

The significance of the adversative connectives *aber*, *mais*, *ma* ('but') as indicators in young children's argumentation

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Adversative connectives have been analyzed as articulating explicit and implicit facets of argumentative moves and have been thus recognized as potential argumentative indicators. Here we examine adversative connectives Ger. *aber*, Fr. *mais*, It. *ma* ('but') in young children's speech in the context of the ArgImp project, a research endeavor seeking to understand in which situations children aged between two and six years engage in argumentation and how their contributions are structured. Two multilingual corpora have been collected for the project: (1) everyday family conversations, (2) semi-structured play activities and problem solving in a kindergarten setting. Through the detailed analysis of a small collection of examples, we consider the indicative potential of adversative connectives for identifying argumentative episodes in interactions involving young children and for the reconstruction of the inferential configurations of children's contributions to these argumentative discussions. The results show that fully fledged argumentative interpretations of adversatives occur as a possibility in children's speech, and that adversative connectives can be used profitably to identify less apparent argumentative confrontations and implicit standpoints in children's speech.

Keywords: children's argumentation, argumentative indicators, *but*, adversative connectives, argumentative semantics, counterargument, rebuttal, undercutter, implicit standpoints

1. Introduction

Adversative connectives such as French *mais* or English *but* have been analyzed as finely articulating both explicit and implicit facets of argumentative moves in discourse and dialogue (Anscombe and Ducrot 1977; Ducrot *et al.* 1980; Moeschler 1989; Winterstein 2012; Zeevat 2012). Based on this style of analysis of their semantic and pragmatic functioning, these connectives have been recognized as potential *argumentative indicators*, providing the analyst with relevant insights for the reconstruction of the dialectical and inferential aspects of argumentative discourse (van Eemeren *et al.* 2007: 124–136).

In this paper we examine the functioning of three adversative connectives, namely German *aber*, French *mais* and Italian *ma*, in young children's speech in the context of the ArgImp project,¹ a research endeavor seeking to understand *in which situations* children aged between two and six years engage in argumentation and *how* their contributions are structured.

More specifically, the ArgImp project focuses on the reconstruction of children's argumentation from an *inferential* viewpoint, taking care of teasing out its *implicit* components. Implicit premises – and implicit standpoints – in children's arguments are important because investigators' judgments about children's arguments as well as the very detection of argumentation in children's speech in interaction are highly dependent on the researchers' ability to recover these implicit components.

Previous ArgImp contributions (see Greco *et al.* 2018) have shown that a model of argumentative inference, distinguishing, in particular, the material and the procedural components of the inferential structure of arguments, offers precious guidance in formulating hypotheses about the structure of children's arguments. Here we discuss another type of guidance, which is offered by linguistic *argumentative indicators*. Van Eemeren *et al.* (2007:1) use the term argumentative indicators to designate a broad class of “linguistic expressions” that constitute “a sign that a particular argumentative move might be in progress”, including those that are not decisive pointers. Argumentative connectives that can be interpreted as indicating that an utterance plays the role either of an argument (e.g., *because*, *since*) or of a conclusion (e.g., *therefore*, *so*) are among the most obvious examples. Here we look at the indicative power of adversative connectives Ger. *aber*, Fr.

1. The project “Analysing children's implicit argumentation: Reconstruction of procedural and material premises” (ArgImp) is funded by the Swiss National Science Foundation (contract n. 100019–156690/1, 2015–2019). Applicants: A.-N. Perret-Clermont, S. Greco, A. Iannaccone, A. Rocci. J. Convertini and R. Schär were PhD students within this project and have collected the data analyzed in this paper.

mais, It. *ma* ('but') for the identification of argumentative episodes in interactions involving young children and for the reconstruction of the inferential configurations of children's contributions to these argumentative discussions.

In order to make the indicative potential of adversatives explicit, we will first introduce an argumentative semantic analysis for adversative connectives and diagramming conventions for mapping counterarguments. Then, having described the corpus data of the study, we proceed with the detailed analysis of a small collection of examples, in keeping with the qualitative approach adopted by the ArgImp project.

2. An argumentative semantics for adversative connectives

The indicative potential of adversatives may be less obvious to the untrained eye compared to that of the cause or consequence connectives mentioned above. It is only with the help of a theoretical lens, in the form of an explicit analysis of the semantics of adversatives, that the connective can function as a sure guide to reconstruction. As observed above, we already have a well-established "argumentative" semantic analysis of these connectives, originating from the work of Anscombe and Ducrot (1977), capable of elucidating their contribution to argumentative discussions.

As shown in the in-depth literature review carried out by Winterstein (2012), the *argumentative-inferential* analysis is one of two major approaches to the analysis of adversatives, the *contrast* approach being the other option. The *contrast* approach (Kehler 2002; Asher and Lascarides 2003; Umbach 2005) sees adversatives as signals of a *contrast* discourse relation between sentences or broader discourse segments. Contrast involves different, typically incompatible, choices in the two segments that are highlighted on a backdrop of similarity or structural parallelism between the two segments, as in (1):

- (1) Lammy plays the bass, but Ritchie the guitar (see Winterstein 2012:1865)

It is interesting to observe, with Winterstein (2012), that this approach makes an effort to define the semantics of *but* in terms of the semantic properties of the conjoined segments, limiting as much as possible the recourse to the context of utterance. We also notice that this is a monologic approach, as illustrated by Asher and Lascarides (2003), where the contrast relation is first defined for monological discourse and then extended to dialogue, where the contrasted segments are uttered by different participants. Interestingly, however, when Asher and Lascarides (2003:298) extend the contrast relation to dialogue, they observe that it takes up "additional inferential effects" involving the cancellation of a defeasible inference of

the first conjunct. They cursorily refer to the works of Oswald Ducrot and Jacques Moeschler (1989) – two authors analyzing adversatives in the argumentative-inferential paradigm. In fact, these “additional inferences” are what constitutes the core of adversative semantics in the argumentative-inferential approach.

Many variants of the argumentative-inferential approach have been proposed over the years, all involving a denial of an expectation resulting from the first conjunct. For the present investigation, it will be sufficient to start with a minimal version of the argumentative analysis, which remains quite close to the original proposal (see Anscomb and Ducrot 1977: 28). This basic analysis will be further discussed in the next section. According to this analysis, an utterance of the form *P but Q* presupposes that:

- a. *P* counts as a possible defeasible argument towards a conclusion *R*
- b. *Q* counts as a possible defeasible argument against the acceptance of the same conclusion *R*

and updates the discourse context with the information that the argument *Q* is *stronger* than the argument *P*.

As observed by Winterstein (2012:1868), there is considerable fuzziness on the required strength of *Q* as an argument against the conclusion *R*. Certainly *Q* is not required to be a “definitive” argument, ruling out once for all the provisional conclusion *R* and deductively concluding $\neg R$. A way of expressing the idea of “being a stronger argument” in a non-monotonic framework of defeasible argumentation (see Pollock 1987) is saying that the conjunction of *P* and *Q* is an argument for concluding that not *R*, symbolically: $(P \wedge Q) > \neg R$. This notion corresponds to Pollock’s (1987) concept of a “rebutting defeater”. It seems, however, that the use of *but* is compatible with a weaker definition, corresponding to Pollock’s generic definition of a defeater, which only requires the conjunction not to be an argument for *R*, symbolically: $\neg((P \wedge Q) > R)$.

It should be noted from the outset, as Anscomb and Ducrot (1977) already observed, that the above semantics does not capture the *corrective* uses of *but*, Fr. *mais*, It. *ma*, illustrated by Example (2), which correspond to German *sondern*, in (3).

- (2) Chiara is not Italian, *but* Swiss.
- (3) Chiara ist keine Italienerin, sondern Schweizerin.

Our corpus investigation will be only concerned with the properly adversative uses (see Ger. *aber*), leaving aside the issue of the possibility of a unified semantic analysis for languages with connectives covering both functions. Consider the following example:

- (4) (P) Datacloud Megacorp is the most innovative tech company out there, *but* (Q) it ruthlessly exploits its young aspiring employees.

In the appropriate context the first conjunct P could be taken as a non-monotonic, defeasible, argument for a standpoint such as

- (5) (R) You should leave academia and join Datacloud Megacorp after your PhD.

while the second conjunct (Q) can be seen as another defeasible argument supporting the contradictory standpoint $\neg R$.

It is immediately clear that, unlike the *contrast* approach, the argumentative-inferential approach is inherently *contextual* in that it requires the recovery of a *tertium* beyond the conjuncts P and Q: the conclusion R, which may or may not have been made available at the surface of the previous discourse. Ducrot *et al.* (1980:98) insist that the interpretation of a connective such as French *mais* requires referring to the utterance situation, “because the conclusion R, which represents the link between P and Q, is only very partially determined by the content of these two propositions and depends to a large extent on the beliefs that the participants attribute to each other”² in the dialogue context.

The argumentative-inferential approach is also inherently *dialogical*. In fact, under this view an actual conversational exchange, where P and Q are uttered by different participants, provides the simplest context of interpretation for the adversative connective. It is the occurrences of *but* in monological discourse that appear to be derivative and characterized by some sort of polyphony (see Nølke, Fløttum and Norén 2004) as regards the source of R and P, to which the utterer of the P *but* Q monological sequence is not committed. The kind of polyphonic configuration can vary greatly; *rhetorical concession*, where P is attributed to a real or imagined opponent, is just one possible configuration. A different configuration is represented by *inner dialogue* (see Greco 2017), where the arguments P and Q are attributed to successive moments of consciousness of the same subject within an individual process of deliberation.

Unsurprisingly, the inferential-argumentative analysis of *but* did not escape the attention of pragma-dialecticians. Starting with Snoeck-Henkemans (1995), a version of the approach was used to elucidate the role of *but* as an indicator of concession and counter-argument and later integrated in the pragma-dialectical analysis of argumentative indicators, especially with reference to the qualified

2. Our translation from French. The original reads: “Car la conclusion *r* qui sert de lien entre P et Q n'est que très partiellement déterminée par le contenu de ces deux propositions, mais dépend pour une bonne part des croyances que les interlocuteurs se prêtent les uns aux autres dans le contexte où le dialogue est situé” (Ducrot *et al.* 1980:98).

acceptance or wholesale rejection of the opponent's premises as common starting points (see van Eemeren *et al.* 2007:124–136).

We believe that the argumentative-inferential semantics for adversatives offers a clear opportunity to display the added value of an explicit consideration of indicators in the analysis of children's arguments. Interestingly, adversatives have been considered the last step in the acquisitional sequence of connectives (Spooren and Sanders 2008). Peterson (1986) records a rich variety of "pragmatic" uses of *but* in very young children, but does not interpret them in argumentative terms, while studies on the use of adversatives in arguments often focus on older children and written language, sometimes emphasizing their late and arduous acquisition (Akiguet and Piolat 1996). As it will be apparent from the following pages, our findings suggest a different picture.

Methodologically, our investigation assumes that the above mentioned "argumentative" analysis is the most adequate to capture the adult semantics of *but*-like adversatives. Furthermore, we *avoid* assuming any semantic deficit in children's use of the connective with respect to adult use. Thus, we use the argumentative-inferential semantics as a guide to the in-depth reconstruction of the implicit facet of children's argumentation in a rich collection of cases from two corpora of argumentative discussions between adults and young children collected for the ArgImp project.

This method allows us to check if the instructions of the argumentative semantics can really be resolved plausibly in the context of these discussions. In case they are, it allows us to better elucidate three levels of analysis that are of great interest in view of a better understanding of children's arguments: (1) the *inferential* level (i.e., indication of inferential relations), (2) the *dialogical* level (i.e., the reference to other participants' voices in the dialogue) and (3) the *dialectical* level, i.e., the indication that the children take-up a dialectical role in a dispute. As we will see, in terms of the Pragma-dialectical theory (van Eemeren and Grootendorst 1992) the use of adversatives signals that the children take up a double protagonist-antagonist stance in a mixed dispute.

2.1 *But* and the typology of counterarguments

In this section, we look more closely at the relationship of adversatives with different kinds of counter-arguments.

Generally speaking, all *counterarguments* involve the presentation of reasons against the acceptance of an extant argument in support of a standpoint. From a dialectical viewpoint, the presentation of a counterargument by a discussant always gives rise to what Pragma-dialectics (see van Eemeren *et al.* 2007: 24) calls *mixed* dispute. While a dialectical antagonist can ask critical questions without committing to any standpoint, whenever a counter-argument is presented a certain

standpoint is ipso-facto defended, because all counterarguments *are also arguments in support of some standpoint*. The nature of the standpoint defended, and of the mixed dispute arising, however, depends on the kind of counterargument.

Drawing on the work of Pollock (1987), Freeman (1991, 2011) and Peldusz and Stede (2013); Rocci (in press) distinguishes three main types of counterarguments: (a) *rebutter of a conclusion*, (b) *rebutter of a premise*, (c) *undercutter of an argument*. Rocci (forthcoming) also proposes a style of diagramming that clearly displays the mixed confrontations to which they give rise (see Figure 1, below). We refer to this forthcoming publication for a full discussion of the relevant literature and for a theoretical rationale for this approach to diagramming. Here this diagramming style will be used for a compact presentation of the analysis of corpus examples.

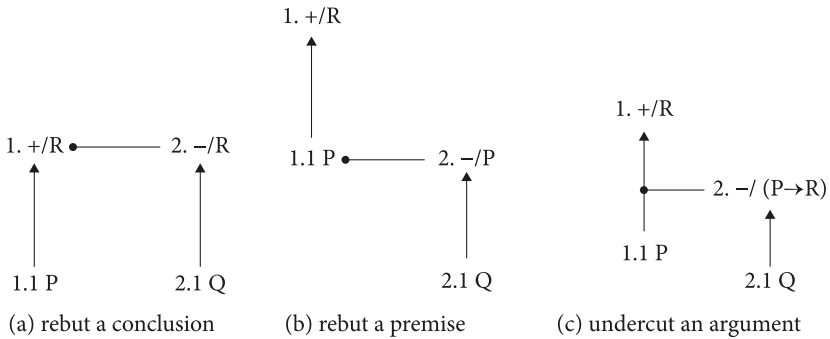


Figure 1. Three basic types of counterargument: (a) rebutter of a conclusion, (b) rebutter of a premise, (c) undercutter of an argument. Arrows with rounded points indicate an argumentative confrontation. The letters P, Q and R, which stand for propositional variables, are used in analogy to Ducrot et al. (1980: 97). Numerical notation, graph layout and symbols mostly follow pragma-dialectical convention: + = positive standpoint, - = negative standpoint, /= with regard to. The symbols $P \rightarrow R$ stand for “P would not be true unless R is true”, an intensional conditional similar to the one discussed in Pollock (1987: 485)

The first configuration, the *rebutter of a conclusion* (Figure 1, (a)), corresponds to the case exemplified in Example (4) above, where the second conjunct Q of *but* represents an argument supporting a negative standpoint towards R. This type of counterargument transforms the original discussion into a mixed dispute.

Configuration (b), the *rebutter of a premise*, can be exemplified by the following dialogue, adapted from Peldusz and Stede (2013):

- (6) S1: [We should tear down this building.]_R [It is full of asbestos.]_P
 S2: [Yet, nobody made a precise assessment of the degree of contamination.]_Q

When we have a rebutter of the premise, the counterargument Q supports a negative standpoint with regard to the premise P supporting the original standpoint. Having used P as a premise, the original protagonist (S₁) is obviously committed to its acceptability. Once P has been questioned, he/she can either retract this premise or defend it as a standpoint +/P. This configuration gives rise to a mixed sub-dispute on the acceptability of P.

It should be noted that, in contrast with the rebutter of the conclusion, in configuration (b) the truth of the original argument P is not conceded, but rather argued against. This configuration is incompatible with monological sequences P *but* Q uttered by the same speaker, which always concedes the factuality of P.³ As it was already observed by Ducrot *et al.* (1980) with regards to the dialogical uses of French *mais*, the adversative introducing a reply can have a wider variety of targets and does not always relate to a conceded P. Among the possible configurations at the start of a dialogical reply, Ducrot *et al.* (1980: 99) include connectives that introduce an argument directly countering the truth of the content of their target utterances.

The final configuration, the *undercutter of the argument*, can be showcased by Example (7), adapted from Freeman (2011: 21):

- (7) S₁: [Smith was at the victim's home the night of the murder.]_R [We have a witness testifying that she saw him entering the house on that night.]_P
 S₂: [*But* the witness has a significant visual impairment. And she admitted that, due to a medical treatment, she was not wearing eyeglasses at all at the time]_Q

As Freeman (2011: 21) puts it, “undercutters call into question the reliability of some inferential move from premises to conclusion”. Dialectically, an undercutter supports a negative standpoint towards the conditional P→R. Having presented P as a relevant and sufficient reason for concluding R, the original protagonist is committed to the conditional P→R. Also in this case, the original protagonist can either retract this commitment, or defend a standpoint +/(P→R). This gives rise to a mixed sub-dispute with regard to the conditional proposition P→R.

Unlike the rebutters of the premise, the undercutters do not question the factuality of P, but only its relevance. For this reason, this configuration can occur both with adversatives opening a dialogical reply, as in Example (7), and in P *but* Q sequences uttered by the same speaker, as in (8):

3. Inner dialogue is an exception. In fact, the use of adversatives in utterances manifesting an inner dialogue of the speaker seems to admit configurations that are excluded from proper monological sequences.

- (8) [Yes, we have a witness testifying that she saw him entering the house on that night.]_P [But the witness has a significant visual impairment and she admitted that, due to a medical treatment, she was not wearing eyeglasses at all at the time]_Q

With these small refinements and diagramming conventions our semantic and argumentative toolbox is ready for the analysis of examples from our corpus of interactions involving young children.

3. Corpus data

The corpus data analyzed in this study come from corpora collected by two authors in the context of the ArgImp project.

Corpus 1 was collected by Rebecca Schär at the home of 12 families in three different linguistic regions of Switzerland (Schär 2018). The researcher observed and audio-recorded the interactions between the adults and the children – in most cases between a parent and one or more children. Thereby it was possible to observe 16 children in the age range examined in the ArgImp project, namely children that were between 2 and 6 years old at the moment of the data collection. During the researcher’s visit, the families were not given any specific task nor were they asked to adopt a specific behavior. The focus was on observing whether and how argumentative discussions between adults and children or between children themselves came into being (see Schär and Greco 2018). The researcher accompanied family activities and, at the children’s request, took part in play activities, but did not instigate argumentative interactions nor take an active role in them. This corpus contains 84 transcribed episodes of argumentative discussions that amount to a total of 7’265 words.⁴ For the transcription, a notation system based on CA was used that takes care of the relevant aspects according to the research goal of doing an argumentative analysis, as discussed by van Rees (1992: 157).

In 26 of the 84 transcribed episodes, 60 occurrences of ‘but’ were observed, of which the majority, 43 occurrences, were produced by children and the rest by adults who were interacting with them. It is important to note that whereas few children produced the vast majority of utterances with ‘but’, other children rarely or never used ‘but’ in the recorded conversations.

4. In the context of the ArgImp project, we count as one argumentative episode a continuous stretch of interaction, where an individual issue or a chain of related issues are discussed. Contiguous argumentative discussions about topically unrelated issues are treated as separate episodes. Non-contiguous discussions separated by non-argumentatively relevant talk are also treated as separate episodes.

Corpus 2 was collected by Josephine Convertini in two kindergartens, one located in French-speaking Switzerland, the other one located in Italy. The main aim of the collection in both kindergartens was to analyze argument schemes – in terms of the AMT approach (Rigotti and Greco 2019) – in discussions between children aged 3–6 years and the adult or within the peer group (Convertini 2019). In contrast with *Corpus 1*, a part of the data of this corpus is based on semi-structured play activities of various kinds (exploration of physical and chemical phenomena, construction tasks, decoration activities) while the other part is based on technical problem-solving (construction of a tunnel, construction of a bridge and construction of a hourglass). In the Swiss data collection, 19 children (11 males and 8 females) aged between 3 and 6 years were video recorded for a total of 8 hours. The Italian data collection involved 25 children (13 males and 12 females) for a total of 16 hours of video recording. In this second study, the researcher moves away from the worktable after assigning the task and the children work together without adult intervention until the end of the activity, unless they request the presence of the researcher. Analogously to *Corpus 1*, only episodes of argumentative discussion were transcribed. The 76 transcribed argumentative episodes amount to 5'384 token words. In total, 59 occurrences of 'but', were observed in 34 argumentative episodes. Thereof, children produced 25 occurrences.

Table 1 summarizes the occurrences of 'but' in the two corpora, whereas Table 2 shows the occurrence of 'but' per language.

Table 1. Occurrences of 'but' in the corpora of this study

Corpus of everyday family conversations		
size	7265 words	84 argumentative episodes
occurrences of 'but'	60	26 argumentative episodes
occurrences of 'but' produced by children	43	
Corpus of semi-structured play activities in kindergarten		
size	5384 words	76 argumentative episodes
occurrences of 'but'	59	34 argumentative episodes
occurrences of 'but' produced by children	25	

Table 2. Occurrence of ‘but’ per language

Occurrence of ‘but’ per language*	
<i>French</i> (19 argumentative episodes)	
occurrences of ‘but’	43
occurrences of ‘but’ produced by children	18
<i>Italian</i> (67 argumentative episodes)	
occurrences of ‘but’	38
occurrences of ‘but’ produced by children	22
<i>Varieties of Swiss German</i> (17 argumentative episodes)	
occurrences of ‘but’	38
occurrences of ‘but’ produced by children	28

* Some of the registered discussions are multilingual and feature a ‘but’ in more than one language.

4. Analysis

The approach to adversative connective semantics and counterargument diagramming detailed in Section 2 was applied to a series of examples from the two corpora – drawing from all settings and all languages – where the use of *but* equivalents by children is plausibly explained with reference to the argumentative semantics and plausibly corresponds to a counterargument configuration.

The series should not be treated as a statistically representative sample, but rather as a *collection* (Mondada 2005) illustrating the insights that can be gained in the reconstruction of children’s contributions to argumentative discussions, by paying attention to Ger. *aber*, Fr. *mais*, It. *ma* (‘but’) as potential argumentative indicators. Some of these examples have been analyzed before in other publications within the ArgImp project; when this is the case, we clearly indicate this in a footnote. However, the perspective adopted in this paper is different and, as a consequence, the analyses are original. All the names and identifying information from the recordings have been modified to anonymize data in our examples.

In general, the ArgImp project is chiefly concerned with the careful reconstruction of children’s contributions to argumentative discussions through qualitative analyses guided by the principles of *pragmatic integrity* and *inferential integrity*. As explained in Greco *et al.* (2018: 444–45), pragmatic integrity requires situating children’s contributions in the broader interactional context, while inferential integrity involves carefully reconstructing the inferential steps proposed by the children, including their implicit premises.

These principles are kept also in the analysis of the present collection, as they play a critical role in evaluating the power of elucidation of the proposed adversative semantics and the insights it can provide for the understanding of argumentation in young children.

4.1 Banana

The first case, from *Corpus 1*, occurred on an afternoon in February 2016, on which the researcher visited the family of Elina (3:8 years old) at her home. The discussion, which originally took place in a variety of Swiss German, occurs as Elina and her father are playing a memory game. In this game, every player aims at finding two matching cards. Each player has the right to turn over two cards per turn, if he or she does not succeed in finding a matching pair, it is the next player's turn. Apart from these 'standard' rules of the game, Elina's father implemented an additional rule prescribing that whenever Elina fails to find a matching pair, she has to eat one bite of banana. The father probably implemented this rule because it is difficult for Elina's parents to make her eat. The transcript displayed in Table 3 starts when Elina turns over two cards that have the same background but do not depict the same object.

Table 3. Discussion between Elina (3:8 years) and her father (banana)

Turn	Speaker	Transcript	Our translation
1	Elina	das isch nid s gliche=	this is not the same=
2	Father	nei de muesch e banane näh=	no so you have to take a banana=
3	Elina	aber nome bizli isch das glichig	but only a little bit it is similar
4	Father	wieso es bizli † (2.0)	why a little bit † (2.0)
5	Elina	die baume	the trees
6	Father	ah böim ((lacht))	ah trees ((laughs))
7	Elina	böim es bizli glichig	trees a little bit similar
8	Father	ja	yes

In the excerpt, at T.2, the father confirms Elina's earlier admission (T. 1) that the two memory cards are not identical and concludes that Elina has to take a bite of banana (+/R). Elina, having conceded P, disagrees with her father's conclusion and provides a counterargument Q to it, saying that the cards are a bit similar (argument 2.1). In order to introduce her argument, Elina uses the adversative connective *aber* ('but'). The corresponding structure is laid out in Figure 2.

The counterargument configuration is a *rebutter of the conclusion* (a), arguing for an implicit standpoint -/R and giving rise to a mixed confrontation between

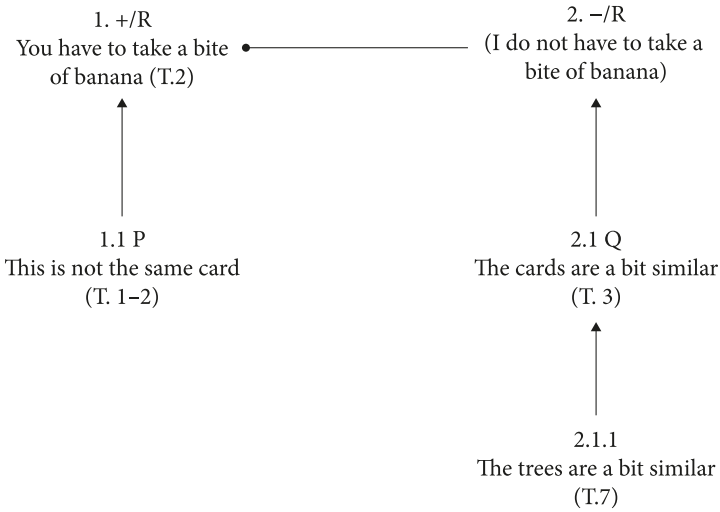


Figure 2. Diagramming of the “banana” case

Elina and her father. Because the memory cards have similar traits, they can be treated as identical, and hence Elina does not have to take a bite of banana. In fact, Elina’s reasoning could be based on the *locus from analogy* (Rigotti and Greco 2019: 261–3):⁵ two cards that are a bit similar can be treated analogously to two identical cards, because they belong to the same functional genus whose goal it is to show Elina’s memory capacity. Even though ‘but’ introduces an explicitly stated argument, the consequence that Elina does not have to take a bite of banana remains implicit throughout the discussion.

5. In contrast with other publications originating from the ArgImp project, in the present paper we do not present a fully-fledged reconstruction of the inferential configuration of children’s (counter-)arguments according to AMT theory (Rigotti and Greco 2019), concentrating instead on the extended argumentation structures to which counterargumentation gives rise (see Rocci, forthcoming). This happens for reasons of space and because the interaction between counterarguments and inferential configurations remains largely to explore and would deserve its own paper. That said, we do briefly indicate the *loci* involved in the arguments we reconstruct, as the ease of assigning a *locus* to a purported argument corroborates the plausibility of the reconstruction.

4.2 Day Care

The following episode belongs to the same overall interaction as the discussion between Elina (3:8 years) and her father presented above. It occurred approximately three minutes after the first discussion. The discussion presented in Table 4 starts when Elina finished her turn, in which she turned over two cards that are not matching.⁶ However, just after she turned over the second card, she realizes that the card next to it would have matched with the first card she turned over. Therefore, she tries to extend her turn and turn over a third card.

During this episode Elina uses ‘but’ several times (turns 1, 7, 9 and 17). In turns 7 and 9 ‘but’ is a means to oppose the father’s standpoint and takes the logical form: ‘R, but \neg R’. In itself, this use of ‘but’ does not correspond to any configuration of counterargument. The same could be said for the ‘but’ Elina uses in T.1, which could be dismissed as a mere means of getting her father’s attention. That would be a mistake: following the principle of pragmatic integrity, it is more suitable to look at what Elina jointly accomplishes with her father in the whole interactional episode. In this perspective, these occurrences look more like subsequent moments of a work in progress in creating a mixed argumentative confrontation, which is fully achieved with the ‘but’ Elina uses in turn 17. From this perspective, the ‘but’ in T.1 picks up a different flavor: as Elina sets out to turn more than two cards, she anticipates a confrontation with her father. Figure 3 shows the reconstruction of the whole argumentative interaction, so-to say, as a finished product,⁷ from the viewpoint of T.17.

The father stops Elina from turning another card in the memory game (T.4), arguing that it is now his turn (T.6), not hers (T.8). This is jointly supported by the rule that in one turn one can only pick up two cards (T.12) and the fact that Elina did already turn two cards in her turn (T.16). In terms of the AMT analysis of the inferential configuration of arguments (Rigotti and Greco 2019), the latter (T. 16) represents the situational *datum* of the inference, while the former (T. 12) represents

6. This case has been presented at a conference (Greco *et al.* 2017) and analyzed before in Schär and Greco (2018) and Schär (2018). However, the analysis of “aber” is an original contribution made in this paper.

7. This reconstruction is not meant to suggest that Elina knew from the outset how she was going to argue her standpoint. This is unlikely. One could hypothesize that she quickly realized that she was entering a confrontation with her father if she was not going to follow the rules of the game, and that this started an on-the-spot process of rhetorical *inventio* to find an argument that could allow her to get away with it. From a developmental psychology viewpoint, the episode shows the temporally inscribed “genesis” of thought in front of the “father” obstacle, a case of socio-cognitive conflict inciting the search of a creative solution, which is finally found in the invocation of the authority of Chrabolino.

Table 4. Discussion between Elina (3:8 years) and her father (day care)

Turn	Speaker	Transcript	Our translation
1	Elina	aber weisch was †=	but you know what †=
2	Father	was †=	what †=
3	Elina	papi	Daddy
4	Father	nei	No
5	Elina	done ((will ein kärtchen aufdecken))	here ((wants to turn over a card))
6	Father	ou achtung ich bi dra	oh hang on it is my turn
7	Elina	aber andoch papi=	but no daddy=
8	Father	nei wart schnäll Elina jetzt darfsch du nid=	no hang on Elina it is not your turn=
9	Elina	aber done chan=	but here can=
10	Father	du muesch* nochethär=	your turn is after that=
11	Elina	nei ich mues mal ehm=	no i have to ehm=
12	Father	wart schnäl du darfsch [immer nume zwoi	wait a minute you can [always
13	Elina	[glichi sueche= ((steht auf))	[look for the same ones=
14	Father	ja ebe a ha:lt halt halt Elina iz muesch	yeah bu wai:t wait wait Elina
15	Elina	abhocke=	now you have to sit down=
16	Father	nei das hemr z Chrabolino ((in der krippe))	no we did this in Chrabolino
17	Elina	mal so zwoi gmacht**	((in the day care)) two times
18	Father	du hesch ja zwoi gno	but you did take two
19	Elina	aber ich z Chrabolino het nomal zwoi mache	but in Chrabolino*** i took
20	Father	nomal zwoi mache nomal zwoi mache und	two again two again two again
21	Elina	nomal zwoi mache=	and two again=
22	Father	ja de bisch ja numeno du dra=	yeah but then it is only you
23	Elina	und nomal zwoi mache	playing=
24	Father		and took again two

* Note that Elina's father uses several modal verbs in Swiss German. He uses 'can' when he refers to the rules of the game (turns 8 and 12) and 'have to' in turns 10 and 14. Their literal translation into English is not possible.

** Elina uses a sentence structure that does not correspond to the one normally used in this Swiss German dialect. This may be due to the fact that Elina speaks Armenian with her mother.

*** Chrabolino is the name of the day care attended by Elina.

the *endoxon*, the supposedly culturally shared premises. Now, *endoxa* are usually left implicit, except when forgetfulness or resistance is anticipated by the arguer. Here the father makes the *endoxon* explicit (T. 12, "wait a minute you can [always

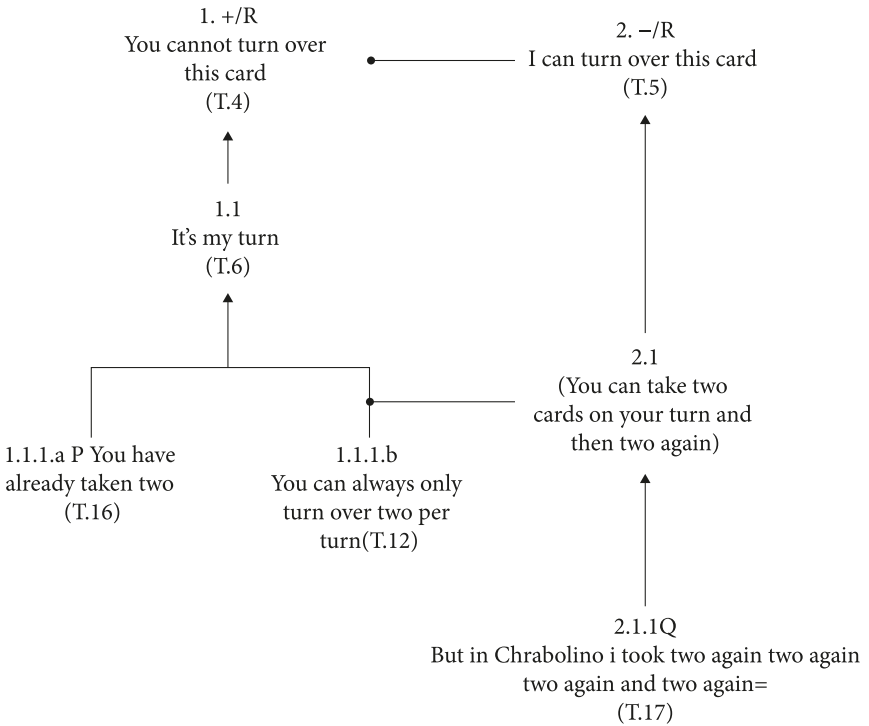


Figure 3. Reconstruction of the argumentative discussion between Elina and her father (day care)

only turn over two per turn”), perhaps out of a “pedagogical” preoccupation.⁸ Elina argues that she adopted the same behaviour in her day care (T. 17), introducing the argument with ‘but’.

This argument (T. 17) has interesting properties. Thanks to the grounding in the authority of the day care, it establishes an alternative rule (2.1) that supports Elina’s standpoint $-/R$. Thus, it ultimately works as a rebutter of the conclusion. At the same time, the alternative rule is in direct contradiction with the explicit *endoxon* (1.1.1.b) proposed by Elina’s father. Does this constitute a rebutter of the premise? Actually, the typical rebutter of the premise would be an argument against the *datum* (1.1.1.a). In fact, it is typically the job of undercutters to make an argument irrelevant due to the falsity of its implicit *endoxon*. Here the *endoxon* is explicit. For this reason, we prefer to say that Elina’s argument is both a rebutter

8. As Schär (2018) explains, Elina’s father is somebody who invents new board games as a hobby; he might be willing to teach her daughter that it is important to learn and follow board games rules.

of the father's conclusion (as Chrabolino's rule supports the opposite conclusion) and an undercutter of the father's argument, because Chrabolino's authority undermines the father's *endoxon*.⁹

From the point of view of the argument schemes mobilized, Elina's appeal to the authority of the day care is interesting: she counters parental authority with an alternative source that the parents themselves ought to respect; after all, it is the parents who send Elina to the day care.

4.3 I'm bored

The following two cases were taken from *Corpus 2*. Both episodes are part of the same activity, performed by a triad of children, which has been recorded in November 2016. The participants were Giacomo (4:8 years), Carlo (5:3 years) and Maria (4:9 years).¹⁰ The activity was inspired by Piaget (1980) and consisted in building a tunnel with LEGO® bricks. More specifically, the adult presented the activity, asking children to build a tunnel with LEGO® bricks in such a manner that a specific toy car could pass through it. The activities proposed by the adult were carried out in a kindergarten toy library and were divided into four phases: Children were allowed some time for assessing the available material (the car, the LEGO® bricks and 4 images of different tunnels); the researcher presented the activity and eventually moved away from the workbench and asked the children to call her if needed or upon completion of the activity; the children resolve the task and finally they check the result with the adult.

In the first part of the activity, Giacomo and Carlo began to work together. Maria tried to work alone, but then decided to move away from the workbench and started playing. In the middle of the activity, Maria sat under the table, and a few minutes later, a teacher of the kindergarten takes Maria away from the library. Giacomo and Carlo stay with the researcher and continue the work. At some point, the researcher gets out of the room in order to search more LEGO® bricks and Giacomo and Carlo are left alone in the room.

In the first episode, Carlo and Giacomo talk about the fact they are alone in completing the activity. The use of *but* in T.1 is a polyphonic one, connecting two segments within Giacomo's turn. In fact, the argumentative confrontation turns out not to be a dispute between the two kids, but rather a case of Giacomo manifesting his inner argumentative dialogue (Greco Morasso 2013; Greco 2017), a dialogue in which the researcher is finally enlisted as an expert advisor.

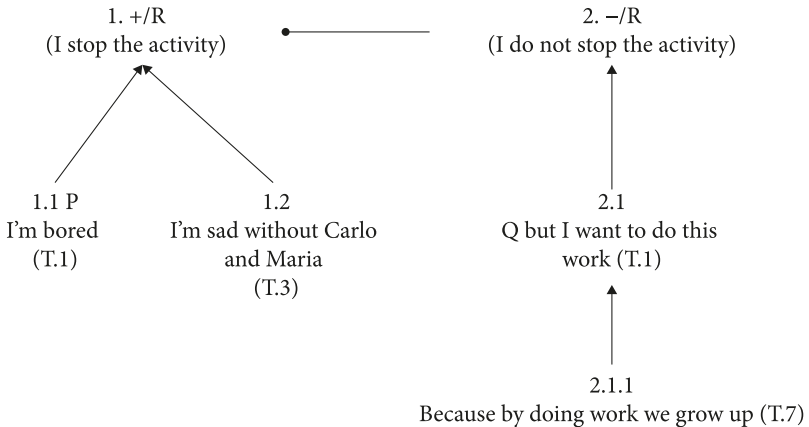
9. In doing so, we give priority to the inferential role of the counterargument's target over its explicit or implicit status.

10. The case: "I'm Bored" has been analyzed, from a different perspective, in Convertini (2019).

Table 5. Discussion between Giacomo (4:8 years) and Carlo (5:3 years)

Turn	Speaker	Transcript	Our translation
1	Giacomo	io mi sto annoiando (.) no no io voglio fa (.) io mi sto annoiando, ma voglio fa questo lavoro	i'm bored (.) no i want to do it (.) i'm bored but i want to do this work
2	Carlo	ora siamo in due ((la ricercatrice rientra nella stanza))	now it is just the two of us ((the researcher comes back into the room))
3	Giacomo	è vero che che siamo (.) che io sono triste senza Carlo e Maria	it is true that that we are (.) that i'm sad without Carlo and Maria
4	Carlo	io sono qui	i'm here
5	Giacomo	e ora Maria non può fare questo lavoro	and now Maria can't do this work
6	Carlo	non può fare più lavoro	she can't do the work anymore
7	Giacomo	perché così così diventa più grande (.) quando si fanno i lavori si diventa grande, vero? vero? ((guarda la ricercatrice))	because in this way in this way we grow up (.) when doing work we grow up, right ↑ right ↑ ((he looks at the researcher))
8	Researcher	sì	yes

In Figure 4 we provide the reconstruction of Giacomo's inner argumentative dialogue, again "as a finished product" from the point of view of the accomplishment of T.7, using the same diagrammatic conventions of Elina's arguments.

**Figure 4.** Reconstruction of Giacomo's inner argumentative discussion

Giacomo's reasoning is based on the *locus from termination and setting up* (Rigotti and Greco 2019:263) for the first standpoint and on the *locus from final cause* (Rigotti and Greco 2019:258) for the second standpoint. The argument 2.1.1

ensuring the finalistic grounding of the activity is cast as a question to the researcher. In turn 7, Giacomo asks the researcher to confirm the correctness of his argumentation by saying: “Because in this way (repeated) we grow up (.) when doing work we grow up, right †”. Rocci and Raimondo (2017) call this a *request of confirmation of inference* – a conversational argumentative move in which the speaker presents an argument and asks the interlocutor to confirm the validity of his/her own reasoning. This analysis suggests a scenario where the child manifests his inner debate and reasoning seeking validation from the adult. Such a cooperative scenario is in sharp contrast with the “rhetorical” flavour of the episodes discussed in 4.1 and 4.2, highlighting the diversity of children’s uses of argument.

4.4 Something important to do

In the second episode, which is part of the same activity, the researcher and Carlo work together building the tunnel. Giacomo is touching some LEGO® bricks and the researcher asks him for help.

Table 6. Discussion between Giacomo (4:8 years), Carlo (5:3 years) and the researcher

Turn	Speaker	Transcript	Our translation
1	Researcher	chi lo aiuta † ((Carlo cerca di unire due parti di tunnel))	who can help him † ((Carlo is trying to put together two different parts of the tunnel))
2	Giacomo	devo fare una cosa io	i have something to do
3	Researcher	chi lo aiuta che cade †	who can help him cause it is crashing †.
4	Giacomo	io devo fare una cosa qua	i have something to do here
5	Researcher	e ma (.) mi sa che se non c’aiuti cade ((la ricercatrice aiuta Carlo))	but (.) i think if you do not help us it will crash ((the researcher helps Carlo))
6	Giacomo	ma devo fare una cosa importante	but I’ve something important to do
7	Researcher	piano piano perché qua (.) è in bilico ((la ricercatrice si allontana dal tavolo))	carefully carefully because here (.) the tunnel is wobbly ((the researcher takes a step away from the worktable))

In this episode, Giacomo presents a rebuttal of the standpoint of the researcher, justifying his refusal to help Carlo. This rebuttal first appears in T.2; its function is then made explicit by the adversative connective in T.6. Giacomo’s reasoning is based on the *locus from alternatives* (Rigotti and Greco 2019: 261).

4.5 T-shirt

In Section 2.1 we have already observed, with Ducrot *et al.* (1980) that *But* Q, at the start of a dialogical move, can introduce an argument directly countering the truth of the content of their target utterances. This can happen when it directly rebuts a premise P, as shown in 2.1. It can also happen when it immediately counters a standpoint /R, with an argument Q for /-R.

The following conversation took place in February 2016 in a family in the Italian-speaking region of Switzerland. Nico (4:10 years) shows his carnival costume to his grandmother who came to visit. Once the costume is shown, he would like to take off the shirt.

Table 7. Discussion between Nico (4:10 years) and his grandmother

Turn	Speaker	Transcript	Our translation
1	Nico	sì io posso anche togliermi questa †	yes can i also take off this one †
2	Grandmother	no quella non toglierla non vale la pena di toglierla ti dà fastidio hai caldo † (1.0)	no this one do not take it off it is not worth taking it off does it bother you do you feel hot † (1.0)
3	Nico	ma c'è sotto la maglietta	but beneath there is the t-shirt
4	Grandmother	sì però ho capito che hai sotto la maglietta hm (1.0) lasciala	yes but i understood that you have the t-shirt beneath hm (1.0) leave it on

In this episode, Nico in T.3 gives a reason why, according to him, he can take off the shirt, countering the grandmother's refusal. Interestingly, Nico is the only one who argues for his position, as the grandmother at first does not bother to provide reasons for her refusal beyond the merely paraphrastic 'it is not worth taking it off' and then acknowledges to have understood Nico's argument, but again does not care to refute it, just reiterating her prescription ("leave it on"). Thus, in this example we have Nico's Q for /-R, but no grandmother's P for R. Nico's solitary argument is reconstructed in Figure 5.

Nico's reasoning is based on the *locus from instrumental cause* (Rigotti and Greco 2019: 250) pointing out that he already has an instrument to reach the goal of keeping him warm, namely the t-shirt, therefore the shirt is not a necessary instrument to reach the same goal.

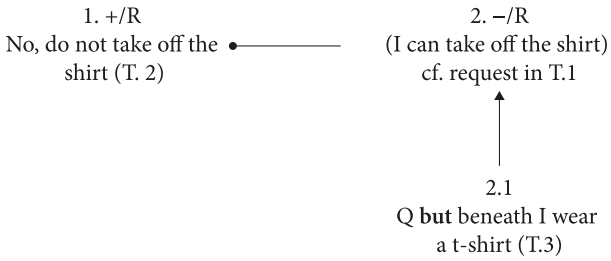


Figure 5. Reconstruction of the argumentative discussion between Nico and his grandmother

4.6 Iron bridge

In this episode the utterance of *But* Q is articulated with an action rather than with a previous conversational turn. In fact, it is the material happening of the action that takes the role of P, while presumed beliefs and intentions of the agent seem to take the role of R.

The first episode stems from the building activity of a tunnel carried out by Giacomo and Carlo and already presented in Sections 4.3. Carlo is engaging in building the tunnel, whilst Giacomo is monitoring and watching Carlo's work. Giacomo takes one of the images of a tunnel, comments it and Carlo's tunnel.

Table 8. Discussion between Giacomo (4:8 years), Carlo (5:3 years) and the researcher

Turn	Speaker	Transcript	Our translation
1	Giacomo	↑ ma questo ponte è di ferro (indica una delle immagini di tunnel)) è co è anche coi mattoni	↑ but this bridge is made of iron ((he indicates one of the images of tunnel)) and with and bricks as well
2	Carlo	e dentro=	and inside...=
3	Giacomo	=e l'hanno colorato	=and they colored it
4	Carlo	no no perché dentro mattone c'è ferro	no no because inside the bricks there is some iron
5	Giacomo	è vero (.) e con la colla::	it is true (.) and with the glue::
6	Carlo	no (.) cemento	no (.) cement
7	Giacomo	ha detto cosa ↑	what did he say ↑
8	Researcher	cemento	cement

The proposition against which Giacomo raises his objection is not a verbalized standpoint: it is the assumption that what Carlo is doing is appropriate for the aim of the activity. In fact, objecting to an action, rather than to an utterance is a common occurrence in adult conversation and perhaps should not surprise us here.

4.7 But, look!

This is another episode where the adversative articulates the propositional content of an utterance with an extraverbal element. This time, however, it is Q that is realized by ostension of a material aspect of the context. As it happens with the T-shirt Example in 4.5, P is not present as R has not been supported by arguments.

The episode comes from *Corpus 2* and is part of the materials collected in a kindergarten located in the French-speaking part of Switzerland. The activity consisted in making a collage by gluing scraps of colorful paper on a drawing. The researcher does not participate in the activity, but she watches the group of children (a triad) working together. In the example below the triad is discussing the state of their work.

Table 9. Discussion between Zoé (4:8 years), Chanel (5:1 years), Adèle (4:2 years) and the researcher

Turn	Speaker	Transcript	Our translation
1	Zoé	Joséphine on a fini	Josephine we are done
2	Chanel	non	no
3	Zoé	mais oui regarde ((elle pointe l'image en couleur))	But, yes, look at it ((she indicates the coloured picture))
4	Adèle	il reste il reste	there is more, there is more
5	Researcher	qu'est-ce que vous avez dit † vous avez fini †	what did you say † did you finish †
6	Chanel	non non non	no no no

In T.1 Zoé puts forward a standpoint that corresponds to the \neg R role, while Chanel puts forth the contradictory standpoint R. In T.3 Zoé uses the adversative with an utterance and gesture aimed at the ostension of Q, a material situational *datum* that is supposed to function as an argument for \neg R. The move is unsuccessful. The participants are faced with the same material *datum* but their idea of *what counts as a finished collage*, that is the *endoxon*, diverges. Adèle, in a sort of argumentative coalition with Chanel, highlights the fact that there is still white space in the base drawing. We could say that Adèle evokes a *locus from parts and whole* in her intervention (see Rigotti and Greco 2019: 255): she means that, if there are still uncovered parts, then the whole task is not complete.

A final note on terminological consistency is in order. In this paper, we have consistently called R the standpoint supported by P and \neg R the standpoint supported by the argument Q introduced by 'but'. This can be at times confusing, namely when the standpoint R takes a negative form and \neg R does not feature a negation. This happens frequently in our corpus, for various reasons. One of them is that children may have recourse to a 'but' when they are faced with a refusal or prohibition. In these cases, R has typically a negative form.

5. Conclusion

While the analyses of the seven episodes discussed above cannot be generalized to all occurrences of adversatives in children's speech in the data, they are sufficient to show something quite interesting. Namely, that the fully-fledged argumentative interpretations of *but* occur as a possibility in children's speech, well attested by a collection of plausibly reconstructed examples.

In particular, we have found cases where the use of adversatives corresponds to a rebutting defeater relative to adult standpoints and arguments. We also found cases of externalized inner deliberative dialogue by the child and situations where *but* can connect a previous action with propositional contents. Children seem to have access to a whole (and complex) range of possibilities in constructing counterargumentative moves with adversatives. More extensive descriptive work on corpus data will be necessary to appreciate the extent of this range. For instance, we have not found yet instances of *but* following an explicit concession, be it a dialogical "Yes, but..." or some kind of proleptic concession. At this stage, however, absences are hardly significant.

These results suggest that linguistic indicators can be profitably employed in reconstruction, provided that the recourse to indicators is well informed. In fact, we were able to identify simple mixed discussions where the child puts forward a standpoint ($\neg R$) contradictory to a standpoint put forth by the adult. Being often implicit, this standpoint could have easily escaped the attention of an untrained analyst. Furthermore, mixed discussions are interesting because they see children advancing standpoints but also dialogically taking into account the standpoints and arguments of their adult counterparts. In conclusion, taking or not taking account of these indicators can significantly affect the overall appreciation of how children contribute to argumentative discussions.

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