Computational Argumentation — Part III

Basics of Argumentation

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Learning goals

- **Concepts**
  - What is argumentation, why and how do we argue
  - Linguistic concepts argumentation builds upon
  - Main concepts related to argumentation
  - Proper use and distinction of argumentation-related terms

- **Associated research fields**
  - Linguistics
  - Argumentation theory
  - Rhetoric

- **Within this course**
  - Basics needed for understanding what is analyzed and generated in computational argumentation

Outline

Introduction

Need for debate?

iphone vs galaxy

death penalty

skolstrejk för klimatet

rescue boats

putin

silk road

maduro

energy embargo

affirmative action

basic income

feminism

refugees

arm exports

equal pay

vaccine mandate

#metoo

curfews

two-state solution

messi vs ronaldo

tuition fees

western arrogance

telegram

democracy

Controversial issues

- **Controversy**
  - A question (problem) without a clearly correct answer (solution).
  - A potential conflict of standpoints on a given issue.

  "Controversy is an essential prerequisite of debate. Where there is no clash of ideas, proposals, interests, or expressed positions on issues, there is no debate."

  (Freeley and Steinberg, 2009)

- **Examples**

Controversial.	Non-controversial.	Borderline case.
Feminism is needed.	*2 plus 2 equals 4.*	*The earth is a sphere.*

- **Issue**
  - A topic is a subject, matter, or theme, such as *"feminism"*.
  - An issue is a topic at discussion.
  - Issues are usually phrased as claims, such as *"Feminism is needed"*.

Argumentation: a compressed definition

"Argumentation is a verbal, social, and rational activity aimed at convincing a reasonable critic of the acceptability of a standpoint by putting forward a constellation of propositions justifying or refuting the proposition expressed in the standpoint."

(van Eemeren and Grootendoorst, 2004)

What is argumentation?

> *"Argumentation is a verbal, social, and rational activity aimed at convincing a reasonable critic of the acceptability of a standpoint by putting forward a constellation of propositions justifying or refuting the proposition expressed in the standpoint."*

(van Eemeren and Grootendoorst, 2004)

- **A verbal activity**
  - Argumentation is inherently linguistic, either in spoken or in written form.
    Mimics, gestures, and other forms of communicating are secondary.

- **A social activity**
  - Argumentation is an interaction with two or more opposing participants.
    Notice that you may also argue with yourself.

- **A rational activity**
  - The core of argumentation is to exchange reasonable arguments.
    Other facets of arguing such as rhetoric may still play a role, though.

Why to argue? based on Stede and Schneider (2018)

> *"Argumentation is a verbal, social, and rational activity aimed at convincing a reasonable critic of the acceptability of a standpoint by putting forward a constellation of propositions justifying or refuting the proposition expressed in the standpoint."*

(van Eemeren and Grootendoorst, 2004)

- **A standpoint** (aka stance)

  - Arguments support (or oppose) a pro or con view on a controversial issue.
    Without controversy, there is no disagreement and, hence, no reason to argue.

- **Convincing of acceptability**

  - Arguments aim to make opponents accept one's own view.
    Arguments are *not* about finding truth, because truth is not always not known and not always accessible.

- **A reasonable critic**

  - Arguments can be judged within a given social context.
    In many cases, the judges will be the participants themselves.

How to argue?

> *"Argumentation is a verbal, social, and rational activity aimed at convincing a reasonable critic of the acceptability of a standpoint by putting forward a constellation of propositions justifying or refuting the proposition expressed in the standpoint."*

(van Eemeren and Grootendoorst, 2004)

- **A constellation of propositions**
  - Argumentation creates sequential and hierarchical relations between a set of selected propositions.
    Concrete arguments are phrased linerarizations of these relations.

- **Justifying or refuting proposition of the standpoint**
  - Argumentation aims to clarify why a standpoint is right (or wrong).
    It is not just about social power relationships between the involved participants.

Argumentation at different granularity levels

Alice. **Some people say refugees threaten peace, as many of them were criminals.**

In fact, Spiegel Online just reported results from a study of the federal police about numbers of refugees and crimes:

Overall, there is no correlation at all!

Rather, the police confirmed that the main reason for committing crime is poverty.

So, if you believe the police then you shouldn't believe those people.

Syrians are even involved less in crimes than Germans according to the study.

So, the more Syrians come to Germany, the more peaceful it gets there, right?

Bob. *The question is here why should I believe the police!? Argument failed :p*

Argumentative discourse unit

Argument

Argumentation (monological)

Debate (dialogical argumentation)

Next section: Argumentative language

Subjective language

- **Public and private states**
  - Public. A person's actions can be observed by the outside world.
  - Private. A person's current mental state (what is thought, felt, ...) cannot.

- **Objective and subjective language**
  - Objective. Some statements of a person describe public states in the world. Listeners can judge them as true or false.

    | *There is a cat on the mat.* | *Winston Churchill came to office in 1940.* |

  - Subjective. When a private state is revealed, such judgments do not apply. Only, we may like or dislike a respective statement.

    | *That's a really bad wine.* | *I guess that's a llama over there.* |

- **Notice**
  - Objections to a subjective statement rather target the expressed content.
  - Without linguistic indicators, subjectivity if often not apparent.

Types of subjective statements

- **Sentiment**
  - Statements that express positive or negative polarity/valence
  - Opinion. An evaluation directed towards an object, idea, ...
  - Judgment. An evaluation of a *person's* behavior, character, appearance, ...
  - Emotion. An expression of happiness, fear, sadness, ...

Opinion.	Emotion.	Judgment.
That's a really bad wine.	*Hooray!*	*You don't deserve the price.*

- **Belief in truth**
  - Statements that focus on the truth or falsity of propositions
  - Prognosis. An expectation about the future
  - Speculation. An assumption about the past, present, or future
  - Claim. An assertion that a certain *stance* on an issue is true (or false)

Claim.	Speculation.	Prognosis.
We need feminism.	*I guess that's a llama over there.*	*There will be snow later.*

Stance

- **Stance**
  - The overall position held by a person towards some target, such as an object, statement, or issue
    Near-synonyms: Viewpoint, view, standpoint, stand, position.
  - To have/take a stance on a target means to be *pro* or *con* towards it.
    Stance may indicate a perspective (e.g., *liberal),* but it is not the perspective.

Con towards death penalty.	Pro towards the left claim.
The death penalty must be abolished.	*It doesn't deter people from violence.*

- **Stance vs. claim**
  - Some literature equates a stance with a claim.
  - In fact, a claim is a statement that conveys a stance towards a target.

- **Observations on stance**
  - Often but not necessarily conveys sentiment
  - Depends on what a speaker claims to be true
  - Can be expressed without naming the target

  Con towards death penalty.
  Human life is invaluable.

Verifiability, evidence, and reasons

- **Verifiability of claims** (Park and Cardie, 2014)
  - Verifiable-public. Claims that can be verified based on public evidence

    I tell you Winston Churchill came to office in 1940. I saw it on Wikipedia!

  - Verifiable-private. Claims that can be verified based on evidence from the speakers private state or personal experience

    I have a headache. Maybe I had too much wine last night.

  - Non-verifiable. Claims that cannot be verified with objective evidence, but where still a reason can be given

    I don't like this wine, because it has so much tannin.

- **Evidence vs. reasons**
  - Evidence. An answer to *what* is known or *when* something happened
  - Reason. Any answer to *why* a statement is supposed to be true (or false)

Types of evidence

- **Common types of evidence**
  - Testimony. Reference to a proposition made by some expert, authority, ...

    D. Tutu said, to take a life when a life has been lost is revenge, it is not justice.

  - Statistics. A report of results from quantitative research, studies, ...

    A survey by the UN from 1998 gave no support for the deterrent hypothesis.

  - Anecdote. Personal experience, a concrete example, a specific event, ...

    I heard about a guy who was proven innocent one day after his execution.

- **Observations**
  - Other statements may be seen as evidence, such as an analogy or causality.
  - Evidence is often backed up by a reference to sources.
  - Conflicting studies exist about what evidence type is most persuasive.

Causality and communicative effects

- **Causality ("A because B")**
  - Using causality in language may have different communicative effects.
  - In argumentation, it may be used for persuasion or justification.

- **Communicative effects of causality**
  - Persuasion. A claim *A* is supported by a reason *B*.

    Using airplanes is bad because they are among the worst air polluters we have.

  - Justification. *A* is a possibly controversial attitude or action, *B* the reason for it.

    I need to use airplanes a lot because my job requires me to be in different parts of the country every week.

  - Explanation. *A* is an "undisputed" fact, and *B* is the reason why *A* holds.

    An airplane is able to take off because the shape of the wings produces an upward force when the air flows across them.

Discourse structure

- **Discourse structure**
  - The representation of the organization of an entire text
 - Coherence relations exist between the contents of text segments

- **Rhetorical structure theory (RST)** (Mann and Thompson, 1988)
  - A model of discourse structure that captures hierarchical coherence relations between adjacent text segments.
  - A coherent text is supposed to have a fully connected RST tree.
  - The original RST considers 22 relation types:

Circumstance	Volitional cause	Antithesis	Evidence
Solutionhood	Non-volitional cause	Concession	Justify
Elaboration	Volitional result	Condition	Restatement
Background	Non-volitional result	Otherwise	Summary
Enablement	Purpose	Interpretation	Sequence
Motivation		Evaluation	Contrast

Discourse vs. argumentative structure based on Stede and Schneider (2018)

- **Example RST tree**

evaluation

elaboration   **antithesis**

anthithesis   **condition**
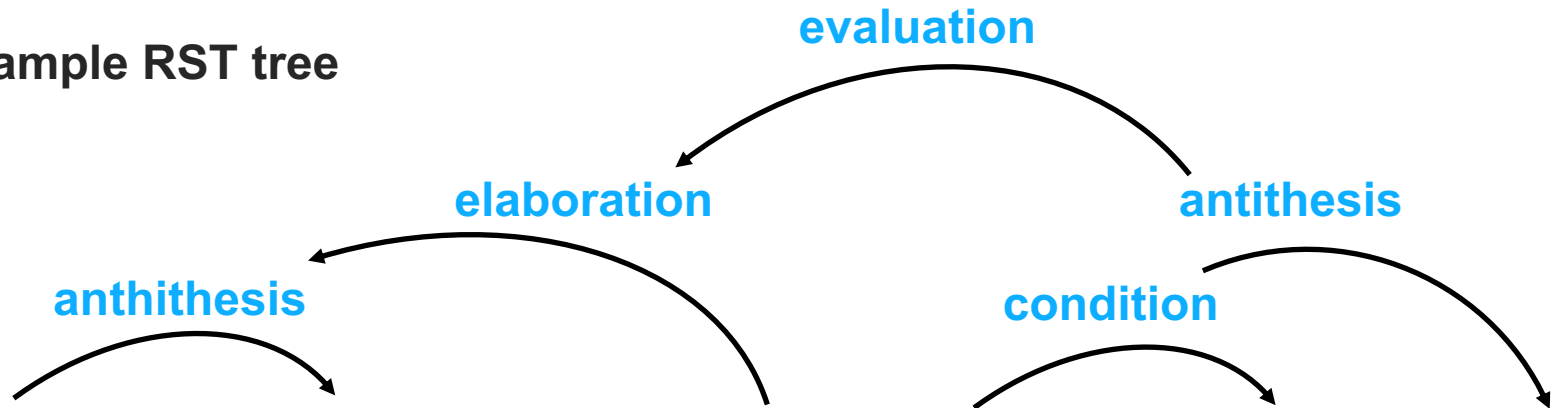
Rather than administering aid almost entirely through the slow drip of private organizations,	*international agencies and foreign powers should put their money and their effort into the more ambitious project of buiding a functional Haitian state.*	*It would be the work of years and billions of dollars.*	*If this isn't a burden that nations want to take on,*	*so be it.*	*But to patch up a dying country and call it a rescue would leave Haiti forsaken indeed, and not by God.*

- **Discourse vs. argumentative structure**
  - Some coherence relations encode argumentative structure.
  - Discourse structure models continuity of meaning, not pragmatic functions.

Speech acts

- **Speech acts**
  - A speech act is the utterance of a statement with a performative function.
  - Speech acts, if successful, affect the world in some way.

- **Five kinds of speech acts** (Searle, 1969)
  - Representatives. The speaker commits to the truth of an assertion.
  - Directives. The speaker tries to make the listener perform some action.
  - Expressives. The speaker expresses an emotional state.
  - Declaratives. The speaker changes the state of the world by means of performing the utterance.
  - Commissives. The speaker commits to doing some action in the future.

- **Levels of speech acts**
  - Speech acts can be analyzed on three levels simultaneously: the *locution*, the *illocution*, and the *perlocution*.

Speech acts in arguments

- **Three levels of a speech act**
  - Locutionary act. The act of saying something with a performative function

    Smoking is bad for your health.

  - Illocutionary act. A direct or indirect act performed by a locutionary act

    Direct. *Assertion that smoking is bad for your health.*
    Indirect. *Warning not to smoke.*

  - Perlocutionary act. An act which changes the cognitive state of the listener

    Causing the listener to adopt the intention not to smoke.

- **Speech acts in arguments**
  - Locutionary acts. Inherent part of arguments
  - Illocutionary acts. Often found in claims of arguments
  - Perlocutionary acts. Capture the effect of an argument on the listener

Goals of argumentation and debate based on Tindale (2007)

- **Persuasion**
  - Changing or reinforcing the stance of an audience towards an issue

- **Agreement**
  - Resolving a dispute between multiple parties or achieving a settlement in a negotiation

- **Justification**
  - Giving reasons or explanations for an attitude or action that might be controversial

- **Recommendation**
  - Suggesting a decision to make, an action to take, a product to buy, or similar

- **Deliberation**
  - Deepening one's own understanding of an issue
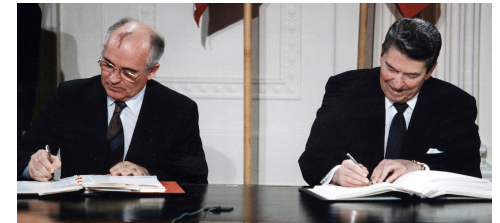
Next section: Argumentative units and arguments

Argumentative (discourse) units

- **Argumentative function**
  - Argumentative language supports or attacks stances on controversial issues.
  - Any claim, or reason for a claim, has an argumentative function.

- **Argumentative unit** (aka argument component)
  - A contiguous text span with a specific argumentative function, demarcated by neighboring spans with a different function

- **Argumentative discourse unit (ADU)**
  - An argumentative unit, or a non-argumentative text span that has a rhetorical or dialectical function, gives background information, ...
    Some literature sees only argumentative units as ADUs.

non-argumentative   **argumentative**

" If you wanna hear my view, I think that the EU should allow sea patrols in the

Mediterranean Sea. Many innocent refugees will die if there are no rescue boats.

Nothing justifies to endanger the life of innocent people."   **argumentative**

argumentative

Arguments

- **Argument**
  - A composition of a set of argumentative units, where one takes the role of a *conclusion* and every other the role of a *premise*

  - Conclusion. A claim that conveys a stance on a controversial issue, implicitly or explicitly
  - Premise. A reason given to support (or object to) the truth of the claim

Conclusion	*The EU should allow sea patrols in the Mediterranean Sea.*
Premise 1	*Many innocent refugees will die if there are no rescue boats.*
Premise 2	*Nothing justifies to endanger the life of innocent people.*

Observations (detailed below)

- Often, some argument units are left implicit.
- The inference from premises to conclusion follows some *scheme*.
- Arguments are inherently relational: Reasons are given for claims.

Argument conclusions

- **Three types of conclusions** (Eggs, 2002)
  - Epistemic. A proposition is true or false.
  - Ethical (or esthetical). Something is good or bad (or: beautiful or ugly, …).
  - Deontic. An action should be performed or not.

- **Example conclusions in arguments**

Epistemic. *Climate change exists. The temperature increase can be felt in our everyday lives.*

Ethical. *Using airplanes is problematic because they are among the worst air polluters we have.*

Deontic. *We should tear this building down. It is full of asbestos.*

Argument premises

- **Premises**
  - A reason that supports (or attacks) an argument's conclusion
  - Different but partly overlapping distinctions of premise types exist.

- **Minor vs. major premises** (Walton et al., 2008)
  - Minor. A premise stating specific information related to an issue
  - Major. A generalization or rule, linking the other premises to the conclusion

- **Facts, warrants, and backings** (Toulmin, 1958)
  - Facts (aka data). Information specific to a given context
  - Warrant. A rule clarifying that the conclusion holds in case the facts hold
 - Backing. A justification for the warrant

- **Enthymeme**
  - An unstated (i.e., implicit) premise
    The major premise (or: the warrant and backing) often remain implicit.
  - Sometimes also: an *argument* in which a premise is left unstated
    Notice that also conclusions are often implicit, but usually not called enthymemes then.

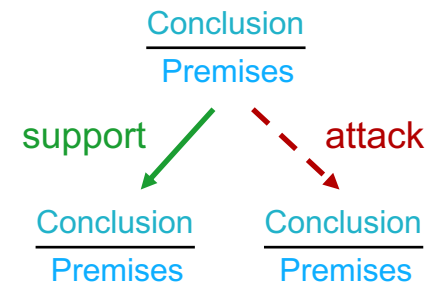# Argumentative relations

- **Relations within arguments**
  - An argument defines a relation where premises support a conclusion.
  - A premise may also serve as a counterconsideration that objects to a conclusion. It is then usually *undercut* in the same argument.

$$\boxed{P}$$
$$\downarrow$$
$$\boxed{C}$$
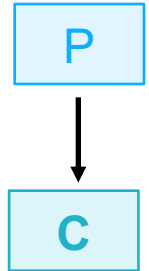
- **Relations between arguments**
  - Different arguments may support or attack each other.
  - A counterargument may attack an argument's premise or its conclusion — or the inference between them.

$$\frac{\text{Conclusion}}{\text{Premises}}$$

support   attack

$$\frac{\text{Conclusion}}{\text{Premises}} \qquad \frac{\text{Conclusion}}{\text{Premises}}$$

- **Types of support**
  - Simple. A premise individually supports a conclusion (analog for arguments).
  - Linked. Multiple premises (arguments) collectively provide support.

- **Types of attacks**
  - Rebuttal. A support of the opposite conclusion to an argument's conclusion
 - Undercutter. An attack of the relevance of a premise to a conclusion

Argument structures

- **Five types of argument structures** (Freeman, 2011)
  1. Single. One premise supports a conclusion.
  2. Linked. All premises, taken together, support a conclusion.
  3. Convergent. Each premise, in isolation, supports a conclusion.
  4. Serial. The conclusion of one argument is a premise of another conclusion.
  5. Divergent. A premise supports multiple different conclusions.
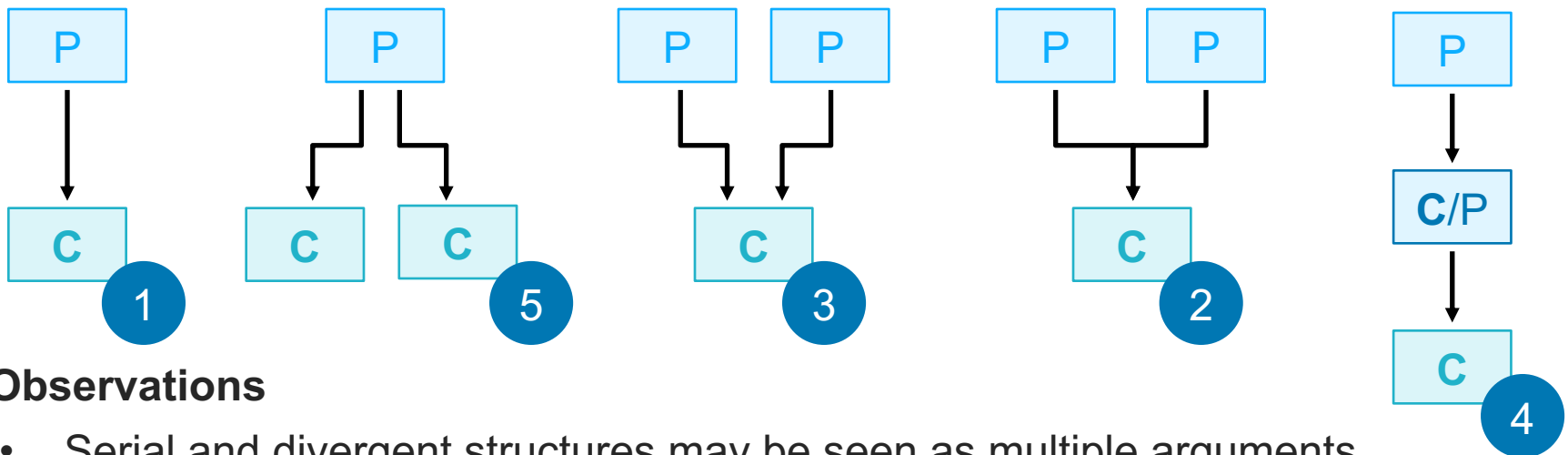
- **Observations**
  - Serial and divergent structures may be seen as multiple arguments.
  - The essential distinction is whether premises are linked or convergent.

Common argument models
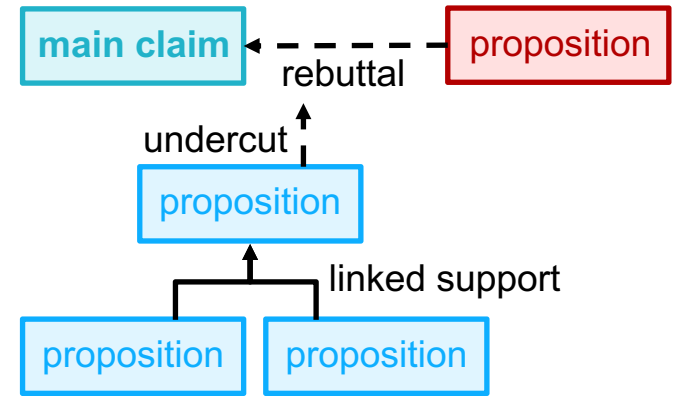
- **Focus on unit roles** (Toulmin, 1958)
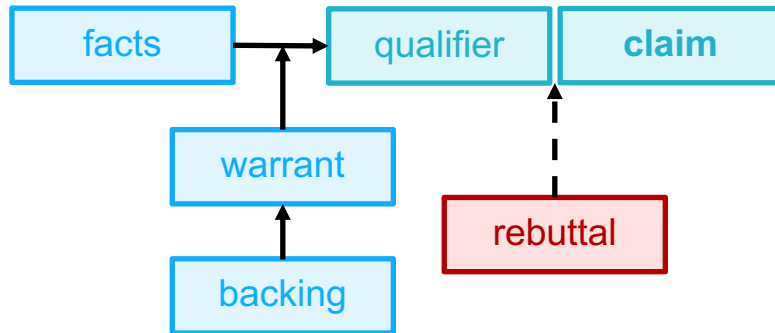
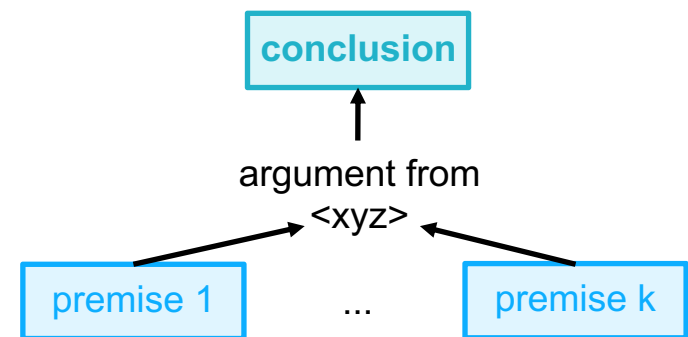*Anne is one of Jack's sisters.*   *So, I guess   Anne now has red hair.*

Since all his sisters have red hair   *Unless Anne dyed or lost her hair.*

as was observed in the past.

- Few real-life arguments really match this idealized model.

- **Focus on dialectical view** (Freeman, 2011)

- **Focus on inference** (Walton et al., 2008)

Next section: Argumentation and debate

Argumentation

- **Argumentation**

  - The usage of arguments to achieve persuasion, agreement, or similar with respect to a stance on a controversial issue

    Conclusion / Premises

  - Refers both to the *process* of arguing and to its *product,* i.e., a text or speech

- **Components of argumentation**

  - One or more arguments (given by argumentative units and their relations)

  - Zero or more statements that serve rhetorical and dialectical functions, or give context and background information
    The minimal instance of argumentation is one argument.

- **Thesis** (aka main/central/major claim)

  - The explicit or implicit conclusion of an entire argumentative text or speech

  - All other components (ideally) directly or indirectly support the thesis.

- **Monological vs. dialogical argumentation**

  - Monological. A composition of arguments on a given issue

  - Dialogical. A series of monological argumentative turns on the same issue

Monological vs. dialogical argumentation (recap)

Monological argumentation

Italy, Malta, Germany, and France agreed a plan at the end of September to share responsibility for hosting asylum seekers and migrants rescued in the central Meditarranean. [...]

However, the plan does not address the underlying issues with EU migration policy that have led to the increased death rate – namely the Europe-wide criminalisation of humanitarian support for asylum seekers and refugees and the EU's policy of border externalisation. [...]

Dialogical argumentation

Alice. *The EU should allow sea patrols in the Mediterranean Sea, to save the innocent refugees.*

Bob. *So naïve... having rescue boats makes even more people die trying.*

Alice. *Well, I actually read that sea patrols haven't led to an increase yet.*

Overall structure of monological argumentation

- **Monological overall structure** (aka discourse-level structure)
  - An entire argumentative text or speech simultaneously has a *hierarchical* and a *sequential* overall structure.

- **Hierarchical overall structure**
  - The logical structure induced by all argumentative relations
  - A thesis is supported (or attacked) by conclusions whose premises may be conclusions of other arguments, etc.
  - Can be modeled as a tree or directed acyclic graph (DAG) where nodes are ADUs and edges are relations

- **Sequential structure**
  - The structure induced by the ordering of units in a text or speech
  - Can be modeled as a sequential flow of *rhetorical moves*, such as the stance of each ADU towards the thesis
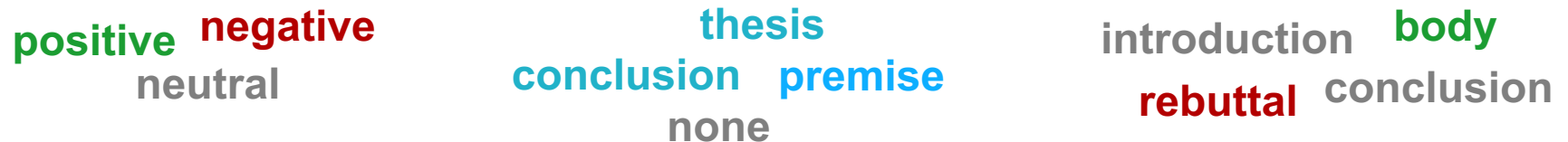 - Often has a rhetorical function primarily
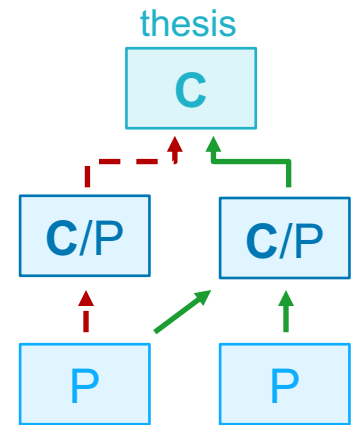
Rhetorical moves and argumentative zones

- **Rhetorical move** (aka discourse function)

  - A segment of text with a specific communicative function

  - Focused on speech acts in argumentation

  - Both generic and task-specific sets of moves have been proposed
    (Swales, 1990; Wachsmuth and Stein, 2017)

  positive **negative**   **thesis**   **introduction** **body**
         neutral   **conclusion** **premise**   **rebuttal** conclusion
                              none

- **Argumentative zones** (Teufel, 1999)

  - Rhetorical moves that capture the role of a text segment (usually a sentence) within the overall argumentation of a text

  - Pioneer concept that originally covered seven zones of scientific articles:

background	**other**	**own**	**aim**	**textual**	**contrast**	**basis**
background knowledge	research by others	research in article	goal of article	article structure	own vs. other	use of other

Overall structure of dialogical argumentation

- **Dialogical overall structure**
  - The arguments by the participants induce a *hierarchical* structure.
  - The series of turns defines a *sequential* structure, possibly with clear stages.
  - Fragmented. Arguments may be split into disconnected turns.
  - Not plannable. Participants need to react on the opponents' turns.

- **Sequential structure** (exemplarily for Oxford-style debates)
  1. Introduction. Each party lays out its main arguments, one after the other.
  2. Discussion. Parties respond to questions by an audience and to each other.
  3. Conclusion. Each party subsequently gives final remarks.

- **Hierarchical structure induced by arguments**
  - The structure given by the relations between arguments, by the reuse of argumentative units, or similar
  - Can be modeled as a graph where nodes are arguments and edges are relations (or similar)
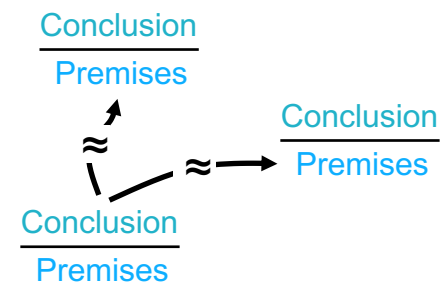
Participants in argumentation (recap)

▪ **Author (or speaker)**

- Argumentation is connected to the person who argues.
- The same argument is perceived differently depending on the author.

> *" The EU should allow rescue boats. Many innocent refugees will die if there are no rescue boats. "*
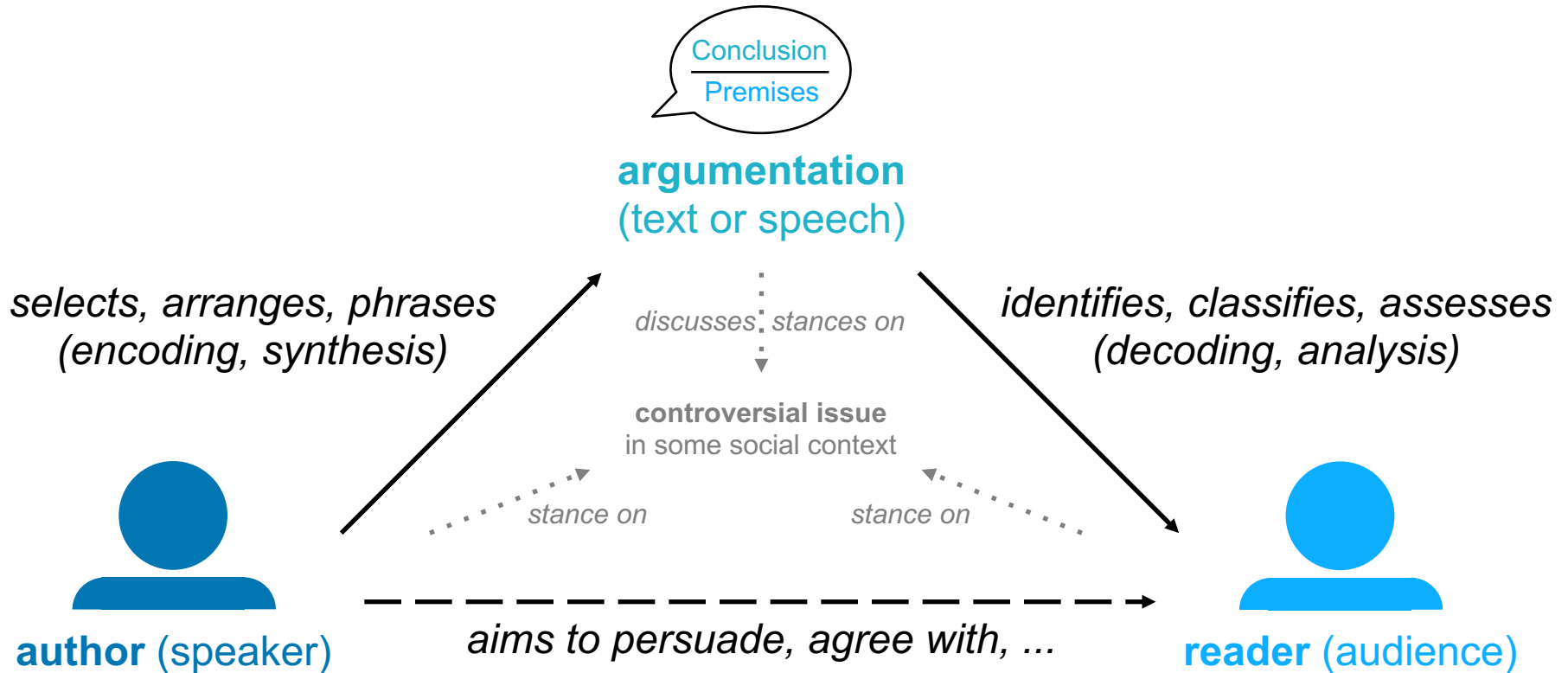

▪ **Reader (or audience)**

- Argumentation often targets a particular audience.
- Different arguments and ways of arguing work for different readers.

> *" According to a recent UN study, the number of rescue boats had no effect on the number of refugees who try. "*

General argumentation setting

- **Notice**
  - In dialogical argumentation, the roles of the participants alternate.
  - In some cases, the audience is a third, not actively involved party.
    Example: In Oxford-style debates, the goal is to change the view of an audience that listens to both sides.

Next section: Logic, rhetoric, and dialectic

Logic

- **Formal argumentation** (Blair, 2012)
  - Formal logic studies the *soundness* of arguments, requiring true premises and a deductively valid inference of the conclusion.
  - Valid inference includes *modus ponens* and *modus tollens*.

$$\frac{A \qquad A \rightarrow B}{B}$$

- **Natural language argumentation**
  - In the real world, truth is often unclear or unknown to the audience.
  - While valid natural language arguments exist, most are *defeasible*.
  - Logically good arguments are supposed to be *cogent*.

- **Defeasibility** (Stede and Schneider, 2018)
  - Argumentation follows a non-monotonic logic, including tentative conclusions, which may have to be revised when new information is given.

- **Cogency** (Blair, 2012)
  - A cogent argument has individually acceptable premises that are relevant to its conclusion and, together, sufficient to draw the conclusion.

Types of argumentative reasoning

- **Three types of reasoning**

  - Deductive. A conclusion is logically inferred from the given premises.

  - Inductive. A conclusion is seen as likely due to multiple concrete instances.

  - Abductive. A conclusion is seen as plausible given a set of premises.
    Defeasible arguments are usually abductive (also called *defeasible reasoning* or *presumptive reasoning*).

Inductive.	Deductive.	Abductive.
My grandpa died. My grandma died. Elvis died. It seems that everyone dies.	*All humans are mortal. Socrates is a human. Therefore, Socrates is mortal.*	*Elvis can only be dead. It just seems impossible that none of his fans ever saw him again.*

- **Syllogism** (Aristotle, 2007)

  - An argument where a conclusion is *deduced* from a general statement (major premise) and a specific statement (minor premise).
    The deductive example above is a syllogism.

Argumentation schemes based on Walton et al. (2008)

- **Argumentation scheme**
  - The form of inference from an argument's premises to its conclusion
  - Around 60 deductive, inductive, and especially abductive schemes exist.

- **Example schemes**
  - Argument from example
  - Argument from cause to effect
  - Syllogism
  - Argument from consequence
  - Argument from position to know

- **Critical questions**
  - Each scheme is connected to a set of critical questions.
  - The correct use of a scheme can be checked against them.

Conclusion	*A is true.*
Major premise	*Source E is in a position to know about things in a subject domain S with proposition A.*
Minor premise	*E asserts that A is true (in domain S).*

1. *Is E in a position to know about A?*
2. *Is E a reliable source?*
3. *Did E assert that A is true?*

Fallacies

- **Fallacy** (Tindale, 2007)
  - An argument with some (often hidden) flaw in its reasoning, i.e., it has a failed or deceptive scheme.

I want something that will attract attention, but have no real importance.

- **Example types of fallacies**
  For a comprehensive list, see: https://en.wikipedia.org/wiki/List_of_fallacies

  - **Ad-hominem.** Attacking the opponent instead of attacking her arguments

  - **Red herring.** Introducing an unrelated issue in the reasoning

  - **Appeal to ignorance.** Taking lack of evidence as proof for the opposite

My girlfriend won't give me a gift for my birthday. I have received no indication to the contrary from her.

- **Fallacies are hard to detect**
  - Structure identical to other arguments
  - Understanding and context knowledge needed

My flight tomorrow won't be delayed. I have received no indication to the contrary from the airline.

(thanks to Mario Treiber for this example)

Rhetoric

- **Rhetoric**
  - The study of the merits of different strategies for communicating a stance (Stede and Schneider, 2018)
  - The ability to know how to persuade (Aristotle, 2007)

  > *" Is a strong argument an effective argument which gains the adherence of the audience, or is it a valid argument, which ought to gain it?"*

  (Perelman and Olbrechts-Tyteca, 1969)

- **Persuasion**
  - The influence of someone's beliefs, attitudes, intentions, or similar
  - The use of techniques to make an audience think or behave in a desired way
 - Persuasive argumentation aims to be *effective.*

- **(Persuasive) Effectiveness**
  - Argumentation is effective if it persuades the audience of (or corroborates their agreement with) the stance of the author.

Means of persuasion, style, and arrangement

"In making a speech, one must study three points: the means of producing persuasion, the style or language to be used, and the proper arrangement of the various parts."

(Aristotle, 2007)
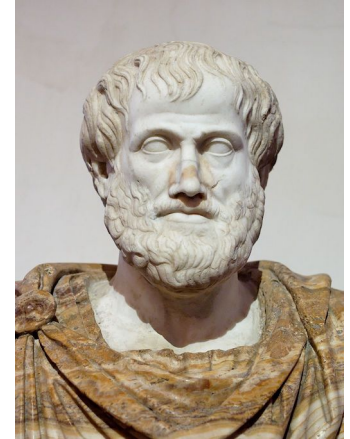
- **Three means of persuasion**

  - Logos. The use of logically good arguments.

  - Ethos. The demonstration of a good character, authority, and credibility.

  - Pathos. The appeal to certain emotions in the listener/reader.
    … there is also *kairos:* Stating something at the right place and time

- **Style and arrangement**

  - Clear style. The use of correct, unambiguous language without unnecessary complexity and deviation from the discussed issue

  - Appropriate style. A choice of words that fits to the issue and audience

  - Arrangement. The sequential structure of the presentation of arguments

Argumentation strategies

- **Argumentation strategy**
    - A rhetoric guiding principle followed in the synthesis of argumentation, in order to achieve persuasion.
    - Encodes logos, pathos, and ethos in language tuned towards the audience
    - Decides about the selection, arrangement, and phrasing of content

Example: "America first" https://www.youtube.com/watch?v=dIaoZqMrbCo
- Practically only pathos (with a bit of "ethos")
- Simple messages, loaded language, many repetitions
- Tuned towards the core voters

- **Three steps of synthesizing an argumentative text** (Wachsmuth et al., 2018)
    1. Select content that *frames* the given issue in a way that is effective for the intended stance.
    2. Arrange the structure of the content considering ordering preferences.
    3. Phrase the style of the content to match the audience and encoded means.

Frames and framing

- **Frame** (Ajjour et al., 2019)
  - A frame highlights an aspect under which an issue may be considered.
  - A frame defines a subset of all arguments on a given issue.
  - Both topic-specific and generic sets of frames have been proposed.

economics   morality   fiscal   discrimination

generic fairness   benefits

health   and equality   **gay marriage**

and safety public opinion   world religions

man and woman

- **Framing**
  - The selection of specific aspects of an issue to make them more *salient*, i.e., more noticeable, meaningful, and/or memorable.
  - The same issue framed in a different way may be perceived entirely different.
  - Selecting the right frames is decisive to achieve persuasion.
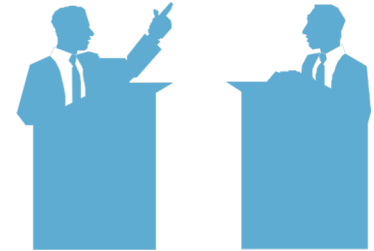 - The stance on an issue affects what frames should be chosen.

Pro. *Death penalty saves costs for imprisonment.*	Con. *Death penalty kills.*

Dialectic

- **Dialectic**
  - Dialectic considers debates between two parties that aim at agreement.
  - In a dialectical debates, parties should argue *reasonably*.

- **Reasonableness**
  - All arguments and the way they are stated are acceptable for all participants.
  - Arguments aim to contribute to resolution, helping to arrive at a conclusion.

- **Pragma-dialectics** (van Eemeren and Grootendoorst, 2004)
  - A theory to evaluate dialectical debates in an idealized process
  - The entire argumentation in a debate is viewed as a complex speech act.

  - Idealized discussion process. Four defined stages of a debate
  - Strategic maneuvering. Parties follow both dialectical and rhetorical goals.
  - Rules of a critical discussion. 10 rules to obtain reasonableness in the debate
    Variants with different numbers of rules are also found in the literature.

Discussion stages & strategic maneuvering (van Eemeren et al., 2002)

- **Idealized discussion stages**
  1. Confrontation. Establishment of the difference of opinion.
  2. Opening. Agreement on the rules and focus of the discussion.
  3. Argumentation. Defense of stances by putting forward arguments to counter the opponent's arguments.
  4. Closing. Evaluation of whether and how the difference of opinion is resolved.

- **Strategic maneuvering**
  - Even when agreement is the goal, participants want to effectively persuade others of their stance.
  - They need to *maneuver* between dialectic and rhetoric.

- **Aspects of strategic maneuvering**

Topic potential	**Audience demand**	**Presentational devices**
Selection of the most effective content currently available.	Adaptation to the frame of reference of the audience.	Exploitation of effective and reasonable style and other expressions.

Argumentation quality

$$\frac{A \quad A \to B}{B}$$

Logic

*"An argument is **cogent** if its premises are **relevant** to its conclusion, individually **acceptable**, and together **sufficient** to draw the conclusion."*

Blair (2012)

Argumentation quality

*"A dialectical discussion derives its **reasonableness** from a dual criterion: **problem validity** and **intersubjective validity**."*

van Eemeren (2015)

Dialectic

$$\frac{A \quad A \to B}{B}$$ $$\frac{B \to C}{C}$$

https://de.wikipedia.org

Rhetoric

$$\frac{A \quad A \to B}{B}$$

https://commons.wikimedia.org

*"In making a speech, one must study three points: the **means of producing persuasion**, the **style** or language to be used, and the proper **arrangement** of the various parts."*

Aristotle (2007)

Next section: Conclusion

Conclusion

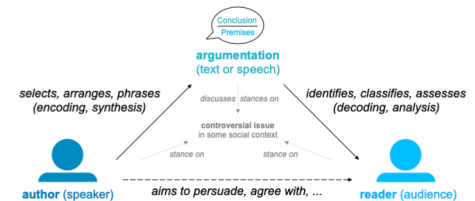- **Argumentative language**

  - Claims and reasons related to sentiment and truth

  - Deals with stance on controversial issues

 - Targets persuasion, agreement, deliberation, or similar

- **Argumentation and debate**

  - Compose premises and conclusions in arguments

  - Comprise a sequential and a hierarchical structure

  - Always affected by the specific participants

- **Logic, rhetoric, and dialectic**

  - Most arguments follow defeasible inference schemes.

  - Strategies are based on the means of persuasion.

  - Good arguments are cogent, effective, and/or reasonable.
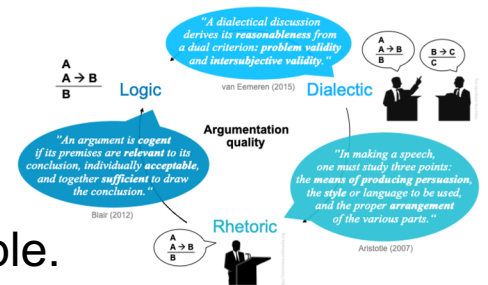
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