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FACOLTÀ DI SCIENZE LINGUISTICHE E LETTERATURE STRANIERE
UNIVERSITÀ CATTOLICA DEL SACRO CUORE

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NOTA INTRODUTTIVA

Siamo lieti di inaugurare in questo fascicolo la nuova Rassegna di Tradizione della cultura classica, dedicata alla segnalazione di opere recenti relative al rapporto tra la cultura classica e tardoantica e la cultura moderna e contemporanea. Le schede saranno redatte preferibilmente in inglese, ma saranno accolti i contributi nelle più diffuse lingue europee. Ci si augura che questa Rassegna possa costituire un momento di contatto tra studiosi che, muovendo da specializzazioni diverse, si riconoscono nella tradizione della cultura europea.

I Direttori con Guido Milanese

DEFINITIONAL ARGUMENTS IN CHILDREN'S SPEECH¹

REBECCA SCHÄR

Based on the debate on children's ability to produce argumentative discourse in different educational settings, this paper provides further support for the fact that small children are able to support their opinions with arguments. In particular, the paper makes a case in point on children's appeal to definitional loci, when supporting their standpoints. The analysis of their reasoning's implicit components shows how children apply different definitional arguments.

Keywords: adult-children interaction, argumentation, definition, small children's speech

1. Introduction

Studying the implicit underlying children's utterances allows for interesting insights in what prompts the children's use of certain linguistic devices and how this conforms (or does not conform) with adults' utterances and expectations in a discourse. This article focuses on a particular aspect of children's speech, namely on argumentative discourse between small children and adults and between small children themselves. Studying the argumentative dimension of speech is a manifold task: it entails, among others, the study of language in the (real or projected) interaction and the linguistic expression of the reasoning that underlies the argumentative moves. In the field of argumentation and education it is highly debated whether small children (before they go to school) are able to put forward a standpoint on an issue and support it with an argument² or whether the ability of resolving a dispute in a reasonable way, thus by using argumentative discourse is a skill that needs educational input, in order to optimally develop³. Studies in less formal contexts, such as

¹ An earlier and shorter version of this article was presented at the Conference of the Ontario Society for the Study of Argumentation OSSA, Windsor, Canada, May 2016 and is available online on the conference website.

² See: J.A. Danish – N. Enyedy, *Latour goes to kindergarten: Children marshalling allies in a spontaneous argument about what counts as science*, "Learning, Culture and Social Interaction", 5, 2015, pp. 5-19; N.L. Stein – R. Bernas, *The early emergence of argumentative knowledge and skill*, in *Foundations of argumentative text processing*, J. Andriessen – P. Coirier ed., AUP, Amsterdam 1999, pp. 97-116; C. Pontecorvo – F. Arcidiacono, *Development of reasoning through arguing in young children*, "Cultural-Historical Psychology", 4, 2010, pp. 19-30; P.-L. Völzing, *Kinder argumentieren. Die Ontogenese argumentativer Fähigkeiten*, Schöningh, Paderborn 1982.

³ See: M. Felton – D. Kuhn, *The Development of Argumentative Discourse Skill*, "Discourse Processes", 32, 2001, 2&3, pp. 135-153; D. Kuhn, *The skills of argument*, Cambridge University Press, New York NY 1991; D. Kuhn – W. Udell, *The Development of Argument Skills*, "Child Development", 74, 2003, 5, pp. 1245-1260; C. Golder, *Le développement des discours argumentatifs*, Delachaux and Niestlé, Lausanne 1996.

family conversations at the dinner table, for example Arcidiacono and Bova⁴ or in informal situations within an institutionalized context, such as “an open solution space”⁵, i.e. an autonomous group work situation have found positive cases of children’s argumentation, showing that children ‘spontaneously’ start argumentative discussions, if they are given the necessary room to do so.

Recently, children’s argumentation in a semi-structured setting has been studied in an interdisciplinary approach between argumentation theory and sociocultural psychology⁶. These studies showed that children provide complex argumentation⁷, e.g. by opening up sub discussions⁸ when resolving a cognitive task. It therefore seems clear that children engage in argumentation also in semi-structured settings. The aim of the present paper is to add to this line of research, by illustrating a single⁹ critical case¹⁰ on how children (and the adult discussing with them) make use of definitional arguments in discussions occurring in such a semi-structured setting. As outlined above, previous studies have analyzed children’s argumentation in semi-structured settings, however, to our knowledge, an analysis of a determinate type of argument in this specific setting has not yet been undertaken. Therefore, the present paper will go a step further highlighting not only the presence of argumentation in discussions with small children (in an age-range below 6 years), but focusing on the use children make of one type of argument, namely the definitional argument. The paper furthermore aims at paving the way towards possible reasons for children’s use of definitional arguments.

⁴ F. Arcidiacono – A. Bova, *Argumentation among family members in Italy and Switzerland: A cross-cultural perspective*, in *Steering the cultural dynamics*, Y. Kashima – E.S. Kashima – R. Beatson ed., IACCP, Melbourne 2013, pp. 167-174.

⁵ J.A. Danish – N. Enyedy, *Latour goes to kindergarten*, p. 17.

⁶ S. Greco Morasso – C. Miserez-Caperos – A.-N. Perret-Clermont, *L’argumentation à visée cognitive chez les enfants. Une étude exploratoire sur les dynamiques argumentatives et psychosociales*, in *Argumentations dans les contextes de l’éducation*, N. Muller Mirza – C. Buty ed., Peter Lang, Bern 2015, pp. 39-82; A.-N. Perret-Clermont – F. Arcidiacono – S. Breux – S. Greco – C. Miserez-Caperos, *Knowledge-oriented argumentation in children*, in *Scrutinizing Argumentation in Practice*, F.H. van Eemeren – B. Garssen ed., John Benjamins Publishing Company, Amsterdam/Philadelphia 2015, pp. 135-149; C. Miserez-Caperos, *Étude de l’argumentation à visée cognitive dans des interactions entre adulte et enfants: un regard psychosocial sur le modèle pragma-dialectique*, PhD Dissertation, Université de Neuchâtel, Neuchâtel 2017.

⁷ A.-N. Perret-Clermont – F. Arcidiacono – S. Breux – S. Greco – C. Miserez-Caperos, *Knowledge-oriented argumentation in children*, p. 146.

⁸ S. Greco Morasso – C. Miserez-Caperos – A.-N. Perret-Clermont, *L’argumentation à visée cognitive chez les enfants*, p. 78.

⁹ See: S. Jackson, *Building a case for claims about discourse structure*, in *Contemporary issues in language and discourse processes*, D.G. Ellis – W.A. Donohue ed., Lawrence Erlbaum Associates, Hillsdale NJ/London 1986, pp. 149-167; S. Jacobs, *How to make an argument from example in discourse analysis*, in *Contemporary issues in language and discourse processes*, D.G. Ellis – W.A. Donohue ed., Lawrence Erlbaum Associates, Hillsdale NJ/London 1986, pp. 149-167.

¹⁰ B. Flyvbjerg, *Making social science matter, why social inquiry fails and how it can succeed again*, Cambridge University Press, Cambridge 2001, p. 74.

The present paper has been developed within a research project on children's implicit argumentation¹¹, funded by the Swiss National Science Foundation. The project, which is carried out by the Institute of Psychology and Education of the University of Neuchâtel and the Institute Argumentation, Linguistics and Semiotics of the Università della Svizzera italiana, is situated within the broader tradition of the study of children's speech and their reasoning. The outcome of previous studies of children's speech in a semi-structured context¹², where children are asked to perform certain tasks outside the classroom has shown that, by adopting a different perspective, it should be possible to gain more insights on the children's perception of discussion situations and on how their verbal reactions are to be connected to their reasoning. The aim of this project is therefore to continue the study of interactions that are similar to the ones studied by previous research and at the same time adopt a perspective rooted in argumentation theory on the data. By paying attention to the argumentative aspects in children's speech, that is to say their language use and its underlying meaning when producing argumentative utterances (in particular standpoints, arguments supporting their standpoints or counterarguments against another standpoint), the project focuses on children's implicit reasoning processes during their engagement in argumentative discussions. The project thereby follows the hypothesis that in order to entirely understand children's reasoning, it is important to distinguish between the material and the procedural component of reasoning.

The case reported in this paper is taken from a 'revised-Piagetian task' (see section 3), that is to say from a semi-structured setting, where children discuss on a task they are asked to perform by an adult experimenter (psychologist). Two excerpts of a longer conversation, in which two children and an adult experimenter are involved, will be presented. By choosing an example that occurred in a semi-structured setting, such as the 'revised-Piagetian task', it will be possible to show that children engage in argumentation in a context that does not *a priori* give them a lot of room for 'spontaneous' discussion. This is so, since the adult experimenter has an agenda of 'issues' to discuss with the children and hence does not explicitly provide them with a space for discussion. Nevertheless, the children start their own lines of argument, using, in this case, definitional arguments. Within this argumentative discussion the paper focuses in particular on the children's appeal to definitional arguments. Two different situations in which the children make use of an argument appealing to definitional arguments have been identified: in the first situation, the children 'spontaneously' set out the 'issue' of the discussion and support their standpoint by definitional arguments. In the second situation, the 'issue' of the discussion is given by an adult and the children make use of definitional arguments in order to contest or refute the arguments from the adult discussant.

¹¹ "Analysing children's implicit argumentation: Reconstruction of procedural and material premises"; project no. 100019_156690; applicants: A.-N. Perret-Clermont, S. Greco, A. Iannaccone and A. Rocci.

¹² See: A.-N. Perret-Clermont – F. Arcidiacono – S. Breux – S. Greco – C. Miserez-Caperos, *Knowledge-oriented argumentation in children*; F. Arcidiacono – A.N. Perret-Clermont, *The Co-construction of Conversational Moves in the Context of Piagetian Interview: The Case of the Test of Conservation of Quantities of Liquid*, "Rassegna di Psicologia", 27, 2010, pp. 117-137.

2. Theoretical framework

This paper will analyze ‘spontaneous’ argumentation produced by children in a semi-structured setting. In line with recent studies occurring in a similar context, the data will be analyzed with a combination of two theoretical approaches within argumentation theory, namely pragma-dialectics and the Argumentum Model of Topics (AMT), understood here as a type of approach to the analysis of discourse in oral interaction. Differently from previous studies, however, the present paper will concentrate on the definitional arguments occurring in ‘spontaneous’ discussions within a semi-structured task setting and provide an in-depth analysis of this type of argument.

The reconstruction of the argumentative discussion will be carried out by means of the pragma-dialectical approach to argumentation¹³. In order to account for ‘spontaneous’ discussions within the semi-structured setting the focus will lie on the ‘confrontation stage’, the point in the discussion where the existence of a difference of opinion becomes evident¹⁴. By using the ‘analytic overview’¹⁵, the standpoints and the arguments supporting them will be represented. The analytic overview, furthermore, allows for the inclusion of the premises that are made explicit by the discussants and the deletion of non-argumentative parts of the discussion.

In order to analyze relevant moves of the ‘argumentation stage’ of a critical discussion, that is, the part, where “arguments in support or against a standpoint are advanced and critically tested”¹⁶, the Argumentum Model of Topics (henceforth: AMT)¹⁷ will be applied. The AMT model is a tool for the analysis of the inferential mechanisms that lie at the basis of an argumentative move. From a methodological perspective, the AMT allows for the reconstruction of the *implicit* in an arguer’s reasoning on formal, as well as on cultural premises. From a theoretical perspective, the AMT, differently from other analytical tools, distinguishes between two syllogisms, representing each one a component of the arguer’s reasoning: a ‘procedural’ and a ‘material’ one. In real-life argumentation, procedural and material premises are linked. On the one hand, the procedural part allows for the logical reconstruction of an argumentative move and the verification of the logical consistency of an argument: a locus, that is the principle of support¹⁸ between a standpoint and an argument, is connected to a minor premise through an inferential connection that is called maxim. Maxims are inferential rules, derived from the locus. On the other hand, the material part

¹³ F.H. van Eemeren – R. Grootendorst, *Speech acts in argumentative discussions*, Foris, Dordrecht/Cinnaminson 1984; F.H. van Eemeren – R. Grootendorst, *A Systematic Theory of Argumentation: The Pragma-Dialectical Account*, Cambridge University Press, Cambridge 2004.

¹⁴ F.H. van Eemeren – R. Grootendorst, *Argumentation, Communication, and Fallacies, A Pragma-Dialectical Perspective*, Lawrence Erlbaum Associates, Hillsdale 1992, p. 35.

¹⁵ *Ibid.*, p. 93-95.

¹⁶ F.H. van Eemeren – R. Grootendorst, *A Systematic Theory of Argumentation*, p. 60.

¹⁷ E. Rigotti – S. Greco Morasso, *Argumentation as an object of interest and as a social and cultural resource*, in *Argumentation and education*, N. Muller Mirza – A.-N. Perret-Clermont ed., Springer, New York NY 2009, pp. 1-61.

¹⁸ B. Garssen, *Argument schemes in Crucial Concepts in Argumentation Theory*, F.H. van Eemeren ed., Sic-Sat, Amsterdam 2001, pp. 81-99.

consists of generally shared cultural concepts rooted in the context of the discussion. The reasoning in the material component is represented by two premises: an *endoxon* that is a culturally shared concept and the *datum*, i.e. the facts that are present in the discussion. The AMT therefore not only enables to access children's reasoning, but it does so taking the context, in which the reasoning occurred into account. This is particularly important when studying children's arguments in a non-ordinary context, as this is the case in the 'revised-Piagetian task'.

Hence, the AMT is a useful tool to reconstruct the implicit reasoning of children, and thereby better understand why a specific argument is given to support the analyzed standpoint. Furthermore, an AMT analysis reveals possible misalignments that occur in the discussion caused by the different points of departure of children's and adult's reasoning. In fact, the analysis of argumentative moves shows that it is often the *endoxon* that the children and adult do not share in the moment of the discussion. The analyses in section 4 will show one case in which the *endoxon* is not shared between a child and an adult; and another case in which the two children do not share the same *datum*, i.e. they interpret the facts of the situation differently¹⁹.

The conjoint use of the Pragma-dialectical Model of a critical discussion and the Argumentum Model of Topics has been applied before on other occasions²⁰ and explained in detail in Palmieri²¹.

2.1 *Definitional arguments: theoretical framework*

In this paper, the AMT is adopted as a theoretical framework²². Therefore this section, discusses the origins of the AMT approach to definition in the tradition of topics.

The AMT classifies the different types of arguments by means of a taxonomy of loci. This taxonomy of loci is based on the contributions of ancient and medieval authors²³. The tool that originally had a heuristic function, namely to support the writing process of argumentative texts, classifies the possible loci based on the "relation of the subject-matter of the premises to that of the conclusions"²⁴. The AMT distinguishes between three groups of loci. Intrinsic loci, extrinsic loci, as well as complex loci²⁵. Definitional loci are located

¹⁹ S. Greco – C. Morasso, *Argumentation from expert opinion in science journalism: The case of Eureka's Fight Club*, in *Rhetoric and Cognition*, S. Oswald – T. Herman ed., Peter Lang, Bern 2014.

²⁰ See: A.-N. Perret-Clermont – F. Arcidiacono – S. Breux – S. Greco – C. Miserez-Caperos, *Knowledge-oriented argumentation in children*; S. Greco Morasso, *Argumentations in Dispute Mediation, A responsible way to handle conflict*, John Benjamins Publishing Company, Amsterdam/Philadelphia 2011.

²¹ R. Palmieri, *Corporate argumentation in takeover bids*, John Benjamins, Amsterdam/Philadelphia 2014.

²² E. Rigotti – S. Greco, *Comparing the Argumentum Model of Topics to Other Contemporary Approaches to Argument Schemes: The Procedural and Material Components*, "Argumentation", 24, 2010, 4, pp. 489-512; E. Rigotti – S. Greco, *Inference in argumentation: A topics-based approach to argument schemes*, (in preparation).

²³ E. Rigotti – S. Greco, *Inference in argumentation: A topics-based approach to argument schemes*.

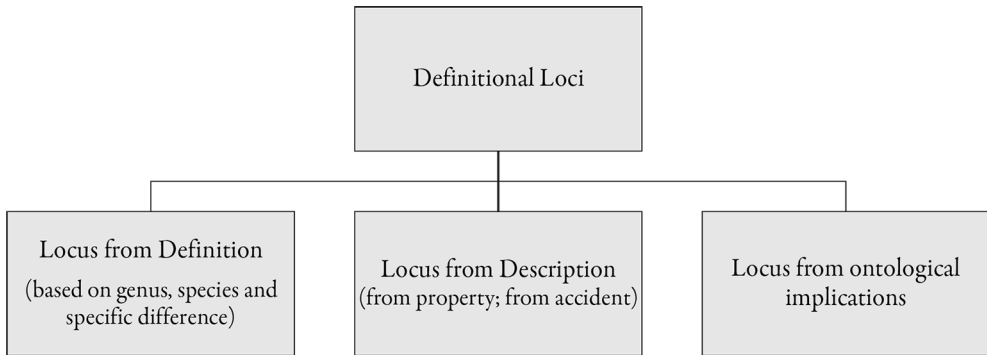
²⁴ R. Whately, *Elements of rhetoric*, International debate education association, New York 2009/1846, p.43.

²⁵ E. Rigotti – S. Greco, *Inference in argumentation: A topics-based approach to argument schemes*.

within the group of the intrinsic loci, where the argument and the standpoint belong “to the same possible world”²⁶.

The definitional loci have been treated by several ancient and medieval authors (to cite but two, see Aristotle²⁷ and Peter of Spain²⁸), as well as contemporary authors²⁹ (e.g. Hastings³⁰, Kienpointner³¹, Macagno³², Macagno & Walton³³, Walton & Macagno³⁴). The AMT classifies three sub-loci under the main label of ‘definitional locus’: the locus from definition, the locus from description and the locus from ontological implications³⁵. Figure 1 represents the definitional loci according to the AMT. In the following, the three definitional loci will be described. The second and the third definitional sub loci, the locus from description and the locus from ontological implications, will be discussed in broader detail, since they will be relevant for the analysis presented in section 4.

Figure 1 - The definitional loci within the AMT



²⁶ R. Palmieri, *Corporate argumentation in takeover bids*, p. 33.

²⁷ H. Tredennick – E.S. Forster ed., *Aristotle Posterior Analytics Topica*, H. Tredennick – E.S. Forster trans., Harvard University Press, Cambridge MA/London UK 1960.

²⁸ I.M. Bochenski, ed., *Petri Hispani Summulae logicales*, Marietti, Torino 1947, as quoted in E. Rigotti – S. Greco, *Inference in argumentation: A topics based approach to argument schemes*.

²⁹ An exception to this is the pragma-dialectical approach to argumentation used in this article for the general reconstruction of the argumentative discussion. In Pragma-Dialectics the definitional loci are not explicitly treated. They can be classified as symptomatic argumentation. F.H. van Eemeren – P. Houtlosser – A.F. Snoeck Henkemans, *Argumentative indicators in discourse. A pragma-dialectical study*, Springer, New York 2007, p. 154.

³⁰ A.C. Hastings, *A Reformulation of the Modes of Reasoning in Argumentation*, PhD dissertation, Evanston IL 1963.

³¹ M. Kienpointner, *Alltagslogik: Struktur und Funktion von Argumentationsmustern*, Frommann-Holzboog, Stuttgart-Bad Cannstatt 1992.

³² F. Macagno, *The Dialectical-Dialogical Definition*, “L’Analisi Linguistica e Letteraria”, 16, Special Issue: Word meaning in argumentative dialogue, 2008, pp. 443-461.

³³ F. Macagno – D. Walton, *Emotive language in argumentation*, Cambridge University Press, New York 2014.

³⁴ D. Walton – F. Macagno, *Reasoning from Classifications and Definitions*, “Argumentation”, 23, 2009, pp. 81-107; D.N. Walton – F. Macagno, *Defeasible Classifications and Inferences from Definitions*, “Informal Logic”, 30, 2010, 1, pp. 34-61.

³⁵ E. Rigotti – S. Greco, *Inference in argumentation: A topics-based approach to argument schemes*.

The locus from definition is based on Aristotle's perception in which definition consists of a genus and a *differentia* that specifies the genus. This means that a definition should represent the essence of the defined object³⁶.

The locus from description, the second locus within the compound of definitional loci according to the AMT, designates cases where a definition is based on a description of an entity. In comparison to the definition in a strict sense (i.e. the locus from definition within the AMT), the description is broader and can differ according to the context, in which an entity is described. An example for a definition by description that varies in different contexts would be that of a manager that is described by her collaborators as 'company X's CEO', whereas her parents describe her as 'our youngest daughter'. Macagno & Walton³⁷ point out that definitions "can advance a description of a meaning";³⁸ as a descriptive definition might state a proposition³⁹. According to the AMT, the description may be derived from two of Aristotle's four predicables: either from a property or from an accident⁴⁰. In the following paragraph the property will be discussed, since it will be part of the analysis in section 4.

Aristotle characterizes a property (*gr. ἴδιον, lat. proprium*) as exclusive and designating a kernel of a thing. A property consists of the name of the thing and the description of it. Aristotle presents different kinds of properties: 'relative properties', 'properties that inhere to entities as such' and 'permanent properties' that are inherent to a thing. Aristotle gives the following examples for permanent / temporary properties: a permanent property of God is that He is an immortal living being, whereas a temporary property of a man would be to walk in a gymnasium⁴¹. In order to verify if something is a property, Aristotle proposes to observe the relation between the name and the description of the thing:

In the constructive argument, the object is to see whether the description (given in the property) also is predicated of that of which the name (of the subject) is predicated and whether the name also is predicated of that of which the description is predicated⁴².

The third sub locus of the definitional loci is based on an ontological implication between an argument and the standpoint. The locus designates the relationship between the nature of an entity and the implications of this nature, namely the goal this entity has been designed for⁴³. An example that highlights the relation between ontology and deontology

³⁶ H. Tredennick – E.S. Forster ed., *Aristotle Posterior Analytics Topica*.

³⁷ F. Macagno – D. Walton, *Emotive language in argumentation*.

³⁸ *Ibid.*, 152.

³⁹ *Ibid.*, 120.

⁴⁰ E. Rigotti – S. Greco, *Inference in argumentation: A topics-based approach to argument schemes*.

⁴¹ T. Wagner – Ch. Rapp ed., *Aristoteles Topik*, T. Wagner – Ch. Rapp trans., Philipp Reclam Jun., Stuttgart 2004, p. 145.

⁴² H. Tredennick – E.S. Forster ed., *Aristotle Posterior Analytics Topica*, p. 509.

⁴³ S. Greco – A.-N. Perret-Clermont – A. Iannaccone – A. Rocci – J. Convertini – R. Schär, *Analyzing implicit premises within children's argumentative inferences*, accepted at European Conference on Argumentation, Fri-

would be: if you are a politician, you need to be accountable. This reasoning is described by Hastings as the argument from criteria to a verbal classification⁴⁴. In this case the definition is used “as the instrument for classifying reality”⁴⁵. An argument from criteria to a verbal classification is a means to “classify or categorize a situation; to prove that a certain label, classification, or verbal description may properly be attached to an aspect of reality”⁴⁶. Section 4 will present, among others, the analysis of a case of this reasoning by means of the AMT. The AMT⁴⁷ applied in this paper in order to explicit the implicit premises of the children’s arguments is partly based on the contributions of some of the above discussed authors.

3. *Corpus*

The data considered in this paper stems from a large corpus that has been collected in the context of different research projects over the last 30 years at the Institute of Psychology and Education at the University of Neuchâtel in Switzerland⁴⁸. Within the research project described in the introduction, we have the opportunity to reanalyze this data, originally collected for different purposes and in different contexts with a focus on the argumentative aspects in children’s speech in this specific setting. By means of this data, psychologists initially tested whether children have acquired certain cognitive concepts. In order to do so, they carried out experiments in schools and kindergartens and asked children in pairs to join them for a short session in a different room or a separated angle of their classroom. They then presented the children with different tasks, such as the “revised-Piagetian task” on the conservation of liquids (i.e. whether the children realize that the amount of liquid remains unchanged, even if it looks more in a long and thin container and less in a bowl-like container). This kind of tasks, initially used to study the children’s conceptual reasoning⁴⁹, have a long tradition in psychological research⁵⁰. The research group at the University of Neuchâtel has adapted the original Piagetian task in order to allow for peer-to-peer interactions, since this “under certain circumstances can favor reasoning and argumentation, in particular when partners experience ‘socio-cognitive conflicts’ i.e. the confrontation *hic et nunc* of different conflicting

bourg, Switzerland, 2017.

⁴⁴ A.C. Hastings, *A reformulation of the modes of reasoning in argumentation*.

⁴⁵ F. Macagno – D. Walton, *Emotive language in argumentation*, p. 69.

⁴⁶ A.C. Hastings, *A reformulation of the modes of reasoning in argumentation*, p. 36.

⁴⁷ E. Rigotti – S. Greco Morasso, *Argumentation as an object of interest and as a social and cultural resource*; E. Rigotti – S. Greco, *Comparing the Argumentum Model of Topics to Other Contemporary Approaches to Argument Schemes: The Procedural and Material Components*.

⁴⁸ I would like to thank Anne-Nelly Perret-Clermont and the Neuchâtel team for giving me access to the data. The data analyzed in this paper have been collected by Lysandra Sinclair-Harding as part of the SNSF project No. 100019-156690/1.

⁴⁹ J. Piaget, *La représentation du monde chez l'enfant*, Presses Universitaires de France, Paris 1926/2003.

⁵⁰ A.-N. Perret-Clermont, *Social interaction and cognitive development in children*, Academic Press, London 1980.

points of view that they feel the need to overcome.”⁵¹ At the same time, the altered task is supposed to lead the focus away from the asymmetrical adult-child relation. The adult experimenter who is pursuing his goal to assess the developmental level of a cognitive concept asks the children to perform a certain task and comment on it. Thus, within this activity, the adult experimenter has in mind a precise agenda of ‘issues’ to discuss with the children. Nevertheless, while performing the task and discussing their opinions with the adult experimenter and peers, it occurs that children spontaneously set up ‘sub-issues’. These may be more or less directly related to the ‘issues’ proposed by the adult.

The discussion chosen for this paper takes place in an angle of the children’s school. The activity that has been audio and video recorded was carried out in a public school in England. Both of the children participating in the extract chosen for analysis were five years old at the time of the data collection in October 2009. In order to participate in the task, they are separated from their fellows and brought to a table, where the tasks are set to take place. The context of the interaction is very particular. There are many components that make the situation different from ‘usual’ school situation in the eyes of the children: the children are not familiar with the adult experimenter person, the less so they are aware or do understand the goal of the task. This leads to unexpected subjects of discussion from an adult experimenter’s perspective. That is to say the context has an influence on the behavior and actions of the children⁵² and, at the same time, the actions and discourse of the children may alter the context in the sense that they change the expected course of a discussion⁵³. This might happen to a greater or lesser extent, depending on how much space the adult gives to the children’s spontaneous ‘issues’ and arguments. The activity type⁵⁴ that can be detected in these situations is shaped by the perception of the participants. On the one hand, from the perspective of the adult experimenter, the activity type arises from a research-oriented goal, i.e. the observation of cognitive concepts in small children. In the present situation the activity type could be labelled as ‘discussion on the concept of conservation of the quantities of liquid’. On the other hand, from the perspective of the children, the activity type may be very vague. As described above, the children do not know about the goal of the adult experimenter. They may perceive it as a game, where they are guided by an adult person or as a kind of ‘test’. In the present situation, the children behave in a way that gives rise to the impression that they do not know how to classify this activity. Whenever the adult experimenter takes another object, they start discussing on it in order to explore the use of the object and the whole situation.

⁵¹ A.-N. Perret-Clermont – F. Arcidiacono – S. Breux – S. Greco – C. Miserez-Caperos, *Knowledge-oriented argumentation in children*, p. 138, emphasis in the original.

⁵² A.-N. Perret-Clermont, *Comments on Rigotti & Rocci*, “Studies in Communication Sciences”, 6, 2006, 2, pp. 181-188; E. Rigotti – A. Rocci, *Towards a definition of communication context*, “Studies in Communication Sciences”, 6, 2006, 2, pp. 155-180.

⁵³ A.-N. Perret-Clermont, *Psychologie sociale de la construction de l'espace de pensée* “Actes du colloque. Constructivisme: usages et perspectives en éducation”, 1, 2001, p. 71, pp. 65-82.

⁵⁴ S.C. Levinson, *Activity types and language*, in *Talk at work. Interaction in institutional settings*, P. Drew – J. Heritage ed., Cambridge University Press, Cambridge 1979, pp. 66-100; E. Rigotti – A. Rocci, *Towards a definition of communication context*; F.H. van Eemeren, *Strategic maneuvering in argumentative discourse*, John Benjamins Publishing Company, Amsterdam 2010.

4. Analysis

4.1 Example 1: the giraffe

In what follows, two situations in which the children make use of the definitional loci will be analyzed. In the first situation, the children spontaneously go over the *issue* proposed by the adult and initiate a sub discussion on an ‘issue’ they proposed themselves. This discussion precedes the test of the conservation of liquids. The adult experimenter introduces the task to the children, with the help of a soft toy giraffe. The children are told a story that involves the giraffe and her soft toy friends. This reduces the asymmetrical relation between the children and the adult experimenter. The children get room to freely express their standpoint and support it, by answering the soft toy or the adult experimenter⁵⁵.

At the moment the analyzed extract takes place, the conversation between the two children⁵⁶ Andrew (5:10 years) and Ben (5:7 years) and the adult experimenter has been going on for nine minutes. The adult experimenter is now introducing the soft toy giraffe to the children (see above). Please note, that the children are seated on an edge of a hexagonal table, while the adult experimenter is seated in front of Andrew and to the right hand side of Ben. This is an important fact, since it means that the perspective the children have on all the objects used for the task differ. The transcription was based on a slightly modified version of Traverso⁵⁷, since different systems focus on different aspects of an utterance, and which aspects are relevant depends on where the investigator’s interests lie⁵⁸. A legend describing the used transcriptions signs can be found in the appendix.

Table 1 - Excerpt 1: Participants: Andrew (5:7 years), Ben (5:10 years), adult experimenter

Turn	Speaker	Transcript
1	Exp.	[...] we put the monkey there and then this is ↑
2	Ben	[a giraffe
3	Andrew	[a giraffe
4	Exp.	a giraffe yah
5	Ben	((raising both hands)) it’s got a long neck
6	Exp.	yah alright
7	Andrew	that hasn’t actually a long neck it’s a little neck
8	Exp.	you’re right is not the longest neck [t t the longest neck
9	Andrew	(((shakes his head confirming the Exp.’s utterance*))
10	Exp.	for a giraffe [I’ve ever seen is it no
11	Andrew	(((shakes his head confirming the Exp.’s utterance))
12	Exp.	you’re absolutely right ahm I think it could be a bit longer

⁵⁵ S. Greco Morasso – C. Miserez-Caperos – A.-N. Perret-Clermont, *L’argumentation à visée cognitive chez les enfants. Une étude exploratoire sur les dynamiques argumentatives et psychosociales.*

⁵⁶ The children’s names have been changed for reasons of privacy.

⁵⁷ V. Traverso, *L’Analyse de la Conversation*, Editions Nathan, Paris 1999, p. 157.

⁵⁸ *Ibidem.*

13	Andrew	((nods his head to say yes))
14	Exp.	[but it's still a giraffe
15	Andrew	[((nods his head to say yes))
16	Exp.	just maybe it is a junior giraffe
17	Andrew	((nods his head to say yes))**

* The fact that Andrew shakes his head in order to confirm the adult experimenter's utterance seems contradictory. However, when carefully watching the video registration, it becomes clear from his facial expression that even though shaking his head, Andrew does actually agree with what the adult experimenter is saying. In fact, later in the conversation (from turn 13 onwards), Andrew changes his head movement into nodding but his facial expression remains constant.

** At the end of the discussion Andrew seems to agree with the adult experimenter and Ben that the animal presented is a giraffe, a baby giraffe, since its neck is not as long as it would be for a 'typical' giraffe. This change in Andrew's position occurs thanks to the reframing made by the adult experimenter. Greco Morasso, Miserez-Caperos and Perret-Clermont (2015) show that especially in discussions with small children occurring in such semi-structured settings, standpoints can be intermediate positions that may change during the discussion. S. Greco Morasso – C. Miserez-Caperos – A.-N. Perret-Clermont, *L'argumentation à visée cognitive chez les enfants. Une étude exploratoire sur les dynamiques argumentatives et psychosociales*, p. 76.

The extract shows the children's primary reaction on the presentation of the soft toy giraffe⁵⁹. Both Andrew and Ben state that the soft toy animal presented to them is a giraffe. At first, all the interlocutors agree that this animal is a giraffe. When Ben continues by adding that it has a long neck, arguably a characteristics that describes a giraffe, Andrew contests this. For him the animal presented has not a long neck. This opposition is followed by the adult experimenter who tries to find a middle course solution, in order to accommodate Andrew as well as Ben. After the displayed discussion the adult experimenter continues to introduce the task on the conservation of liquids to the children.

In the discussion displayed in excerpt 1 all three interlocutors use a definitional argument from description. The following table gives an overview of the standpoints and the arguments from description given by the interlocutors.

Table 2 - Illustration of the arguments from description occurred in extract 1

Ben	1	It's a giraffe
	1.1	It's got a long neck
Andrew	2	(It's not a giraffe)
	2.1	That hasn't actually a long neck
Exp.	3	It's a junior giraffe
	3.1	It's not the longest neck for a giraffe I've ever seen

In the following, the focus will be put on the discussion between Ben, who gives an argument from description to support his standpoint right at the beginning of the discussion

⁵⁹ An image of the soft toy giraffe that was introduced to the children can be seen here: <https://www.amazon.de/NICI-Giraffe-Schlenker-50cm-23409/dp/B0002Y5WYI> last accessed April 27, 2017.

(turn 5) and Andrew, who problematizes Ben's argument in turn 7 with another argument from description.

By giving an argument in favor of his standpoint "(this is) a giraffe" (turn 2), Ben in turn 5 spontaneously introduces the implicit 'issue' 'is this a giraffe?'. This 'issue' is further pursued by Andrew, who in turn 7 shows his disagreement by giving a counterargument "that hasn't actually a long neck it's a little neck". By means of a slightly modified version of the 'analytic overview'⁶⁰ the discussion can be represented as follows:

Table 3 - Analytic overview of excerpt 1

Issue (introduced by the children): Is this a giraffe?			
<i>Standpoint 1</i>		<i>Standpoint 2</i>	
Ben	1 Yes	Andrew	2 (No)
<i>Argument</i>		<i>Argument</i>	
Ben	1.1 it's got a long neck	Andrew	2.1 it hasn't actually a long neck it's
T. 5		T. 7	a little neck

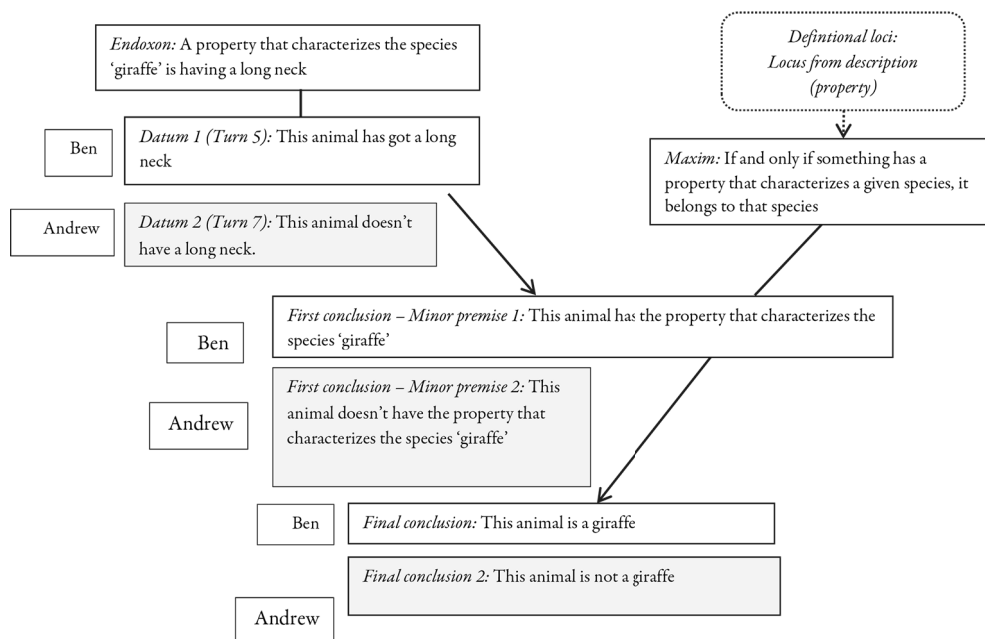
The representation of the argumentative elements of the discussion highlights that this discussion is taking place between the two children. Note that Andrew's standpoint remains implicit in the discussion. The moves the adult experimenter makes in turns 8, 10, 12, 14 and 16 are not part of the difference of opinion on the 'issue' 'Is this a giraffe?'. Even though one could suggest, considering each of the turns of the adult experimenter (see above) in an isolated way, that she is giving an argument in favor of each of the two opposing standpoints. Such a consideration, however, would lead to the conclusion that the adult experimenter has no clear opinion on the 'issue', as the two arguments she puts forward are opposing each other. Therefore, the adult experimenter's moves are interpreted as having a mediating effect between the two opposing standpoints of the children. By trying to 'mediate' between the two opposing standpoints of the children in turns 8, 10, 12, 14 and 16, the adult makes a typical move of reframing the discussion⁶¹: on the one hand, she admits that she has seen giraffes with longer necks and, on the other hand, she suggests that the soft toy giraffe may be a junior member of the species. By giving herself an argument from description for the 'mediated' standpoint "It's a junior giraffe" that she adopted in turn 16, the adult experimenter implicitly redefines the particular giraffe around which the discussion revolves. Knowing about the design and the goal of the task, namely to verify the acquisition of the conservation of liquids, it becomes clear that the aim of her move is to reconcile the children in order to proceed with the original task on the conservation of liquids.

⁶⁰ The modification within the analytic overview consists of a graphical change, representing the relation between argument and standpoint in a different manner.

⁶¹ S. Greco, *Framing and reframing in dispute mediation: an argumentative perspective*, in *Case studies in Discourse Analysis*, M. Danesi – S. Greco ed., Lincom, Munich 2016, pp. 353-379.

In order to understand the reasoning of the children this difference of opinion will be analyzed by means of the so called y- structure of the AMT. Figure 2 shows an adapted version of a y-structure, namely the combination of two single y-structures. In the present case the arguments of Ben and Andrew were combined in order to better highlight what aspects they have in common and where they differ:

Figure 2 - AMT representation Argument 1.1 of Situation 1



Two of the components of the AMT y-structure can be directly linked to statements made in the discussion: the 'final conclusion' given by Ben corresponds to Ben's standpoint in turn 2 of the transcript. The *datum* is based on the subjective perception of the facts present in the situation of the discussion and coincides with the argument Ben gives in turn 5 of the transcript. The syllogism on the left hand side of the y-structure represents the material premises. The *endoxon* is a culturally shared premise that is substantiated by the facts (*datum*). The outcome of this reasoning is the first conclusion. On the right hand side of the y-structure, in the logical syllogism, one finds the *locus* – in this case a definitional locus from description – that designates the ontological relation between the argument and the standpoint. The 'maxim', derived from the locus, is the inferential connection between the *locus* and the 'final conclusion'. By combining these two syllogisms, it is possible to get insights into the reasoning process of the arguer. Ben pursues the reasoning that the soft toy animal shown by the adult experimenter is a giraffe. He therefore starts his reasoning from a maxim that takes the property characterizing a species into account. Arguably, in the cultural context in which this interaction has been recorded, giraffes are described to children as having a long neck, thus the *endoxon*, of Ben's reasoning is this culturally shared premise.

Since in Ben's eyes the soft toy animal introduced by the adult experimenter has in fact a long neck, he concludes that it is a giraffe. This reasoning is only partially shared by Andrew. In his reasoning, Andrew starts from the same 'maxim' ("if and only if something has a property that characterizes a given species, it belongs to that species") and acknowledges the same *endoxon* as Ben ("a property that characterizes the species 'giraffe' is having a long neck"). To him, however, the soft toy animal introduced by the adult experimenter does not possess this characterizing property of a giraffe. He thus uses an opposite *datum* and therefore arrives to the final conclusion that the soft toy animal introduced by the adult experimenter is not a giraffe. Thanks to the reconstruction of the children's reasoning by means of the γ -structure, it can be concluded that the difference of opinion⁶² in this excerpt of the discussion stems from the different interpretation of the facts (*data*).

The locus from description introduced by Ben is based on a 'property'. In the present case the children describe the soft toy animal based on its property '*long neck*'. The long neck is inherent to a giraffe, therefore it can be regarded as a permanent property of the species 'giraffe'. In order to verify if this inference is correct, according to Aristotle, one can observe the relation between the name and the description of the thing, as has been explicated above. Thus, the description 'animal with a long neck' is predicated of the same living being as the name 'giraffe' and reversely, the name 'giraffe' is predicated of the same living being as the description 'animal with a long neck' is predicated. Since both directions of reading are correct, a long neck can be designated the property of a giraffe⁶³.

By means of the analysis of this simple discussion on the neck of a soft toy giraffe, it was shown that the reasoning of both children is sound at the procedural-inferential level and from a logical point of view (see right hand side of the AMT γ -structure). The analysis of the material part of the reasoning (left hand side of the AMT γ -structure) furthermore shows that the apparent contradiction of the standpoints "This animal is a giraffe" vs. "This animal is not a giraffe" in a discussion like this does not mean that only one interlocutor makes a sound reasoning. In fact, the opposing standpoints are due to a divergent perception of the datum. Indeed, Andrew does not perceive the soft toy animal as a giraffe, because, for him, it does not have the property of a giraffe, even though many other characteristics of it, such as the shape of the body in general and the color may coincide with that of a giraffe.

4.2 Example 2: *the sweets*

The second situation chosen for analysis is taken from the same discussion between Andrew (5:7 years), Ben (5:10 years) and the adult experimenter. However, it differs from the first in that it occurs in a rather 'mute' moment, where the children seem to explore what the next task is about. This time the adult experimenter gives the 'issue' by means of her action: the task on the conservation of liquids has been finished and the adult experimenter

⁶² F.H. van Eemeren – R. Grootendorst, *Argumentation, Communication, and Fallacies, A Pragma-Dialectical Perspective*.

⁶³ See: H. Tredennick – E.S. Forster ed., *Aristotle Posterior Analytics Topica*; E. Rigotti – S. Greco, *Inference in argumentation: A topics-based approach to argument schemes*.

is preparing the next task which is on the conservation of numbers. To this purpose, she prepares sweets of different shapes. Ben initiates a discussion, asking what the sweets are, as he seems not to know or to recognize them. As an answer, he gets among others the statement of Andrew that these are mints and that he has already eaten some of them. Continuing on the question whether the mints are eatable, Ben states his unwillingness to eat them. This is where the adult experimenter drops into the discussion stating turn 1 (see below), thereby introducing implicitly the 'issue' 'Can we eat the sweets?'. What follows in excerpt 2 is the rest of the discussion on this 'issue', mainly taking place between Ben and the adult experimenter. At this moment the overall discussion (including the discussion on the giraffe analyzed before) has been going on for more than 12 minutes.

Table 4 - Excerpt 2: Participants: Andrew (5:7 years), Ben (5:10 years), adult experimenter

Turn	Speaker	Transcript
1	Exp.	[...] ((shakes her head)) no one has to eat anything (1.0) actually ((uses a pen to bring a mint out of the box)) if they xxx to
2	Ben	if they I if Andrew wants [to eat them
3	Exp.	[this one is stuck
4	Ben	this one is stuck
5	Exp.	stuck (3.0)
6	Ben	maybe we can eat them=
7	Andrew	three= ((counting the mints on the table))
8	Ben	you can't eat them because they're for adults

In the following table the transcription is complemented with the interpretation of the ambiguous turns based on the video recording of the conversation⁶⁴.

Table 5 - Explanation of the interpretation of ambiguous turns of excerpt 2

Turn	Speaker	Transcript	Interpretation of ambiguous turns
1	Exp.	[...] ((shakes her head)) no one has to eat anything (1.0) actually ((uses a pen to bring a mint out of the box)) if they xxx to	<p>"no one has to eat anything (1.0) actually" is regarded as a permission, i.e. you won't be obliged to eat them. This interpretation is based on the fact that Ben states his unwillingness to eat them shortly before the discussion displayed in table 4 starts.</p> <p>"if they xxx to" is interpreted as "if they don't want to". This interpretation as well goes in line with the fact that Ben states his unwillingness to eat the sweets before the displayed discussion starts.</p>

⁶⁴ I thank an anonymous reviewer for suggesting the inclusion of this explanatory table.

2	Ben	if they I if Andrew wants [to eat them	This turn is independent from the Exp.'s previous turn. The utterance is regarded as a hypothesis that Ben starts and completes in turn 6.
3	Exp.	[this one is stuck	
4	Ben	this one is stuck	
5	Exp.	stuck (3.0)	
6	Ben	maybe we can eat them=	This utterance is the second part of Ben's hypothesis on the possibility of eating the sweets. In fact, the overlapping speech of the Exp. deviates Ben's attention (visible in the recorded video) and cuts Ben's utterance into two. The connected utterance would be: "if they I if Andrew wants to eat them maybe we can eat them"
7	Andrew	three= ((counting the mints on the table))	
8	Ben	you can't eat them because they're for adults	Ben does not visibly direct this utterance to Andrew. Therefore, it is regarded as a 'general principle' i.e. you can't eat the sweets, because they are for adults only.

In the transcribed excerpt, Ben and the adult experimenter talk about two different subjects that overlap each other. The analysis will focus on the above specified 'issue': 'Can we eat the sweets?'. The first standpoint on this 'issue' is put forward by the adult experimenter in turn 1. Ben then bases his reasoning on this standpoint and concludes with his standpoint: "you can't eat them", that he supports with the argument: "because they're for adults", in turn 8. This discussion can be visualized by means of the analytic overview as follows:

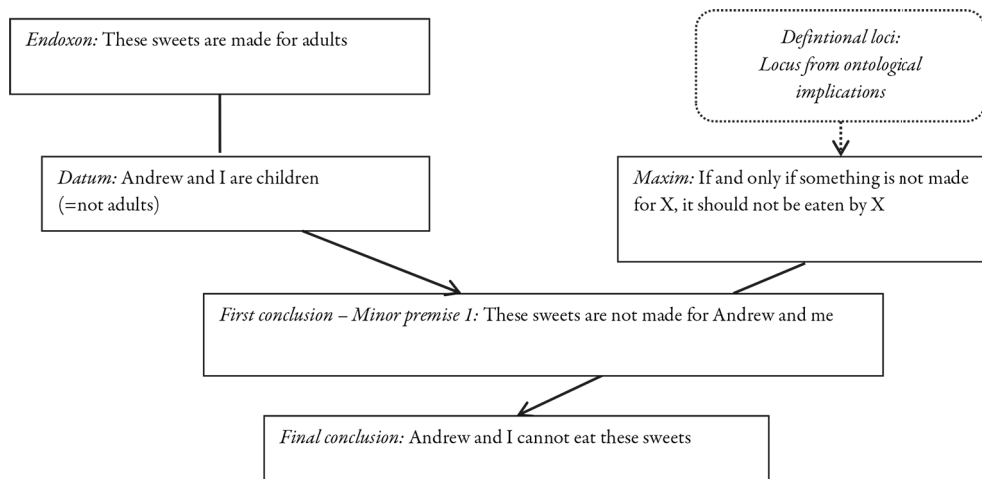
Table 6 - Analytic overview of excerpt 2

Issue (introduced by adult experimenter): Can we eat the sweets?			
<i>Standpoint 1</i>		<i>Standpoint 2</i>	
Ben	1 You can't eat them	Unspecified antagonist	2 (we can eat them)
<i>Argument</i>		<i>Argument</i>	
Adult experimenter	1.1 no one has to eat		---
T. 1	anything		
Ben	1.2 they're for adults		
T. 8			

The difference of opinion analyzed here has no specified antagonist. Both Ben and the adult experimenter are supporting the standpoint that the sweets do not have to be eaten. By taking the whole discussion into account, however, one can find a possible trigger of Ben's reasoning by Andrew's statement that declares mints to be something eatable. As is

shown by the following AMT representation, Ben does not include Andrew's statement that he has already eaten some mints in his reasoning.

Figure 3 - AMT representation of Argument 1.2 of Situation 2



Ben's argument pertains to a subtype of the definitional loci, namely to the locus from ontological implications. In the present case, Ben defines the situation on the right to eat the sweets through the purpose / addressee for which they have been produced (according to him). This is also underlined in the maxim he implicitly uses. Albeit appearing 'weird', Ben's reasoning is sound from a viewpoint of inference (right hand side of the y-structure): arguably, there are cases in the domain of nutrition, but also in other everyday domains, where something is either especially designed for children or it is not addressed to children at all⁶⁵. An example would be, on the one hand, books on fairy tales with colorful drawings to illustrate the story, addressed to children, and on the other hand, novels where the plot and the language used are complex, addressed to adults. Whereas the former was realized in a way that is more appealing to children, using drawings and colors, the later was produced for a public of adults, where the content is more important than the appearance. It is possible that Ben was 'inspired' by such cases, when giving an argument for his standpoint that Andrew and himself cannot eat the sweets.

The material part of Ben's reasoning consists of a datum that remains implicit, since it is obvious to all the participants of the conversation that Andrew and Ben are children / not adults. Ben's *endoxon* corresponds to his argument. Based on the argument put forward by the adult experimenter (T. 1 "no one has to eat anything"), Ben creates an *endoxon* that is particular to the situation. Indeed, by departing from the fact that adults can eat sweets, he implicitly refuses the adult experimenter's argument. One may hypothesize that Ben's reasoning turns around the fact that sweets are produced for a certain reason, that is for

⁶⁵ A similar case has been analyzed in: S. Greco – A.-N. Perret-Clermont – A. Iannaccone – A. Rocci – J. Convertini – R. Schär, *Analyzing implicit premises within children's argumentative inferences*.

being eaten and therefore the adult experimenter's argument in turn 1 cannot be sound and hence must be refuted.

According to the modes of reasoning described by Hastings⁶⁶, Ben's reasoning would correspond to an argument from criteria to verbal classification⁶⁷. An argument from criteria to classification comprises, among others, the classification of a situation⁶⁸. In order to reach conclusions, according to Hastings "the premises demonstrate that the event has the characteristics or attributes which comprise the definition of that classification."⁶⁹ In fact, Ben's implicit premises (datum and maxim) are such as to show that the sweets have the characteristics that encompass the definition of the classification that Andrew and himself cannot eat the sweets.

Although the argument Ben uses in order to make sense of the conversation and the actions taking place may convince an adult reader only to a limited extent, it can still be regarded as being part of a valid reasoning. Children may have different ontologies than adults, which is reflected in the present case in the reconstructed *endoxon*.

By analyzing the implicit component in Ben's reasoning about the edibility of sweets, it was possible to make Ben's thoughts more understandable and retraceable. Whereas a simple reading of Ben's argument on his standpoint that the sweets cannot be eaten by Andrew and him does not seem 'correct', the understanding of the underlying implicit reasoning, makes his position more clear. Even though Ben's reasoning may nevertheless be regarded as 'fallacious' or not completely 'correct', an adult interlocutor acting according to the principle of charity⁷⁰ is more likely to accept Ben's argument, once he is aware of his reasoning.

5. Conclusion and openings for future research

In the case study of this paper, a particular part of children's speech was analyzed, namely the argumentative discourse that small children under the age of six years spontaneously produced in a semi-structured setting. This means that the setting did not *per se* give room to discussion. However, it was shown that the children have the linguistic skills to express their standpoints on an 'issue' and support them with arguments in two different types of situations: in the discussion on the giraffe, the children spontaneously started an argumentative discussion on a subject ('issue') of their 'choice' that was not thought to need discussion from the perspective of the adult experimenter. In the situation of the sweets, the children discussed on a 'sub issue' that was given by an adult, whereas the main 'issue' was raised by the children. The focus of this paper lies on the illustration of a specific type of argument that occurred in these situations: the definitional argument. The locus of definitional arguments was recurrent in children's speech during the first phase of an

⁶⁶ A.C. Hastings, *A reformulation of the modes of reasoning in argumentation*.

⁶⁷ *Ibid.*, 36.

⁶⁸ *Ibidem*.

⁶⁹ *Ibidem*.

⁷⁰ R.C. Anderson – C. Chinn – J.Chang – M. Waggoner – M. Yi, *On the logical integrity of children's arguments*, "Cognition and Instruction", 15, 1997, 2, pp. 135-167.

exploratory research conducted by the author from July to November 2015. The present paper analyzes two different sub loci of the definitional locus: < the locus from description and the locus from ontological implications.

In the case of the discussion on the soft toy giraffe (example 1), all the interlocutors used a definitional argument from description to support their respective standpoints. The analysis shows how one and the same object can be defined (and redefined) by means of a description that is based on the personal perception of each interlocutor. Moreover, the AMT analysis of this example highlights the importance of considering the material premises when analyzing children's reasoning. In this case, a divergent perception of a fact in reality (length of the giraffe's neck) leads to an oppositional conclusion (standpoint). However, as shown, this does not mean that one of the reasonings is not correct.

The second analyzed example illustrates the use of the locus from ontological implications. In this case sweets are defined by their perceived purpose. In fact, the distinction between the material and the procedural part of the reasoning in the AMT allows for a differentiated perspective at Ben's contribution. It becomes clear that in the material part of the reasoning, although it is not generally 'wrong', Ben's endoxon might not be shared with the other interlocutors. In this case the reconstruction of the implicit premises is a helpful means in order to show that the children's reasoning is sometimes based on an ontology that differs from the adult's, a fact that could make the children's reasoning appear fallacious in the eyes of an adult.

Children want to understand things they see, situations they find themselves in, which is understandable especially in a context in which an unknown adult proposes an unknown task to them. It is therefore not by chance that they may recur to definitional arguments when reasoning about something that is new to them. The analysis of the implicit components of their reasoning allows for a better understanding and appreciation of children's contributions to argumentative discussions that at first sight may not always convince.

This paper presented a single critical case of a conversation in a specific setting, where small children use definitional arguments. In order to further explore whether and what kind of definitional arguments small children use more research has to be done; currently a collection of examples is being made by the members of the ArgImp project. It would also be interesting to amplify this research to less structured settings and smaller children. Furthermore, also the influence of the setting on the choice of definitional arguments has to be investigated. Considering the cases studied in a semi-structured setting, one can make the hypothesis that in situations, in which the children are confronted with different unknown aspects, such as an unknown task and/or an unknown adult person, they are trying to understand the different components of the setting they find themselves in by means of definitional arguments.

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Appendix: Transcription symbols

sign	description
Ó	rising intonation
(())	nonverbal component
(1.0)	pause of 1 second
xxx	non understandable utterance
[overlapping segments
=	immediately following turn

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