

## Bibliography and Citations

The bibliography is usually the last section (or one of the last sections) of a report, but in the course we treat it early, because it begins with the selection of literature.

Virtually every scientific work builds on earlier work or is at least related to earlier work. An author almost never starts from zero, and often the author “sits on the shoulders of giants”. The main purpose of the bibliography is to put the article in context. Possible reasons to cite a paper in the bibliography are:

- The article builds directly upon the cited work, uses their results, and extends or improves them.
- The article is not a direct continuation of the cited work, but the cited work has introduced the concepts or developed key results.
- The cited work is about different subjects that are however closely related. It is mentioned as delimitation or as general background.
- The cited work is a standard reference, for instance, a common textbook or survey.

In the first two cases citation is mandatory. Other authors can even feel offended if they come across an article where their work is not cited although it clearly should. However, one may miss references for various reasons: the publication venue was not well known or not accessible, the title did not hint to the subject, etc. In fact, even a thorough keyword search in literature databases does not guarantee that all relevant work is found. Often the same subjects have been studied independently under different names. Therefore omissions are excusable, but one should at least make a serious effort to find all relevant and up-to-date work.

We list some formal rules:

- To cite a paper in the text, always give the number or identifier as it appears in the bibliography: “as is well known [xx]”. One may also add the author name(s): “was shown by AuthorX and AuthorY [xx]”.

- Usually only the surnames are mentioned in the text, but neither given names nor titles. (Write “was investigated by Holmes and Watson [xx]”, but not “was investigated by Sherlock Holmes and Dr. John Watson [xx]”.)
- Do not repeat the titles of cited papers in the text; the identifier is enough. Cite documents, not persons. Cite explicitly using the identifier, not by circumscriptions like “in their type theory paper”.
- Place the full stop correctly; a citation belongs to the citing sentence. Therefore write “was shown by AuthorX [xx].”, but not: “was shown by AuthorX. [xx]”.
- One can use the Latin abbreviation “et al.” (“et alii”, which means “and others”) to omit some authors if a cited article has many authors. One mentions the first one or two authors and then simply adds “et al.” However, in the bibliography one should list all authors of an article, unless the list is excessively long. Authors have worked hard and deserve mentioning by name. The phrase “et al.” is more suitable for citations inside the text, in order to keep the sentences short and readable.
- Obviously, every paper cited in the text must also appear in the bibliography. But also the converse is important: A paper should be in the bibliography only if it is cited in the text, because otherwise it is not clear how that paper relates to the present one.
- Do not use footnotes for references, but collect all references in the bibliography section.
- Only truly scientific work can be cited, but not, for instance, Wikipedia articles. While they can be very good introductions and serve their purpose, they do not meet the standards of scientific publications. If you want to refer to a general introduction to some topic, cite a textbook instead.
- Always give full bibliographic details: name(s) of the author(s), with given names or their initials, then the name of the journal or conference or repository, volume number, page numbers, publication year.

- Many articles are available online, but it is not common to mention links to the electronic versions in the bibliography. Give only the bibliographic data. Only when a cited article is not officially published, one should give the web links. But then also mention the date of access, because these documents might change.
- Different citation styles are in use (just look into different articles to see examples), and they have their advantages and disadvantages. The only hard demand is that all citations and bibliography entries must be written in a uniform style. Bibliography entries are usually copied from somewhere, and then it is easy to forget to adjust the styles.
- Text pieces of other authors can be cited literally, however: One must clearly mark quotations as such, and mention the source. Failing to do so is **plagiarism**.
- Really look up what you cite, do not simply copy from other bibliographies without thinking.

Readers may use the bibliography to get more background information: look up details of earlier results, look up concepts, definitions, and basic facts that are well known to experts but not to a novice reader. This also leads to an advice for **reading** a scientific paper: If you are not familiar with things that are apparently assumed to be known, it is a good approach to trace the main references mentioned in the paper.