data.

*Decide now that you will not do those things!

Plagiarize: failing to give credit for another person's work

Copyright Violation: publishing a work without permission of the copyright owner

Fabrication: deliberately distorting, producing, or changing information or data