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Article

More than *Relata Refero*: Representing the Various Roles of Reported Speech in Argumentative Discourse

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Abstract: Reported speech, or *relata refero*, although not always part of the argumentation *tout court*, can be an important element of argumentative discourse. It might, for instance, provide information on the position of another party in the discussion or function as part of the premise of an argument from authority. Whereas existing methods of representing argumentative discourse focus on arguments and their interrelations, this paper develops a method that enables the analyst to also include informative elements in the representation, focusing on reported speech. It does so by incorporating the notion of 'voice' into the representation framework of Adpositional Argumentation (AdArg). In particular, the paper explains how to formalize the constituents of this notion and illustrates its use in representing (1) an author's report of the position of another party (including the supporting argumentation); (2) an author's own position (including the supporting argumentation); and (3) source-based arguments such as the argument from authority, with an indication of the distance of the source from the author.

Keywords: argumentation; argumentative discourse; argument from authority; argumentation structure; Adpositional Argumentation (AdArg); complex argumentation; pragmatics; relata refero; reported speech; voice

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1. Introduction

When representing argumentative discourse, the analyst usually generates a so-called 'argumentation structure', i.e., a schematic overview of all the arguments (and their interrelations) the arguer has put forward in support of their main point of view—see Freeman (2011) or van Eemeren et al. (2014, pp. 21–24). Although providing such an argumentation structure may satisfy particular analytical aims, we observe two main points of improvement.

First of all, existing approaches conceive the argumentation structure as *monological* in that it only represents the argumentation of the 'author' of the discourse and leaves out what others might have contributed. Consequently, when reconstructing dialogues or polylogues (Aakhus and Lewiński 2021) for each party in the discussion, the analyst must provide a separate argumentation structure. This representation method may easily complicate matters, especially in cases where earlier contributions to a discussion are cited by other parties to subsequently refute it or for other argumentative purposes.

Second, an argumentation structure in general only pictures *relationships between statements* but does not provide information on the types of argument instantiated by these statements. Although scholars have described how explicit or anticipated criticisms regarding the argumentation influence its structure, their classification of these criticisms takes the complete statement as the unit of analysis and does not take into account any specific characteristics of the argument type(s) involved. As a result, the representation of the discourse in terms of its argumentation structure only consists of labeling two or more

statements as 'linked' ('coordinative'), 'convergent' ('multiple'), or 'serial' ('subordinative'), the choice being based on whether the analyst thinks the arguer is anticipating abstract criticisms regarding the 'relevance', 'acceptability', or 'sufficiency' of the arguments they already put forward (Freeman 2011; Snoeck Henkemans 1992).

These two problems are especially salient when the discourse contains *relata refero*, i.e., a report of the point of view and sometimes also (part of) the supporting argumentation of any party that is not the author of the text. The usual implication of using this Latin expression is that the author takes no commitment to what is reported: *relata refero* means 'I am (just) telling what I have been told', regardless of whether I agree or disagree on what I reported. Following this interpretation, the analyst would have a reason for labeling this part of the discourse as 'informative' and thus for refraining from including it in the argumentation structure—on the difference between information and argumentation see, e.g., Govier (2018). However, if the reported speech contains the position of an opponent in a discussion, the analyst might also have reasons to hold the author committed to having provided a faithful report thereof; this may lead to the accusation of the so-called 'straw man fallacy'—see, e.g., Aikin and Casey (2022); Lewiński and Oswald (2013). And if the reported speech contains a position of a third party, there is even a third possible interpretation, namely, that it functions as (part of) the premise of an argument from authority—see, e.g., Goodwin (1998); Wagemans (2011); Walton and Koszowy (2017).

In argumentative discourse then, reported speech can be more than *relata refero*: instead of being just a piece of information invoking no commitment on the part of the messenger, it can play various argumentative functions, each of which comes with different (types of) commitments. As we indicated above, current methods for representing argumentative discourse are centered around the notion of 'argumentation structure' and are therefore limited in scope. They are restricted to monological representations of complete statements functioning as arguments and depict the interrelations among these statements by using a narrow vocabulary of structural terms. In this paper, we aim to provide a much more refined method to represent argumentative discourse, particularly one that enables the analyst to also include (seemingly) informative elements of argumentative discourse such as reported speech. We do so by extending Adpositional Argumentation (AdArg) (Gobbo et al. 2019), a high-precision framework for representing pragmatic and linguistic aspects of argumentative discourse in so-called 'adpositional trees', with the notion of 'voice' mutuated from linguistic and literary studies – in particular, Hoffmann (2017).

By extending the framework of AdArg in this way, we do not claim to give a novel interpretation of the notion of voice or the distribution of commitments in argumentative discourse, let alone to present a new method of interpreting argumentative discourse. Rather, we aim to facilitate the resolution of disputes about the interpretation of such discourse by contributing to the refinement of methods for representing it. AdArg enables analysts to discuss their interpretations at any level of detail they deem purposeful, showing or hiding in adpositional trees any of the linguistic and pragmatic elements or aspects of the discourse. Moreover, the clarity, transparency, and precision required for building the adtrees 'forces' the analyst, so to speak, to avoid unclear, ambiguous, and inaccurate representations of the discourse, thereby helping them to provide a scientifically sound justification of their interpretation.

The paper is structured as follows. We first provide, in Section 2, a formal account of the various constituents of the notion of voice so as to integrate it into the framework of AdArg. In Section 3, we illustrate through several exemplar analyses how to use the extended framework to represent reported speech performing various functions in the discourse. In Section 4, we conclude with a short reflection on the uses of the framework and the possibilities for further extensions and refinements.

2. The Concept of Voice in Adpositional Argumentation

The two building blocks of Adpositional Argumentation are the linguistic representation framework of Constructive Adpositional Grammars (CxAdGrams) developed by

Gobbo and Benini (2011) and the argument categorization framework of the Periodic Table of Arguments (PTA) developed by Wagemans (2016, 2019). In their joint work, Gobbo et al. (2019) show how both theoretical frameworks are put together under the form of adpositional trees (adtrees).

Within the adpositional paradigm, each pair of linguistic elements form an asymmetrical relation, i.e., one element is the 'governor' and the other the 'dependent', which is mutated from the corresponding pair 'trajector' and 'landmark' introduced by Langacker (1987) in cognitive grammar. Gobbo and Benini (2011, Appendix B) describe the linguistic and formal rules of CxAdGrams in full. CxAdGrams were already successfully applied to pragmatics, in particular to Searle (2010)'s modelling of the social world. For the purposes of this paper, we shall use a similar modelling that comprises linguistic, pragmatic, and argumentative levels of abstraction.

It is worth noting that, by working within the constructive paradigm, information is hidden but never lost; whereas Gobbo and Benini (2011) present the foundation of constructive linguistics, Floridi (2011) presented a coherent constructive framework for philosophical purposes, from epistemology to ethics and politics.

The Cambridge Dictionary defines an utterance as 'something that someone says'. According to speech act theory, saying is an act, i.e., it has an expected effect into the world of reference. In order to take into account reported speech in the representation of any argumentative text or discussion, it is unavoidable to consider not only the mere linguistic material, but also to represent the source putting forward that material, being the author or speaker or any other party.

The concept of 'voice' is a central tenet of narrative studies (Gregoriou 2014, p. 165), and it is used as "an umbrella term, covering all theories and frameworks which authors employ to let readers experience the fictional world through the eyes or mind of a narrator" (Hoffmann 2017, p. 160). Because the concept of voice can be seen as consisting of a pair narrator/predication and their implicit relation, it can be faithfully represented as an adpositional tree with the 'voice predication' (**S**) as the governor, the 'voice entity' ($\mathbf{m}_x$) as the dependent, and the adposition being marked as ϕ_x—see Figure 1 on the left. By 'voice predication' we mean to refer to any verbal form within the domain of 'saying', e.g., asserting, arguing, stating, referring, mentioning, reporting, and so on. By using the expression 'voice entity' instead of 'narrator', we aim to include the author, speaker, writer, arguer, narrator, and so on. The voice entity thus models the one who is putting forward an argument, the arguer, or the one to whom the author is referring, the source, or any other agents involved in the argumentative universe of reference.

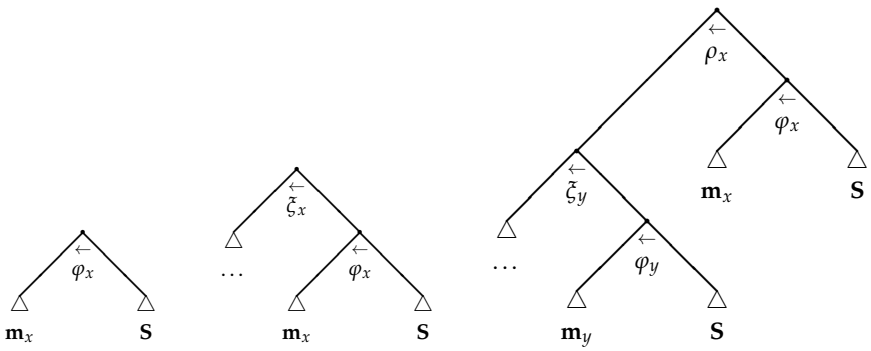

Figure 1. Abstract adtrees showing voice (**left**), viewpoint (**middle**), and reported speech (**right**).

If the discourse contains more than one voice, the voice entities ($\mathbf{m}_x$) are listed in order of appearance: the Latin letter (**m**) follows the order of the alphabet, and the subscript (x) is a natural number indicating the degree away from the author, who is indicated as $\mathbf{a}_0$ by convention. Regarding the representation of the utterances put forward by the voice, we distinguish between two cases. First, in Figure 1, in the middle, we pictured the case where the linguistic material functions as argumentation, i.e., as the voice's own viewpoint

(including eventual argumentative support for its acceptability), which we shall indicate as ξ_x. Second, in Figure 1, on the right, we pictured the case where one voice, denoted by $\mathbf{m}_x$, is reporting[1] the point of view (including eventual argumentative support for its acceptability) of another voice $\mathbf{m}_y$, indicated by ρ_x[2].

It is worth noting that subscripts appear also in voices (φ_x), viewpoints (ξ_x), and reported speeches (ρ_x), as the distance is a piece of pragmatic information affecting all these concepts. This double indexing system, by Latin letters and numbers, is needed to make clear which occurrence of the voice in the text is indicated (Latin letter), and whether it is directly referred to by the author or by another referred voice. In both cases, the voice governs the relation with the content expressed by the voice entity: it may be either argumentation or reported speech. As we are not making any assumptions about the content of the argumentation itself, in Figure 1 it is generically indicated with three dots. For an overview of all the symbols, please see the legenda in Table A1.

3. An Analysis of Voices in the Copernicus Plagiarism Case

3.1. Presentation of the Exemplary Text and Its Argumentative Fabric

The example we shall use in order to illustrate our representation method is chosen from a textbook on argumentation by van Eemeren et al. (2002, pp. 85–86). There, it functions as an exercise aimed at training students how to represent the 'argumentation structure' of a text belonging to the genre of argumentative discourse. The example runs as follows:

> In his article "Plagiarism: A rich tradition in science", editor John Lowell argues, referring to an article by dr. P. Smith, that Copernicus was also guilty of plagiarism: it appears that he "forgot" to mention that Aristarchos of Samos (310–230 BC) had already arrived at a heliocentric theory. It is, however, doubtful that Copernicus knew of this.
>
> Kant spoke of heliocentricity as a Copernican revolution: it is directly contrary to "common sense" (after all, we can see that the sun rises in the east and sets in the west), and more importantly, to a centuries-old geocentric, Christian-scientific tradition. Copernicus needed all the support he could muster for his theory, and cited a great many classical writers to that end.
>
> The fact that Copernicus did not refer to Aristarchos is not easy to understand, if he had, indeed, known him to be the intellectual author of heliocentricity. However, the best source for Aristarchos' theory was Archimedes' *Sand reckoner*, which did not "appear" until 1544, a year after Copernicus' death. Another source, in which Aristarchos is vaguely cited, was possibly only consulted by Copernicus *after* he had already announced his hypothesis.
>
> In conclusion, it can be said that the accusation that Copernicus committed plagiarism is at the very least doubtful and is probably incorrect. In order to avoid being justly accused of something similar, I will mention now that my most important source was: O. Gingerich, "Did Copernicus owe a debt to Aristarchos?" in *Journal for the History of Astronomy* 16, 1985.

The above exercise is interesting for our purposes for various reasons. First of all, the first paragraph introduces a *report* of the position of another party in the discussion. From a rhetorical point of view, it is to be expected that an argumentative text starts like this, for it provides the reader with the background information that is needed to understand the debate in which the author operates. Such a report, by the way, can also be used for less noble purposes: by representing the point of view of the opponent in a slightly different way, it might become easier for the author to attack it—a persuasive technique also known as the fallacy of the 'straw man' (see, e.g., Lewiński and Oswald 2013; Aikin and Casey 2022). Because the report, however, is not part of the argumentation *tout court*, it is usually left out of the representation of the argumentation structure of the text.

Second, the text contains an abundance of *voices*—in the sense defined above—which fulfill different argumentative functions: there is John Lowell, the opponent in the debate, and dr. P. Smith, an authority cited by Lowell to back up his claim, which is doubted by the author, who is also a voice. Then there are, in order of appearance, Copernicus, Aristarchos of Samos, Kant, Archimedes, and O. Gingerich. This might complicate the analysis in that it is not always clear who is on whose side regarding which issue, and, most importantly, how the commitments regarding the acceptability of the propositional content of the text are distributed among all these parties.

One of the main characteristics of our method is that it enables the analyst to chart, in a very precise way, *who* says *what*, as well as how this information is related to everything else that is said in the text. Instead of working with separate representations of parts of the text with different functions (e.g., information and argumentation) or of parts uttered by different voices, the argumentative adtree resulting from our analysis provides all elements of the text in one detailed overview.

Before we present our detailed analysis of the first three sentences of this text, let us provide a 'quick and dirty' analysis of the whole text. This not only gives the reader a first orientation of how the different paragraphs function within the bigger picture, but also provides some handles that function as a heuristics for the interpretation of the separate sentences.

As noted above, the first sentence contains a report on the opposite position in the debate, put forward by editor John Lowell in reference to dr. P. Smith. The report contains a claim, that Copernicus is guilty of plagiarism, and an argument in support of it, that he knew about Aristarchos. It is interesting to note that the author uses quotation marks in saying that Copernicus "forgot" to mention Aristarchos. Interpreting this typographical addition as a marker of 'textbook or 180-degree irony' (Hoppmann 2021), the utterance implies two things: (1) that he knew, and (2) that he did not mention him. If (1) is correct, it means that (2) was intentional, which complies with the legal definiton of plagiarism. The second sentence makes clear that the author does not agree with (1) and, hence, not with the claim that Copernicus is guilty of plagiarism. But that the latter is the author's main claim is only made explicit at the very end of the text, namely the first sentence of the fourth paragraph.

The overall strategy of the author is to provide arguments against (1). In the first sentence of the third paragraph, they do so by stating that if Copernicus knew about Aristarchos, he would have cited him, a claim that is supported by the main argument that heliocentrism is revolutionary theory, which is further supported by the arguments in the second paragraph. The third paragraph contains another argument against (1), namely that it is impossible or unlikely for Copernicus to have known about Aristarchos, which is supported by the two last sentences of that paragraph.

At the end of the text, the author provides a formulation of their main claim, followed by a half joking argument in support of their own trustworthiness, a persuasive technique that in rhetoric is labeled an ethotic argument or simply *ethos*.

3.2. A Representation of the First Three Sentences in Argumentative Adpositional Trees

After this general and informal overview of the argumentative fabric of the text, we now turn to projecting the elements of the first sentence of the text onto an adpositional tree. For brevity's sake, we first provide an overview of the unique identifiers of these elements as they will appear on the leaves of the tree—see Listing 1.

The first sentence contains quite a lot of different voices, listed in Table 1. The sentence does not, however, contain any argumentation on the part of the author, which is why representations of argumentative discourse based on the notion of argumentation structure would leave it out.

Listing 1. The first sentence annotated for the purposes of the corresponding adtree.

[0] [the author writes]
1.1.a.I In his article "Plagiarism: A rich tradition in science",
1.1.a.II editor John Lowell
1.1.a.III argues,
1.1.b.I referring
1.1.b.II to an article
1.1.b.III by dr. P. Smith,
1.1.c that Copernicus was also guilty of plagiarism:
1.1.d.I it appears that he "forgot" to mention
1.1.d.II that Aristarchos of Samos (310–230 BC) had already arrived at a heliocentric theory.

Table 1. Voices introduced in the first sentence.

Entity Label	Voice Entity	Voice Predication
$\mathbf{a}_0$	[author]	[writes]
$\mathbf{b}_1$	editor John Lowell	referring
$\mathbf{c}_2$	dr. P. Smith	argues
$\mathbf{d}_3$	Copernicus	"forgot" to mention
$\mathbf{e}_4$	Aristarchos	arrived at

In contrast, our representation, which is pictured in Figure 2, does include such a report by the author φ_0 on the position of another party φ_1 by putting the symbol for reported speech ρ_0 with the subscript corresponding to the voice into the hook connecting that voice and what is said by it. Furthermore, given that the report about the position of the other party φ_1 contains yet another voice φ_2 in the premise of an argument from authority, we put the symbol ξ_1 for argumentation in the hook connecting the second voice φ_1 with the argument from authority containing the third voice φ_2 in its premise. In short, the first sentence follows the structure depicted in Figure 1 on the right, distinguishing between reported speech and argumentation put forward by different voices.

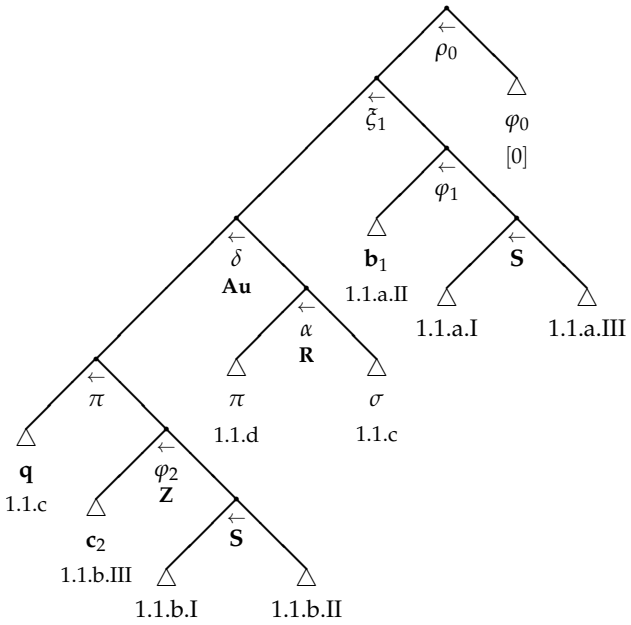

Figure 2. Argumentative adpositional tree of the first sentence.

Whereas the first sentence contains a report by the author of another party's position, including the support for its acceptability in the form of two arguments, the second of which is from authority containing a third voice, the second sentence contains a claim. It contradicts one of the implications of the other party's position, namely that Copernicus

knew about Aristarchos having arrived at a heliocentric theory—see the 'quick and dirty' analysis of the argumentative fabric of the text above. Again, we start with providing an overview of the unique identifiers of the elements of this sentence as they will appear on the leaves of the tree—see Listing 2.

Listing 2. The second sentence annotated for the purposes of the corresponding adtree.

```
[0] [the author writes]
1.2.a It is, however, doubtful
1.2.b.I that Copernicus knew of
1.2.b.II this [anaphora of 1.1.d.II].
```

The main difference between the status of what is said by the author in the first sentence and what is said in the second one is that the latter contains the author's own point of view on the matter. Put succinctly, it is only in the second sentence that the author of this piece of argumentative discourse becomes an *arguer*. For this reason, in the subtree pictured in Figure 3, we put the symbol ξ_0 for argumentation in the hook connecting the voice of the author φ_0 with the second sentence, which is a single claim and therefore by default a conclusion—see Gobbo et al. (2021). As we already provided the adtree of the first sentence in more detail above, we offer here a compacted version in which the linguistic and pragmatic information concerning the reported speech is hidden in the triangle above the symbol ξ_1.

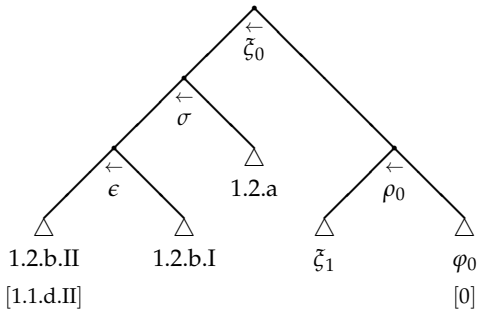

Figure 3. Argumentative adpositional tree of the first and second sentence.

For a final illustration of our method for representing argumentative discourse we will now turn to the third sentence, of which we provide the elements and their unique identifiers in Listing 3.

Listing 3. The third sentence annotated for the purposes of the corresponding adtree.

```
[0] [the author writes]
2.1.a.I Kant
2.1.a.II spoke of
2.1.a.III heliocentricity as a Copernican revolution:
2.1.b it is directly contrary to "common sense"
2.1.c (after all, we can see that the sun rises in the east and sets in the west)
2.1.d and more importantly, to a centuries old geocentric, Christian scientific tradition.
```

The sentence introduces another voice, Kant, who will be indicated with the Latin letter $\mathbf{f}_1$ since the last voice was indicated by $\mathbf{e}_4$ and Kant is at distance 1 from the author—see Table 2. The double indexing shows that the order of appearance does not necessarily correspond to the distance away from the author $\mathbf{a}_0$.[3]

Table 2. New voice.

Entity Label	Voice Entity	Voice Predication
$\mathbf{f}_1$	Kant	spoke of

The corresponding adtree, which is shown in Figure 4, pictures how to deal with this voice, which occurs in the premise of an argument from authority within the author's *own* argumentation. The author's main point in this sentence is that heliocentricity is a revolutionary theory, which is depicted as a conclusion that is further supported on the main level by three premises: the 'common sense' premise, the 'tradition' premise, and an argument from authority with Kant as the authority.

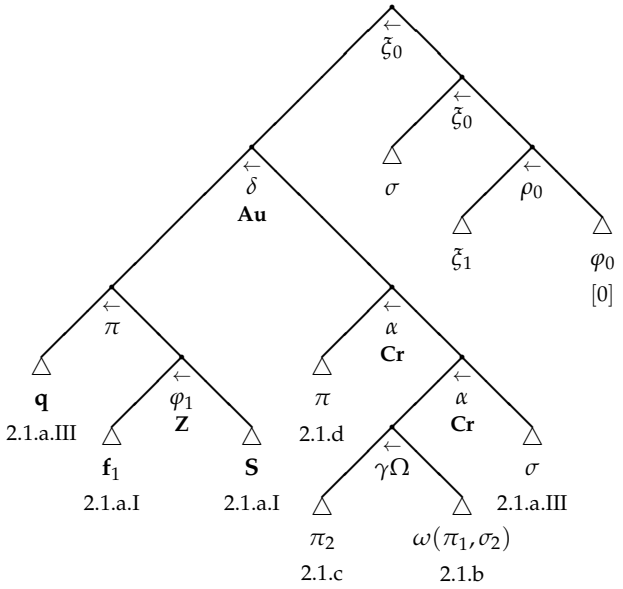

Figure 4. Argumentative adpositional tree of the first, second, and third sentence.

Below the argument from authority (**Au**) there is a complex argument that is convergent on the main level of the two arguments from criterion (**Cr**) and serial on the level below the 'common sense' premise. The seriality is found in element 2.1.b, which plays the double role of premise supporting the conclusion 2.1.a.III and conclusion supported by the premise 2.1.c. This double role is indicated by putting $\omega(\pi_1,\sigma_2)$ at the leaf and Ω in the hook—for further explanation of how to represent complex arguments see Gobbo et al. (2021).

4. Conclusions

In this paper, we set out to develop a method for representing the various roles of reported speech in argumentative discourse by incorporating the notion of 'voice' into the framework of Adpositional Argumentation (AdArg). First, we have provided a formalization of 'voice' as an adtree, indicated by φ, and of its constituents, the 'voice predication', indicated by **S**, and the 'voice entity', indicated by $\mathbf{m}_x$. Subsequently, we have provided several examplary analyses of parts of a single argumentative text in which multiple voices occur and reported speech plays different roles. In particular, by providing the adtrees of the first three sentences of this text, we have illustrated how the concept of voice can be used to represent: first, an author's report of the position of another party (including the supporting argumentation); second, an author's own position (including the supporting argumentation); finally, source-based arguments such as the argument from authority, with an indication of the distance of the source from the author.

The resulting argumentative adpositional trees (arg-adtrees) demonstrate how the analyst can accurately represent their interpretation of the discourse. In the adtrees provided

in Section 3, the difference between the author's report of someone else's position and their own viewpoints is reflecting the difference between information and argumentation as it is known in argumentation theory—see, e.g., Govier (2018). In contrast to existing methods of representing argumentative discourse based on the notion of 'argumentation structure', our method allows one to include the informative part of the discourse. Furthermore, the adtrees represent the author's quotations of statements put forward by other voices—compare Figures 3 and 4, respectively. Here, our representation method can help the analyst in attributing the right (types of) committments of the voices to what has been said.

In sum, AdArg allows one to go beyond the dichotomy of informative vs. argumentative elements in argumentative discourse by representing and differentiating both of them by means of appropriate symbols indicating their status. As a consequence, from a formal point of view, there is no a priori assumption on the logic being presumed by the different voices involved in the discourse; this reflects real-world argumentation, where the underlying logic is negotiated by the arguers. It is worth remarking how the representation based on adtrees emphasizes where the arguers' committment to the logic-in-use comes in, as already discussed in Gobbo et al. (2021).

As is clear from the analyses and figures presented in this paper, AdArg requires the analyst to get acquainted with a wealth of formal symbolisms as trees and tables. We acknowledge that this might increase their efforts in producing all of them and also might reduce the intuitive readability of the representation of the text under scrutiny. However, our constructivist approach does not multiply entities or put redundant formalisms onto the analyst's shoulders. Moreover, we hold a strong belief that, by using the framework of AdArg, the analyst is forced to make decisions about the interpretation where they are unavoidable in the discourse, whereas elsewhere they can apply the procedure more or less effortlessly. A corollary is that, in case of disagreement among analysts on the same linguistic material with an argumentative purpose, it is much easier to find the exact point(s) of disagreement, comparing the respective arg-adtrees they produce.

In further work, we plan to enrich the representation framework with notions going beyond that of 'argumentation structure', focusing on formally eliciting elements that have remained implicit in the discourse or are subject to various interpretations, e.g., missing premises, figurative language, and ironical remarks. If, for instance, we frame verbal irony being "between the utterance of the speaker and the voice of [...] an antagonist", following Hoppmann (2021), elaborating from Burke (1941) and especially Lausberg (1949, 1960), then irony is a relational concept that can be represented as an adpositional tree. A final possible direction of research is the application of the concept of voice in genres different from argumentative discourse. As this concept is well-known, for instance, in narrative studies, it would be worthwhile to explore how linguistic and pragmatic material convey committment in fiction.

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Appendix A

Table A1. Legend of the symbols used in all the adpositional trees shown here.

Symbol	Meaning
φ_x	voice
S	voice predication
$\mathbf{m}_x$	voice entity
ρ_x	reported speech by x
ξ_x	viewpoint by the voice indicated by x
ϵ	linguistic-syntactic information
σ, π	statement function (respectively 'conclusion' and 'premise')
$\alpha, \beta, \gamma, \delta$	argument form
Ω	Omega-transformation
ω	statement with double function ('conclusion' and 'premise')
$\triangle$	hidden subtree
q	subject of a Gamma or Delta argument
Z	predicate of a Delta argument
Au	argument from authority
Cr	argument from criterion
R	argument from requirement

Notes

[1] The ρ_x denotes who (m_x) is reporting what (the tree with root ξ_y), in which context (the tree with root ϕ_x).

[2] The Greek letter ϕ denotes the Greek *phoonè*, meaning 'voice', whereas the Greek letter ξ denotes the Greek *xagnanto*, meaning 'viewpoint'. Finally, the Greek letter ρ refers to the Latin expression *relata refero*.

[3] It is even possible to find the same voice entity (e.g., Kant) in two different voices at different distances; this is why the double indexing counts as a unique identifier of the voice.

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