

Questions, Arguments, and Dialogue

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Overview

- Argumentation Schemes.
- Questions about critical questions.
- Dialogic aspect.
- A semantics of (some) questions.
- Instantiated argumentation.
- Consequences for an analysis of argumentation schemes.

Argument from Expert Opinion

Premise: Source E is an expert in subject domain S containing proposition A.

Premise: E asserts that proposition A is true (false).

Claim: Presumptively, A is true (false).

Critical Questions

Is E an expert in the field that A is in?

Is E personally reliable as a source?

Is A widely accepted by other experts in the field?

Is E biased?

The Critical in Critical Questions

- There are defeasible, stereotypical patterns of reasoning from premises (with rule) to claim.
- There are critical questions which, if asked, must be answered in a way so as not to defeat the argument:
 - Is E an expert in the field that A is in? *No* is contrary to an explicit premise.
 - Is E personally reliable as a source? *No* is contrary to some implicit information.
 - Is A widely accepted by other experts in the field? *No* is contrary to some implicit information.
 - Is E biased? *Yes* is contrary to some implicit information.
- Every scheme has some CQs (Practical Reasoning has 17).

What is a Critical Question?

- What is the relationship (if any) between CQs as found with argumentation schemes and questions as analysed in formal semantics of natural language questions?
- What is the relationship (if any) between CQs and formalised approaches to instantiated arguments (ASPIC + or Logic-based).
- What constraints (if any) are there between CQs and schemes (arbitrary question/spontaneous generation)?
- What is the relationship between CQs and various dialogue games?

Claim

- Addressing each of these questions:
 - gives a more explicit analysis of argumentation schemes.
 - clarifies the role of the questions in dialogues.
 - allows an integration with NL semantics.
 - ties CQs to formalised argumentation systems.

Types of Dialogues and Questions

- **Information seeking** – P1 seeks answer to Q1 from P2, where P2 (presumably) knows the answer. *What time is it?*
- **Inquiry** – P1 and P2 seek the answer to Q1, where neither knows the answer. *How do we find the Higgs?*
- **Persuasion** – P1 seeks to persuade P2 that R, where P2 and P1 start with different positions. *Why do you say P? And give a justification.*
- **Negotiation** – P1 and P2 negotiate over the division of a scarce resource. ?
- **Deliberation** – P1 and P2 negotiate over what to do. *Will action A1 promote value V1?*
- **Eristic** – P1 and P2 substitute verbal quarrelling over physical fights. ?
- **Explanation** – P1 justifies (?) some statement. ?

Observations

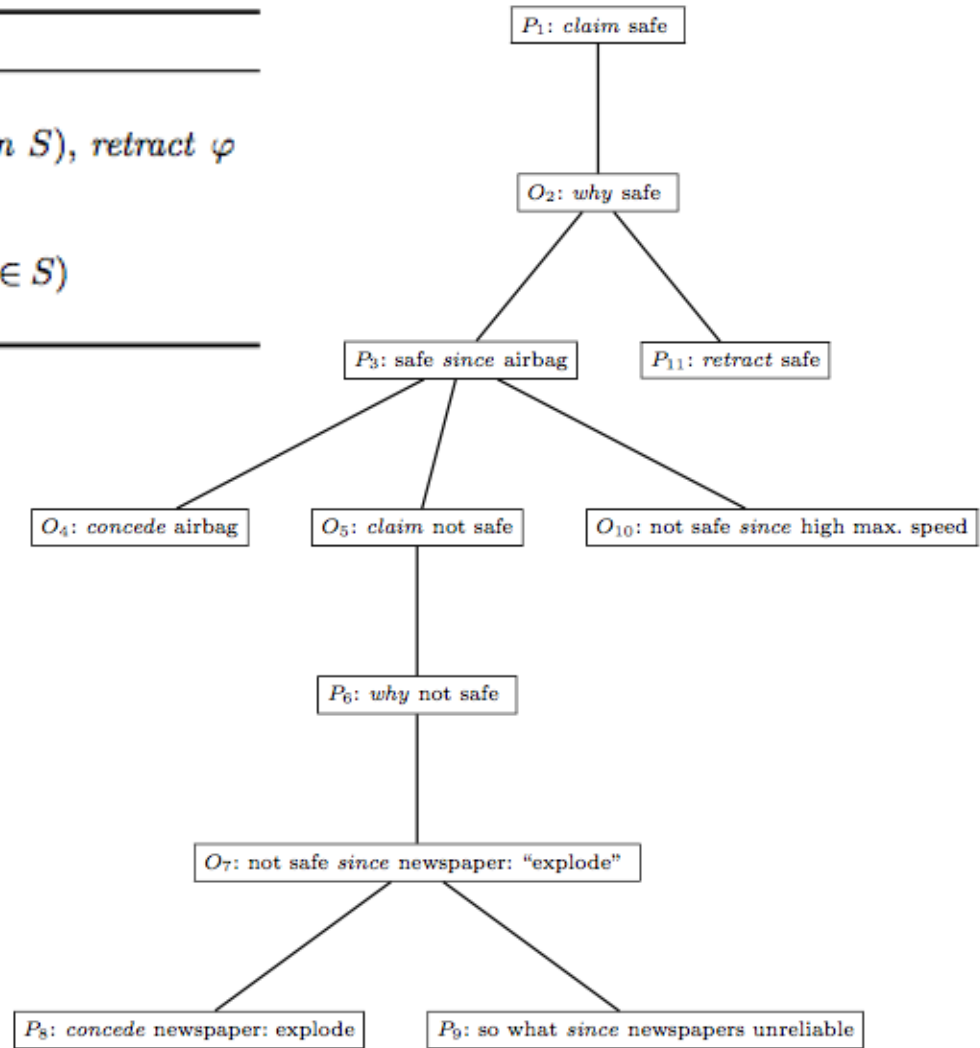
- Questions (AFAIU) are not all 'critical' in each of these games, that is, giving an answer one way (or the other) does not 'attack' some argument.
- Argumentation schemes (AFAIU) are not systematically classified according to the dialogue game they are used in. Do certain schemes indicate particular dialogue games?
- If any scheme in any dialogue game, and not all questions in any dialogue game are critical, if a scheme is used in a dialogue game that has no 'critical questions', then what are the critical questions?
- Look at the 'criticalest' of the dialogue types – persuasion.

Dialogue Games

Locutions	Replies
<i>claim φ</i>	<i>why φ, claim $\bar{\varphi}$, concede φ</i>
<i>why φ</i>	<i>φ since S (alternatively: claim S), retract φ</i>
<i>concede φ</i>	
<i>retract φ</i>	
<i>φ since S</i>	<i>why ψ ($\psi \in S$), concede ψ ($\psi \in S$)</i>
<i>question φ</i>	<i>claim φ, claim $\bar{\varphi}$, retract φ</i>

In persuasion O and P do not agree about R. why P (challenge, deny, question,). The speaker challenges that other party about R and asks for reasons why it would be the case. If the party fails to respond to a 'why' question, then that party 'forfeits'. 'Attack why' question.

Prakken 2006



Do CQs Fit Dialogue Games?

1. Is E an expert in the field that A is in?
2. Is E personally reliable as a source?
3. Is A widely accepted by other experts in the field?
4. Is E biased?

None of these are 'why' questions that solicit a justification. In fact, they are another question type – 'yes/no' questions.

Only 1 is explicit in the argumentation scheme, the others are 'out of the blue', which does not fit the Dialogue Game model.

Besides

- The presumption is that asking a question implies an attacking 'why', while no question implies tacit acceptance.
- Really? Since when is 'why' always an attack, even if it solicits a justification? Perhaps it functions this way in persuasion dialogues, but we are not sure we are always using schemes in that sort of dialogue. "Why are you going to the zoo?"
- So, the notion of attack is an overlay on a question in a particular dialogic context.
- Remove the dialogic aspect, and we still have: 'yes-no' questions related to the (presumptive) truth or falsity of the propositions that the question is about; we still have 'why' questions to solicit justification. Neither is intrinsically 'attacking'.
- Separate out what can be distinguished, then recombine.

Formal Semantics of Questions in Natural Language 1

- Groenendijk and Stokhof (2010) argue against the speech act theory and claim that any analysis of questions has an underlying 'static' and 'a-dialogical' semantics.
- The use of questions in dialogical contexts sits atop this.
- Formalisation of Hamblin's Picture (1958).
- The issue of attack does not occur in this body of literature.
- To connect questions in argumentation to natural language semantics, a syntax and semantics ought to be given.

Formal Semantics of Questions in Natural Language 2

- Hamblin's picture (1958):
 1. An answer to a question is an indicative sentence.
 2. The possible answers to a question form an exhaustive set of mutually exclusive possibilities.
 3. To know the meaning of a question is to know what counts as an answer to that question.
- Yes/no questions denote the set of answers:
 - *Is Bill happy?* denotes $\{Bill\ is\ happy, Bill\ is\ not\ happy\}$.
- Other sorts of questions (denumerations, rankings, etc) have other denotations.

Formal Instantiated Argumentation

- ASPIC+, Logic-based, Assumption-based....
- In (variant of) Logic-based argumentation an argument A1 has a structure, for example, such as:
A1: $\langle \{p, p \rightarrow q\}, q \rangle$
To attack A1, one can have an argument A2 where the claim is $\neg p$, or an argument A3 where the claim is $\neg q$, or an argument A4 where the claim is $\neg[p \rightarrow q]$.
- There is no attack otherwise. Attacking arguments must have as claim the negation of some propositional content of A1. Where we have A5 with claim $\neg r$, we could stipulate that this is an attack on A1, but this is arbitrary.

CQs in Formal Instantiated Argumentation

- CQs do not seem to abide by the requirements of formal instantiated argumentation, but introduce ad hoc attacking arguments.

A Proposal

- Looked at dialogical, NL semantics, and argumentation formalism.
- Want an approach that is compatible.

Revised Argumentation Scheme Inclusive 'Premisising'

Not Ab.

A is widely accepted by other experts in the field.

E is not biased.

E is personally reliable as a source.

A is widely accepted by other experts in field S.

Source E is an expert in subject domain S.

S contains proposition A.

E asserts that proposition A is true.

Therefore, presumptively, A is true.

Introduce green premises, which are **felicity conditions/presuppositions** and implicit, in addition to blue premises, which are the **explicit conditions**. The whole represents the argumentation scheme. With the Ab predicate, there may be other circumstances that block the inference. If we think up other felicity conditions, we may add those (open world).

What We See and What We Can Question

Source E is an expert in subject domain S.

S contains proposition A.

E asserts that proposition A is true.

Therefore, presumptively, A is true.

- The felicity/presupposed premises are those implicit and which are presumed to hold as 'preconditions' to making an utterance/ introducing the instance of the scheme.
- Can ask 'yes-no' or 'why' justification questions of any premise.
- The answers to 'yes-no' count as attack in the usual way.
- The dialogical model still works (where we want it to).
- Aligns with NL semantics and formal instantiated argumentation.

Presuppositions and Felicity Conditions

- Presuppositions (background shared by participants):
 - Jane no longer writes fiction? (Jane used to write fiction)
 - Have you stopped eating meat? (You once ate meat)
 - Have you talked to Hans? (There is a person Hans)
- Felicity conditions for successful speech acts.
 - *It's hot in here* as a request to open a window. We still need the indicative meaning plus context to determine the alternative meaning.

A Criticism of Inclusive 'Premising'

- Criticism: We can't delimit the number of premises, and if we did make them premises and limited, then we would have a strict rule. But, we have a defeasible rule, so this can't be right.
- Rebuttal: We already delimit the number of questions. And we have Not Ab. And we make no commitment about these being the 'all and only' premises, such as is made with a strict argument.

Future work

- Examine further some of the particular issues raised such as scheme-dialogue relations.
- Examine further presupposition and felicity condition issues.
- Formalise the analysis of schemes and relate them to dialogical models: an argumentation scheme is a structure with felicity conditions, explicit premises, and a claim. Only the explicit premises and claim are 'visible' unless questions are proposed concerning felicity conditions.

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- Questions?
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