

DISCOURSE MARKERS
IN THE PIAGETIAN INTERVIEW:
HOW ADULTS AND CHILDREN
CONSTRUCT THEIR CONVERSATIONAL MOVES
WITHIN THE TEST CONTEXT

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ABSTRACT: *The aim of this paper is to explore how children and adults use discourse markers as embedded in conversational moves during the Piagetian test of conservation of liquid quantity. As we are interested in the pragmatic functions of discourse markers, we focus on how these contribute to construct the participants' statements within the specific setting in which they interact, i.e. during the testing situation. Through a qualitative analysis of clinical interviews involving children aged from 5 to 7, we intend to highlight how participants use discourse markers to co-organize their interactions and to continuously frame what is at stake. The relevance of the context for the use of discourse markers allows us to take into account roles, positions and social relations that participants play during their interactions.*

KEYWORDS: *Discourse markers - Pragmatics - Piagetian interview - Conversational moves - Context.*

I. INTRODUCTION

THIS study¹ explores how children and adults use discourse markers (hereafter DMs) in their construction of conversational moves within a typically Piagetian testing situation, that of liquid conservation (Piaget & Szemiska 1941). The focus of the work concerns the pragmatic functions of DMs, that are viewed as resources for participants to collaboratively manage the conversation. The specific situation within which the study has been conducted is related to the idea that Piagetian testing situations are not exclusively settings to test children's statements as indicators of their cognitive-logical level. As children's answers are also the result of an interaction with the adult (the tester), we intended to analyze, in this specific frame, the role of DMs in contributing to the co-construction of conversational moves among participants. Through the qualitative approach used

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to analyze children-adults interventions, we intended to draw attention to the use of DMs within the specific context of the Piagetian interview in order to highlight roles, positions and social relations of participants.

II. THE PIAGETIAN INTERVIEW

To have access to children's modes of reasoning, Piaget (1926) suggested that confronting children with different points of view in various situations was more relevant than simply asking them to answer questions. Piaget described thereafter his method of "critical" or "clinical" interview as engaging in conversations with children, granting special importance to counter-suggestions as invitations to defend and back up their answers. This should allow the psychologist to assess the operational structure behind the child's reasoning and not just the conformity of isolated responses to the adult's normative expectations.

According to previous studies on the use of tests in different situations (Grossen *et al.* 2006), we recognized the specific and situated character of the participants' interaction during the Piagetian interview. For this reason, we presented a specific design we employed as a different testing situation in order to account for a re-interpretation of the Piagetian clinical interview. We chose the liquid conservation as one of the most famous Piagetian tests for assessing concrete operations in children (typically 5-to 7-years old).

From a psychological point of view, Piaget considered the need for conservation as a kind of functional *a priori* of thought. As described by Piaget and Szeminska (1941), the test of liquid conservation concerns a situation in which a child is given two cylindrical glasses of equal dimensions (A and A') containing the same quantity of liquid. The content of A is then poured into two smaller containers of equal dimensions (B and B'), and the child is asked whether the quantity of liquid poured from A into (B + B') is still equal to that in A'. Then, the liquid in B could be poured again into two smaller, equal containers (C and C'), and the liquid in B' poured into two other containers C'' and C''' that are identical with C and C'. Questions concerning the equality between (C + C') and B', or between (C + C' + C'' + C''') and A' are then asked. In this way, the quantities of liquid are subdivided in a variety of ways, and each time the issue of conservation is put in the form of a question about equality or non-equality of the quantities with one of the original containers. Eventually, the experimenter would take another glass (D, taller and thinner), and pour the liquid from glasses B and B' into D. The child is asked to compare the quantities present in glasses B + B' and D: "Is there more liquid in one glass or in the other one, or is there the same amount in both glasses? Why?" Piaget has invited the child to react to counter-suggestions in order to solicit various arguments, with the intention of understanding the structure of the child's thoughts.

Within the line of recent re-interpretations of the Piagetian test of liquid conservation (Arcidiacono & Perret-Clermont 2009, 2010) a central objective has been to explore how conversations between adult and child are co-constructed in this specific setting. To some extent, we considered the test of liquid conservation as prototypical of Piagetian situations in which a child is called to engage in conversation with a partner to answer questions and provide explanations. According to Arcidiacono *et al.* (2011), we assumed that the «*language and its effects cannot be con-*

sidered deterministically preordained by the exclusive properties of linguistic structures or by assumed constructs of individual competence and knowledge. Rather, the opportunity to share the responsibility among interlocutors for the creation of sequential coherence, identities, and meaning is an important element of co-construction within interaction» (p. 20).

In this paper, we specifically focused on some DMs and on their functions in as much as they create a task's space within the Piagetian interview. Context was considered in terms of what participants observably attend to in their interactions, according to Schegloff (1992) and our idea was to highlight the construction of conversational moves by the participants when using DMs and the pragmatic (contextually-based) effects of their use.

III. DISCOURSE MARKERS IN CONVERSATION

During the last decades, in the field of social and developmental psychology, as well as in linguistics, there has been a growing interest in a set of pragmatic resources often referred to as DMs (Schiffrin 1987; Redeker 1990; Jucker & Ziv 1998; Fraser 1999; Schourup 1999; Blakemore 2002). In particular, Schiffrin (1987) used an interactional sociolinguistic approach in which markers serve to connect utterances on the multiple planes of participation during social interactions: exchange structure (turns, adjacency pairs¹); action structure (speech acts); ideational structure (semantic units, such as propositions or ideas); participation framework (participants' orientation to the produced talk, but also orientation to ongoing activities through which participants state their position and their relation to others²); and information state (cognitive capacities of the speaker/hearer – organization and management of knowledge and meta-knowledge). Other studies were conducted within a pragmatic perspective (Fraser 2006; Mosegaard-Hansen, 2005; Pons 2005), within a discourse-coherence perspective (Sanders & Noordman, 2000; Roulet 2005) or within the Relevance Theory framework (Montolío Durán 1997, 2001). In recent years, research on DMs has notably increased and many differences in DMs' use have been highlighted such as differences signalling various degrees of formality involved in the formulation of a statement, marked by register and types of discourse (Dominguez Garcia 2010), and differences in the grammatical uses of DMs within a historical perspective (for example, Brinton 1996, in the English context, and Pons Rodríguez 2010, in the Spanish context). Furthermore, in other investigations a significant gender difference has been found in the use of DMs. For example, Croucher (2004) has shown how women seem to use some DMs as "like" and "you know" more often than men, although these DMs serve no proper linguistic function.

Although DMs are an object of interest to several disciplines and can be considered as resources that allow a link between linguistics, sociology and psychology, in our perspective, they can be defined as a set of linguistic items functioning at a cognitive, social, and textual level (Bright 1992). DMs help communicators to gain

¹ An adjacency pair is a minimal sequence of two turns related by a principle of conditional relevance (Schegloff, 1972): given the first pair part, the second is structurally expected. Usually, participants understand each other and keep the conversation going because they adhere to this structure.

² Cf. the notion of footing (Goffman 1981).

linguistic and/or conversational consistency and coherence (Bussman 1984) and, more generally, to develop language skills (Spratt 1992).

In this paper, we focused on DMs which have mainly a pragmatic function: firstly, we considered DMs to be primarily elements conveying no or minimal propositional content. For their classification, we referred to the model elaborated by Martín Zorraquino and Portolés Lázaro (1999) that considers DMs as invariable linguistic units with discursive and pragmatic functions. These authors offer a systematic description of 170 discourse markers within a typology that distinguishes five different groups: 1) structuring markers (DMs that help to structure a given information); 2) connectors (DMs that connect semantically and pragmatically discursive units); 3) reformulation markers (that introduce a new utterance as a more adequate expression of what has been said before); 4) argumentative operators (that contribute by their meaning to highlight the argumentative character of a discursive unit); and 5) conversational markers (that usually appear in a conversation). Although Martín Zorraquino and Portolés Lázaro (1999) did not separate conversational and non-conversational DMs claiming that every discourse is dialogical, they established a specific group of conversational markers. In fact, conversation is considered as a peculiar communicative situation with specific properties that allow for the use of certain DMs. Although this typology has been established for the Spanish language, it can be used to describe and to analyze the organization of DMs also in other languages, such as English or French.

Within this theoretical framework, we intended to explore the use of DMs in testing situations involving adults and children as conversational resources that contribute more to pragmatic roles than to the ideational plane/conceptual meaning/propositional content. These functions can be summarized as ways: to help signal connections to the propositional content; to build a relationship between participants in a conversation; to express the speaker's stance toward the content of the conversation and the organization of its course. A second point we wanted to explore concerned the relevance of context for the use of DMs. Few studies (e.g. : Verdonik *et al.* 2008) have explicitly focused on the relationships between the use of DMs and the context, although this is one of the basic aspects of pragmatics and may contribute to a better understanding of DMs' role. By considering DMs' use as embedded in context, we would obtain an insight into some particular aspects of context-talk relationships within the Piagetian interview as an interactional setting of conversation.

In this study we relied on the concept of discourse stance, as defined by Biber and Finegan (1989: 124): «*the lexical and grammatical expression of attitudes, feelings, judgments, or commitment concerning the propositional content of a message*», including adverbs, verbs, and adjectives which mark affect, certainty, doubt, hedges, emphasis, possibility, necessity, and prediction. Other studies (Ochs & Schieffelin 1983) have considered stance as a dimension that concerns the relationships between language and culture. In particular, stance includes a socially recognized way of knowing a proposition, such as direct and indirect knowledge, degrees of certainty and specificity (an epistemic stance) and a socially recognized feeling, mood, or degree of emotional intensity (affective stance). This second perspective was deemed relevant in that it derives from the investigation of communicative contexts with the aim to analyze the linguistic forms occurring in different socio-cultural settings.

In particular, our focus on conversational interactions investigated through participant observation (Pontecorvo & Arcidiacono 2010; Arcidiacono & Gastaldi 2011) was assumed as a way to assess how children acquire the ability to use language constitutively, on the assumption that «*epistemic and affective stance has an especially privileged role in the constitution of social life*» (Ochs 1996: 420). In the present study we adopted this approach to analyze forms of linguistic expressions (specifically, the DMs) which speakers use as discourse stances in realizing the co-construction of their conversational moves within a test situation. As there is no one way of talking about a given topic, speakers can use different rhetorical options in the perspectives they adopt towards a given situation. This aspect concerns the extent to which DMs are used as linguistic devices to meet specific conversational functions.

IV. METHODOLOGY

We designed an experimental procedure to administer the test of liquid conservation to children individually and in small groups. An adult interviewed children in order to test their understanding of the notion of quantity conservation via a conversation about the effects of pouring juice into glasses of different shapes.

Participants and data collection

In four different primary schools in Switzerland and England, we invited 104 children aged between 5 and 7 to participate in tests of liquid conservation. A total of 116 interviews were conducted by one experimenter,¹ each one lasting no more than 20 minutes in a separate room adjacent to the classroom. Interactions were video- and voice- recorded to ensure students' reactions were captured.

Procedure and instruments

The experimenter and the child were seated at the same table. At the beginning, two identical glasses A and A' (cf. FIG. 1) were filled with juice to the same level, and the child was asked whether they each contained the same amount of liquid. Once the child had established that this was the case (sometimes after having added a few additional drops), the content of one (glass A') was poured into another (taller and thinner) glass (B). The child was then asked whether the two glasses (A and B) still contained the same quantity of liquid. Then, the content of B was poured back into A' and the child was asked the same question concerning A and A'. When the child had again established the equality of the initial quantities of A and A', the content of A was poured into another (smaller and larger) glass (C), and the child was asked again to discuss the relative quantities in A' and C.

¹ Experimenters were female researchers (25-30 year olds) trained to conduct Piagetian interviews. They were unknown to the children and were introduced to the participants using first names (in order to disassociate from the classroom authority or teacher figure, thereby reducing the effect of relationship-asymmetry).

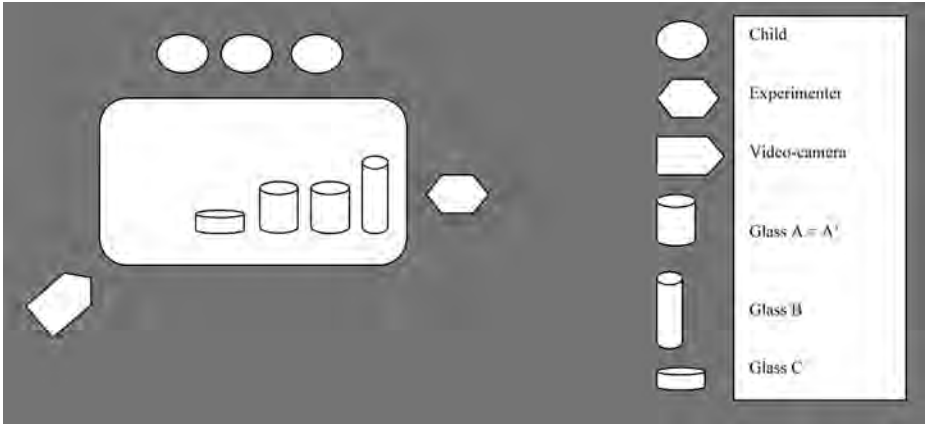


FIG. 1. Setting of the test of liquid conservation (adapted from the original source: Arcidiacono & Kohler 2010).

Instead of relying exclusively on face-to-face interviews between adult and child, we organized a group activity similarly to Perret-Clermont (1980). In some cases, children were grouped with their peers in dyads or triads.

By adopting a qualitative approach to study social interactions (Baucal *et al.* 2011), we analyzed some cases in order to explore how participants were able to build their interactions through the pragmatic functions (among others) of DMs in their dialogues. We presented and discussed different excerpts of videotaped conversations (for the transcription symbols we used, see Appendix 1; where necessary, transcriptions in the original language are provided in Appendix 2) in which various uses of DMs by children and adults in the co-construction of their conversational moves were presented. The selection of the cases presented in this study has not been guided by external criteria such as children's genre, age or country in which the testing situation was experienced. Rather, the excerpts have been selected as representative of different uses of DMs embedded in conversations within Piagetian interviews. For all participants, fictitious names replaced real names in order to ensure anonymity in the presentation and the analysis of the excerpts.

Selection of discourse markers and categories

The main idea of this empirical part was to analyze interventions used by participants when functioning as DMs. In particular, we referred to such expressions as "oh", "well", "mhm", "look", "you know", "right?", "okay", "yes", "yeah", and "no" used by participants during the observed interactions. In addition, some other expressions were included (such as "I mean", "so", and "so now") as they were employed during conversations between adults and children.

The presentation of the above-mentioned DMs was organized in categories inspired by the classification suggested by Martín Zorraquino and Portolés Lázaro (1999) and described above. As already said, the authors established five groups of markers organized according to the role that these markers exert in commu-

nication: structuring markers, connectors, reformulation markers, argumentative operators and conversational markers. In this study, we referred to *conversational, reformulation and structuring markers*. More specifically, different categories could be identified: in particular, within the conversational markers Martin Zorraquino and Portolés Lázaro (1999) included metadiscursive markers, other-referred markers and epistemic modality markers. In the reformulation group, they included the explicative markers, and within the structuring markers they included the category of commentary.

The organization of DMs considered in the analytical part of our study is summarized in TABLE 1:

TABLE 1. Classification of DMs for the analysis.

Group of DMs	Category of DMs	Examples of DMs
Conversational	Metadiscursive	Oh / Well / Mhm
	Other-referred	Look / You know / Right?
	Epistemic modality	Okay / Yes / Yeah / No
Reformulation	Explicative	I mean
Structuring	Commentary	So / So now

We organized DMs in these five functional categories although their values and different uses must be observed in context, as can be seen in the empirical part of this article. Examples of DMs for the above-mentioned categories must be intended as being not mutually exclusive.

Our study was mainly focused on the group of conversational DMs. These types of DMs not only have an informative but also an interactive function oriented to the interlocutor. In particular, three categories can be included in this group of conversational markers: the meta-discursive markers that serve to structure the conversation; the other-referred DMs that have an interactive function (such as showing the focus or the position that a speaker adopts in relation to his/her interlocutor), and indicate cooperative strategies among participants during a conversation; the epistemic modality markers that reflect the speaker's stance by the indication of his/her position within what is being announced. They show if the speaker accepts or not what has been said. Therefore, they contribute to establish strategies of cooperation with an interlocutor showing agreement or disagreement and reinforcing the positive or negative image of the person who is talking.

The other two groups of DMs are the reformulation and the structuring markers. On the one hand, the reformulation markers, as its name indicates, present a statement as a new formulation of a previous statement (Rossari 1994; Martin Zorraquino & Portolés Lázaro (1999)). The category of explicative markers is used to reformulate a previous idea with the aim of explaining it clearly. On the other hand, the structuring group helps to organize the information that is provided. Specifically, the commentary markers introduce a new statement as a comment to what has been previously said. The utterance is understood as a different comment responding to another topic, or as a preparation to a new comment introduced by the DM.

V. ANALYSES

Data were organized in three subsections, according to the groups of DMs found in the observed interactions. In the first group we referred to the conversational markers as the main group considered in this study. Then, we presented a subsection in which we accounted for a mixed use of conversational and structuring markers that appeared together in the participants' interactions. The last subsection included all the three groups of DMs (conversational, structuring and reformulation markers) at the same time.

1) Conversational markers

The categories of DMs of the first group are the metadiscursive markers “mhm” and “oh”, the other-referred markers “look” and “you know”, and the epistemic modality markers “yes”, “okay” and “no”.

Continuers (Schegloff 1982) such as “mhm”, “oh”, “no”, “yes” or “okay” are one of the clearest manifestations of the hearer's active role in conversation. In many cases their use is not considered as an interruption of the speaker's talk, but as interactional and discursive elements that signal the quality of the relationships, the speaker's delivery, and the type of discourse (Laforest 2005). These DMs can include different meanings depending on the context in which they are used. “Mhm” expresses understanding, but can also show a doubt. “Oh” indicates understanding and in some cases the speaker's emotions, and especially his/her stance towards the content of the conversation. “Okay” also expresses understanding and acceptance of what has been said as “yes”. Nevertheless, “no” manifests disagreement with the interlocutor. All of these elements can help to create an intimate, close contact among participants in conversation. Moreover, they function as signals indicating the beginning of a new turn. “Look” and “you know” are other-referred markers used to capture the hearer's attention. “Look” usually introduces a clear explication that the speaker wants to highlight whereas “you know” is more used to obtain the complicity of the hearer.

In spite of the fact that basic meanings can be identified, DMs must be always analyzed in their context of use. For this reason, we present some excerpts of interaction within the Piagetian interview in order to highlight how participants referred to different DMs during an activity about the sharing of liquid in different glasses.

Excerpt 1

Pre-school – second grade (Les Ponts-de-Martel, Switzerland). Participants: Child 1 (Noni, 5.6 years old), Child 2 (Antoine, 6.1 years old)

134. Child 2: like this we have the same (*referring to the juice in the glasses A' and B*)
135. Child 1: **mhm**
136. Child 2: but **yes** because my glass (*the glass A'*) is larger. **look** wait a moment
137. Child 1: **no**
138. Child 2: wait. look my glass. **you know**, your glass is looking [like
139. Child 1: [like this (*the glass A*) it's the same

In this excerpt, children were trying to reach an agreement about the amount of juice in the glasses A' and B. In particular, Antoine focused on the shape of glasses in order to show the partner that the quantities of juice are the same although the glasses were different. In turn 136, after the hesitation of Noni (turn 135, "mhm"), Antoine said "but yes because my glass is larger" as a way to invite the other child to change his perspective and to take into account the shape of the glasses. The connector "but" introduced the new turn of child 2 and prefaced the use of an epistemic modality marker, expressing the conviction of the child with what he was saying. To express his opinion, child 2 added a causal clause, thus reinforcing his argument. Just afterwards he invited Noni to reflect and listen ("look, wait a moment"). Noni showed disagreement with Antoine's statement. However, child 2 re-invited the partner to reflect (turn 138 "wait") and to reconsider the argument concerning the shape of the glasses. Whereas the first "look" obtained to generally have the child's attention, the second "look" was used as a clear directive prompting Noni to orient his attention to the glasses. The marker "you know" was then used to make a concession to Noni and try to reach an agreement about the evidence based on shape. The overlapping intervention of child 1 in turn 139 contributed to strengthen this kind of interpretation. Noni finally recognized the value of the argument proposed by the partner about the shape of the glasses. The sequential arrangement "yes-look" and "wait-you know" is particularly interesting in this case: it seems that the first element of the structure was marking a "discover", linked to a degree of certitude that is followed by a request to wait. The partner was included in this reasoning process completed by the second part of the structure, in which he was invested by the responsibility/authority to know. DMs, in the specific setting of conversation, contributed to create the stances of both children. Whereas Noni doubted about what Antoine said ("mhm", "no"), Antoine used arguments and some of other-referred markers such as "you know" and "look".

Excerpt 2

Primary school – first grade (Les Ponts-de-Martel, Switzerland). Participants: Child 1 (Eliot, 7.2 years old); Child 2 (Anna, 7 years old), Experimenter (Exp)

16. Child 2: *((is pouring juice in the glass B in order to compare the quantities of liquid with the glass C))*
17. Exp: you can discuss together, *((about the equality of quantities of liquid in the glasses))* if you want, hein
18. Child 2: **okay** *((looking at both glasses))*
19. Child 1: I- I would say not like this *((trying to add more juice in the glass C))*
20. Exp: you have to speak aloud when discussing
21. Child 2: **oh. okay**
22. Child 1: that's it *((after pouring in the glass C))*
23. Exp: and here, you can discuss together. the goal is to have the same quantity of juice. if you, Eliot you drink in your glass, *((showing C))* and if you Anna you drink in your glass *((showing B))*
24. Child 2: **oh**
25. Exp: that's the point
26. Child 2: **okay**

Excerpt 2 shows a brief example of how children can use the DM “oh” and “okay” to signal their understanding of the experiment’s instructions. Children were requested to discuss together in order to establish the equal amount of juice in glasses B and C. A friendly setting was created by the experimenter through the use of “can” that contains no obligation, but possibility, and by the conditional clause “if you want” (turn 17). When the adult invited children to speak aloud, Anna said “oh okay” (turn 21) as a signal addressed to the experimenter which is a way to reply to the adult’s invitation while maintaining her interaction with the partner (Eliot). In this case, the use of the marker “oh” was used as a change of state token (Heritage 1984). In turn 24 she used again the same metadiscursive marker in order to confirm her understanding of the adult’s instruction and to signal an agreement (reinforced in turn 26 by “okay”). The combination of both DMs showed an understanding of what was said, although “oh” showed in some way a kind of child’s surprise. “Oh” is a metadiscursive marker used to continue the conversation and to show participation without stopping what the interlocutor is saying. “Okay” seems to be an epistemic modality marker which signals the agreement position of the hearer. However, another possibility is to consider “okay” as a sign that the partner is assuming the other’s position. This could be interpreted not only as a way to show a discursive alignment, but also as a modality to solicit a cohesive effect. The use of this marker contributes to the shared understanding achieved in the discourse and therefore to what is called the “common ground” that participants maintain in conversation (Condon & Čech, 2003). We also recognize that “oh” and “okay” are used as assertions of understanding in a variety of contexts: in many occasions they are used at the beginning of decision sequences. In some way this position induces to consider these markers as pure continuers of the conversation (as was observed in the previous excerpt¹).

Excerpt 3

Primary school – first grade (Les Ponts-de-Martel, Switzerland). Participants: Child (Emilie, 6.4 years old); Experimenter (Exp)

19. Exp: look at me (*taking the glass B*) I’m giving you a new glass. (*presenting the glass B to the child*) I pour all the content in this new glass. (*pouring the juice from the glass A to the glass B*) done! and now, if I drink from this glass (*points at the glass A*)
20. Child: **mhm**
21. Exp: and you drink from your glass (*pointing at the glass B*) do you think that we will have the same amount of juice? somebody will have more juice or somebody less juice?
22. Child: (*looking at the glasses*) **mhm** (5.0) less
23. Exp: what do you think?
24. Child: juice

¹ For a study of the occurrence of “ok” at the beginning of decision sequences, see Condon (2001).

In the analysis of this excerpt we can highlight different uses of the discourse marker “mhm”. In the exchange between the child and the experimenter, when the adult was formulating the question about the quantities of liquid in the glasses, Emilie used the marker “mhm” in turn 20 as a continuer aiming at inviting the partner to continue his speaking. By using this marker she was showing that she was following the experimenter’s claim. Consequently, the adult continues his formulation of the question, using the coordinating conjunction “and” at the beginning of turn 21. The use of this conjunction shows the continuity between what the experimenter was saying in turn 19 and what he was announcing in turn 21. “Mhm” is a minimal form that lacks propositional and syntactic structure: its use demonstrates understanding and shows participation in the conversation without a real interruption of the experimenter’s turn. However, when later on the child was asked to answer about the quantities of juice, the use of “mhm” assumed a different value: in turn 22, the use of this marker indicated the beginning of a new conversational turn. This marker, followed by a long pause of five seconds, was a sign of the doubt that preceded the child’s opinion. Emilie hesitated with respect to the adult’s request. This interpretation can be confirmed in this context by the intervention of the experimenter in turn 23, who asked again “*what do you think?*” as a way to make clearer his question and to check for an alignment with the child.

2) *Conversational and structuring markers*

In this second subsection we included various conversational markers, some of which were like those we found before (“okay” and “mhm”) and some, new as “yeah”, “well”, and “right?”, based on other studies (Martín Zorraquino & Portolés Lázaro 1999; Condon & Čech 2003). Furthermore, we also analyzed structuring markers as the commentary marker “so”.

Within the conversational markers we found another epistemic modality marker: “yeah”. This marker has the same function and value than others already analyzed, such as “okay” and “yes”. Its use contributes to shared understanding in conversation. Referring to the category of metadiscursive markers a particular attention has been devoted to the discourse marker “well”, frequently used in English conversations.¹ One of its main functions, in the observed interviews, is as a marker negotiating common ground, according to Smith and Jucker (2000). In addition, we analyzed the other-referred marker “right?” that helps to build a relationship among participants, by checking the hearer’s presence, his/her interest in conversation and understanding.

Within the structuring markers, the commentary marker “so” introduces a new statement separately from the previous discourse, adding a new topic. However, all these discourse markers have to be considered in context, as it will appear in the next excerpts.

Excerpt 4

Primary School – first grade (Wittington, England). Participants: Child 1 (Dan, 6.11 years old), Child 2 (Sean, 6.2 years old), Child 3 (Daisy, 6.4 years old), Experimenter (Exp).

¹ It is among the 100 most frequent words in the conversational part of the London-Lund Corpus, where it occupies rank 14 (Svartvik 1990; Aijmer, 2003).

131. Exp: **so** Sean thinks it's the same, Dan thinks it's the same. Daisy? you're still not sure?
132. Child 1: *((turning to Daisy))* do you think it's the same?
133. Child 2: *((pointing at the glass B))* I think that one needs a little bit more
134. Child 1: **yeah**
135. Child 3: a bit in that one *((pointing at the glass B))*
136. Child 1: **yeah**
137. Child 2: no one drop in each really
138. Child 3: **yeah** one drop in each
139. Child 1: **yeah**, one drop in all of them. **yeah** but how we gonna get, how we gonna know how tall it is, because it's rounder? *((indicating the greater width of the glass B with his hands))* it's fatter.

In this excerpt three children were interacting in order to answer the adult's question about the hypothesis that there was the same amount of juice in the glasses at stake. Firstly, the experimenter opened turn 131 with the commentary marker "so" that helped to carry on with the conversation from what was said before. In this context, the marker acquired even some recapitulative value in that what had been said until then was described (Dan and Sean's opinions). Daisy is the only one who did not decide yet.

After the first experimenter's turn, a discussion involved all the children. In particular, the stance of child 1 is interesting with respect to the use of the marker "yeah" he was employing during his interventions. Although the adult was addressing Daisy at the beginning (turn 131), Dan took the turn of talk, questioning again child 3. However, Daisy did not answer immediately and child 2 decided to involve himself in the conversation. When Sean claimed for the inequality of quantities (turn 133 "I think that one needs a little bit more") and Daisy aligned herself with this proposal, Dan approved this solution in turns 134 and 136 by saying "yeah". In turn 137, Sean partially modified his previous suggestion, claiming for the need to drop a little bit more of juice in each glass. Daisy immediately reached an alignment with this new proposal by saying "yeah one drop in each" (turn 138) and Dan too, in his turn 139, took the same position. Through the use of the marker "yeah" children were able to signal their alignment to the solution proposed by one of them. In this sense, they reached an agreement about the course of the activity in order to respond to the initial experimenter's request.

Excerpt 5

Primary School – first grade (Wittington, England). Participants: Child 1 (Dan, 6.11 years old), Child 2 (Sean, 6.2 years old), Child 3 (Daisy, 6.4 years old), Experimenter (Exp)

153. Exp: **so** Dan you think we need another one of those glasses?
154. Child 1: because if we tip it in, if we measure it up here *((the glass A))* then we could tip it in there *((the glass B))*
155. Exp: **mhm, ok**
156. Child 2: **well** (.) I can see if I go down like that *((getting out of his chair and moving down to table))*

level)) the height is from there. **right?** ((*pointing at level of the glass A*))

157. Child 1: you don't need any more juice in

158. Child 2: **well** I would say that we need, because it's wider I think, we don't need any in that one ((*the glass A*)) but we need some less in that one ((*the glass B*))

Excerpt 5 was opened by the same structuring marker as in excerpt 4. Now, it did not sum up the previous fragment but introduced a question directed to one of the children (Dan) in order to continue the interview. Child 1 immediately answered the question of the experimenter by a causal clause (introduced by “because”) in order to argue his opinion. Just afterwards, the experimenter introduced a turn including two DMs: the metadiscursive “mhm”, and the epistemic modality marker “ok”. If he would have only used “mhm”, the argument of child 1 may have not been completed; by adding “ok”, he explicitly made an assertion connected to what child 1 said, taking a new conversational turn. “Well” was used by child 2 in turns 156 and 158 as an opening marker in order to take the turn and express his point of view in contrast to the answer of the partner in turn 154. Although the claim of child 1 was in some way validated by the experimenter (turn 155 “*mhm ok*”), Sean proposed a different point of view. In this sense, the choice to use the marker “well” can be interpreted as a way to mitigate the form of the intervention (that is contrastive in content) in order to signal a different position. As Sean proposed an alternative solution to Dan's idea, the marker can play a role in Sean's intention to check for his partner's understanding. In particular, turn 156 ended by another marker, such as “right?” as a way to check for a possible agreement with respect to the claim at stake. The answer of child 1 in turn 157 (“*you don't need any more juice in*”) went in the opposite direction: Dan was not convinced by his partner's proposal and this reaction induced Sean to continue in his claim in turn 158. Child 2 tried again to express his arguments (“*well I would say that...*”) in favour of balancing the quantities of juice in the glasses, using the discursive marker as an element to mitigate his dis-preferred (at conversational level) claim. In many cases “well” expresses the speaker's stance towards the topic of conversation; when used at the end of an utterance, it stresses the content of the utterance. It is also used as a connective element when the speaker starts a new topic. This last use is the one observed in excerpt 5. Although “well” was followed by a pause in turn 156 but not in turn 158, its use remained the same.

3) *Conversational, structuring and reformulating markers*

In this last group of DMs we found not only conversational and structuring markers but also reformulating ones. Conversational and structuring markers that will appear in the next excerpt are the same as those we observed in previous excerpts. The new element that we will analyze here is the reformulating marker “I mean”. It is considered as a parenthetical clause and it signals that a speaker has not finished his/her turn, but still he/she needs to explain what he/she is trying to say. This means that the speaker needs to reformulate the previous statements in a new one. Although “I mean” has a procedural meaning as a pragmatic marker, its original meaning suggests that it «*marks a speaker's upcoming modification of the ideas or intentions of a prior utterance*» (Schiffrin 1987: 317-318).

Excerpt 6

Primary school – first grade (Les Ponts-de-Martel, Switzerland). Participants: Child (Dimitri, 6.11 years old), Experimenter (Exp)

33. Exp : **so now** (.) ((*taking the glass A*)) I'm taking your glass ((*pouring from the glass B to the glass A*)) and () in this one. ((*glass B*)) and now what do you think? **I mean** do we have the same to drink? somebody will have more? somebody less?
34. Child : ((*looking at the glasses*)) (10.0) we will have both the same.
35. Exp : we will have the same, **okay. so** look now what I'm doing ((*taking the glass C*)) now I'm taking my glass ((*pouring juice from the glass A to the glass C*)) and I'm changing the glass. and now, what do you think? if you drink from your glass ((*the glass B*)) and I drink from mine ((*the glass C*)) do we have the same to drink?
36. Child : **yes**

In excerpt 6, the experimenter used DMs in order to orient the course of the conversation with the child. The exchange began by a structuring marker as in excerpts 4 and 5. However, in this case the marker was accompanied by “now”. This adverb reinforces the introduction of a new topic that the structuring marker “so” usually adds. It cuts with what has been said before, emphasizing what it is going to say afterwards. The pause used after “so now” seems to highlight that the DM is a combination of the two elements “so” and “now.” However, its categorical status as a marker can be discussed exclusively because of the context in which it appears. In particular, the experimenter used the adverb four times in turns 33 and 35 because he was explaining what he was doing at that moment: “now”. The propositional meaning of now in “so now” seems to exist, therefore it cannot be considered as a proper DM because it does not seem to be totally grammaticalized.¹ In turn 33, the experimenter poured the liquid from glass B to glass A to see what the child thought after this transformation. After pouring the liquid the adult asked the child what he thought. However, the child did not have the opportunity to answer because the experimenter immediately continued his turn by reformulating the general question (“*what do you think?*”) more specifically (“*I mean, do we have the same to drink? Somebody would have more? Somebody less?*”) By using the reformulating marker “I mean” the adult was trying to clarify his statement in the eyes of the child as a sign of mutual understanding’s intention. After these questions the child expressed his opinion in turn 34, that was repeated by the experimenter in turn 35 in an accepting tone by using the marker “okay”. The experimenter again used the commentary marker “so” to introduce a new situation in the test. After a new move (he poured the juice from glass A to glass C, changing the set of glasses) he asked the child whether if he drank from

¹ The term grammaticalization was firstly used by Meillet (1912) who defined this process as «*l'attribution du caractère grammatical à un mot jadis autonome*» (p. 131). In our case, “now” seems to have an adverbial meaning and not the relational and functional meaning that characterizes the discourse marker.

glass B and glass C he would have the same amount of juice. The child answered affirmatively (turn 36 “yes”).

VI. DISCUSSION AND CONCLUSION

The above-presented excerpts must exclusively be considered as *capta* of some specific phenomena observed within the interactional situations we collected. As the goal was not to generalize interpretations or to make assessments on the basis of participants' discursive strategies, we presented and discussed these excerpts to account for the variety of DMs used by adults and children during a testing situation. In this sense, the possibility to highlight certain discursive choices made by participants in the here-and-now of the interaction is interesting as a description of the elements that make us understand how people co-construct the interaction in a specific setting.

All the DMs we observed were linked to some contextual factors which contributed to differentiate their use and moderate their pragmatic effect. Besides the communicative level and the pragmatic functions in co-constructing a shared conversation, DMs can impact on social relationships between the participants in conversation: this is the case when people are trying to agree, to reach a joint solution, and generally to play a performance. Another aspect concerns the use of DMs as an orientation towards the topic, for instance, when people try to offer the good answer, or to reason instead of acting, as for face value. The relationship between DMs' use and contextual factors is also highlighted by the fact that people continuously attempt at building relationships with others. To some extent, this can encourage the use of expressions of mutual understanding and alignment, such as some of the DMs we observed. This brings us to the conviction that social relationships between participants in conversation can influence DMs' use and viceversa. However, we are aware that the specific situation we observed had particular characteristics of asymmetry. In fact, the interviewer had a privileged role, because she was responsible for managing the course of the conversation; she could decide who would get the next turn of talk, what the topic would be and when the conversation would end without asking for the interviewee's approval. This evidence resulted in our data by the fact that fewer signals were used for turn change and fewer signals were used for ending a conversation from the child's side. Discursive roles and status within the relationship among participants can influence DMs' use.

The DMs we identified allowed us to reflect about the nature of the task within the situation we implemented and about the consequences in terms of interpretation. The analysis of DMs' use has shown different interesting aspects. Firstly, participants seemed to use markers as expressions of agreement, alignment and understanding. In some cases, the marker could play as a request for agreement and/or understanding, while in other situations it could signal an intention to check them. Secondly, participants used DMs as expressions of continuation, turn-change, opening topic and/or changing the framework of participation. In this sense, DMs' use could also have the aim of requesting further explanations and of attracting the other's attention during the interaction. In addition, DMs seemed to exhibit the relationship between talk and thought and therefore to sustain intersubjectivity between participants. In fact, differently from the case in which the

experimenter was required to orchestrate the conversation (by asking, suggesting, reformulating, as in excerpts 2 and 3), children who had the possibility to argue (as in excerpt 1, for instance) were able to modify their reasoning during the discussions, and DMs played the function of cohesive elements. DMs seemed to be used more in symmetric situations, in which the fluidity of argumentation was sustained by the use of markers, at the level of both argumentative coherence and interaction.

Another point is that children's use of DMs often expressed a search for "confirmation" or "validation" in the eyes of other participants. This result is in line with other findings (Costello & Mitchell 1995; Pramling 2006; Kolstø & Ratcliffe 2008): children are aware of the difficult task they are invited to solve, and their performances have to fit with the adult's expectations. When they are faced with difficult topics children show relational sensitivity and resort to meta-communicative markers. Other investigations have shown the validity of this type of interpretation in the same testing setting and the relevant implications of interactional acts in terms of conversational moves (Arcidiacono & Perret-Clermont, *in press*) and dialogical dimensions (Sinclair-Harding *et al.*, 2013). As children's moves are always linked to the partner's interventions, this finding can have implications for developing discursive strategies and general awareness of children's competencies for improving problem solving in various settings.

We must be aware that there may be other contextual factors likely to influence DM's use. A detailed analysis of the micro-level environment seems to be the logical next step in this type of analysis. Furthermore, the contextual factors we identified are of different types: some can be classified as social (concerning participants in conversation, their relationships and discursive roles), others as psychological (related to opinions about the topic, stances towards the topic, goals of conversation), or even as semantic (related to the content of discourse). These evidences invite us to reconsider testing situations in a larger qualitative frame, focusing on the multiple dimensions involved in adult-children conversations. Another area that can be addressed in future research concerns the impact of DMs on the perception of communicative competence and credibility among interactants, in order to better understand the interplay between cognitive and social factors in testing situations. Finally, we think that it would be interesting to analyze DMs' use also in relation to nonverbal activities and gestures, according to what Krafft (2006) suggests in terms of visible (position, posture, facial expression, articulatory movements) and audible (prosodic elements, sounds) activities used in conversation.

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APPENDIX 1

TRANSCRIPTION SYMBOLS

.	FALLING INTONATION
?	RISING INTONATION
,	CONTINUING INTONATION
-	ABRUPT CUT-OFF
[SIMULTANEOUS OR OVERLAPPING SPEECH
(2.0)	PAUSE (SECONDS)
(.)	PAUSE (2/10 SECOND OR LESS)
()	NON-TRANSCRIBING SEGMENT OF TALK
(())	COMMENTS ADDED BY THE RESEARCHER
BOLD	ELEMENTS OF INTEREST FOR THE ANALYSIS

APPENDIX 2

EXCERPTS IN ORIGINAL LANGUAGE (FRENCH)

Excerpt 1

134. Enfant 2 : comme ça on a la même chose ((*par rapport au sirop dans les verres A' et B*))
135. Enfant 1 : mhm
136. Enfant 2 : mais oui parce que mon verre ((*le verre A'*)) est plus épais. regarde attends un moment
137. Enfant 1 : non
138. Enfant 2 : attends. regarde mon verre. voilà, ton verre semble
[comme
139. Enfant 1 : [comme ça
((*le verre A*)) c'est la même chose

Excerpt 2

16. Enfant 2 : ((*verse le sirop dans le verre B pour comparer les quantités de sirop avec le verre C*))
17. Exp : vous pouvez discuter ensemble ((*par rapport à l'égalisation de sirop dans les verres*)) si vous voulez, hein
18. Enfant 2 : d'accord ((*observe les deux verres*))
19. Enfant 1 : moi- je dirai pas comme ça ((*tente d'ajouter du sirop dans le verre C*))
20. Exp : il faut que vous parliez plus fort quand vous discutez
21. Enfant 2 : oh. d'accord
22. Enfant 1 : c'est ça ((*après avoir versé dans le verre C*))
23. Exp : alors là, c'est à vous de discuter ensemble. le but c'est que vous ayez la même chose de sirop. si toi, Eliot tu bois dans ton verre, ((*montre C*)) et si toi Anna tu bois dans ton verre ((*montre B*))
24. Enfant 2 : oh
25. Exp : c'est ça le plus important
26. Enfant 2 : d'accord

Excerpt 3

19. Exp : regarde-moi ((*prend le verre B*)) j'vais te donner un nouveau verre. ((*donne le verre B à l'enfant*)) je mets tout ton sirop dans ce nouveau verre. ((*transvase le sirop du verre A dans le verre B*)) voilà! et maintenant, si moi je bois dans ce verre-ci ((*désigne le verre A*))
20. Enfant : mhm
21. Exp : et toi tu bois dans ton verre ((*montre le verre B*)) est-ce que tu penses qu'on va avoir la même chose de sirop? quelqu'un va avoir plus de sirop ou quelqu'un va avoir moins de sirop?
22. Enfant : ((*regarde les verres*)) mhm (5.0) moins
23. Exp : qu'est-ce que tu penses?
24. Enfant : sirop