

Seminar Natural Language Processing (NLP) — Part 8

# Basics of Written Presentation

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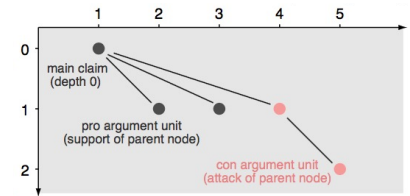
Henning Wachsmuth

<https://ai.uni-hannover.de>



# Outline

- **Basic article elements**



- **Content, structure, and style**



- **Citation and authorship**



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# Basic article elements

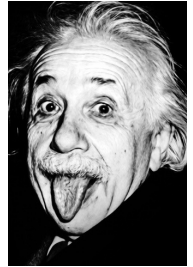
# Textual part of articles

- **Most hints on oral presentation also hold for articles**

- Science is storytelling

Seminar: No scientific novelty expected, rather summarize and discuss

- Science needs to be understood



- **Articles more complete**

- Tell the whole story, avoid gaps in argumentation

- But again: Include only relevant content

- Don't expect too much prior knowledge

- But: Avoid details on knowledge that can be presupposed

**”Don't make  
me think.”**



Steve Krug

- **Articles should be sound**

- Need to be more precise than in talks

- Use logical arguments, from broad context to deep details

- Formalize concepts if needed/helpful

# Tables, figures, terms, and footnotes

## ■ Tables and figures

- In articles, just number increasingly

Figure 1, 2, ... Table 1, 2, ... (NOT: Figure 2.1, 2.2, ...)

- Explain in text *and* in caption

Rule of thumb: tables/figures should be clear from the caption

## ■ Technical terms

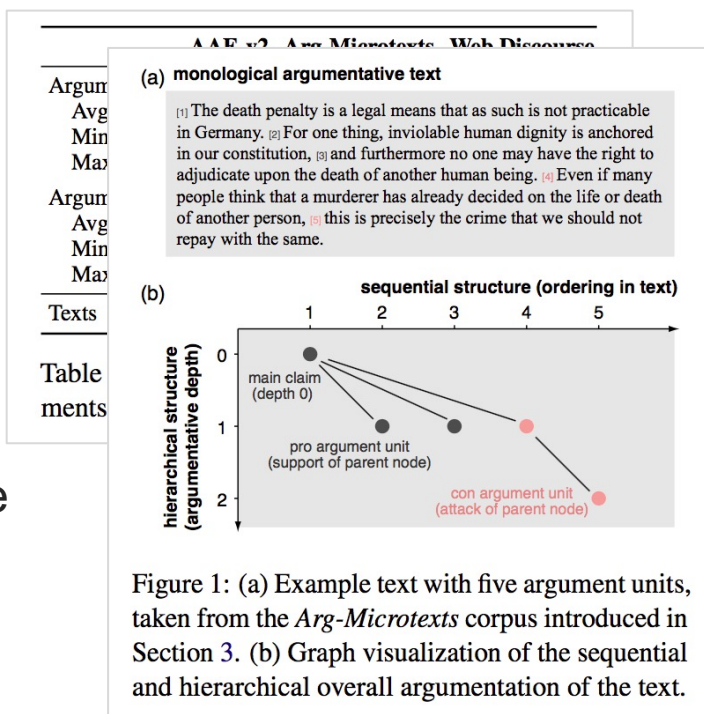
- Introduce where needed, don't overformalize
- Use well-defined terms, AIA & AUA

- Don't use synonyms for terms

Reader is misled to check whether intentional differences exist

## ■ Footnotes

- Reduce readability, should be the exception
- In NLP: Don't cite literature using footnotes
- Only for secondary information



alternatives by modeling the stance of each unit towards its parent in the associated tree. This stance can be derived in all corpora.<sup>3</sup> All other unit and relation types from the specific models are ignored, since there is no clear mapping between them.

<sup>3</sup>Alternatively, the stance towards the main claim could be modeled. We decided against this alternative to avoid possibly wrong reinterpretations, e.g., it is unclear whether a unit that attacks its parent always supports a unit attacked by the parent.

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# Content, structure, and style

# Content of articles: Abstract

## ▪ Abstract

- A concise high-level summary of the paper
- Usually 5–10 sentences

## ▪ My view of a good abstract

- **Motivation** and context (1 sentence)
- **Problem** and why not solved (1–2 sentences)
- **Question** addressed in the paper (1 sentence)
- **Approach** in general, some details (2–3 sentences)
- **Evaluation**, results, conclusion (1–3 sentences)

May differ a bit for seminar articles, since you present others' work

## ▪ My PhD advisor's view

- What is the problem? Why is it a problem?
- What is the solution? Why is it a solution to the problem?

Notice that this view is NOT in conflict with mine

### Abstract

Several approaches have been proposed to model either the explicit sequential structure of an argumentative text or its implicit hierarchical structure. So far, the adequacy of these models of overall argumentation remains unclear. This paper asks what type of structure is actually important to tackle downstream tasks in computational argumentation. We analyze patterns in the overall argumentation of texts from three corpora. Then, we adapt the idea of positional tree kernels in order to capture sequential and hierarchical argumentative structure together for the first time. In systematic experiments for three text classification tasks, we find strong evidence for the impact of both types of structure. Our results suggest that either of them is necessary while their combination may be beneficial.

# Content of articles: Other sections

## ▪ Introduction

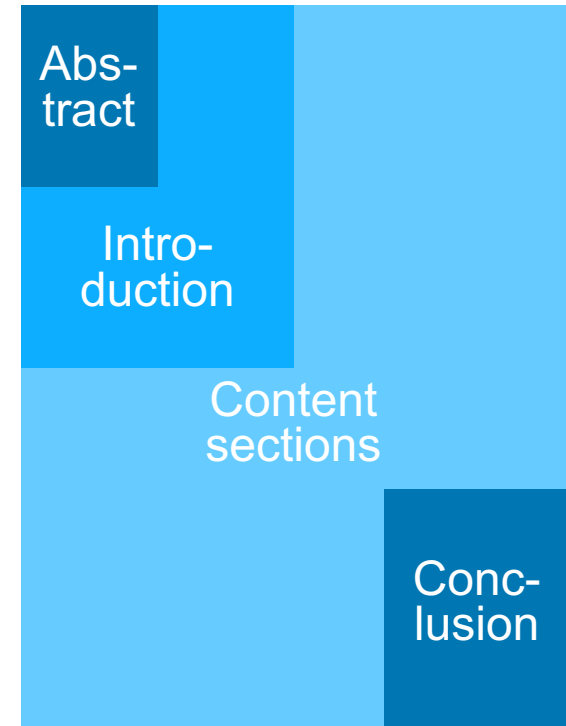
- The abstract in more detail
- Tells the whole story, from context to conclusion
- High-level, understandable for computer scientists

## ▪ Content sections

- The introduction in more detail
- Elaborate on related work, concepts, models, data, approaches, experiments, and results
- More technical, for researchers from the area

## ▪ Conclusion

- The introduction in less detail
- Summarize story in retrospective, give outlook
- Semi-technical



# Structure of articles

## ■ High-level structure

- Title and author information
- Abstract
- Usually 4–7 sections
- References

... and sometimes appendices (not in seminar article!)

## ■ Section structure

- Often numbered subsections (2.1, 2.2, ...)
- Subsubsections unnumbered, if any
- Always have text before sub<sup>+</sup>sections

## ■ Headings

- Sections. In NLP, often structural: “Introduction”, “Approach”, ...
- Sub<sup>+</sup>sections. Often more topic-specific and self-descriptive

**The Impact of Modeling Overall Argumentation with Tree Kernels**

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**Abstract**

Several approaches have been proposed to model either the explicit sequential structure of an argumentative text or its implicit hierarchical structure. So far, the adequacy of these models of overall argumentation remains unclear. This paper asks what type of structure is actually important to tackle downstream tasks in computational argumentation. We analyze patterns in the overall argumentation of texts from three corpora. Then, we adapt the idea of positional tree kernels in order to capture sequential and hierarchical argumentative structure together for the first time. In systematic experiments for three text classification tasks, we find strong evidence for the impact of both types of structure. Our results suggest that either of them is necessary while their combination may be beneficial.

**1 Introduction**

Argumentation theory has established a number of major argument models focusing on different aspects, such as the roles of an argument's units (Toulmin, 1958), the inference scheme of an argument (Walton et al., 2008), or the support and attack relations between arguments (Freeman, 2011). The common ground of these models is that they conceptualize an argument as a conclusion (in terms of a claim) inferred from a set of pro and con premises (reasons), which in turn may be the conclusions of other arguments. For the overall argumentation of a monological argumentative text such as the one in Figure 1(a), this results in an implicit hierarchical structure with the text's main claim at the lowest depth. In addition, the text has an explicit linguistic structure that can be seen as a regulated sequence of speech acts (van Eemeren and Grootendorst, 2004).

**(a) monological argumentative text**

The death penalty is a legal means that is not practicable in Germany. For one thing, irrevocable human dignity is anchored in our constitution, and furthermore no one may have the right to adjudicate upon the death of another human being. Even if many people think that a murderer has already decided on the life or death of another person, this is precisely the crime that we should not repeat with the same.

**(b)**

Figure 1: (a) Example text with five argument units, taken from the *Arg-Microtexts* corpus introduced in Section 3. (b) Graph visualization of the sequential and hierarchical overall argumentation of the text.

Figure 1(b) illustrates the interplay of the two types of overall structure in form of a tree-like graph. Natural language processing research has largely adopted the outlined hierarchical models for mining arguments from text (Suba and Gurevych, 2014; Habernal and Gurevych, 2015; Peldszus and Stehle, 2016). However, the adequacy of the resulting overall structure for downstream analysis tasks of computational argumentation has rarely been evaluated (see Section 2 for details). In fact, a computational approach that can capture patterns in hierarchical overall argumentation is missing so far. Even more, our previous work indicates that a sequential model of overall structure is preferable for analysis tasks such as stance classification or quality assessment (Wachsmuth and Stein, 2017).

In this paper, we ask and investigate what model of (monological) overall argumentation is important to tackle argumentation-related analysis tasks. To this end, we consider three corpora with fully

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Copenhagen, Denmark, September 7–11, 2017. ©2017 Association for Computational Linguistics

# Style of articles

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## ▪ **Scientific writing style**

- Write clearly, unambiguously, and concisely
- Use "we" form (only) to clarify what is from you
- Use 3rd person or impersonal form otherwise
- Avoid pronouns with unclear references

## ▪ **Some guidelines**

- English sentences are short, one statement per sentence
- Again: Avoid grammar and spelling errors  
Seminar: Too many of them will negatively affect your grade
- **Don't make things complex**  
Common misunderstanding!

## ▪ **Article format in the seminar**

- Provided template predefines layout and its usage
- 4 two-column pages of content, 1–2 pages of references



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# Citation and authorship

# Citation

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## ■ Citation

- In-text reference to a bibliographic source
- We use ACL-style: **Author names + year**

Other communities may use numbers [1] or acronyms [ACW17]

mentation, namely, to classify the myside bias and stance of texts. For myside bias, [Stab and Gurevych \(2016\)](#) use features derived from discourse structure, whereas [Faulkner \(2014\)](#) and [Sobhani et al. \(2015\)](#) model arguments to classify stance. [Ong et al. \(2014\)](#) and we ourselves ([Wachsmuth et al., 2016](#)) do similar to assess the quality of persuasive essays and [Reisman, Klebanov et al. \(2016\)](#)

## ■ What to cite

- Any reuse, paraphrase, summary, or translation of content from some source

Content: Text, figures, and tables

- Better one citation too much than one too less
- **Rule of thumb: Always clarify what is from you and what from others**

Also cite yourself if you reuse your own sources

## ■ How to cite

- **Direct reuse.** Put in quotes (possibly shorten with [...]), give source

Example: Unit segmentation is "[...] the splitting of a text into argumentative segments" ([Ajjour et al., 2017](#)).

- **Other citations.** Give source close-by

Example: As [Ajjour et al. \(2017\)](#) point out, segmentation is the first task of an argument mining pipeline.

- **Large text portions.** Give source once in the beginning

Example: In the following paragraph, we summarize the segmentation approach of [Ajjour et al. \(2017\)](#).

# References

## ▪ List of references

- Bibliographical information at end of paper
- Exactly those references cited in the text
- Information should be complete and consistent

## ▪ Needed meta-information

- **All literature.** Author, year, title
- **Conferences/Workshops.** Proceedings, pages
- **Journals.** Journal name, issue, number, pages
- **Books.** Edition if any, publisher
- **Online only.** Give URL with access date

Other meta-information optional, but should be consistently used

## ▪ Bibtex

- LaTeX handles references automatically using bibtex

Aristotle. 2007. *On Rhetoric: A Theory of Civic Discourse* (George A. Kennedy, translator). Clarendon Aristotle series. Oxford University Press.

Beata Beigman Klebanov, Christian Stab, Jill Burstein, Yi Song, Binod Gyawali, and Iryna Gurevych. 2016. *Argumentation: Content, structure, and relationship with essay quality*. In *Proceedings of the Third Workshop on Argument Mining (ArgMining2016)*, pages 70–75. Association for Computational Linguistics.

Stefanie Brüninghaus and Kevin D. Ashley. 2003. *Predicting outcomes of case based legal arguments*. In *Proceedings of the 9th International Conference on Artificial Intelligence and Law*, pages 233–242.

Chih-Chung Chang and Chih-Jen Lin. 2011. *LIB-SVM: A library for support vector machines*. *ACM Transactions on Intelligent Systems and Technology*, 2(3):27:1–27:27.

# Plagiarism

## ■ Plagiarism

- To sell another's ideas or expressions as one's own

See [en.wikipedia.org/wiki/Plagiarism](https://en.wikipedia.org/wiki/Plagiarism)

- On purpose or due to lack of giving sources
- Plagiarism *not* a trivial offense

In many countries considered a crime

- **Proper citing avoids all plagiarism issues**

- For more information on plagiarism, see the leaflet we provide

[https://studip.uni-hannover.de/sendfile.php?type=0&file\\_id=b0b29b98f0010d95c9f75b50ede89acb&file\\_name=upb-plagiarism-leaflet.pdf](https://studip.uni-hannover.de/sendfile.php?type=0&file_id=b0b29b98f0010d95c9f75b50ede89acb&file_name=upb-plagiarism-leaflet.pdf)



<https://commons.wikimedia.org>

## ■ Consequences in the seminar

- Major cases lead to failing the seminar (and report to examination office)
- Minor cases may likely still negatively affect your grade

## ■ My former group...

- Does research on plagiarism detection
- See the tool picapica [www.picapica.org](http://www.picapica.org)



# Use of generative AI technologies

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- **We do not forbid the use of generative AI technologies**
  - However, we require you to be authors of your slides and articles
  - If you used help from such technologies, you need to indicate this
  - If your contribution is small, you need to justify this

H

Dear ChatGPT, how could I start the motivation of my seminar talk on prompt engineering?

- **We do not generally encourage the use of such technologies**
  - Using generative AI entails various risks that may have harmful effects
  - Our intended learning effects may not happen when you use them
- **We encourage learning a responsible use of such technologies**
  - Useful to *support* writing and illustration tasks
  - Not useful to *take over* such tasks, let alone for other tasks like search
  - Ask your advisor, if you are unsure about if/how to use them

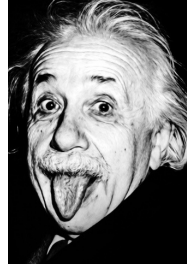
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# Sum up

# Take aways

## ■ Oral vs. Written presentation

- As talks, articles tell a story and need to be understood
- Articles are usually more complete than talks
- Articles should be scientifically sound



## ■ Written presentation

- Several best practices for content, structure, and style
- Proper citation is a must
- Start writing early enough to see how well that works



## ■ For the seminar

- Consider hints in this presentation
- Notice that some are subjective, much is missing
- Develop your own way of writing while following conventions



# References

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## ▪ Some slides reuse content from:

- **Engels (2010)**. Gregor Engels. Einführung in wissenschaftliches Schreiben und Präsentationstechniken. Presentation within the Seminar "Information-Driven Software Engineering". Paderborn, 2010. [https://cs.uni-paderborn.de/fileadmin/informatik/fg/dbis/Lehre/ws10\\_11/PG\\_IDSE/Dokumente/2010-04-15\\_Schreiben\\_Praesentieren.pdf](https://cs.uni-paderborn.de/fileadmin/informatik/fg/dbis/Lehre/ws10_11/PG_IDSE/Dokumente/2010-04-15_Schreiben_Praesentieren.pdf)
- **Becker (2012)**. Steffen Becker. Scientific Working. Presentation within the Seminar "Model Driven Software Engineering with Eclipse". Paderborn, 2010. [www.hni.uni-paderborn.de/fileadmin/Fachgruppen/Softwaretechnik/Lehre/Proseminar\\_Model\\_Driven\\_Software\\_Engineering/ProSem\\_MDSD\\_Guidelines.pdf](http://www.hni.uni-paderborn.de/fileadmin/Fachgruppen/Softwaretechnik/Lehre/Proseminar_Model_Driven_Software_Engineering/ProSem_MDSD_Guidelines.pdf)

## ▪ Examples are taken from:

- **Ajjour et al. (2017)**. Yamen Ajjour, Wei-Fan Chen, Johannes Kiesel, Henning Wachsmuth, and Benno Stein. Unit Segmentation of Argumentative Texts. In Proceedings of the Fourth Workshop on Argument Mining, pages 118–128, 2017. <http://aclweb.org/anthology/W17-5115>
- **Wachsmuth et al. (2017f)**. Henning Wachsmuth, Giovanni Da San Martino, Dora Kiesel, and Benno Stein. The Impact of Modeling Overall Argumentation with Tree Kernels. In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing, pages 2369–2379, 2017. <http://aclweb.org/anthology/D17-1252>