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When the same form does not have the same function: how mothers' lexical repetitions shape the children's emerging linguistic and interactional skills

By:

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To Carlos (*in memoriam*) and Rosa,
for their unconditional love, support and patience
(por seu amor amor incondicional, apoio e paciência)

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ABSTRACT

One of the main problems recipients and speakers have to face when using lexical repetitions is to distinguish the action the speaker is doing when uttering a repetition. The multi-functionality of repetitions makes it harder to explain some of the ambiguities involved in their analysis, and it calls for an analytic division between different actions done by repetitions in which the same form may be used for different functions.

Following the interactional phonetics methodological approach, this thesis integrates the methodology of Conversation Analysis and instrumental and impressionistic phonetics to show how mothers and their children negotiate the action done by mothers' repetitions of the children's previous turns in everyday Brazilian Portuguese conversations.

Repetitions to affirm are used as a way of approving the children's articulatory performance and labeling ability. Here the repetition matches the children's prior turn pitch pattern and have minimised phonetic differences.

Repetitions to correct pronunciation are produced with significant difference in articulation and pitch pattern, as compared to the child's prior realisation. The phonetic cues are understood by the children as an invitation to correct their prior turn.

Mothers' repetitions to correct the child's lexical choice are produced with a distinctive rise-fall intonation contour. The children treat the repetitions as a hearing trouble on the mother's side, while the mothers' subsequent talk provides evidence that in fact she had designed the repetition with the aim of correcting the children's lexical choice.

Repetitions to request confirmation are produced also with a rise-fall contour. Mothers and children seem to orient to the repetition in the same way, since both treat them as a request of confirmation.

The results show that the children's ability to understand repetitions addressing pronunciation problems, to affirm and to request confirmation come before the ability to understand repetitions that address problems of lexical choice.

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DECLARATION

A few of the ideas presented in this thesis, and an earlier version of the data analysis have appeared in print in the following publication:

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1. INTRODUCTION

This thesis investigates the interrelationship of phonetic structure and sequence organization in mothers' repetitions of children's prior turns. It contributes to the literature which shows how systematically produced clusters of phonetic events are responded to and manipulated in both shaping and interpreting interactions in natural talk between mothers and children (Corrin et al. 2001; Tarplee 1996; Tarplee 2010; Walker & Benjamin 2017; Wells 2010; Wells & Stackhouse 2016). The above researchers, and the study presented in this thesis, integrate the methodological approach of Conversation Analysis (CA) and instrumental and impressionist phonetics to show how particular activities in a mother-child conversation are managed and oriented to by the participants themselves.

The discovery of systematic differences in the phonetic productions of mothers' reparative repetitions to correct the children's lexical choice and articulation are evidence that mother and children continuously display their awareness of the sequential structure(s) within their talk. However, when comparing the phonetic characteristics of mothers' repetitions to initiate repair on the children's lexical choice, to affirm, and request confirmation, it is evident that the sequential position and the participants' orientation to the next turn and sequential implicature are essential. That is, the talk's interactional characteristics play a bigger role in helping the participants' to distinguish one repetition from the other, as opposed to its phonetic differences.

The goals and contributions of this thesis are the following:

- To test predictions about the phonetic characteristics of Child Direct Speech (CDS) in natural interactions. Few studies (Tarplee 1993; Tarplee 1996; Wells et al. 2008; Wells & Stackhouse 2016) have take into consideration the interactional characteristics such as sequential position, the importance of the next turns, and the sequential implicature when distinguishing between repetitions themselves. This study shows how mother and child use the prosodic cues of CDI in parallel with their turn-taking and sequential characteristics to negotiate the action done by each

mothers' repetition. It demonstrates that the sequential characteristics may, sometimes, have a higher influence on the talk than its phonetic characteristics.

- To emphasise the importance of the participants' orientation and conduct when trying to distinguish repetitions that have similar pitch pattern contours, but are oriented as different actions. This study demonstrates that phonetic studies can be improved upon with a more sophisticated understanding that, occasionally, the same form (pitch pattern contour) can have different functions (Walker 2014a; Walker 2014b).

Lexical repetition is used by mothers interacting with their children for a variety of functions. One may use it to ratify the contribution of the child in the ongoing interaction; to add a common ground to the new information offered by the child; as a way of showing understanding of a prior turn at talk; as well as a tool to correct the child and to pursue more talk from them. As a result, one of the main problems mothers and children have to face when dealing with a lexical repetition of the children's prior turn is to distinguish the action the speaker is doing when uttering a repetition. The multi-functionality of repetitions calls for an analytic division between different actions done by repetitions in which the same form may be used for different functions (Walker 2014a). The following examples illustrate the conundrum the mothers and children may face when encountering and using lexical repetitions.

Fragment 1 (nalu2zoológico)

	01-M:	que mais qui a gentshi vai vê nu zoológico?	
		What else are we going to see at the zoo?	
	02-	(0.9)	
→	03-C:	**/ˈumə taˈtaɬugaˑ/**	**Trouble source**
		a turtle	
	04-	(0.2)	
→	05-M:	**/ˈuma tartaˈɾuːga/**	**Repair initiation**

a turtle

→ 06-C: **/ɛ /** **Repair solution**

it is

In line 05 Mother repeats Child's prior turn. At first sight, Mother and Child could have oriented to and treated Mother's repetition in many different ways, as repetitions may be used for different purposes (Casby 1986; Clark & Bernicot 2008; Huang 2012). In this particular example, Mother (line 05) is requesting confirmation of Child's prior turn. This line is labeled as the trouble source turn (TS). No utterance is necessarily a trouble source since the other party in the talk may treat any turn as such (Schegloff et al. 1977). One of the most common uses of repetitions is to project further action in the subsequent talk (Schegloff 1997a). In other words, Mother's repetitions are contingent upon their recipient to produce an adequate response to its repetition in the next turn (in this thesis called next position). In line 06, Child confirms Mother's request, that is, Child produces the repair solution to their interaction.

However, mothers may also initiate repair to correct the children's articulation. Fragment 2 is an example of an other-repair initiation to display problems in acceptability.

Fragment 2 (thacarfantasma 13:06-13:43)

01-M: vô fazê di brancu

I'm going to make it white

02- (1,9)

03-C: é

it is

04- (0,3)

05-C: vô ajudá a mamãe a fazê /ˈbapʰãnə/ **Trouble source**

I'm going to help mommy to make a ghost

06- (0,6)

→ 07-M: /ˈfãnːtʰasm̩ə̯/ **Repair initiation**

Ghost

08-C: /ˈβʰɐ̃ːpʰa̤mə̯/ **Repair solution**

		Ghost	
	09-	(6,7)	
	10-C:	vô cotá a fita	
		I'm going to cut the lace	

In fragment 02, line 05 is labeled as TS. Mother treats line 05 as creating some kind of problem, as displayed by her repetition. This repetition occurs as a next-position-repair initiator, because the repetition is contingent upon the recipient (Child) to produce a repair in the next position. Yet, this repair initiation is not treating and orienting to the trouble source turn as a problem of understanding and hearing, but as a problem of acceptability (misarticulation). In line 08, Child treats the mother's repetition as a repair initiation and produces the repair solution to their trouble source.

Mothers' repetitions to display problems in acceptability are also used to display that the children's lexical choice is wrong. Fragment 3 is an example of this kind of repetition.

Fragment 3 (cigumartelo 27:03-27:16)

	01-M:	uhm qui qui tinha nu piquinique	
		uhm what did we have at the picnic	
	02-	(0,5)	
	03-C:	ehm:: biscotu	
		uhm:: biscuts	
	04-M:	biscoi:tu (.) que mais	
		biscuts *what else?*	
	05-	(1,6)	
→	06-C:	/maiˈtʰɛ̤ɹu:/	**Trouble source**
		hammer	
→	07-M	/maɪˈtɛ:ɹu:/	**Repair initiation**
		hammer	
	08-	(0,3)	
	09-C:	(laughs)	

In fragment 03, Mother treats line 06 as a troublesome turn. This repetition is another example of next-position-repair initiator (line 07) to display problems

in acceptability (see chapter 4). Here, the Child has to produce a repair in the next position. This repair initiation is treating and orienting to the trouble source turn as a problem of acceptability (wrong lexical choice). In line 09, Child laughs to fill the turn where a repair solution should have been given (see Walker 2017 on the uses of laughter to fill turns).

Mothers may also repeat the children's prior turn to affirm the children's correct lexical choice and articulation (see chapter 5). Here, mothers and children orient to and treat the next position after the repetition as a position to display the closure of their sequence. Fragment 04 depicts this kind of repetition.

Fragment 4 (thacarpresente1)

→	07-M:	e o tio Elê que cor que eli é?	
		and uncle Elê what colour is he?	
→	08-C:	/mạ^{ɪh}xõ/	**First saying**
		brown	
→	09-M:	/mạ^{ɪ}xõ:/	**Next-turn repetition**
		brown	
	10-	(0.6)	
	11-M:	I u Saci?	
		And Saci? (Saci is character from the Brazilian Folklore)	

In this particular example, Mother (line 9) is affirming the lexical and phonetic correctness of Child's prior turn. This type of mothers' repetition is issued to give feedback to Child's correct response to a test question and thereby close the sequence at hand.

As illustrated by the fragments above, the mothers' repetitions of their children's prior turn do not have the same linguistic functions (Walker 2014a; Walker 2014b). That is, the participants of the interaction will orient to and treat the repetitions as having similar or different functions and forms depending on their sequential position, phonetic features, next turns, and sequential implicature.

In order to facilitate the distinction and analysis between the different mothers' repetitions found in this study, we turn to the literature that supports the

importance of considering the repetitions according to their form (practice) and function (action). As you will see throughout this thesis, the next turn and the talk's sequential implicature will play a very important role in distinguishing the mother's repetitions. However, it will be the relationship between form and function that will help us to distinguish repetitions having the same lexical and phonetic forms but different functions.

The literature on mother's repetitions has explored their syntactic, semantic, phonetic and phonological characteristics (cf. Brown & Bellugi 1964; Moerk 1977; Nelson 1977; Newman 2003; Ochs Keenan 1974; Snow et al. 1976). Yet, these approaches to the study of lexical repetition favoured a formal linguistic approach, thus not taking advantage of the interactional characteristics of the talk to explain the participants' orientation and treatment of the repetition.

Studies that focused on the importance of establishing a common ground between the participants of the talk highlighted the need for taking into consideration the previous or following turns when analysing lexical repetitions (Cameron-Faulkner et al. 2003; Clark 1996; Mannle et al. 1991; Tomasello 1992). However, speakers and we (analysts) cannot know what the participants of an interaction are thinking or feeling as they speak. The participants' mental states are opaque in their own verbal conduct (Drew 2005).

A pragmatic approach to the analysis of lexical repetitions favoured the study of patterns of textual structures that were used to signal to the recipient how to incorporate the repetition into the ongoing discourse (Blakemore 2001; Perrin et al. 2003; Tyler 1994a). Still, these kinds of studies did not consider the phonetic features and distinctions between one repetition and another. Additionally, they were based on writing discourses and not on naturalist data (recordings of everyday mundane interactions). An analysis based on what occurs in real life can better explain the nuances of talk between mother and child. The same does not arise in studies based on written texts, sentence recordings, or experiments.

Using an interactional approach, recent studies have shown the importance of analysing adults' repetitions in situ (cf. Curl 2002; Curl 2005; Curl 2006; Tarplee 1996; Couper-Kuhlen & Selting 1996). Repetitions should, therefore, not be considered as a mark of a 'sloppy' speaker (Schegloff 1987), but as

interactional actions that are directly connected to their place in sequence and phonetic features. Thus, mother's lexical repetitions of the children's previous turn should not be characterized and understood as 'copies' of what the children said. Each repetition will have particular phonetic, sequential, and interactional characteristics (Curl 2002). In other words, a 'successful' interaction will depend on the children and mothers' ability to negotiate the action done by each repetition.

However, Walker (2014a, b) advises caution when labelling the repetitions according their interactional and phonetic characteristics, as they can have similar functions and different lexical and phonetic forms, similar functions and similar forms, different functions and different forms, or different functions and similar forms. These last two illustrate those analysed in this study.

The two types of repetitions--reparative repetitions (other-initiated repetition to initiate repair) and affirmations- stand out from the others because they have phonetic and sequential characteristics that help deal with the conundrum mothers and children may face when encountering and using lexical repetitions. Here, the phonetic and interactional characteristics appear to be used to differentiate one repetition from another.

The same does not happen in the two types of repetitions to initiate repair the child's lexical choice and to request confirmation. These repetitions have similar rise-fall pitch patterns and are carried out in third position, therefore having similar form, but not function.

Yet, caution is advised as we (analysts) should not to be tempted to claim that all mothers' repetitions in Brazilian Portuguese behave the same way as those analysed in this thesis. It is important to be aware that different contexts, the age of the participants and their language development, may impact their treatment and orientation to the repetitions. Most importantly, we should avoid attributing certain labels (functions) to only certain forms; be it phonetic or lexical.

This chapter has considered the analytic approach used in this study. It has presented the main concerns and goals of this thesis and discussed the issue of multi-functionality in lexical repetitions, thereby proposing an approach to deal with the complexity and ambiguities entailed in the repetitions.

In chapter 2, the relevant literature on child language acquisition and development, and the many theories and approaches used to study lexical repetitions in mother-child talk is reviewed. Some flaws within studies dealing with mothers' repetitions of the children's prior turn are explained, and we show that they make incorrect predictions as they fail to take into account the context in which the talk takes place.

The findings of several recent studies stressing the importance of considering phonetic structure in parity with sequential structure in adult and child-adult interactions are discussed and compared to studies on language acquisition that took a psycholinguistic, pragmatic and syntactic approaches to the study of lexical repetitions.

In Chapter 3, the methodology of Conversation Analysis is outlined. This methodology continually renews the connection between the data and the analysis (Goodwin & Heritage 1990). Using the practices and tools of sequential analysis, mothers and children are shown to display an orientation to the suggested analytic categories. This chapter also presents the methods of phonetic analysis used to investigate articulatory characteristics and the characteristics of the pitch patterns produced by mothers and children during their interaction.

Chapters 4 and 5 present the analysis of the four types of mother's repetitions: other-initiated repetitions to initiate repair on the children's lexical choice; other-initiated repetitions to initiate repair on the children's articulation; affirmatory repetitions; and request for confirmation. Additionally, graphs of pitch contour are provided to exemplify the differences between the mothers' repetitions and the children's prior and next turns.

Chapter 6 summarizes the findings and discusses their importance for current research in phonetics, child language acquisition and development, and in Conversation Analysis. The limitations of this thesis are addressed, and directions for future study are outlined.

2. Motivation and Research Questions

Mothers use lexical repetition for a variety of functions when interacting with their children. They may use it to ratify the contribution of their children in the on-going interaction, to add a common ground to the new information offered by the children, or as a way of showing understanding of a prior turn at talk. Lexical repetition can also be a tool to correct the children and to prompt more talk from them. As a result, one of the main problems mothers and children have to face when dealing with lexical repetitions of the children's prior turn is to distinguish the action the speaker is performing when uttering them. The multi-functionality of repeats calls for an analytic division between different actions done by them, in which the same form may be used for different functions (Walker 2014a).

The literature on child language acquisition has given considerable attention to the role of repetition and imitation in the children's and mothers' speeches (e.g. Brown & Bellugi 1964; Gratier & Devouche 2011; Moerk 1977; Newman 2003; Nelson 1977; Ochs Keenan 1974). Snow et al. (1976) suggested that mothers' repetition of the children's deviant utterance would be considered phonological expansions, since the children's turn were produced as a correct phonological model. Repetitions would be used to facilitate language learning (Snow 1972) and may be produced as prosodic repetition (Fernald & Simon 1984) and/or lexical repetition (Kaye & Charney 1981). Mothers would repeat the children's prosodic contour from when the children are 3-months old (Gratier & Devouche 2011). Prosodic repetition, elsewhere called prosodic matching (cf. Couper-Kuhlen & Selting 1996; Reed 2011), can be used to close or to expand a sequence in the conversation (see Wells 2010; Wells & Stackhouse 2016).

A wide range of distinctions has been drawn between the categories of reproductions on the basis of the lexical and syntactic relationship between the child and adult utterances. Brown and Bellugi (1964) propose that mothers may expand the children's prior turn. The authors show that an expansion maintains all the words of the child's utterance, in the same order, while adding new words and morphemes to form a syntactically well-formed utterance; whilst Moerck (1974)

defines expansion as a kind of corrective feedback that occurs after an incorrect or incomplete statement by the child.

Some researchers have drawn a distinction between expansions and repetitions or echoes, in which the adult would repeat the exact form of the child's utterance, without expansion (Harkness & Travis 1977; Nelson 1973). Seitz & Stewart (1975) extended the field further with 'modifications', a term that includes expansions, contractions, and reductions of children's utterances. Others made the distinction among 'exact' and 'partial' imitations, or would simply deploy the word 'imitations' to refer to 'exact', 'exact plus' (expansions), 'partial' or 'partial plus' reproductions, depending on the relationship between the child and adult utterances (Cross 1977; Newport 1977).

One form of adjusting the adults' correction to the child's comprehension level is to categorise the adult's utterance as a recast. The term 'recast' or 'recasting' is used to cover all adult utterances that change the form of a child's prior utterance, but maintain the meaning. Recasts are valuable resources of input to language learners given that they provide children with models that are contingent on their own speech and likely to serve as salient input for the children's language acquisition (Nelson 1973).

Some years later, Morgan et al. (1995) showed that recasts do not provide the negative evidence necessary to explain the production of correct utterances. Saxton (2000) proposed an alternative approach in which the negative input is used as an umbrella term to describe an immediate contrast between the children's ungrammatical speech and a correct alternative supplied by the adult (recipient of the talk).

The literature has also taken into consideration the sequential placement of the repetition. Some studies only looked at the repetitions that immediately followed the child's turn; others looked at repetitions that were separated from the child's first saying by varying amounts of intervening talk. Seitz and Stewart (1975), for example, included in their study expansions that occurred within the mother's three subsequent utterances, while Cross (1978) considered repetitions occurring within two turns. Snow and collegues (1976), instead, claimed that repetitions can follow the child's utterance by as many as, but no more than, ten

utterances by any speaker.

In adult-child interaction, repetition is used by mothers for a variety of functions, which include requesting confirmation, affirming, requesting clarification, correcting, and as a receipt of information. However, the repetitions' variety of functions/multi-functionality may pose a problem with regards to distinguishing the action the speaker is doing when uttering a repetition (Ford 2004; Walker 2014a; Walker 2014c).

The literature on pragmatics discusses the problem repetition poses for utterance interpretation, by categorising its function based on models of dialogue structure. These models are based on patterns of textual structures that signal to the recipient (listener) how to incorporate the repetition (new information) into the ongoing discourse established between the repetition and the interactions analysed (e.g. Blakemore 2001; Perrin et al. 2003; Tyler 1994). However, these kinds of studies do not consider the phonetic features and distinctions between one repetition and another.

It is clear that the coding category for repetition presented so far in the literature is too broad to be of any use when dealing with interactional studies. Indeed, the repetitions are subdivided along purely structural lines, based on the formal relationship between the mothers' repetition and the child's first saying. Research on prosodic characteristics of repetitions fails to take into account the differences in articulation between adult and child's speech, as well as interactional characteristics of the mothers' repetitions. Consequently, why should one assume these structural distinctions, if no recourse is made to consider the way the participants orient to their own utterances and to their recipient's utterances? Indeed, as Tarplee (1993) proposed "the focus on the structural phenomena may be to OBSCURE the interactional significance of particular features" (original emphasis, Tarplee, 1993:23).

Interactional studies (Tarplee, 1996; Wells, 2010; Wells & Stackhouse, 2016; among others) have raised the importance of taking into consideration the phonetic and sequential characteristics (sequence implicature and turn position) of the mothers' repeat and the children's first saying.

In order to have a better picture of how the mothers' repetitions behave

and are used to display a specific action, one should analyse repetitions based on their position in the turn-sequence, their phonetic features, their meaning, their sequential implicature, the appropriate next action and the deployment of the following turns after the repetitions.

This chapter places the current work among prior research into mother's lexical repetition. Some of the questions posed by research to date, which this thesis contributes to answering, are:

- How are mothers' repetitions realised phonetically? (Tarplee 1996, 2010; Wells et al. 2008; Pan & Snow, 1999; Perrin et al., 2003).
- Could repetitions be distinguished between themselves by their sequential position and phonetic features? (Curl 2004; 2005; Curl et al 2006; Walker & Benjamin, 2017)
- How do mothers and children negotiate the action done by the mothers' repetitions? (Sidnell 2017a, Sidnell 2017b; Walker 2014a, Walker 2014b).

It is clear that certain gaps exist in our current knowledge of mothers' lexical repetitions (especially its phonetic exponents) and how these phonetic differences help Brazilian mothers and children (especially children) to design the next turns after the repetitions. This chapter refers to these issues, and discusses how they are addressed by current research. The literature discussed in this chapter is divided into three main groups: the first group discusses the literature supporting the use of repetitions and expansions in CDS (see Section 2.1.); the second group is composed by studies focusing on child language acquisition (see Section 2.2.); finally, the third group reviews the interactional studies that focus on lexical and prosodic repetitions (see Section 2.3.). Section 2.4. presents an overall conclusion and draws a bridge between the literature and the present study.

2.1. Phonetic Features of Repetitions

Snow et al. (1976) was one of the first studies to look at the phonological relationship between 'original' and 'repetition' in adult-child interaction. The

authors suggested that straight repetitions could be regarded as phonological expansions since the mother's repetition of the child's deviant production will be produced as a correct phonological model. However, the fine details (differences in articulation) of the phonetic relationship between child and adult utterances were not examined. The nature of the child's production (turn) and its repetition was also not discussed. Without examining the sequential context and the nature of the turn, the adult's speech is bound to result in distorted and incomplete representation of the data under analysis (Tarplee 1993).

Within the same framework of repetitions and their phonetic characteristics, Snow (1972) proposed that repetitiveness is an important feature of mother's speech and it may facilitate the language learning. As a matter of fact, it would appear that 'motherese' is considerably richer in repetitions than the literature has indicated, since most of the studies (cf. (Kaye & Charney 1981; Stern et al., 1983) only looked at the repetition of lexical items (words).

Fernald and Kuhl (1987) demonstrated that infants will respond to the intonation patterns before they comprehend their own language, and Fernald & Simon (1984) proposed that the incidence of prosodic repetition (repetition of the pitch pattern) in infant-direct speech is higher than the repetition of a lexical item. Yet, Fernald and Simon did not take into consideration the sequential context in which the prosodic matching can be used to expand or to close a sequence (cf. Wells 2010; Wells & Stackhouse 2016).

In adult-speech, Goffman (1974) proposed that speakers who repeat some other speaker's utterances have the option of using some non-lexical context (i.e. prosody) when producing the word again. This repeat, also called 'mimicry' of the prosody, would have the effect of shadowing what was said by the original speaker of those words (Tannen 1987). The lexical repeats would be repeated with a phonetic trajectory that either copies or differs in some way from the original utterance (Hellermann 2003), thereby influencing the ensuing discourse.

When mimicking the words and pitch patterns of the original speaker, repeats are done with subtle distinctions in pitch height (Couper-Kuhlen 1996; Couper-Kuhlen & Selting 1996). Couper-Kuhlen (1996) showed that talk-show hosts used either pitch matching on a relative scale, or absolute pitch matching,

depending on their interactive purposes, demonstrating that prosodic repetitions may or may not be 'imitations' of the prior saying.

Gratier and Devouche (2011) proposed that mothers and children may imitate and repeat prosodic contours in the course of their vocalisation from when the children are 3-months old. The authors also proposed that mothers and children may use different contour patterns when they reproduce the prosodic contour of their mother's vocalisation from when they repeat their own preceding vocalisation. Consonant with Wells (2010) and Wells and Stackhouse (2016), these results indicated that it is worth considering prosodic intonation patterns and their communicative functions (see Fernald 1989; Trainor & Desjardins 2002; Ford 2004). However, as Walker (2014 a, b) highlighted, one should avoid a simplistic analysis where pitch patterns are given specific functions depending on the their grammatical characteristics (Truckenbrodt et al. 2008; Moraes 2008).

Still dealing with the prosodic characteristics of mother's repetitions, Fernald and Mazzie (1991) suggested that mothers would increase their pitch when repeating a word to call their children's attention to the word they are saying. This result conforms to Fernald and Simon's (1984) findings that mothers may use exaggerated F0 peaks at the end of utterances to exploit perceptual and attentional listening biases, which would make some sounds much easier to detect, discriminate, and remember. However, Fernald and Mazzie did not analyse the articulatory characteristics of the repeated words.

Some years later, Newman (2003) proposed that mothers still deploy the prosodic characteristics of 'motherese' (higher pitch, greater pitch variability and more prosodic repetition) when talking to two-year-old children. Balog and Snow (2007) study revealed that children's contour inventory was more sensitive to the different differences between rising and falling contours during the second year of life. These results support the use of contour inventory for measuring intonation development as a supplement to traditionally used measures (e.g. accent range).

2.1.1. Expansions and Repetitions in CDS

Traditionally there has been a strong research focus on adult speech addressed to

children. Early descriptions of 'baby talk' aimed to describe this particular speech register and whether it should be considered a universal phenomenon or not (Ferguson 1964). At that time, little consideration was given to the effects of this speech style on language development. It was only later, in response to Chomsky's innateness hypothesis (Chomsky & Morris 1965) that research into child directed speech was concerned with investigating the environment in which language acquisition takes place.

Experimental studies in this area can be broadly divided into two groups. The first group (cf. Brown & Bellugi 1964; Moerk 1977), includes the ones that have tested the effect of expansions (e.g. corrective feedback used to correct the grammar of the child's utterance) on the general rate of language development by measuring a variety of language performance scores before and after extensive exposure to expansions. The second group includes experimental studies that have measured the effects of controlled inputs on the child's language development (cf. Cameron-Faulkner et al. 2003; Morales et al. 2000; Snow et al. 1976; Cross 1977).

Studies that have focused on the intonation models which infants are typically exposed to claim that it is important for the children to be able to work out the meaning of the intonation system they are exposed to (cf. Newman 2003; Snow et al. 1976; Balog & Snow 2007). In these studies, the most important register to be considered is Child Directed Speech (henceforth CDS), as it is the register that adults use when interacting with children.

CDS is distinct from Adult-Directed Speech (ADS) in various ways; one of the most prominent differences is prosody. The mother produces modifications in her own speech using a broad range of loudness and pitches, which are higher than in ADS (Sachs 1983). The duration of vowels and the pauses between the utterances are longer in CDS than ADS; this rhythm is also seen in signing mothers of deaf children (Fernald & Simon 1984).

A range of different languages and varieties (British and American English, Italian, French, German) share some of the general features of motherese (i.e., higher pitch, greater pitch variability, shorter utterances, and longer pause) but maintain distinct characteristics (Fernald & Simon 1984; Fernald 1989). In

Brazilian Portuguese, the differences between CDS and ADS include higher pitch, wider pitch range, longer pauses, voice quality that can range from whispery to falsettos, longer syllabification and lengthened vowels (Cavalcante 2001; Cavalcante 2005; Ferreira 2005). Appendix I provides an overview of the phonetic characteristics of Brazilian Portuguese in ADS.

Although the use of motherese and its phonetic characteristics are not universal to all languages (see Ratner & Pye 1984; Ochs & Schieffelin 1995), it is very widespread, since the speech modifications made by adults have been shown to play a role in helping infants map their native language (Goodsitt et al. 1993).

2.1.2. Shortcomings of CDS

As we have seen, the literature on child language acquisition have shed some light on the characteristics of CDS and the prosodic differences between CDS and ADS (e.g. Flax et al. 1991; Fernald & Simon 1984; Fernald 1989; Ferreira 2005); yet these studies neither focused on the phonetic (articulatory) characteristics, and differences between CDS and ADS; nor they compared their phonetic and prosodic characteristics.

The question of how the modifications found in CDS influence the child's learning of phonetic and prosodic features in everyday interaction has mainly been addressed in studies with English or Finnish speakers (e.g. Laakso 2010; Wells & Stackhouse 2016; Ford 2004; Wells et al. 2008). In these studies, the phonetic, turn-position, and sequential characteristics are taken into consideration. These features should be analysed in tandem and not separately. The phonetic and prosodic influences are even more evident when the mother repeats the child's prior turn, as prosody may serve as a resource to distinguish the function of the repetitions when they happen in similar sequential positions (Tarplee 1996; Tarplee 2010; Walker 2014a).

This interactional approach has the advantage of considering the interaction as a whole (see 2.2.2.), where each turn is influenced by their prior turn, and influences the ones to come. When comparing them to studies in CDS, interactional studies can shed light to issue of how to better distinguish the

function of repetition from the other. Interactional studies have the advantage of analysing the data based on their phonetic, prosodic, and sequential characteristics, which can better depict the action done by lexical repetitions. .

Interactional studies base their analyses on the sequential implicature and importance of the next turns after the mothers' repetitions and not only on the input received (see Tarplee 2010). Chapters 4 and 5 of this study show how mother and child use the prosodic cues of CDS to negotiate the meaning of the action done by each mothers' repetition

2.1.3. Conclusions

This section has considered the features of CDS in the literature and presented the prosodic characteristics of CDS in Brazilian Portuguese. Throughout this strand of research, the adult's speech is viewed as an input which results in the child's linguistic production (output). The input essentially seems like a unidirectional phenomenon which fails to take into account the interactional complexities of the talk. The next section discusses the literature on child language acquisition that led to studies based on mother and child communicative aspects.

2.2. Studies in Language Acquisition

This section demonstrated that the focus of child language study has moved away from the exclusively syntactic and semantic models and approaches from the mid 1960's and 1970's, and has awarded increasing importance to the pragmatic and communicative aspects of the interactions between mothers and children.

A pragmatic and communicative approach gives way to a more interactional organisation of talk where cognitive characteristics or explanations of the conversation are systematically organised independently of the participants' cognitive states. This approach is adopted in this thesis and it is based on the idea that talk is organised as a social action.

In the next subsection the idea of talk as a social action is further explored. We will discuss the past literature and approaches to child language acquisition

drawing a line between the classical language acquisition studies based on syntactic and semantic characteristics and studies based on the interactional characteristics of the mother's speech. The latter is compared to studies based on the participants' common ground, suggesting that a better approach to language acquisition is to consider the interactions between mothers and their children as something organised independently of the participant's mental constructs and personalities.

2.2.1. Past Approaches to Child Language Acquisition

Research on child language has been guided by the predominant concerns of linguistic theory, and has shifted its emphasis along the development of theoretical linguistics. Fester and Skinner (1957) proposed that knowledge of language consists of a set of words (e.g. mummy, daddy, etc.) and sentences (e.g. I love it) paired with their meaning. According to this view, children would learn their language through fine-grained selected reinforcements by the parents or caregivers. Here, similar to Skinner's famous animal learning studies, children's attempt to imitate an adult utterance (e.g. mummy) could result in a reward (with praise and smiles) in case they were correct or produced close attempts, but the same did not happen when there were clear errors.

Chomsky (1959) argued that Skinner's account of language acquisition could not explain sentences that children produced correctly without having been previously exposed to them. Consequently, in the 1960s and early 1970s the field of linguistics was dominated by studies that were largely concerned with developing syntax-oriented models of children's linguistic systems (see Braine, 1963 for an example of this grammar model). Chomsky's Transformational Grammar (Chomsky & Morris 1965) governed the nature of language research for many years. This model focused on the description of language as a formal system based on the construction of grammars. The children's linguistic knowledge is not acquired, but innate. The grammatical rule system for the language can be derived innately from the 'degenerate' input given by the adult speech. Although this model may have explained some of the grammatical

structures produced by the children, it largely ignored the linguistic environment in which the child is inserted.

In the 1970's a sematic component is included in Chomsky's (1965) model of grammar, which resulted in a shift in emphasis from syntax to semantics in prevailing linguistic models. An example of this shift is the case grammar model (Chomsky 1965), in which the meanings of the child's speech take precedence over syntactic form. Although the literature still focused on the formal system in which children acquire their language, the studies also took into consideration the context (both linguistic and non-linguistic) of the children's utterances.

A more pragmatic orientation to child language acquisition arouse with the emergence of speech act theory (Searle 1969). Dore (1975), for example, proposed a model for the child's language development in terms of the conversational acts that the children are able to perform, and their illocutionary functions. In Dore's study the focus of attention is on what the child is acquiring, whether it is primarily a syntactic system, a semantic system, or a communicative one. In the latter case, interest lies on the children's production and their abilities, rather than the interaction in which the children are engaged.

Concerned with children's understanding and ability to participate in talk and to adapt to social roles, rather than with the interactional process itself, Halliday (1975) proposed that dialogue is one among a number of competencies to be acquired by children along with the grammatical system of their language. In Halliday's study, the ability to engage in dialogue is broken down into a list of skills the children may be able to do (e.g. to respond to WH-questions, to initiate dialogue, etc.). The focus is on what those children participating in the study can do, and not on how the interaction is negotiated by its participants.

In the same line of research, Garvey (1977) adopted the speech act framework for analysing the conversation skills of three to five year olds when engaged in child-child interactions; and more recently, McTear (1985) presented a detailed description of requests, repair, and turn-taking in conversations between two children with the same age range as Garvey's study. McTear's major concern

was to shed some light on "what young children have to acquire in order to become mature conversationalists" (McTear 1985:2). However, although the study stresses the communicative aspects of child language acquisition, it tends to treat these skills as something disconnected from the linguistic abilities that the children are learning.

In agreement with Dore, Halliday, and McTear, Hymes (1972) proposed that the child must acquire a 'communicative competence' along with a competence for grammar. This competence comprises the understanding of knowing when to speak or not, what to talk about, in what manner and with whom. In fact, this communicative competence is seen as something additional to the set of rules and procedures (grammatical competence) that must to be followed if children appropriately employ their linguistic knowledge.

Following the same principle of communicative competence, Tomasello proposed that language is composed of social communicative-functions (both lexical and syntactic) and pragmatic skills that are acquired by children (Tomasello 1992). The development of communicative competence depends largely on feedback regarding communicative efficacy that children receive from the other participants of the interaction. This view of language acquisition makes relevant the turns constituting the talk and the way they are related to the previous or following turns when establishing a common ground between the participants of the talk (Cameron-Faulkner et al. 2003; Mannle et al. 1991; M & Farrar 1986; Tomasello 1988). This common ground is an assumed shared knowledge (shared cognition) between the participants of the interaction and it is essential to establishing a joint attention between the speakers engaged in a talk (Clark 1996).

However, Drew (2005) advised caution when trying to give cognitive explanations to the actions done by the participants when talking. According to him, the study of interaction should be detached from that of cognition, thus treating the order of interaction as an autonomous field of conduct. Drew suggested that, as analysts, we are not able to know what the participants of an interaction are thinking or feeling as they speak. The participants' mental states during a conversation are obscure in relation to their own verbal conduct. He also

proposed that the organisation of conduct in conversation and talk-in-interaction is generally systematic, organised independently of the participant's personalities and other mental constructs:

> "The opacity of cognition in conversation (inter)-action and the autonomy of social organization of conduct (and the sequences associated with conduct) in talk-in-interaction, taken in combination with one another, suggest that the practices of verbal conduct are independent of the cognitive states of individual participants" (Drew, 2005: 161).

Thus, one should look at the participants' own orientation to what is being done in the interaction. Here it is important to see how the participants negotiate their actions as the talk unfolds. Only an analysis based on the participants' own treatment of the mothers' repetitions may provide an understanding of the interactional accomplishment of turn at talk. In this kind of approach, one should pursue the formal linguistic features associated with such accomplishments to arrive at an understanding of actions done by the mothers' repetitions and how they are negotiated.

2.2.2. Interactional Approach to Action

Much of what gets done in talk is accomplished by the use of speaking practices that, when deployed in a particular sequential context, are said to be implementing a specific social action. This social action involves one speaker of the interaction getting another to recognise their intention. In this scenario, the speakers of an interaction are understood as being accountable for having done an action. This accountability is done in various ways; for example, a next speaker may produce a turn that treats the previous speaker as having done the action that acknowledges the turn as a fitted response (e.g. an answer to a question). In other words, when a speaker makes recognisable to his recipient what action(s) they intend to accomplish, this speaker becomes accountable for having done that action (Sidnell 2017a; Sidnell 2017b). The accountability of a speaker's action is not attached to

what they do in some bare or 'brute' sense, but rather to what they can be described as doing. That is to say that the concept of accountability is attached to a conduct under the description of 'action' (Sidnell 2017b). Actions can be described in different ways: requests, offers, invitations, complaints, etc. Obviously, the next speaker can challenge or contest the prior action (Sidnell & Enfield 2012), but that does not change the fact that participants become accountable for the actions they have done.

This thesis analyses how mothers' repeat of their children's prior turn make mothers accountable for doing these actions. The way the mothers' actions will be understood by the children will depend on a constant turn-by-turn negotiation of what was said before and the implications this has on the next turn. Chapters 4 and 5 illustrate and discuss in detail this negotiation.

2.2.3. Interactional Approach to Language Acquisition

An interactional approach has been applied in many child language acquisition and development studies. These studies include childcare centres (Jones & Zimmerman 2003; Kidwell & Zimmerman 2007), care consultations (Cahill 2010), home interactions (e.g. Filipi 2007; Filipi 2009; Forrester 2008; Gardner & Forrester 2010; Forrester 2015; Wootton 1997), schools and pre-school education centres (Pike 2010) and atypical interactions (e.g. Clarke & Wilkinson 2010; Tykkyläinen 2010). While most of the work has been done using English speakers' data, the number of studies conducted in other languages, apart from English, both in monolingual (Laakso 2010; Tykkyläinen 2010 in Finnish) and bilingual (Filipi 2011) settings have been recently increasing. These studies are interested in establishing how understanding, and hence interaction, is co-constructed in adult-child talk.

Wootton (1994; 1997; 2007) was one of the precursors in examining child language acquisition and development using an interactional approach based on the participants' treatment and orientation of what is being done in the interaction. Wootton's analyses of his daughter Amy's interactions offer one of the most influential and compelling demonstrations of how the contingent and local

features of interaction are involved in the production of children's talk. Video-recordings of Amy's everyday interactions were collected when she was ten months old and four years old, and conversation analytic methods were used to examine how Amy's behaviour revealed her understanding of particular interactional contexts of her talk. Wootton (1997) focused on the design and sequential organisation of request sequences, and suggested that Amy relied on sequential attentiveness to systematically align with and display recognition of the interactional context she was engaged in. For example, the child's use of the request form 'can you do X' to display understanding when she was asking something of her parents that was in her own interest; whereas the form 'shall we' displayed an understanding of the joint nature of the on-going action.

Wootton described Amy's sequential knowledge as being local, public and moral. These understandings are local when they are related to recent events that are specific to particular interactional contexts; public understandings are jointly available through being overtly established in previous talk; and finally, moral understandings demonstrate Amy's expectations and understandings about how an interaction should unfold. The local, public, and moral aspects of children's understandings have implications for developmental psychology (Butler 2008), since a close analysis of instances of children's talk may reveal how children may organise their conduct in relation to "alignments taken up in preceding interactions, alignments that can touch on such things as people's wishes, desires, plans and references" (Wootton 2007:194). In this way, it is possible to observe what are normally considered psychological attributions in naturally occurring talk, without having to resort to cognitive explanations about the children's behaviour, language, and development (Butler 2008).

Forrester (2001, 2008, 2015) also focused on the sequential understanding of young children and the development of children's practices for doing self and other-repair (see Section 2.3. for the distinction between self and other repair initiation). These analyses considered repair as a social practice and examined the verbal and non-verbal resources implemented when producing a repair and the pragmatic implications of initiating repair. Forrester (2015) proposed that self-correction might arrive by the alternative routes of self-initiation or other-

initiation, which themselves are organised to favour self-initiated repair in conversation. This agrees with Tarplee (1993, 1996) and Filipi (2009), in showing that repair sequences are organised similarly in adult-child interaction and adult interaction.

This thesis, along with Forrester, Tarplee, and Filipi, shows that there is a preference for child self-correction (see Section 2.3) however, as Schegloff et al. (1977) proposed, there are still examples of interactions in which the unbalanced knowledge between mother and her children may favour the use of other-correction. In this case, the mother provides the correct answer and the repair initiation is used as a means to correct the children's troublesome turn.

Filipi (2007) showed that children are not only sensitive to how interactions are produced and organised, but they also prove to be competent participants throughout their talk. Actually, Filipi's analysis of how a child between ten months and two years old displayed her understanding of the interactional implications of 'mm' and 'mm hm' produced by her parents, suggested that children's sequential knowledge is essential to their understanding and production of social action.

Kidwell and Zimmerman (2007) studied the procedure by which toddlers younger than two years old establish joint action with both adults and children, through an analysis of interactions where the toddlers were showing objects to the others. The authors demonstrated that children use a range of verbal and embodied actions to make something observable and hence secure a participant's attention, which makes one's intentions recognisable.

Filipi (2009) broadly supports Kidwell and Zimmerman, but suggested that nine-month-old toddlers are already active co-participants in talk. The examination of the next action became a powerful tool for investigating the actions of young children, because the preceding turn carries implications for what children may do next (Sacks 1992a; Sacks1992b), regardless of whether they had produced an acceptable turn or not. In this context, the adults' reaction to the children's prior action provides some information about what is acceptable or not at different points in time (Filipi 2007; Filipi 2009). The same is also true for

the children engaged in the talk. By focusing on the next position (the turn after the children's utterance), it becomes possible to observe how understanding is co-constructed and the resources children and adults can use when establishing mutual understanding, for instance, the way in which mothers and children initiate an action and what kind of information adults provide through their responses (Filipi 2014; Tarplee 2010). In this regard, Tarplee indicates how studies on feedback and negative evidence can be increased and informed by a microanalytic focus on sequences of talk in adult-child interaction.

Focus on sequences of talk in adult-child interaction was also discussed in Keel's (2016) study. The author examined in detail how children's evaluative actions were used as attempts to communicate their normative position. In Keel's study, the parents treat the affective implication of the children's actions as 'emic understanding' of their children's participation in assessing the world they jointly inhabit. This orientation sheds some new light on the ways in which shared understanding is eventually achieved and ratifies the importance of focussing on sequences of talk in adult-child interaction, as proposed by Tarplee.

On of the main characteristics of adult-child interactions is use of repetitions (Snow, 1972). Pike suggested that the variation in conversational structure across the course of learning conversation, along with the dynamics of repetition in the interaction, might help the participants to understand how the orientation to features of the on-going talk may contextualise and presuppose particular understandings of the activity in which the adult and child are engaged (Pike 2000; Pike 2010). Repetition would serve both as coordinatory and communicative functions in conversation (Norrick 1987), helping to build cohesiveness within the talk (Mercer 2000).

Additionally, it appears that 'motherese' is rich in repetitions (Stern et al. 1983). Mothers and children either repeat the lexical item, its phonetic characteristics, or both the lexical item and its phonetic characteristics. Thus, lexical repetitions may be repeated with a phonetic trajectory that either mimics or differs from the original utterance in some way (e.g. Hellermann 2003; Couper-Kuhlen 1996; Snow et al. 1976).

2.2.4. Conclusion

This section demonstrated that the focus of child language study has moved away from the exclusively syntactic and semantic models and approaches and has awarded increasing importance to the pragmatic and communicative aspects of the interactions between mothers and children. A pragmatic and communicative approach gives way to a more interactional organisation of talk, where cognitive characteristics or explanations of the conversation are systematically organised independently of the participants' cognitive states. This approach is adopted in this thesis and it is based on the idea that talk is organised as a social action.

The way the mothers' actions will be understood by the children will depend on a constant turn-by-turn negotiation of what was said before the repetition and the implications this repetition has on the next turn. Chapters 4 and 5 illustrate and discuss in detail this negotiation. A mutual understanding is key to making clear, to a recipient, what action the speaker intends to accomplish when uttering something. We had seen that lexical repetitions are one of the main features of adult-child interaction, and they may help to comprehend how the orientation to features of the on-going talk may contextualise and presuppose particular understandings of the mother-child interaction. The following section discusses the relationship between lexical repetitions and their turn position and sequential characteristics.

2.3. Giving feedback to children: error correction

Traditionally, early descriptions of 'baby talk' aimed to describe adult speech addressed to children, and whether it should be considered a universal phenomenon or not (see section 2.1.1.). In these descriptions, the effects of CDS on language development are given little consideration. It was only later, in response to Chomsky's innateness hypothesis (Chomsky & Morris 1965), that research into CDS became concerned with investigating the environment in which

language acquisition takes place.

This shift is documented by Snow (1994) and Pine (1994), who report the need to consider the interactive context of CDS if we are to accurately understand the feedback mothers give to their children. A motivation for research into language addressed to children has come from the 'no negative evidence' and learnability theory debate (e.g. Brown & Hanlon 1970; Morgan et al. 1995), which concerns the sufficiency of mothers' feedback supplied in response to their children's ungrammatical productions.

Some researchers (cf. Brown & Hanlon 1970; Morgan et al. 1995) have shown that the feedback children receive on their ungrammatical production was not enough to explain the production of correct utterances. Conversely, studies carried out by Moerk (1991) and Saxton (2000) showed that the feedback children receive from adults may influence their production of grammatical sentences. Following Hirsh-Pasek et al. (1984), some researchers (cf. Demetras et al. 1986; Saxton 1997) looked at more implicit forms of feedback. The role of feedback in relation to phonological and lexical development (Bohannon & Stanowicz 1988) and its relation to atypical populations of learners, such as deaf children (Harris 1992) and children with a specific language impairment (Nelson et al. 1996), was also studied.

The studies mentioned above make the use of terms abundant the use of terms like feedback, input, and stimulus abundant; terms which "implicitly present language development as a computational mental process of grammar deduction" (Tarplee 2010:4), which does not value an understanding of the adult-child talk that locates language development within social interaction. As a result, studies based on the theoretical models of learning and deduction may present the adult's contributions in an interactional adult-child interaction divorced from the interactional context in which they were embedded.

The current study, instead, discusses the feedback children get from their mothers by looking for the ways in which mother's responses (feedback) may provide useful information about child language learning. Here we look at identifiable classes of feedback (response types) that act as a signal for the child by marking ungrammatical, lexical, understanding problems. In other words, we

are looking for a signalling code in which the child can crack the action proposed by their mother's repetition.

What we hope to illustrate in this thesis is that whilst we cannot ignore the nature of adult utterances that deal with ungrammatical utterances, we should not ignore that repetitions to initiate repair on child's pronunciation and lexical choice, requests for confirmation, and affirmations, implicate different actions on the part of the child.

Svennevig (2008) shows that the 'canonical concept' of other-initiation of repair used to display a trouble in speaking, hearing, and understanding, evokes a rather narrow conception of the nature of these 'problems' as being just a problem of misspeaking. The so-called 'problems' (Svennevig 2008) should also regard the various aspects involved when producing an utterance that is recognised as valid or as a felicitous social action in a given situation. Thus, in addition to linguistic problems (pronunciation, syntax) the literature on repair should also address acceptability problems, such as saying that something is 'wrong' when it is not acceptable (repair initiations to correct lexical choice), and ways of establishing common ground between speakers (requests for confirmation).

Consequently, instead of formulating categories based on the kind of grammatical information the child receives, we hope to illustrate the benefits of looking at the mothers' turns as interactional objects, in which each repetition implicates a different preferred next action on the part of the child (Clark 1996; Schegloff 1992; Schegloff et al. 1977).

2.3.1. Lexical Repetition in Interactional Studies

There has long been a debate in the literature on child language acquisition and development about the characteristics of mothers' lexical repetitions (see 2.1.1.). More recently, research on language acquisition has profited from the benefits of using an interactional approach to investigate the interactions between adults and children. In particular, this approach has been shown to be of great use when dealing with the multi-functionality of lexical repetitions, since it considers each repetition based on its sequential position, phonetic characteristics, use, and

preferred next action. Therefore, to better understand the complexity of the multi-functionally of repetitions, one should study them *in situ* (Curl 2002).

Schegloff (1997) proposed that one of most common uses of repetition is to target the next action. In other words, the repetition of the previous turn is used to project further action in subsequent talk. This type of repetition is turn-initial, and is also used by the mothers from this study to target and guide the child's next action. Repeats may be used as a way of initiating a side-sequence within the ongoing talk in order to focus on a problem with the prior utterance (Jefferson 1974; Schegloff et al. 1977). They may also be used to mark instructions and recipiency (Goldberg, 1975).

Interested in the position in which a repeat may occupy, Schegloff (1995) proposed three main types of sequential positions: a repeat may initiate a sequence, most commonly a repair sequence; it can be deployed as an answer to a question (in second position); or it may be an affirmation to a test question sequence (thus occupying a third position). The mothers' repetitions analysed in this thesis either occur in second or third positions. Similar to Schegloff's (1997) study, here, the mothers' repetitions that are done in the next turn (here called next position; see Section 4.1) can also be related to dispreferred responses.

In consonance with Schegloff, Huang (2012) claimed that Mandarin-speaking mothers may use partial repetitions to project further elaboration or to project a dispreferred response. They may also use exact repetitions to acknowledge the receipt of information and ask for clarification. However, both forms (reduced and exact repetitions) are used to request confirmation. Huang's results show that although the repetitions differ in form, their main purpose is to elicit the children's participation in conversation.

In this thesis, both reduced and exact repetitions can project dispreferred actions (see chapters 4 and 5). Additionally, the mothers' repetitions can also project preferred actions, such as acknowledging the children's correct answer to a test question (also called affirmations), and requesting confirmation.

Different from other-repetitions in adult interaction, repetition in mother-child interaction is seen as the major device for acknowledging the receipt of information, together with backchannels (Clancy et al. 1996). Additionally,

parental other-repetitions were found to serve as an important strategy for communication, since the responsivity demonstrated by repetitions has been singled out as the principal component of developing relationships.

With regards to the children's development, repetitions may be used to contextualise and presuppose particular understandings of the activity in which the adult and child are engaged (Pike 2000; Pike 2010). In other words, repetitions may serve both as communicative and co-ordinatory functions in conversation, helping to build cohesiveness within the interaction (Mercer 2000; Norrick 1987). For example, phone callers, whose responses were repeated by the talk-show host, showed to orient their responses to the different types of pitch matching done by the host (Couper-Kuhlen 1996).

Consonant with Couper-Kuhlen's claim that a lexical repetition may or may not be an imitiation, Tarplee (1993, 1996) suggested that mothers might produce repetitions that are quite different in segmental structure from those the child produces, and still treat them as repetitions (see 3.3.1.). The repetitions should be seen as something that goes beyond the explicit linguistic feedback inherent in adult turns (e.g. affirmations and corrections). They are based on the speakers' treatment and orientation of what they consider to be lexical repetitions (Tarplee 2010; Walker 2010; Wells & Stackhouse 2016).

Using an interactional approach, Tarplee (1993; 1996; 2010) showed that one of the main problems in adult-child research is that the categories typically employed when giving input to children are formulated in terms of the kinds of grammatical information the utterances can bear. This implies that the adults' inputs are represented by a one-way phenomenon where each contribution is divorced from the local interactional context in which it was embedded.

Tarplee (1993; 1996) investigated the interaction between caretaker and child during a picture-labeling activity and found that the child oriented to the phonetic features of the caretaker's repetitions. Features of pausing and pitch pattern are connected with the ways phonetic repair work is carried out in the interactions. Tarplee showed that the interactions between child and adult could be divided into two groups. The first group represents continued attempts by the child to name the picture, and it is characterised by temporally delayed utterances,

produced with different pitch pattern contours, and strongly contrasting articulations. The second group presents actions that lead to a continuation of the activity, and it is characterised by productions with no delay, and minimised contrastivity of pitch and articulation.

Curl (2002; 2004; 2005) proposed that the phonetic shape of repetitions done by English adult speakers is systematically related to the sequential placement of the troublesome turn. After examining repetitions that followed open class repair initiators (Drew 1997), Curl revealed two separate phonetic patterns: upgraded and non-upgraded. The first type, the 'upgraded phonetic pattern', consisted of repetitions that had an expanded pitch range, were longer in duration, louder, and that presented altered vocal tract settings as compared to the first saying (the turn treated as a trouble source by the participants). In contrast, the second type, the 'non-upgraded phonetic pattern', consisted of repetitions that had a compressed pitch range and were quieter, shorter, and had similar vocal tract settings to the first saying. The upgraded phonetic pattern repetitions occurred after trouble-source turns that were fitted (Curl 2002). In other words, repetitions were appropriately designed to follow the previous turn and continue with the sequence in progress. These repetitions could also begin a new sequence if the previous one had been collaboratively closed. On the other hand, the non-upgraded phonetic pattern occurred on other-initiated self repairs produced after disjunct trouble-source turns that lacked a clear link to the just-prior turn and that failed to display shared understanding (Curl 2002; 2004; Curl 2005).

Curl (2002) also claimed that repetitions need to be studied *in situ*. Consequently, repetitions should not be considered as a mark of a 'disfluent' speaker (Schegloff 1987), but as interactional actions that are directly connected to their place in turn-taking, sequence, and phonetic features. However Walker (2014a) and Walker and Benjamin (2017) advised caution when labeling repetitions that may be oriented as having different or similar functions and actions, since each repetition is context-specific. This means that upgraded/non-upgraded phonetic patterns are bound to the environment in which they are placed. In other words, only repetitions that are produced with similar features and within similar environments are going to receive the same label.

Consonant with Curl (2004; 2005), Curl et al. (2006) base their analyses of adult lexical repetitions on the participants' orientation so as to explore the participants' displayed understandings of pragmatic inferences. The authors propose that the speakers do not treat all repetitions as functionally equivalent. Thus, analysts should not treat all repetitions as being of the same phenomenon (Couper-Kuhlen & Selting 1996a; Walker 2014a; Walker 2014b; Walker & Benjamin 2017). In Curl's et al. (2006) the speakers draw on a range of phonetic features, including loudness, tempo, and pitch, to design and distinguish their repetitions.

In contrast to Curl et al. (2006), sometimes the only phonetic feature available to rely on is intonational contour. Benjamin and Walker (2013) proposed that English speakers would initiate a reparative repetition, using a high rise-fall pattern, to display surprise, and thus mark the unacceptability of the trouble-source turn.

Walker and Benjamin (2017) added another piece to the unfinished puzzle of the other-repetitions discussion in adult-speech, by showing that framing and prefacing repeats, in English, were associated with different functions, phonetics and sequential form. On one hand, framing repetitions suspend a display of understanding by repeating the turn-initial components of the previous turn, thereby indicating that some words were accurately perceived. Framing repetitions are produced with a "long and flat" phonetic pattern (Walker & Benjamin 2017). On the other hand, prefacing repetitions claim a much more serious and sometimes complete breakdown of understanding. They consist of a minimal repetition of the final grammatical structures of the speaker's prior turn, followed by an explicit request for clarification/ repair of the repeated item or an account for not responding appropriately to the turn initiated by the repetition. Prefacing repetitions indicate that at least some of the talk was heard because it was repeated. In terms of phonetic characteristics, they are produced quietly and with a falling intonation contour.

Fernald and Simon's (1984) studies on CDS showed the incidence of prosodic repetition (pitch matching). Mothers and children may or not repeat, the prosodic contour of the previous vocalisation (Gratier & Devouche 2011; see

2.1.). Wells (2010) and Wells and Stackhouse (2016) proposed that Robin, aged 19-21 months, systematically repeated his mother's intonational contour to display alignment with the ongoing activity, whereas he used a contrasting contour when initiating a new sequence or action. In this thesis, the children may also match their intonational contour to display alignment with the action taking place (see Section 4.2.). Mothers may also increase their pitch when repeating a word to call their children's attention (Fernald & Mazzie 1991; Fernald & Simon 1984). In cases where the mother's repetition of the child's deviant produced as a correct articulation, the repetitions could be regarded as phonological expansions (Snow et al. 1976). Repetitions containing minimised phonetic differences would be used to affirm the children's prior turn, while repetitions to initiate repair on the children's articulation would present clear articulatory differences (Tarplee 1993; Tarplee 1996).

This subsection has shown that the literature on lexical repetitions has revealed that repetitions in adult and adult-child interactions can accomplish a range of pragmatic functions or actions, including expressing surprise, questioning the acceptability of what is said, checking understanding, acceptability of what is said (Jefferson 1972; Sorjonen 1996; Sidnell 2010; Benjamin & Walker 2013, among others). But how do mothers and children distinguish different functions? And how do children know what to respond?

In this thesis, we examine the role played in this process by interactional resources and prosody, drawing on methods from linguistics and interactional linguistics. The project contributes to the growing field of Conversation Analysis (Curl et al. 2006; Walker 2014a; Walker 2014b; Walker & Benjamin 2017) with a focus on prosody and the function and form of lexical repetitions in mother-child interactions.

Although there has been work on prosody and the functions of lexical repetitions in child-mother interaction (e.g. Flax et al. 1991; Tarplee 1993; Tarplee 1996; Tarplee 2010), this is the first project that compares the phonetic characteristics, turn position, and pragmatic functions of lexical repetitions in mother-child interactions that are used to initiate repair on the children's articulation, initiate repair on the children's lexical choice, and request

confirmation and affirm the children's correct answer. Besides, our focus on a conversational structure (children's original turn > mothers' repetition > response) gives us a controlled environment to analyse the role of phonetic features in action formation and ascription, but it allow us also to study the prosodic system of Brazilian Portuguese (BP) more generally. The literature on prosody and pragmatics in BP has vastly related the functions of intonation patterns to their pitch contour, instead of taking into consideration the turn's position and sequence (see Moraes 1998; Moraes 2008).

2.3.2. Conclusion

This section has highlighted the main features of adult repetitions in adult interactions and child-adult interactions. It has shown the importance of analysing each repetition according to its meaning, use, phonetic features, and sequential position. It has shown that the speakers have a variety of forms (practices) available to perform a particular function (action) and that, although there is still interplay between the syntactic form and sequential position, the form used is also determined by its place in the sequence (Walker, 2014a).

As Walker (2014b) suggested, a rising pitch pattern is only a pitch pattern, and it only becomes involved in meaning when it occurs at one particular place in the sequence instead of another. Consequently, there are no analytical grounds for saying that all high-rise fall pitch pattern repetitions in English or in any other language are going to display surprise as a single function, since there are other applications for high-rise pitch patterns. As a matter of fact, one form may constitute many functions and several forms may accomplish the same function (Walker 2014a).

2.4. General conclusion

This chapter has argued that the examination of only communication, cognitive and social contexts, and linguistic studies based on syntactic and sematic models, cannot fully explain the complexity of interactions between mother and child.

Even studies that were based on CDS and their phonetic characteristics were not able to tackle the issue of the interrelationship of the phonetic structure of the talk and the sequential unfolding of the interaction. Thus, the separate examination of the interactional sequence or of the phonetic realisations neglects (or worse, obscures) the real meaning and usage of the mothers' repetitions and the participants' conduct and orientation when using the repetitions to negotiate the meaning of their actions. This chapter has shown how studies that ignore either the sequential environment or the phonetic structure of utterances in which the repetitions are produced, do not provide as full an account as possible of the events taking place.

A large and growing field of research has been showing that the participants orient to clusters of phonetic events that co-occur with particular interactional activities. Consequently, sequential analysis alone, or studies that take into consideration only the phonetic characteristics of the repetitions, may not entirely explain the categories relevant to participants in talk-in-interaction. For instance, Tarplee (1996) and Couper-Kuhlen (1996) show that what appear to be 'the same actions', or repetitions of talk by other speakers, are distinguished by the phonetic organisation of the repetition. Participants display different orientations to 'the same' activity. An impressionistic and instrumental phonetic description of the repetition can clearly and accurately describe the systematic differences between the repetitions and their first sayings.

This thesis builds on the work presented in this chapter, and it emphasises the importance of combining linguistic and sequential analysis. Here we will investigate the interrelationship of phonetic structure and sequence organisation in mothers' repetitions of children's prior turns. This study contributes to the ongoing literature by showing how systematically produced clusters of phonetic events are responded to and manipulated, in both interpreting and shaping interactions, in natural talk between children and their mothers.

3. METHODOLOGY

This chapter presents and discusses the methodological principles used in this thesis. Section 3.1. lays out the background information relating to the participants and the setting. Section 3.2. outlines the data collection. Section 3.3. outlines the data set analysed, examining what this study considers to be lexical repetitions and summarising the criteria for inclusion in the collection. Section 3.4. outlines the preparation of the data, including the transcription conventions used. Section 3.5. outlines the methodology of Conversation Analysis. In section 3.6. the phonetic analysis is outlined. Finally, section 3.7. summarises the current chapter.

3.1. Participants: search and selection

One of the selection criteria for this study was that the children should be two years[1] old and have undergone normal development. Additionally, the children should come from monolingual Brazilian Portuguese households. It was also necessary that the children had successfully scored a similar number of entries in a lexical choice vocabulary test (Mangilli et al. 2012), and that they did not have siblings. The presence of another child during the recordings could have compromised the validity of the data collected since this thesis aims to analyse dyadic interactions and not multi-party interactions. Moreover, the children would have had to compete with their sibling(s) for their mothers' attention.

As for the parents, in order to keep the same sociolinguistic and sociophonetic characteristics (cf. Foulkes et al. 2005) within the participants, only those who were from the city of Sao Paulo and who hold a university degree were

[1] Two-year-old children start to have sequential expectations and awareness of local sequential history, which can help us (analysts) to uncover how the participants rely on the sequential intricacies of their talk to negotiate the meaning of the mothers' lexical repetitions (Filipi 2009; Kidwell & Zimmerman 2007; Wootton 1997).

selected. Furthermore, solely the mothers were invited to participate in this study because they were, at the time, the children's main carers.

The researcher advertised their study during a parent-teacher meeting organised by the school. Each parent received an information sheet (see Attachment II) and a consent form (see Attachment IV), and was asked to get in contact with the researcher in case their child fitted the selection criteria and wanted to participate in the study.

In total, fifteen mothers who met the selection criteria expressed interest in participating in the study. The researcher met each mother and child and applied a lexical choice test in order to assess the number of lexical entries in the children's vocabulary.

Eight mothers and their children scored similar values in the lexical test and were thus invited to participate in this study. These children's ages ranged from 2.3 to 2.7 (mean age 2.5) years. However, only six pairs of mother and child were recorded, as one of the children got ill and could not take part in this study, and the other one could not stop crying during the recording.

3.2. Data collection

One of the problems the researcher faces in this kind of study is the decision concerning the most advantageous way to collect data. On the one hand, there is the desirable need to have a 'rich data' set (Tarplee 1993) that includes a record of as many non-linguistic features as possible, including features such as gestures and eye-gaze. On the other hand, the researcher must also satisfy the need of having an uncontaminated naturalness of the data. Since the concerns of this study are to depict the everyday talk between mothers and their children, priority was given to having the data recorded in the most naturalist setting.

In this analysis we have adopted an approach focusing on naturalistic, observational data, which we found particularly useful to focus on the sequential, turn-taking, and phonetic characteristics among the different interactional practices adopted within each mother and child pair. In fact, qualitative data are often preferred to explore real-life language use between mothers and children as

opposed to experimental data, since in some cases the latter kind might result in a report sample of test behaviour, rather than of natural behaviour (Tarplee 1993).

The data used in this study involves playtime interactions between children and their mothers, and was recorded in the participant's house, rather than an unfamiliar environment (e.g. lab). This is because our study focuses on the kinds of interactions in which children are always involved. There are differences between naturalist playtime settings done at home and a more structured setting such as a lab; an unfamiliar environment may influence the children's responses and willingness to participate in the study (Munhoz Xavier 2010).

Of the six hours of data recordings, three are audio recordings recorded using a zoom H4n recorder and three are video recordings, recorded using a digital video camera, HVR-HD1000N. The author, who was present during the recordings, collected all the data and assured the quality of the audio and video recordings.

Each mother and child interaction was produced during a half-hour of playtime. In total, three meetings were needed, the first one to assess the child's lexical knowledge and another two to collect the data. Each meeting lasted for half an hour, resulting in one hour of mother-child interaction. In these meetings, the participants played with: play-dough, toys, colouring books and picture books that were provided by the researcher, as well as the toddlers' own toys. The recordings were made in a quiet room of the participants' house.

Indeed there are certain disadvantages to the use of audio data for the analysis of social interaction when compared with video data, as audio recordings do not allow access to non-linguistic information such as gaze, the spatial configuration of the participants, etc. However, for the environment in which the recordings were made, the use of video would have been too intrusive, with the risk of resulting in a 'less natural' interaction. In this study, the choice made for capturing instances of the children's routine linguistic environment resulted in a collection poor in non-linguistic information (audio recordings) and another collection rich in non-linguistic information (video recordings). Due to only half of the recordings being done without video, the researcher could still have an idea

of the environmental and non-linguistic influences on the data. Furthermore, the researcher documented some of these influences by means of taking notes while collecting the data.

3.3. Data set

Verbal and prosodic repetitions are independent of one another (Couper-Kuhlen 1996). That is, one speaker may or may not repeat another speaker's prosody, and may or may not be repetitious of another speakers' words. The verbal and prosodic independence of lexical repetitions gives rise to the discussion around two common features found in lexical repetitions: form and function.

With respect to form, it is useful to conceptualise repetition as a cline, extending roughly from a 'perfect copy' to a 'near or mere copy', thereby avoiding a comparison where repetitions have binary plus-or-minus features. In this thesis the mothers' repetitions may be produced as perfect copies or as a near copy. As we will see in Chapters 4 and 5, what matters for the study's participants is not that a difference can be heard or measured, but rather how the speakers treat the verbal and phonetic similarities between the mothers' and the children's utterances.

In addition, we should not fool ourselves into thinking that the replication of form necessarily means the replication of function (Couper-Kuhlen 1996; Walker 2014a; Walker 2014b; Walker & Benjamin 2017). Different verbal and phonetic forms may have their function replicated or not, depending on how the speakers' (mothers and children) negotiate the action done by the mothers' repetitions.

3.3.1. What is a lexical repetition?

The data analysed and discussed in this thesis are based on a collection of mothers' repetitions of their children's prior turn. Within this collection, the repetitions' sequential implication and the turns after the repetition are used to help the children (and us analysts) to underpin the action done by the mothers'

repetition.

Building on the literature on Child Directed Speech (CDS; see 2.1.1.), Tarplee (1993, 1996), Wells (2010) and Wells and Stackhouse (2016) suggested that adults (mothers and caregivers) accept lexical repetitions from the children that are quite different in segmental structure from those produced by the mothers themselves, focusing their analysis on the basis of how the participants (adults and children) vary their pitch pattern (tone).

This kind of approach relies on the speakers' (mothers and children) displayed orientations to, and treatment of, the utterances as same or different. The analyst may treat any difference or similarity, no matter how small, like a functionally implicated difference (Walker 2009). Here, what matters is not that a difference can be heard or measured, as in many studies in CDS, but rather how the speakers treat the differences between the mothers' and the children's utterances.

Working on other-initiate reparative repetitions in English speakers' adult talk, Curl (2004, 2005) showed that different phonetic patterns correlate with a difference in the sequential fittedness of the trouble source turn. In Curl's study the deployment of a particular phonetic pattern on a reparative repetition showed the speaker's realisation or acceptance of the fact that the first saying (the turn which contains the repair initiation) was ill-suited

Couper-Kuhlen (1996) and Walker (2014a, b) demonstrated that speakers may produce a verbal and prosodic repetition, a verbal repetition, or a prosodic repetition. In sum, one speaker may or may not repeat another's speaker's words and/or may not repeat another speaker's prosody. Verbal and prosodic repetitions have at least two features in common: form and function.

With respect to form, it is useful to conceptualise repetition a cline extending from a perfect (verbal) copy through a near copy. Consequently, exact repetitions; partial repetitions; recast; etc.… can be distinguished from each other.

With respect to function, Bakhtin (1934-1935), Couper-Kuhlen (1996) and Walker (2014a) showed that the meaning of words is irrevocably tied to the context in which they are used. Thus, repeated words cannot have the same situated meaning as their first sayings because the context is, by definition, a

different one.

In this thesis, the constrastivity in articulation, pitch, and turn-position of the mothers' repetitions are important for distinguishing other-initiated repetitions used to initiate repair on the children's articulation from affirmatory repetitions, other-initiated repairs to initiate repair on the children's lexical choice, and repetitions to request confirmation (Tarplee 1993; Tarplee 1996; Huang 2012).

Each mother's repetition and surrounding context was copied from the video and audio recordings into separate WAV files using Praat (Boersma & Weenink 2017). Praat preserves the dual channel recordings, but it also allows playing both channels at once. Additionally, this software allowed us to get acoustic measurements, to check the waveforms and spectrograms and manipulate pitch. Praat was also used to add the phonetic transcription of the children's first sayings and the mothers' repetitions (see Section 3.6.).

3.3.2. Criteria for inclusion in the collection

The collection, analysed in this study, started to get its form when the researcher collected examples of recast, partial repetitions, exact repetitions, and modifications of the children's utterances (Cross 1977; Newport 1976; Nelson 1977; Seitz & Stewart 1975b). In the literature on language acquisition and development, many studies use the labels, mentioned above, to draw distinctions between the categories of reproductions based on the lexical and syntactic relationship between the child and adult utterances (Nelson 1973; Nelson 1977; Newport 1976). Some studies tried to shed some light on repetitions that immediately followed the child's turn; others looked at repetitions that were separated from the child's first saying by varying amounts of intervening talk. Nelson (1977), for example, tried to address the issue of form; however his analysis presented the prosodic characteristics of the adult's repetitions and their functions inadequately.

Snow et al. (1976) addressed the phonological relationship between 'original' and 'repetition' in adult-child interaction. 'Straight repetitions', or exact repetitions, could be regarded as phonological expansions, since the mother's

repetition of the child's deviant production is produced as a correct phonological model. However, the fine details of the articulatory characteristics of the speakers' utterances, the repetitions' functions, and the nature of the child's production (turn) and its repetition were not discussed.

With respect to function and form, the literature on lexical repetitions and their phonetic characteristics (e.g. Couper-Kuhlen 1996; Curl 2002; Curl 2005; Tarplee 1996; Walker 2014a; Walker & Benjamin 2017) shows that verbal and prosodic repetitions are independent of one another. Therefore, each repetition should have their function and form based on the participants' orientation and treatment of the repetitions as similar or not. The collection analysed in this study was selected from the original data set using the participant's orientation and treatment of repetitions.

The 'children's original data set' contained examples of: children's open class repair initiators (see Drew 1997 for a detailed explanation on open class repair initiators), children's self-repair, and children's repetitions to request confirmation. Fragments 5, 6 and 7 illustrate the children's original data set:

Fragment 5 is an example of the children's open class repair initiators found in the children's original data set. The arrow points to the repair initiator.

Fragment 5 (thacarcordamassinha)

	01-M:	ó a mamãe vai fazê um sol (mother uses play-dough to make a sun)
		look mummy is going to make a sun
	02-	(0.5)
→	03-C:	uh?
		Uh?
	04-	(0.2)
	05-M:	mamãe vai fazê um sol
		mummy is going to make a sun
	06-	(0.2)

Fragment 6 is an example of the children's self-repair found in the children's original data set. This form of repair was excluded from the collection

since this study aims to look at how mothers and children negotiate the action done by the mothers' lexical repetition.

Fragment 6 (caenet3bolotáquente)

	01-M:	nu baldinho alí ó (.)(mother points to the plate) teim um pratinhu pega alí *look inside the bucket there (.) there is a small plate get it over there*
	02-C:	eu vou (stands up to get the plate the mother is pointing to) *I will*
	03-M:	i:::ssu:: essi podzi sê o seu pratinhu *that's right this one can be your little plate*
→	04- C:	u copinho aqui(.) pegue- peguei só um copinho *there is a little glass(.) get-I got only one little glass*

Fragment 7 is an example of the children's repetitions to request confirmation found in the children's original data set. In this interaction Child and Mother are labeling the animals from a picture book.

Fragment 7 (netaneidefazavaquinha)

	01-M:	é::: uma girafa:: (mother is pointing to a picture from the child's picture book) *it is a giraffe*
→	02-C:	é uma girafa? *Is it a giraffe?*
	03-M:	é uma girrafa It is a giraffe

The children's data above were not analysed in this thesis because our study aims to look at how the children display understanding of their mothers'

lexical repetition. Most importantly, this thesis aims to analyse how the mothers and their children negotiate the action underpinned by each mothers' repetitions.

The 'mothers' original data set' contained examples of: mothers' open class repair initiators; utterances where the mothers said the same thing the children said in their previous turn, but the verbs had different verb endings to indicate a different person; utterances where the mothers paraphrased their children's prior turn; mothers' lexical repetitions used to initiate repair on the children's prior turn; mothers' lexical repetitions used to affirm the children's prior turn and mothers' repetitions used to request confirmation. Fragments 8, 9, 10, 11, 12 and 13 illustrate the mothers' original data set:

Fragment 8 is an example of mothers' open class repair initiators found in the mothers' original data set. In this example Mother and Child are playing with Lego.

Fragment 8 (ciguprédio)

	01-M:	o que teim nessi prédio? (points to the building the child is drawing)
		what is there inside this building?
	02-	(0.5)
	03-C:	é::: um *konets
		it is:: a unknown word
	04-	(0.3)
→	05-M:	uh?
		Uh?
	06-	(0.4
	07-C:	*eu coneço
		I know
	08-	(0.4)
	09-M:	cê conhece?
		Do you know it?

Fragment 9 is an example of an utterance where the mother produces the same verb the child did, but it has a different verb ending to indicate a different person. The arrow points to the mother's utterance. The parts in bold are used to

highlight the differences in person.

Fragment 9 (ciguacertei)

	01-C:	vô montá essa (child is playing with Lego pieces)
		I will put these pieces together
	02-M:	tá
		it is
→	03-C:	acertei mãe
		***I** got it right mum*
→	04-M:	acertou?
		*Did **you** get it right?*

Fragment 10 is an example of an interaction where the mother paraphrased her child's prior turn. In this interaction they are playing with play-dough. The arrow points to the mother's turn. The parts in bold are used to highlight the differences in person.

Fragment 10 (nalufazendoumabolinha)

→	01-C:	tá batendo uma bolinha
		***she** is bouncing a little ball*
→	02-M:	[**cê** tá **fazendu** uma bolinha?
		Are you making a little ball
	03-C:	[ehm
		uhm
	04-C:	essa bolinha já tá pronta
		this little ball is already ready

Fragment 11 is an example of mothers' repetitions to initiate repair on the child's prior turn. Here Mother is repairing the Child's misarticulated trouble some turn. Section 4.2 discusses this kind of repair initiation in more detail.

Fragment 11 (thacarfantasma 13:06-13:43)

→ 01-M: /fãnːˈtʰasm̥ə̥/

Ghost

02-C: /β̥ʰaˈːpʰa̤mə̥/

Ghost

03- (6,7)

04-C: vô cotá a fita

I'm going to cut the lace

Fragment 12 is an example of mothers' lexical repetitions used to affirm the child's prior turn, which are found in the mothers' original data set. In this study mothers affirm the children's correct answer to a test question (see Section 5.3).

Fragment 12 (thacarpresente)

01-M: Quem é essi daqui

Who is this?

02- (0.3)

→ 03-C: /ˈmiçei/

Mickey

→ 04-M: u /ˈmiːkeiː/ (.) i qui cor é essa embalagem aqui du presenti?

Mickey And what colour is this gift-wrap?

05- (1.1)

Fragment 13 is an example of mothers' repetitions used to request confirmation, found in the mothers' original data set. These repetitions are going to be further discussed in Section 5.2.

Fragment 13 (caenet3obolotaquente)

01-M: vê si já ficou prontu

check if it is already ready

02- (0.3) (child goes to her oven and opens the oven door to check if the cake is baked)

03-C: tá prontu

it is ready

04-M: °h:: intaum peg- cuidado qui tá quentsi

so get- careful it is hot

05- (2.3) (Child gets the cake)

→ 06-C: /tə ˈkẽ̞n:[tʃi/

it is hot

→ 07-M: [/tə ˈkʰẽ̞n::tʃi/

it is hot

08- (0,5)

09-C: vamu vê si a gentsi desenforma essi bolo

lets see if we can unmould this cake

From the 'mothers' original data set' above, the open class repair initiators were excluded from the collection because, although they yielded repetition, these repetitions were the children's and not those of the mothers. Utterances where the mother said the same thing the child said, but their verbs had different endings to indicate a different person were also excluded from the collection because they are syntactically different from each other; and this study aimed to look at were lexically and syntactically similar to each other. The same happened to utterances where the mothers paraphrased their children's prior turn.

Instead, the mother's lexical repetitions to initiate repair on their children's prior turn, the mothers' lexical repetitions to affirm their children's prior turn, and the mothers' repetitions to request confirmation are part of the collection that compose the data analysed in this thesis. These repetitions were selected because they are examples of lexical repetitions that occurred after the children's prior turn and they shared similar lexical and syntactic characteristics (see below). The mothers' repetitions that compose the data set analysed in this thesis share the following characteristics:

- They are lexical repetitions of a co-participant's talk (other-repetitions).
- They are positioned immediately after the turn constructional unit (TCU)

containing the repeated talk.[2]

- They should be done as, at least, one TCU and Intonational Phrase.

The characteristics above were used to control some of the variability that can occur with the interactions analysed in this thesis. For instance, since the children's turn and the mothers' repetition were heard as 'the same words' we would expect them to have similar articulations, duration, and even similar pitch contour patterns, and so on. Yet, the literature on child language acquisition shows that mothers accept lexical repetitions from their children that are quite different in segmental structure from those which they produce, therefore treating them on the basis of how similar the children's production is to the mother's tone and articulation (Tarplee 1996; Walker 2010; Wells & Stackhouse 2016; Wells 2010).

In adult interaction, Walker (2005, 2010, 2014a,b), Walker & Benjamin (2017), and Couper-Kuhlen (1996) show that lexical repetitions will have phonetic and sequential differences when compared to their first saying. These differences will also be salient in cases where the same person produces the first saying and the lexical repetition. Therefore, when analysing lexical repetitions, one should base their analysis on the speakers' displayed orientations and treatment of the utterances as the talk unfolds. In this thesis, the mothers' repetitions are articulated differently than the children's prior turn (first saying), and still the speakers orient to them as repetitions. Sometimes, the contrastivity in articulation and pitch pattern between the children's prior turn and the mothers' repetition will be more prominent (see Chapter 4). Other times, the contrastivity will be less prominent (see Chapter 5). These differences are functionally implicated and may be used to display the fitness of the children's prior turn. Even when mothers apply a less prominent contrastivity to initiate repair on their children's prior turn, the repetition's phonetic cues, next turn, and sequential implication are meant to help the children to come up with a repair solution.

Although the mothers' repetitions are treated as lexical repetitions of their

[2] I mean "immediately" not in the temporal sense but in the turn-sequential sense, as being the next unit of talk (see Benjamin 2013; Benjamin & Walker 2013; Schegloff 2000).

children's prior turn, they do not have the same linguistic function as the child's utterance. If we take a closer look at the mothers' repetitions analysed in this study, we will notice that some repetitions will differ semantically, prosodically, and sequentially from their original saying (Couper-Kuhlen 1996; Couper-Kuhlen & Selting 1996; Walker 2014a; Wells & Stackhouse 2016).

In total we collected 130 mothers' repetitions, of which 24% were repetitions to initiate repair (6 other-repetitions to initiate repair on the children's articulation and 22 other-repetitions to initiate repair on the children's lexical choice), 29 % affirmations, and 47 % requests for confirmation. The data in our study consists of a collection of video and audio-recorded fragments of repair sequences showing partial repeats and full repeats of the trouble source turn. Due to this study's exploratory purpose, no distinction was made between partial and full repeats, as its main goal was to build a picture of what kind of information children understand from their mothers' lexical repetitions in Brazilian Portuguese.

Some conversations did not yield a single instance of mothers' repetition; others contained as many as 25. Conversations that yielded more than one repetition and implicated a different preferred next action on the part of the child were analysed separately. Rather, cases in which the mother repeated the same word throughout the conversation to initiate repair on child's articulation (see fragment 21) were treated as solely one example. That is, repetitions that had similar function and form were treated as one example altogether. When the mother changed some of the characteristics of her articulation, but the lexical item was still the same, the new item was treated as another example of the same phenomenon and it was analysed in tandem with the previous repetition (see fragment 20- Austin). Thus, the frequency of the repetition per mother was not calculated based on the number of times she repeated child's prior turn, but it was based on the number of repetitions that implicated a different preferred next action on the part of the child (see section 2.3. for a discussion about the importance of the next action as a way of giving feedback to the child).

In terms of the length of talk analysed, longer conversations normally occurred in interactions that aimed to initiate repair on child's articulation and

lexical choice. These interactions could either have the same duration as the conversations that yielded request for confirmation and affirmation, or they could last twice as long. However, this distinction was not explored further in the current study since we focused our analyses on how mother and child negotiate the different next preferred actions, and not how long it would take the speakers to achieve mutual understanding.

Table 1 presents a detailed description of the repetitions analysed in this study. It provides an overview of the data by listing and specifying the data set used herein. Focus is given to the percentage of repetitions used in the different practices per mother. One mother did not produce exemplars for all practices labeled but was still considered since the purpose of this study was not to produce a statistical analysis of the phenomenon described here, but to produce a detailed analysis that distinguished each repetition based on their form and function.

Mothers	Length of the recordings	Children's age	Repetitions to initiate repair on child's articulation	Repetitions to initiate repair on child's lexical choice	Repetitions to affirm child's correct answer to a test-question	Repetitions to request confirmation	Percentage of total repetitions per mother
1	1h (30 mins + 30 mins)	2;7	2	5	10	15	24.61%
2	1h (30 mins + 30 mins)	2;7	0	3	6	11	15.38%
3	1h (30 mins + 30 mins)	2;4	1	2	7	16	20%
4	1h (30 mins + 30 mins)	2;6	1	6	3	5	11.53%
5	1h (30 mins + 30 mins)	2;6	1	2	2	5	7.69%
6	1h (30 mins + 30 mins)	2;4	1	4	12	10	20.76%
Total	6 hours	2;5	6	22	40	62	100%

Table 1 Repetitions breakdown per practice and speaker

This section has described how the collection for analysis was built.

Examples of fragments that were included and excluded from this study were provided. A rationale of the selected data was presented and the interactional characteristics of each group of repetitions (practices) were discussed. A detailed analysis of the number of repetitions and their interactional characteristics was also taken into consideration.

3.4. Data preparation

The author, using the open-access transcription software ELAN[3], transcribed the transcripts of the interactions between the mothers and their children. ELAN enables one to have detailed transcription of video and audio recordings; it also allows the transcription to be converted into the Praat annotation format (.TextGrid).

The transcription conventions were based on Wilkinson & Beeke (2012), where some phonetic symbols are used together with the already established Jeffersonian system as a tool to record the actions done by the mothers' repetitions.

Extremely loud speech is represented with capital letters. Intonation is systematically marked in the transcripts using the symbols below. Additionally, acoustic measurements of pitch were taken. These acoustic analyses are presented were appropriate to support the arguments put forth in this thesis. Where relevant for the analysis, the mothers' repetition and the children's prior turn are also transcribed phonetically using IPA[4]. The remaining transcription conventions are given in Table 2.

[3] The ELAN system for transcription of speech is available for download free at https://tla.mpi.nl/tools/tla-tools/elan/.
[4] IPA- Internacional Phonetic Alphabet

Table 2. Transcription conventions

Symbol	Function
[	overlap talk
=	no interval between adjacent utterances
(0.6)	silences (marked in seconds and tenths of seconds)
(.)	an interval of a 0.1 seconds or shorter in the stream of talk
oh:	a colon indicates an extension of the sound or syllable it follows (more colons prolong further the relevant stretch)
,	a continuing intonation
?	a rising inflection, *not necessarily a question*
↑	rising shift in intonation
↓	falling shift in intonation
Stress	underline indicates emphasis
°no°	a passage of talk that is *quieter* than surrounding talk
>talk<	sections of an utterance delivered at a *greater speed* than the surrounding talk
<talk>	sections of an utterance delivered at a *slower speed* than the surrounding talk
(dog)	one or more target items are in doubt to the transcriber
*	preceding words that are grammatically incorrect

In this thesis, the choice of adopting a transcription system that adopts traditional CA transcriptions and phonetic symbols was made in order to better explain and analyse the mothers' repetitions. Both the traditional CA transcriptions of intonation (cf. Jefferson 1984) and the phonological transcription systems for intonation are limited with regards to the aspects of intonation they capture and how they are represented (ToBI, Beckman & Ayers 1994; Silverman et al. 1992).

The traditional CA transcription system of intonation consists of approximately four symbols for turn-final pitch and the use of down- and up-arrows for intra-utterance pitch changes, which are not enough to depict the

different nuances found in pronunciation and prosody. In this kind of transcription, the most common markings of turn-final intonation are: rising [?], falling [.], level [;] and 'continuing' [,] (Atkinson & Heritage 1984; Curl 2002). There is also no indication given in the transcription system that could be used to compare the children's articulation to their mothers' (target pronunciation). Nor does it indicate where the repetition's pitch began to move. It also does not indicate whether the pitch contour started over the final word, the final syllable, or over the entire utterance (Curl 2002). It is obvious that transcriptions are just a representation of the talk, however, transcripts that also rely on paralinguistic features (e.g. voice quality, pitch, loudness, etc.) can better portray the complex features of mother-child naturalist interaction.

The ToBI system (Silverman et al. 1992; Ladd 1996) likewise makes categorical assumptions about the tones used to mark functions of utterances. ToBI presents a limited inventory based on a binary scheme consisting of two-tone levels, low (L) and high (H), with additional diacritics to indicate their intonational function as part of pitch accents (i.e., L* or H*) or boundary tones (marked with a - or %, e.g. L- or H-). These two levels can also be combined together in bitonal accents (e.g.; L+ H*). ToBI is also used to describe the hierarchical organisation of intonation, or phrasing, marking the strength of prosodic boundaries with a series of break indexes.

ToBI-based annotations have been extensively used in phonological studies to describe pitch contours[5] and the associated syntactic functions (e.g. declarative vs. interrogative intonation). Yet this system does not account for the need to relate interactional characteristics and categories to phonetic and prosodic exponents, and was therefore not used in this study. The next section (3.5) describes the methodology employed in the interactional sequential analysis of the collection.

3.5. Conversation Analysis

[5] Beckman & Ayers 1994, Pierrehumbert & Hirschberg 1990, Gussenhoven 1991, Ladd 1996, Beckman & Pierrehumbert 1986 are some of the studies which employ this approach for the study of intonation.

More than 50 years after Sacks' first seminal lectures on conversation (Sacks 1992a; Sacks 1992b), and since the publication of a series of well-known papers on turn-taking and related topics (cf. Sacks et al. 1974; Schegloff 1968; Schegloff & Sacks 1973; Schegloff et al. 1977), Conversation Analysis (henceforth CA) has developed into a prominent form of investigating the ordinary and extraordinary ways in which people interact with one another in everyday situations. Based on Goffman's concept of 'interaction order' (Sidnell 2010; Goffman 1967), and Garfinkel's concept of 'structure of social action' (Heritage 1984a; Heritage 1984b; Sidnell 2010; Garfinkel 1967), CA is concerned with the analysis of the competences and order underlying ordinary interaction. Specifically, it is directed at explaining and describing the competences that the speakers rely on and use when engaging in intelligible conversations among themselves (Atkinson & Heritage 1984; Heritage 1984a; Hoey & Kendrick 2017).

The speakers' action in itself and their interpretation are accountable as products of their intersubjectivity (Atkinson & Heritage 1984; Heritage 1984a; Kitzinger 2013; Hoey & Kendrick 2017), and the knowledge of these organisations is part of the competence that each speaker will bring into the interaction through their communicative activities.

These communicative activities can exhibit stable organisation patterns of action, to which the speakers of the interaction are oriented. The actions are going to be organised in turns and each speaker will take turns while interacting with another person.

When analysing a conversation between mothers and their children, focussing on the action that is being achieved in the interaction can help us (analysts) to better understand how children acquire interactional competence and understanding of the social rules embedded in the turn sequence of previous interactions (Atkinson & Heritage 1984; Gardner & Forrester 2010). In other words, the action in itself and its interpretation are accountable as products of the speakers' intersubjectivity (Atkinson & Heritage 1984; Hoey & Kendrick 2017; Schegloff 1997b).

CA adopts a view that children, before becoming 'fully fledged' members of a culture, have to learn how to recognise and produce speech that displays to

others around them their understanding of talk (Atkinson & Heritage 1984; Gardner & Forrester 2010; Filipi 2009). Hence, CA aims to describe the competences that adults and children rely on and use when engaging in intelligible conversations amongst themselves.

CA can also help us (analysts) to show how children can identify misunderstandings on the part of the other (Gardner & Forrester 2010; Tarplee 1993; Wootton 1997). This section details the terminology used in the analyses presented in Chapters 4 and 5.

3.5.1. Turn-taking in child-parent interaction

In face-to-face interactions, a successful turn exchange between the speakers is very important and has been detailed in the literature. Sacks et al. (1974) pioneered a model of successful turn taking in adult interactions, which is comprised of the following features:

- one person speaks at a time;
- the number of participants in an interaction can vary;
- the order for speaker turns is variable;
- there are techniques available for repairing turn exchanges and errors;
- occurrences of simultaneous conversation are brief and scarce;
- speakers and listeners use turn allocation techniques to regulate their exchanges;
- turn size is not fixed, but varies;
- the content of speaker turns is spontaneous.

In adult-child interaction, Filipi (2009) has adopted the features above and added the following:

- a turn should be characterised by the speaker's maturity to respond to a partner's previous turn;
- alternation of temporally organised turns;
- avoidance of overlap and lengthy silences.

In mother-child interaction, turn taking is achieved in an orderly and smooth fashion. Most of the time, these turns involve the use of questions or imperatives, which are extensively produced by mothers when talking to their children (Kaye & Charney 1981; Filipi 2009; Wootton 1997).

The turn-taking conventions are learned gradually. One of the first attempts at systematising turn-taking behaviour happens while mothers are feeding their children. "This involves an alternation between sucking, pausing and looking at the mother who then engages in talk" (Filipi, 2009: 24). Yet, it is not until the infants are 11 weeks old that the speakers will start taking turns. Between 12 and 18 weeks, infants already start to increase their turn taking abilities and, towards the end of this period, the infants are more likely to avoid vocalising while their mothers are speaking (Filipi 2009; Symons & Moran 1987). Once these early forms of turn taking are developed, the mothers can establish pseudo-dialogues (see Schaffer 1984) or proto-conversations (see Bateson 1979) with their children. These conversations are characterised by the mother's drive to treat her infant as a conversational partner (Schaffer 1984).

According to Holck (2004), one of the greatest differences between an adult talk and those between mothers and their infants is that mothers organise their talk so that it contains rhythmic and temporal regularity; which is also one of the main characteristics of 'motherese'. This temporal regularity, in itself, cannot be characterised as a turn-yielding cue, but its occurrence makes it easier for the child to know when to turn-take. Additionally, because the mother's aim is to keep the talk going in a chain of turn shifts, temporal regularity promotes this continuing interaction (Kaye & Charney 1981).

In adult talk, Local & Walker (2012) and Ogden (2001) showed that British English and Finnish speakers use phonetic features of turn-yielding, or what the first authors call 'turn-projecting features'. The release of plosives at the point of possible turn-completion and the production of outbreaths are associated with turn yielding in English, while Finnish speakers produce creak phonation. In this study, the nature and function of turns, turn completions, and transitions, which are identified as features that project more talk, are not tackled. This

research aimed to look at the sequential, turn-taking, and phonetic characteristics of mothers' lexical repetitions of the children's prior turn. The turns that are associated with turn yielding are not mothers' repetitions.

A turn-yielding cue that is common in both adult conversation and mother-infant talk is the change in intonation and slower tempo at the end of an utterance (Mayer & Tronick 1985; Wells & Stackhouse 2016). Pause or silence can be used to emphasise turn yielding. In addition, rhythmic movement – chanting, tickling, dance, etc. – often accompanies the mothers' utterances and it ceases when the mother desires a response from the child (Mayer & Tronick 1985). These characteristics, together with high pitch and amplified contour, guide the child when to turn-take. It is not by chance that these cues are also the characteristics of motherese.

It is not until the child is already 11-24 months old that the toddler starts to use gaze and turn-taking in the same way as the adult (Rutter & Durkin 1987; Walker 2017). At this age, children seem to be aware of the conditional rules of turn taking (e.g. the sequential organisation implicature and the importance of the next turn). As a matter of fact, Walker (2017) shows that English children may laugh after they are addressed a question intended to display their inability to answer a question in full, thereby acknowledging the need to produce a second-pair part.

The children recorded for this thesis are already 25-27 months old, meaning they are already capable of taking turns and recognising when is their time to participate in the interaction (Filipi 2009). Such ability will help us (the analyst) to better uncover how the children and their mothers negotiate the action done by the mothers' repetitions. That is, since the speakers are able to engage in interactions where the mothers do not need to produce the children's turns, we will be able show how each speaker negotiates the action done by the repetition.

Nevertheless, two of the features presented above by Filipi (2009) are still very prominent in the interactions analysed in this thesis. These features are: alternation of temporally organised turns, and avoidance of overlap and lengthy silences.

As we have seen, children who are older than 11-24 months are already

able to follow the rules of turn taking. Consequently they are also able to orient the conditional relevance of their turns and their recipient's turn (Filipi 2009). This ability displays the speakers' maturity to address and be a part of an interaction. The turn taking rules are indispensable to establishing adjacency between each speaker's turn.

3.5.2. Adjacency pairs

Adjacency pairs have long been described in literature as an important feature of early turn taking in talk between parent and child (Hilary Gardner & Forrester 2010; Filipi 2009; Snow 1977). Adjacency pairs are both the basic building blocks of adult talk and mother-child interaction (Schegloff & Sacks 1973; Sacks 1992a; Sacks, 1992b). They are paired utterances in the sense that, for example, questions beget answers, summonses take response, greetings follow another greeting, etc. Furthermore, any given first pair part (e.g. question, summon, etc.) makes a second pair part (an answer) conditionally relevant. In the second pair part, the speaker has the opportunity and the obligation to display their understanding of the first pair part.

A first pair part is used to appoint the next speaker. When looking at how adjacency pairs are organised in mother-child interaction, one can evaluate the child's ability to understand what the mother had previously said, as well as (evaluate) the appropriateness of the child's response to it.

If a next speaker fails to produce a relevant second pair part, the missing second pair part in itself can be used as an effective communication resource. Its absence or ill-fittedness is noticeable and available for further actions by the participants. That's to say, a second pair part is expected to occur after a first pair part and if absent, it will be noticeably absent (Schegloff 1995; Curl 2002; Filipi 2009).

Most of the time[6] the first pair part sets up a 'choice' of responses that can

[6] But it does not happen all the time. Sometimes, greetings are given as an example of an adjacency pair without a preference organisation (see Schegloff 1995: 111).

be done as second pair parts. That is, requests may be granted or denied, test questions may be answered correctly or not, offers may or may not be accepted, etc. There is a vast array of different formats of responses (e.g. grantings vs. denials, acceptance vs. rejection) that may or may not be preferred, depending on the preference organisation of each interaction.

3.5.3. Preference organisation

The core idea of preference is that participants often follow principles when they act and react in a variety of different interactional contexts (Pomerantz 1984b; Pomerantz 1988; Pomerantz & Heritage 2013). The literature has vastly discussed these preference principles and the part they play in the selection and interpretations of actions (cf. Sacks 1992a; Sacks 1992b; Schegloff et al. 1977; Pomerantz 1984a; Pomerantz & Heritage 2013). Each interaction will have preferred, conditionally relevant responses. In this study the term 'preference' does not imply psychological preferredness, instead it is related to the structure of the adjacency pair (see 3.5.2. for adjacency pair). Normally, second pair parts that promote the continuation of the sequence are preferred, and those that stop or close the sequence are not preferred. Additionally, there is preference for prompt responses, instead of delayed ones. The delayed turns are characterised by hesitation markers and restarts.

In adult-child interaction there is the preference for the mother evaluating the correctness of the child's turn (Filipi 2009; Forrester 2015; Schegloff et al. 1977; Tarplee 1996; Tarplee 2010). One reason for this is the assumed asymmetry in knowledge between the mothers and their children. The mother, being the more competent speaker, would either flag the inadequacies in the child's talk and initiate repair, or she would ratify the child's prior turn.

Schegloff et al. (1977) showed that other-correction (other-initiated other repair) is preferred. However, recent studies (Filipi 2009; Forrester 2015; Schegloff et al. 1977; Tarplee 1996; Tarplee 2010) demonstrated that self-correction (self-initiated self repair or other-initiated self repair) is preferred in both adult interactions and child-adult interactions.

Instances of other-initiated repairs may occur during mother and child talk, however they are treated as dispreferred actions and may be preceded by hesitations and delays (Tarplee 1993; Filipi 2009). In this context mothers may initiate an embedded correction (Jefferson 1988), or they may choose to abdicate other-correction (here called repair) all together (Jefferson 2007).

As we have seen, the utterances from an interaction are both context determining and context dependent (Fox 1988; Atkinson & Heritage 1984). In other words, the environment (context) shapes the utterances. In this study, the participants and the analyst use the sequential, turn position, and phonetic characteristics as tools to distinguish the mothers' repetitions.

3.5.4. The importance of the next turn and sequential implicature

Turns at talk are built to be understood as dependent upon one another. Each next turn will display to the recipient how the previous turn has been received and understood (Schegloff 2007; Atkinson & Heritage 1984; A. Pomerantz 1984). Contributions to an interaction are not randomly ordered with respect to one another; certain actions in talk make other actions that follow them relevant (Tarplee 2010). In this subsection we discuss the analytic importance of the next turn in mother-child talk, with special attention to the child's understanding of it. The analytic importance of the sequential implicature will also be discussed.

Next turn position has a special status in the analysis of the interpretation of the talk, as it is used by the mother to give feedback on the child's previous turn. The children from this study receive feedback on all their utterances, just as all of their mother's turns receive feedback on their utterances.

The talk is collaboratively constructed in a way that mother and child use the next turn to display to one another how the prior turn has been received and, most importantly, what was understood from it. In the case of the mothers' repetitions, the next turn is used to make clear to the child and to the analyst what the intended action was done by the repetition. Additionally, it is used to display how the child understood the mother's repetition.

Going back to the concept of feedback in adult-child interaction, an adult's

feedback on the child's prior turn is regarded only with respect to its retrospective stance (child's prior turn). However, the adult's turn in itself is a prior to the next action, which carries its own sequential implications and expectations as to what will occur next. Therefore, by looking at the children's response to their mother's turn, one can begin to uncover the sequential implication of the mother's turn in itself, and to build a picture of what kind of information children understand from what their mothers say.

This section has presented an overview of the important aspects of CA methodology - turn-taking, adjacency pairs, the importance of the next turn and sequential implicature, and preference organisation - which are used in the analysis presented in Chapters 4 and 5. The following section describes the phonetic characteristics of the child's speech.

3.6. Phonetic analysis

This research combines the methodological aspects of linguistic study, especially phonetics and phonology, with Conversation Analysis. The interactional and sequential characteristics of the mothers' repetitions are analysed in tandem with their phonetic and phonological characteristics (Local & Walker 2005; Ogden 2011). The fragments were examined with as little bias and prejudice as possible to discover if any phonetic parameters differed among the mothers' repetitions to initiate repair, affirmations, and repetitions used to request confirmation. Acoustic measurements and impressionistic analysis were employed to investigate the relative importance of pitch (tone) and articulation features in distinguishing the mothers' repetitions.

3.6.1. Articulation

Detailed phonetic records of the mothers' repetitions and the children's prior turns were prepared based on the techniques of analytic parametric listening described in Kelly & Local (1989a;b). To start, the children's first saying and the mothers' repetition were transcribed phonetically using the IPA. Attention was paid to the

articulatory difference between the mother and children's productions of the same intended word.

In this study, mothers' repetitions that were not articulated very similarly to the children's first sayings are still considered lexical repetitions (see 3.3.1. and 3.3.2.). In fact, for the purpose of this study, the phonemic sequences and string of phonemes were replaced by strings of words (as in Curl 2002). The characteristics of these repetitions are referred to in Chapters 4 and 5.

Attention was paid not only to the segmental differences but also to the vocalic articulations of both prior turns and repetitions. The details of voice quality were also noted, e.g. creakiness or breathiness. Following Laver's concept (1994) of phonetic setting, any co-ordinatory tendency underlying the production of the chain of segments in the mothers' or the children's speech was perceived as maintaining a particular configuration or state of the vocal apparatus. That is, an utterance that shows a bias to be voiceless or whisper is described as having that setting. Yet some settings, for example whisper voice, are only applicable to voiced sounds. In fact, these settings can last for short or long durations. They can also apply over a few syllables or over the whole utterance. Laver mentions four types of settings:

1- articulatory
2- phonatory
3- overall muscular tension
4- prosodic

The articulatory, phonatory setting and overall muscular tension are described based on the completely relaxed vocal tract setting. However, in this thesis and similar to Curl (2002), the settings of the vocal tract will be described with reference to the children's prior turn.

In this study, the differences in articulation (i.e., in the segmental realisation of the word pairs) were visually inspected using the waveforms and spectrograms generated with Praat.

Contrast in articulation may also be used to correct the children's

articulation. However, since the children studied here are already able to speak without major errors, mothers resort to this resource less often. Finally, mothers may minimise the phonetic and prosodic differences to display alignment with their children's prior turn.

3.6.2. Pitch pattern

Nuclear Tones, also known as pitch pattern, are acoustic correlates of the fundamental frequency (F0), the rate of vibration of the vocal folds (Ladd 1996). In this study, the Praat phonetic analysis software (Boersma & Weenink 2017) was used to extract and measure F0 for each mother's repetition as well as their prior and next turns. F0 was measured in Hertz (Hz), using the Praat pitch extraction logarithm. Moreover, in order to correspond more closely to human perception, the Hertz values were converted to semitones (ST).

The tones extracted using Praat were first visually inspected and hand-corrected for micro-prosodic perturbations (e.g. creakiness, see Ladd, 1996). Then, the corrected pitch values were used to generate and draw a pitch contour on a logarithmic scale. Finally, a Praat script was used to draw pictures based on the time-aligned pitch contour, including waveforms and segment annotation. The F0 median was calculated by measuring samples of 1.5 minutes of uninterrupted speech performed by each speaker. The visual representation of tone was used to impressionistically analyse and compare the tone between the mothers' productions and the respective children's, to see in which contexts the mothers would match their children's tone.

3.7. General conclusion

This chapter has described the building of a collection of lexical repetitions used for distinctive purposes. It has outlined what criteria mothers' repetitions needed to meet for inclusion in the analysis, and given details of both the methods of sequential interactional analysis (CA) and phonetic analysis of the mothers' tone and articulation used in the following chapters. This chapter also presented

examples of interactions that were excluded from the analysis, with their respective reasons for exclusion. The next chapter will present the phonetic and sequential characteristics of reparative repetitions to repair the children's articulation and lexical choice.

4. REPETITIONS WITH PROBLEMS IN ACCEPTABILITY

This chapter presents the systematicities evident in mother's repetitions to initiate repair on the child's prior turn. In some cases, the mothers repeat their children's prior turn to correct the children's pronunciation/articulation; in others, to correct the children's lexical choice. These two types of repetitions are distinguished phonetically and sequentially from each other. Mothers' repetitions to correct the children's pronunciation exhibit the following systematic differences, when compared to repetitions to correct the children's lexical choice:

- Mothers repeat their children's prior turn to initiate repair on the children's articulation/pronunciation.
- Mothers repeat their children's prior turn to initiate repair on the children's 'wrong' lexical choice.
- In terms of phonetic characteristics of repetitions to correct pronunciation, the first syllable of the repeated word may be lengthened and detached from the rest of the word while repetitions to correct lexical choice are not lengthened and detached; they are done with a rise-fall pitch pattern instead.
- Repetitions to correct pronunciation employ a different pitch pattern compared to the children's turn.
- Repetitions to correct lexical choice are done with a rise-fall pitch pattern, regardless of the intonation used by the children.

These phonetic characteristics, together with their turn-taking position and sequential relevance, help the participants of the interaction and us (the analyst) to distinguish repetitions to correct pronunciation from repetitions to correct lexical choice. The current chapter shows that while mothers orient to the phonetic and sequential differences between these two practices, the children seem to orient only to the phonetic and sequential differences of repetitions to correct pronunciation.

In this thesis, although the mothers' repetitions are produced and interpreted as an orderly accomplishment that is oriented to by the mothers and children themselves, the children seem to misinterpret the repetitions to initiate repair on the children's lexical choice as requests for confirmation. This chapter proposes that the children's misinterpretation is occasioned by their linguistic inability to distinguish repair initiations to correct the children's lexical choice from requests for confirmation (see chapter 5 for more information on the linguistic, turn taking, and sequential characteristics of requests for confirmation).

This chapter is structured as follows: Section 4.1. highlights the main sequential and phonetic differences between mothers' repetitions to initiate repair on the children's prior turn. Section 4.2. presents the interactional and phonetic analysis of representative cases of repetitions to correct pronunciation. Section 4.3. presents the interactional and phonetic analysis of representative cases of repetitions to correct lexical choice. Section 4.4. summarises and discusses the results presented within Chapter 4.

4.1. Distinguishing mother's repetitions to initiate repair

In this study, the mothers' repetitions are largely concerned with problems surrounding the production, reception (acceptance), and understanding of the children's talk (the speaker). The mothers repeat the children's prior turn to initiate repair, referred to in this thesis as other-initiation (OI), so as to display that something is 'wrong' and in need of correction.

When the mothers treat the children's prior turn as unacceptable, they must then determine how to address the problem (see, e.g. Corrin 2010; Forrester 2008; Forrester 2015; Tarplee 1996; Wells & Stackhouse 2016). Ways of problematizing a prior turn at talk, and initiating a sequence in which one, both (or all) participants work to resolve this problem, are collectively known as practices of repair (Schegloff et al. 1977). Such repair practices underlie the mother and child's capacity to talk together, act together and, most importantly, to understand each other (Clark 1996; Schegloff et al. 1977; Svennevig 2004; Svennevig 2008; see 2.4.1. for a detailed description on repairs). The repair

process entails that each participant displays to each other their perception (hearing) and interpretation (understanding) of an utterance - in other words, the participants' construal of it. Each participant's construal is manifested in the next turn, and mutual understanding of these turns at talk is imperative to maintain intersubjectivity. The turn-taking organisation itself is designed to facilitate this task, as every new contribution is understood by default to address the prior turn and its sequential implication, thereby revealing the recipient's understanding of what was just said (Sacks et al. 1974). This display of the recipient's construal provides the speaker with the opportunity to inspect how the recipient of the talk understood what was said before, and to subsequently validate or correct it.

For the children in our data, being able to understand the action done by the mother's reparative repetition requires a substantial level of understanding of what was said before (prior turn), but also a full understanding of what needs to come next (after the repetition). Sometimes, to avoid problems in intersubjectivity, the mothers initiate repair on their children's previous turn. The mother's repair initiation is used to locate the source of the trouble in the child's previous turn. This repair initiation is seen, at the same time, as an effective resolution of a local trouble and (as an) educational stimulus that shapes the child's language learning (Corrin 2010; Tarplee 1993; Tarplee 1996). In this kind of interaction, repeats and/ or reformulations, open-class repair initiations, and requests for confirmation are the most common types of repair initiations (Corrin 2010).

Other-initiation of repair, or simply an OI, can occur in the next turn, the third, or fourth turns (Schegloff 1987; Schegloff 1992b; Schegloff 1997b; Schegloff 2000; Schegloff et al. 1977; Wong 2000). Although this thesis discusses examples of *Next Turn* Repair Initiations (NTRIs), this label was avoided since it did not explain the complexity of the OIs analysed here (see below). Similarly, the term *next position* was favoured over *next turn* since it better described the position where the OI occurred.

In this thesis, the troublesome turn and the OI are contained within a distinct turn at talk (a distinct turn constructional unit) and target a reformulation of a specific element on the part of the child (Schegloff et al. 1977). Sometimes,

the mothers may initiate and execute repair in the next position (Benjamin & Walker 2013; Kendrick 2015; Kitzinger 2013; Walker & Benjamin 2017). OIs that initiate repair and present a repair proper are used to initiate correction on the children's articulation/ pronunciation. Fragment 14 is an example of mother's repetition used to initiate and execute repair. In this interaction, Mother and Child are making different objects and animals using dough cutters. Here, Mother's repetition appears to correct Child's phonetically immature form. The arrows are used to indicate the turns each analysis is based on.

Fragment 14 (thacarfantasma 13:06-13:43)

	01-C:	vô ajudá a mamãe a fazê a /ˈbapʰãnə/
		I'm going to help mummy to make a ghost
	02-	(0,6)
→	03-M:	/ˈfãnːtʰasm̥ə̥/
		Ghost
	04-C:	/ˈβ̥ʰaːpʰḁmə̥/
		Ghost
	05-	(6,7)
	06-C:	vô cotá a fita
		I'm going to cut the lace

At first sight, Mother's turn in line 03, /ˈfãnːtʰasm̥ə̥/, seems not to restrict what may be a relevant next action for Child. Crucially for our analysis, however, Child treats Mother's repetition as an opportunity to work on her pronunciation: in line 04, she changes several aspects of her original production /ˈβ̥ʰaːpʰḁmə̥/. Here the most striking phonetic difference between Child's two utterances (the first one in line 01, '/ˈbapʰãnə/' and the second one in line 04, '/ˈβ̥ʰaːpʰḁmə̥/') is the first syllable of '/ˈfãnːtʰasm̥ə̥/' (ghost). In Child's second version, instead of a voiced bilabial plosive /b/ followed by an open front vowel /a/, Child produces a voiced bilabial fricative /β/ followed by a nasalised lengthened open front vowel /ã/ and

an aveolar nasal [n], which resembles much more the mother's first syllable /fãn/ of the target turn (see line 07, '/ˈfãnːtʰasm̤ə̤/'and see section 4.1 for further differences). This contrast in pronunciation between Child's first saying and Mother's repetition appears to indicate Child's first attempt at saying the word as problematic (Tarplee 1993, Tarplee 1996). Moreover, as will be seen in section 4.2., the contrastivity is done both phonetically (contrast in articulation) and in pitch - characteristics that were also found by Tarplee (1993; 1996) in interactions between English children and their caretakers.

Tarplee's work (1993; 1996) thoroughly discusses the sequential and phonetic characteristics of mother's repetition of child's prior turn in picture labelling. Similar to this thesis, Tarplee bridges the classical literature in imitation, echo, partial repetition, full repetition, etc.; with studies based on interactional linguistics by proposing that it is important to understand how phonetic repair work on child's labelling articulation is understood to be a relevant next action in talk (Tarplee 1993). Features of lexical repetitions to affirm and initiate repair on the child's phonetic and lexical production, as well as repair initiations to clarify child's prior turn, were discussed. The author proposed that pitch and articulation contrastivity can be marked as features which are associated with adult repetitions and invite phonetic repair work on the part of the child (Local 1992).

Equally important, Tarplee shows that one way of doing a repeat in talk, without coming out as a correction, is to minimise the all phonetic differences (in pitch and articulation) between the child's first saying and mother's repetition of it. Thus, mother's affirmations would have similar articulation and pitch contour as the child's prior turn. This thesis also discusses the characteristics of affirmations and compares Tarplee's results to the ones found in mother-child interactions in Brazilian Portuguese (see section 5.3.), thereby showing that different languages can use similar phonetic and interactional characteristics to negotiate the child's next preferred action.

Other times, mothers may initiate repair on the next position and allow their children to come up with a repair proper. Corrin (2010) and Tarplee (1993, 1996) showed that children treat mother's repetitions and open class repair

initiations as a correction to deal with linguistic problems. However, these two forms of repair initiations differ in the way feedback is given to the child: adult's reparative repetitions seem to target a specific element (Schegloff et al. 1977), while feedback in the repair initiating (open class repair) is not given by the adult (Corrin 2010). In this thesis, next position repair initiations are also used to correct the children's lexical choice (rather than to correct pronunciation). In Fragment 15, Mother and Child are pretending to be in a restaurant. Child is acting as a 'waitress' and she is explaining to her 'customer' (mother) the special dishes of the day. The dishes are made out of play-dough and they are displayed on the table. The customer is expected to select one of the dishes displayed.

Fragment 15 (netneisabão 24:16-30:00)

	01-M:	Como qui chama [essa (unclear)?
		How is this unclear called?
	02-C:	[é /ˈsapõn/
		It is soap
→	03-M:	/ˈsabãw/↑↓
		soap
	04-C:	xx
		(2.5)
	05-M:	((lau[ghs)) £ Eu naum comu /ˈsabãw/ (.) você
		come?
		I don't eat soap do you eat it?
	06-C:	a-
		a-

There are clear differences between Child's pronunciation and Mother's repetition. For example, the phonetic differences between Child's utterance ('/ˈsapõn/', see line 02) and Mother's repetition ('/ˈsabãw/', see line 03) lie on the second syllable of the word. Child produces a voiceless bilabial plosive /p/ followed by a nasalised close back vowel /õ/ and an alveolar nasal /n/; instead of

the target pronunciation of a voiced bilabial plosive /b/ followed by a nasalised open front vowel /ã/ and a voiced labial-velar approximant /w/. However, Child does not attempt any re-doing (as was seen in Fragment 15). Here, Mother's repetition is produced with a rise-fall contour (see section X for a detailed phonetic analysis of repetitions to initiate repair on child's lexical choice).

One could speculate that Child's unattempt to produce a repair solution could be related to the fact that mothers and children may treat rise-fall pitch movement as a feature that brings the sequence to a close (Corrin et al. 2001). However, in Mother's next utterance (line 05), we find further evidence that this turn is designed to initiate repair on the child's lexical choice of /ˈsapõn/ (soap), as Mother points out that soap is not something she would eat.

Repair initiations to correct the children's pronunciation (articulation) and repair initiations to correct the children's lexical choice form either a two part interactional sequence or a three part interactional sequence (Schegloff 2007, p. 217-9 on retro-sequences).

In interactions between mother and child, mothers may also repeat the children's previous turn to request confirmation (Sorjonen 1996; Svennevig 2004). Similar to repair initiations to correct the children's lexical choice, this form of request for confirmation also occurs in the *next position*. Requests for confirmation are designed in such a way that makes apparent that the error was due to some other, less disreputable, failing than the child's not knowing the correct answer (Drew 1981; Tarplee 1993). An example of this is shown in Fragment 16, in which Mother and Child are playing with a bubble gun.

Fragment 16 (cigu bolinha de sabão 0:10-0:20)

01-M:	como qui chama issu?
	what is this one called?
02-C:	é::
	uhm::
03-	(0.4)
04-C:	/ˈsaboi dzi ˈbɔɬiŋa/

		soap bubble
→	05-M:	/ˈsabãw dzi ˈbɔɬiɲa,/
		soap bubble ((meaning bubble))
	06-	(0.6)
	07-M:	servi
		it works
	08-C:	laughs

In line 01, Mother produces a test question to check if the child knows the name of what they are playing with. In response, Child produces *sabão de bolinha* (see line 04, '/ˈsaboi dzi ˈbɔɬiɲa/'). The word order of this turn does not conform to the rules of Brazilian Portuguese, in which the adjective follows the noun (bolinha de sabão -bubble soap- would be the canonical form). Mother repeats Child's 'wrong' turn (trouble-source) in line 05 /ˈsabãw dzi ˈbɔɬiɲa/ to request confirmation. This confirmation request is followed by a gap of 0.6 seconds (see line 06) in which Child should have confirmed or not Mother's candidate of understanding (see line 05). In other words, the mother's other initiation of repair is used to signal a trouble with understanding that needs to be solved before continuing the talk. In terms of phonetic characteristics, both Child's first saying and the Mother's repetition are produced with minimised differences in articulation. The phonetic differences between Child's utterance ('/ˈsapoi/', see line 04) and Mother's repetition ('/ˈsabãw/' see line 05) lie in the second syllable of the word. Child produces a close-mid back vowel /o/ followed by a close front vowel /i/, instead of a nasalized open front vowel /a/ followed by a voiced labial-velar approximant /w/.

In terms of intonation, Mother produces a rise-fall repetition (see section 4.3. for a detailed analysis of Mother's intonation). Tarplee (1993) and Langford (1981) showed that mothers and children may treat rise-fall pitch contours as an invitation to self-correct, in which the mother's turn (repetition) is designed in such a way as to treat the error as something the child does not or could not have known. That is, the mother's repetition is constructed so as not to treat the error as

one would in correcting problems in articulation, but as something the child does not know. In this way, the child is allowed the benefit of doubt. In fact, Mother's stance with regards to the mistake in word order and her overt acceptance of what Child said with servi ('it works' see line 07) displays to Child, and to us as analysts, that what has been said (in terms of lexical choice and articulation) is 'good enough' on this particular occasion to allow understanding -- the mother announces "it works" and does not pursue any further repair of /ˈsabãw dzi ˈbɔliɲa/. This form of repair initiation (request for confirmation) is further discussed in Chapter 5, in which a detailed explanation as well as more examples is provided. Requests for confirmation differ from the practices discussed in this chapter because while requests for confirmation are used to seek confirmation of what was just said (Pan & Snow 1999; Perrin et al. 2003), repetitions to repair the children's articulation and lexical choice are used to deal with acceptability problems.

In instances where the repair activities are described as a speaker's action in 'pursuit of a response' (Pomerantz 1984), but they are not mothers' repetitions of the child's prior turn, the reissued repair sequence is labelled as a non-minimal OIR sequence (Kendrick 2015). Fragment 17 is an example of a non-minimal OIR. Here, Mother and Child are engaged in a picture labelling activity in which child is asked to label some Disney characters stamped on the gift wrap mother is holding.

Fragment 17 (caenetamarelo 13:06-13:43)

01-M:	u mi::ckey[(.) I qui cor é essa embalagem?
	Mickey and what colour is this gift wrap?
02-C:	[fa-
03-	(1,0)
04-C:	erm::
	ehm::
05-	(1,2)
06-C:	Mickey
	It's Mickey

→ 07-M: Naum é u mickey (.)I essa que cor que é essa?
It is not Mickey and this what colour is it

09-C: /mą̊ˈɛɬa/
yellow

In line 01 Mother produces a test question to check if Child knows how to label the character Mother is pointing to. Child takes a long time to propose a character (see lines 01-05). However, Mother does not intervene in the interaction to propose a candidate label (character's name). Finally, in line 06 Child suggests a name of a character. Yet this candidate label proves to be wrong as Mother explicitly corrects Child in line 07 and asks, once again, for the colour of the gift rap. This interaction is only mentioned in the fragments analysed for the sake of sequential purposes; a detailed analysis of it is not pursued however, since the repair initiation is not a repetition of Child's previous turn.

This chapter documents mothers' use of two phonetic practices used to differentiate repairs on children's turns that are initiated through lexical repetition; namely, syllable lengthening and rise-fall (RF) intonation contours. With these practices, mothers convey to children that their prior talk is "wrong" and in need of correction. The mothers' repetitions locate the source of the trouble – specifically the repeated word or words. However, unlike more generic practices of repair initiation that focus on problems of hearing and understanding (cf. Dingemanse et al. 2015; Filipi 2009; Rossi 2015; Schegloff 2000; Schegloff et al. 1977; Wong 2000), these repetitions strongly delimit the nature of the trouble, as the problem is not hearing nor understanding it, but rather accepting it. In these instances, the mothers seem to hear and understand the referent of the word, since they do not initiate repair to solve these problems, but they do not accept the referent as the right answer, or as a sensible/ possible contribution.

Tarplee (1993; 1996) shows how mothers initiate repair to correct their child's problem in pronunciation. However, she did not tackle the issue of other forms of repair initiation such as those that correct the child's lexical choice. When dealing with repetitions to correct the child's pronunciation and lexical

choice, mother and child need to negotiate the meaning of the action projected by the mother's repetition. In this case, the mother's repetition is concurrently displaying a problem of acceptance, as well as displaying to the child the preferred next action.

This section showed that mothers' repetitions index different actions. The repetition's multi-functionality raises the importance of speakers establishing a mutual understanding of why mothers have repeated the children's prior turn and what the children have to do next. Within this process, the phonetic characteristics of the mothers' repetitions, together with their turn-taking position and sequential relevance, play an important role in distinguishing the action done by repetitions to correct pronunciation from those to correct lexical choice. Section 4.2. presents the interactional and phonetic analyses of representative cases of mothers' repetitions to correct their children's pronunciation.

4.2. Mother's repetitions to repair the child's articulation

As mentioned, mothers may repeat the trouble source turn to initiate repair to correct the child's articulation. In this study 12% of the mother's repair initiations display this function, as opposed to correcting lexical choice. In the fragments below, the children attempt to redo the repeated or corrected word, thereby treating the mother's repetition as a repair initiation and repair solution. Fragment 18 provides an example of this kind of correction.

Fragment 18 (thacarfantasma 13:06-13:43)

01-M:	vô fazê di brancu
	I'm going to make it white
02-	(1,9)
03-C:	é
	Yes
04-	(0,3)
05-C:	vô ajudá a mamãe a fazê /ˈbapʰãnə/
	I'm going to help mummy to make a ghost
06-	(0,6)

→	07-M:	/ˈfãnːˈtʰasm̤ə̤/
		Ghost
	08-C:	/ˈβʰã̤ːpʰa̤mə̤/
		Ghost
	09-	(6,7)
	10-C:	vô cotá a fita
		I'm going to cut the lace

In the fragment above, Mother's repetition (line 07, '/ˈfãnːtʰasm̤ə̤/' is used to, at the same time, initiate repair and model the repair the child should provide of the prior troublesome turn (line 05, '/ˈbapʰãnə/'). In this example both participants (especially Child) seem to display a shared understanding of the action done in the mother's prior turn (line 07, '/fãnːˈtʰasm̤ə̤/'). Here, Mother's repetition (line 07, '/ˈfãnːtʰasm̤ə̤/') prompts self-repair from Child. In other words, Mother's repair-initiating turn is used to take some time off from the conversation to deal with Child's pronunciation problem before continuing with their interaction. Mother's repair initiation aims to pursue and establish a joint project (joint action), which will allow them (Mother and Child) to work together on the child's pronunciation problems. The establishment of a collaborative joint action between Mother and Child is made evident when Mother proposes a repair solution simultaneously in her repair initiation (see line 07, '/ˈfãnːtʰasm̤ə̤/'). This combination of initiation and solution prompts Child's second trial at pronouncing the troublesome turn (see line 08, '/ˈβʰã̤ːpʰa̤mə̤/'). Child's second trial is approved and accepted by Mother as evidenced by the fact that no further correction is pursued (see line 09) and a new topic of interaction is initiated.

In Fragment 18, the most prominent phonetic difference between Child's two utterances (the first one in line 05, '/ˈbapʰãnə/' and the second one in line 08, '/ˈβʰã̤ːpʰa̤mə̤/') is the first syllable of fantasma (ghost). In Child's second version, instead of a voiced bilabial plosive /b/ followed by an open front vowel /a/, Child produces a voiced bilabial fricative /β/ followed by a nasal open front vowel /ã/

and an alveolar nasal /n/. This more closely matches Mother's first syllable /fãn/ -- only the place of the initial fricative is different; whereas in Child's first production, both the place and manner of articulation of this consonant differed from the target. Additionally, Child lengthens the first syllable, to detach the troublesome syllable from the rest of the word as Mother did in her combination of initiation and solution (see lines 07, '/ˈfãnːtʰasm̥ə̥/' and 08 '/ˈβʰɐ̥̃ːpʰɐ̥mə̥/'. The second version also conforms to the adult's on the last syllable of the word /m̥ə̥/, by having a voiced bilabial nasal /m/ followed by a central close-mid vowel /ə/, in place of an alveolar nasal /n/ followed by a central close-mid vowel /ə/. In terms of intonation, Mother produces this repetition with a different pitch pattern and longer duration than Child's troublesome turn (see Figures 01 and 02).

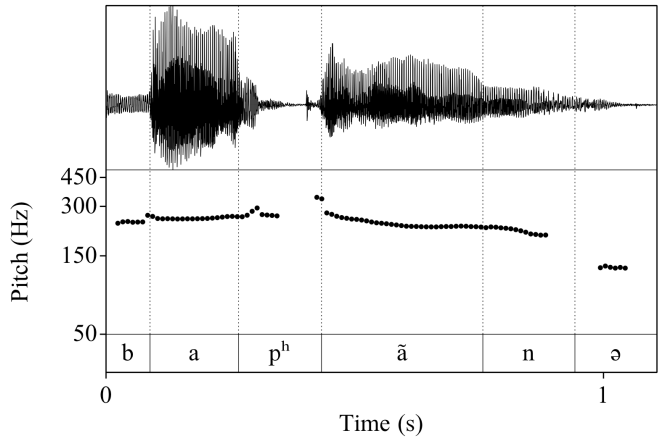

Figure 1: Pitch pattern of Child's troublesome turn (fantasma).

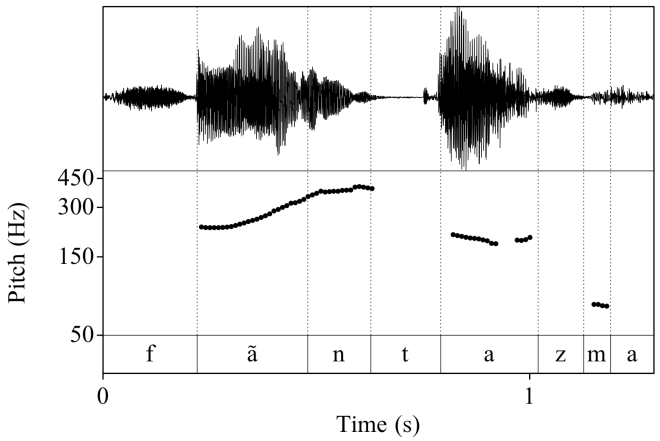

Figure 2. Pitch pattern of Mother's reparative repetition to correct Child's articulation.

Child, on the contrary, relatively[7] matches the pitch pattern of their repair solution (second version) with the pitch pattern of the mother's repetition (see Figures 02 and 03). Mother's pitch rises 9 semitones (ST)[8] over the stressed syllable /fãn/. A similar rise can be seen in Child's second version, where the pitch rises 4 ST over the stressed syllable /$\beta^{h}\tilde{a}$/. Here the relative pitch matching is used to align with the action in progress, in agreement with Wells (2010) and Wells & Stackhouse (2016)'s findings for English children. As shown in this example, Child's second version (the repair solution) is accepted by Mother who chooses not to pursue further correction in line 09, thereby beginning a new action.

[7] Speakers can match their tones relatively when they use similar pitch levels but relative to their respective voice range (see Couper-Kuhlen 1996).

[8] Semitones (ST) provide a perceptually more appropriate representation of pitch than Hertz when dealing with conversation (see Couper-Kuhlen 1996; Nolan et al. 2002) : 12ST _ 1 octave.

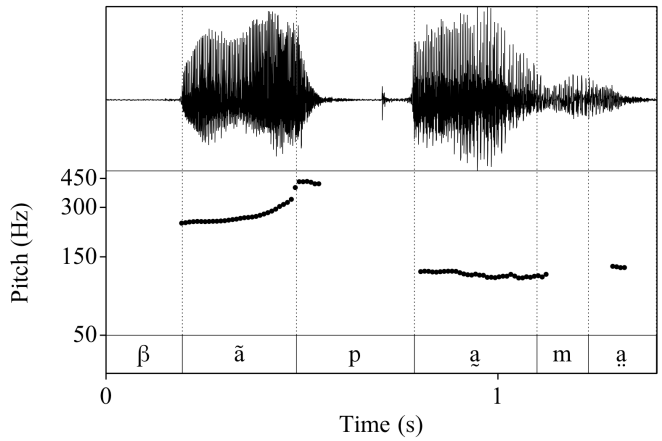

Figure 3. Child's turn matching the contour of Mother's repetition

Fragment 19 is another example of Mother's repetition to initiate repair and provide a repair solution to Child's articulation problems. In this example, Mother and Child are playing with a play-dough set with which they can "make ice cream". The set comes with ice cream cups, spoons, cones, and play-dough of different colours.

Fragment 19 (nad1tutti-frutti/coelho 00:06;16-00:06:59)

01-M:	ó Naira faiz pra mim por favour?
	Naira look could make one for me please?
02-	(0.4)(Child is scooping the "ice cream")
03-M:	um- uma bola beim grandzi tá?
	a- with a big scoop is that ok?
04-	(3.0)(Child is scooping and mixing the ice cream)
05-M:	hum: qui gostosu vai ficá uma delícia
	yummy that's tasty it is going to be tasty
06-	(1.2)(Child is still scooping and mixing the ice cream)
07-C:	ainda não tá plontu* (child moves her eyes and head up to look at Mother)u /ˈpuʃiˌpɫu/
	it is not ready yet (the) tutti-frutti
08-	(2.5)

→ 09-M: fala /ˈtutʃiˌfrutʃi/

say tutti-frutti

10-C: /ˈpɬutʃiˌpɬutʃi/

tutti-frutti

11- (7.0)(Child and Mother continue to play with the ice cream set)

12-M: hum: tá ficando bom essi ne[gócio aí

yummy it's getting really good this thing there (ice cream)

13- C: [ai! mas nau consigu!

Ouch! but I can't make it!

14-M: consegui sim tá ficandu boa (while Child is using a blender to mix the flavours)

yes you can it is getting ready

15-C: u cuelhu (Child points to a picture from the colouring book in front of them)

the rabbit

16-M: u cuelhu↑↓

the rabbit

17-C: é

it is

In the fragment above (Fragment 19), Mother and Child are playing separately with the play-dough, when Mother joins Child's playtime activity. In line 01, Mother makes a request to prompt talk from Child. Yet Child does not respond to Mother's request (see line 02) as they keep playing. Consequently, Mother starts a question-answer sequence to find out the ice cream flavour Child is making (see line 03). In this new request, Mother says that she would like to have a scoop of ice cream. Nevertheless, Child seems to ignore Mother's second attempt at engaging in their interaction since Child keeps playing alone (see lines 03-04). Once again, Mother intervenes and produces an assessment about Child's ice cream making (see line 05). This assessment might be understood as another attempt to engage in a joint activity (playing together) with Child. However, Child only produces a response to Mother's assessment after making two big scoops

(see line 07). One could say that Child has finally engaged in the joint activity proposed by Mother; nevertheless, Child waves off Mother's attempt to start a joint interaction by announcing the ice cream is not yet ready for consumption. At this point Mother could have kept on trying to join the play activity, however she changes the scope of her interaction since she breaks the talk's flow to deal with Child's problem in articulation (see lines 07-09).

Child misarticulates the ice cream flavour when compared to Mother's repair initiation (see lines 07 and 09). Child produces a word-initial unvoiced bilabial plosive /p/ followed by a close back vowel /u/, instead of an unvoiced alveolar plosive /t/ followed by a closed back vowel /u/. Another prominent difference between Mother and Child's troublesome turn and repair initiation lies in Child's production of the second word *frutti.* Here, Child produces an unvoiced bilabial plosive /p/ followed by a velarized alveolar lateral approximant /ɫ/ and a closed back vowel /u/, instead of an unvoiced labiodental fricative /f/ followed by an alveolar tap /ɾ/ and a close back vowel /u/. Additionally, Child does not pronounce the last syllable /tʃi/ of frutti. In terms of intonation, Mother produces her repetition with a different pitch pattern and longer duration than Child's troublesome turn (see Figures 4 and 5). This lexical repetition is, at the same time, used to initiate repair on Child's trouble source and provide a repair solution (see lines 07 and 09).

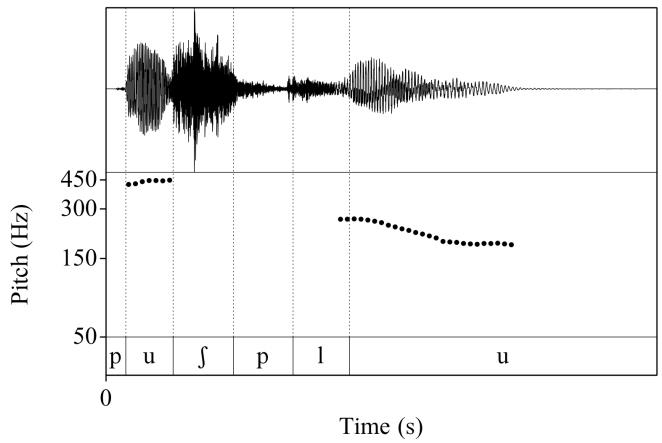

Figure 4: Pitch pattern of Child's troublesome turn (/puʃipɬu/- tutti-frutti).

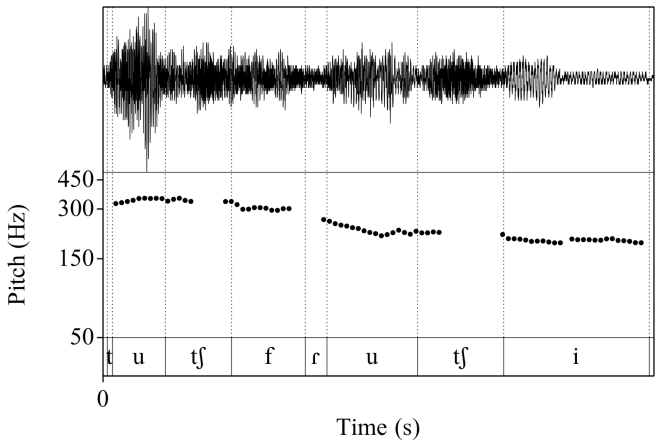

Figure 5: Pitch pattern of Mother's repair initiation and solution (tutti-frutti).

In Child's second version, Child produces a word-initial unvoiced bilabial plosive /p/ followed by a velarized alveolar lateral approximant ɫ/ and a closed back vowel /u/, instead of an unvoiced alveolar plosive /t/ followed by a closed back vowel /u/. Moreover, Child still produces an unvoiced bilabial plosive /p/ followed by a velarized alveolar lateral approximant ɫ/ and a closed back vowel /u/ for the first syllable of *frutti*. However, Child produces an unvoiced alveolar plosive /t/ followed by an unvoiced post-alveolar fricative /ʃ/, which is the last syllable of the word *frutti* /tʃ/. Additionally, the number of syllables produced by Child matches that produced by Mother since both speakers produce a compound noun composed of four syllables, thereby matching more closely Mother's articulation.

Child relatively matches the pitch pattern of their repair solution (second version) with the pitch pattern of Mother's repetition (see Figures 5 and 6). Mother's pitch falls 11 semitones (ST); a similar fall can be seen in Child's second version, where the pitch falls 16 semitones (ST). Here Child's relative pitch matching is used to align with the action in progress, in agreement with Wells (2010) and Wells & Stackhouse (2016)'s findings for English children.

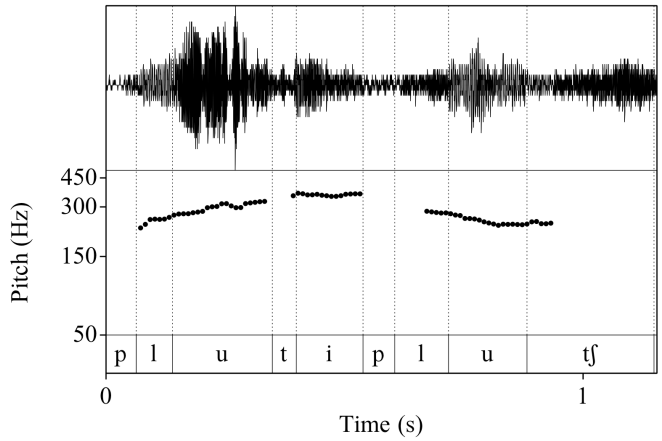

Figure 6: Pitch pattern of Child's second version of *tutti-frutti*.

In the next turns after Child's second version (see lines 10-12) Mother could have pursued further correction, yet she does not. As a matter of fact, neither Mother nor Child pursues correction, since both participants focus on playing with Child's toys (see line 11). This long break from the talk is interrupted by Mother's assessment of Child's ice cream in line 12, however no recourse was made to pursue further correction.

Other times Mother initiates correction by working progressively on Child's incorrect (troublesome) turn. This kind of corrections is done syllable by syllable and Mother treats their production as acceptable when child produces a turn (repair solution) that relatively matches Mother's prior turn and articulation. In Fragment 20 Mother and Child are colouring together in a colouring book from the *Backyardigans* (a TV series for children). At a certain point Mother stops colouring and asks Child to label the characters printed on the page.

Fragment 20 (thacarbackyardigans 0:20-0:30)

01-M:	i::ssu: (.) i essi
	that's right and this one
02-	(1,1)
03-C:	ehm::: num sei
	Uhm I don't know
04-M:	/u̱ˈa̱w/
	the au (first syllable of Austin)

05-C:	/u:ˈa:w/	
	the au (first syllable of Austin)	
06-	(0.6)	
07-M:	/ˈawstʃin/	
	Austin	
08-C:	/ˈa̰ntʃ/	
	Austin	
→ 09-M:	/ˈaẉstʃin/	
	Austin	
10-C:	/ˈãʷtʃi/ (fu(h)n)	
	Austin	
11-M:	I:::ssu::	vamu vê u qui teim dentru
	That's right let's see what there is inside	

The example above (Fragment 20) differs from the previous examples (Fragment 18 and 19) because Mother overtly models the correct pronunciation before Child makes an attempt. In line 3 ('ehm::: num sei') Child claims not to know how to label the character Mother is pointing to. After Child has explicitly said that they do not know the character's name, mother hints at the character's name by uttering its first syllable (see line 04, '/u̯ˈa̰w/'). In response to Mother's hint, Child repeats Mother's prior turn. Here they articulate the segments and intonation of their turn to match Mother's prior turn (see below). Consequently, Mother orients to the phonetic and prosodic similarities as a form of indexing for her Child's preferred next action. However, since Child does not provide the characters name in line 06, Mother models the correct answer in line 07 (/ˈawstʃin/). As in any learning interaction, Child takes this opportunity as a chance to practice the new, learned word. However, Child's repetition of Mother's prior turn (see line 08, '/ˈa̰ntʃ/') is misarticulated when compared to Mother's articulation. Consequently, Mother initiates repair and models the correct response once more. Child then reattempts articulating the troublesome turn (see line10, '/ˈãʷtʃi/'). In Child's second version, instead of a nasal open front vowel /ã/ followed by a voiced alveolar nasal /n/, Child produces a labialized nasal open

front vowel /ãʷ/ followed by a palatalized voiceless alveolar affricate /tʃ/, which resembles Mother's repetition more closely. This resemblance enables the closure of the repair sequence with the mother's validation of Child's correct response (see line 11, 'issu'). Finally, a new topic and sequence of interaction can start (see line 12' vamu vê u qui teim dentru').

Furthermore, Child relatively matches the pitch pattern of their Mother's prior turn (see lines 05 and 06). Mother's pitch rises 14 ST over the first syllable /u̯ˈa̯w/. A similar rise can be seen in Child's second version, where the pitch rises 11 semitones (ST) over the first syllable /u:ˈa:w/. Here, by relatively matching her pitch pattern with her mother's prior turn pitch pattern, Child displays alignment with the action proposed by her mother (see Figures 07 and 08). The mother treats this alignment as a signal that Child had understood and joined the joint project (labelling the character) proposed by her test question at the beginning of the talk (see line 1, 'i:ssu: (.) i essi').

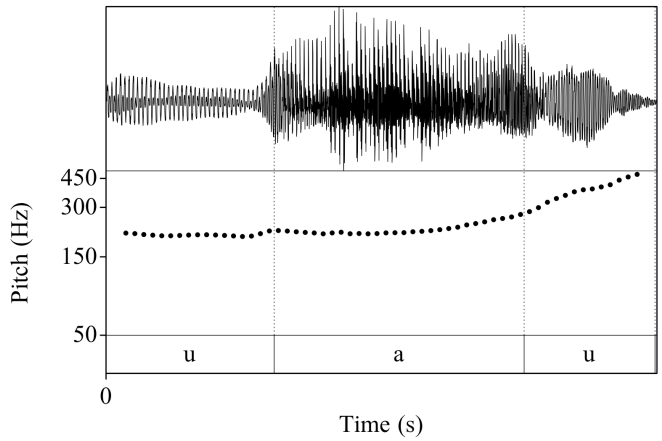

Figure 7. Mother's pitch pattern of the first syllable of Austin.

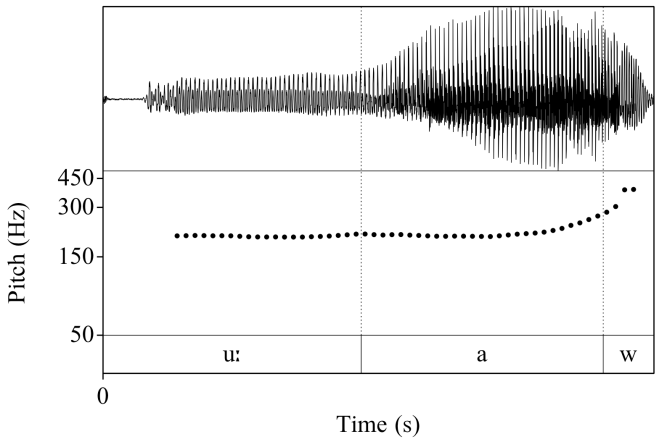

Figure 8. Child's pitch match with Mother's prior turn (Austin).

In fact, Child's repetition and prosodic alignment of the first syllable of the word could have been understood by Mother as a display of understanding and of knowing the answer to line 1. Yet, as Child passed her turn (see line 06), Mother opts to model the correct response (see line 07, '/ˈawstʃin/'). Similar to Fragment 5, Child says the repetition in line 08 /ˈa̰ntʃ/ following Mother's model. Yet their pronunciation is not correct. Therefore, Mother pursues the full name /ˈaw̰stʃin/ (see line 9). In terms of intonation, Mother produces the reparative repetition with a different pitch pattern than Child's troublesome turn (see Figures 09 and 10).

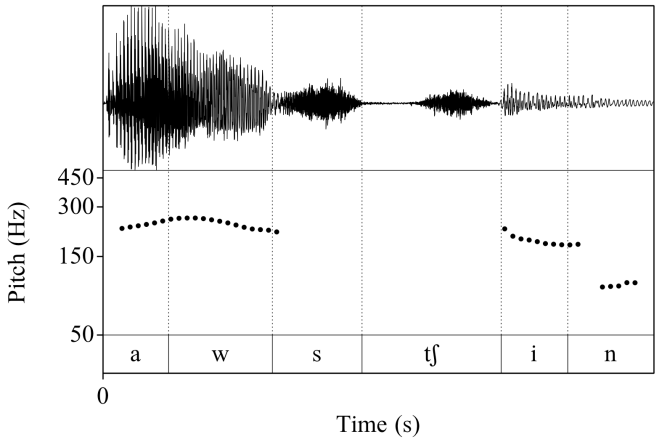

Figure 9. Pitch pattern of Mother's model (Austin).

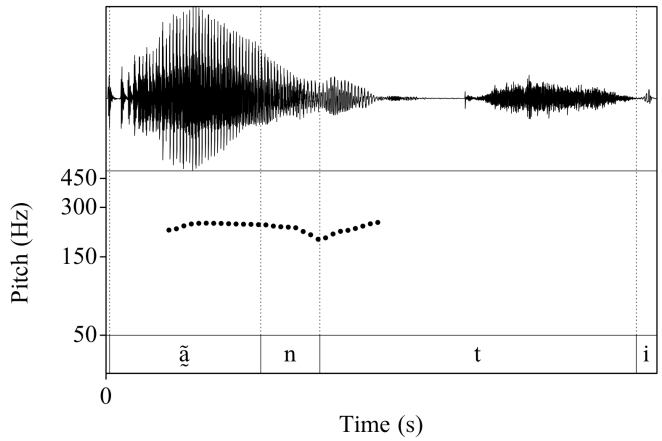

Figure 10. Pitch pattern of Child's troublesome turn (Austin).

In the repair solution (Child's second version) Child, in contrast to Fragment 18, does not match the pitch pattern of their second version with the pitch pattern of Mother's repetition (see Figures 11 and 12). Yet Mother accepts Child's answer as correct (see line 11, 'issu') and starts a new action.

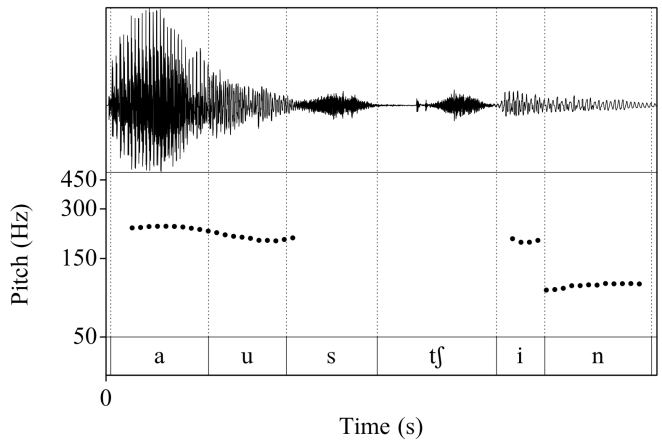

Figure 11. Mother's pitch pattern to correct Child's pronunciation (Austin).

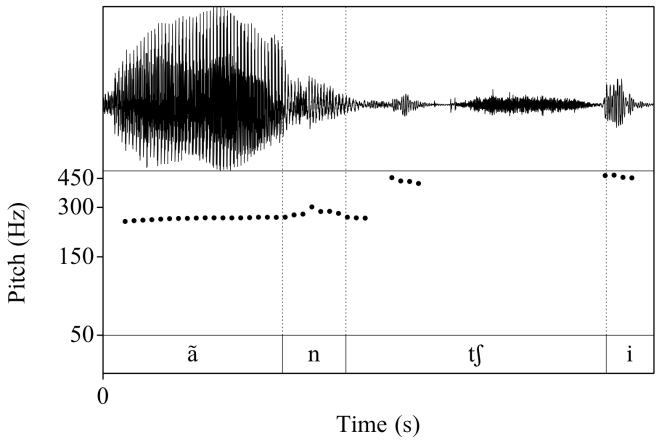

Figure 12. Pitch pattern of Child's repair solution (child's second version of Austin).

Other times Child and Mother may treat the action done by the repetition differently. In these cases Mother and Child may use the next and/or following turns to establish a common ground for both speakers. A deviant case can be used to reinforce the norm (the normal use of the practice). Investigation of deviant cases can show that the mothers and children are aware of the existence of a norm (practice), and show their orientation to its use. We can use it to investigate how the participants display their understanding of the significance of that departure. Hence, deviant cases can provide proof of the participants' orientation to the normative practice of their talk.

An example of deviant case analysis is seen in Fragment 21. Here, Mother and Child are playing with play-dough. More specifically, they are using dough-cutters to make animals and objects. Mother and Child have been talking about the rocket they are both building together. For the purpose of a clear analysis, this interaction will be broken into two segments: the first one from line 1 until line 5, where the child misunderstands the action done by the mother's repetition; and from 7 onwards, in which Mother has another go at trying to correct Child's pronunciation.

Fragment 21 (thacarfoguete1 27:03-27:16)

01-C: Essi é meu /koˈfëtʃi/

		this is my rocket
	02-	(0,8)
→	03- M:	/foˈge ːtʃi/
	04-	(0,7)
	05-C:	é
		it is
	06-	(0,8)
	07-C:	É /koˈfëːtʃi/
		it is rocket
→	08-M:	/foˈgetʃi/
		rocket
	09-C:	é
		it is
	10-	(1,1)
		…
	13-M:	°h((laughs))

In the fragment above, the mother's repetition (line 03, /foˈgetʃi/) is used to simultaneously initiate repair and model the repair the child should provide. The participants do not seem to display a shared understanding of the action done by the mother's repetition (see line 03, /foˈgetʃi/). The repetition prompts self-repair from the child. In other words, the mother proposes a repair solution simultaneously in her repair initiation to deal with the child's pronunciation problem, before continuing with their interaction.

The articulatory differences in this fragment lie between the child's troublesome turn (see line 01, /koˈfëtʃi/) and the mother's repetition (see line 03, /foˈgetʃi/), located at the beginning of the word on the first and second syllables. In the child's turn, instead of an unvoiced labiodental fricative /f/ followed by a close-mid back vowel /o/, the child produces an unvoiced velar plosive /k/

followed by a close-mid back vowel /o/. Additionally, the child produces a voiced velar plosive /g/ instead of an unvoiced labiodental fricative /f/.

Although Child and Mother's articulations of 'rocket' (see lines 03-04) have prominent differences, this is already the second time that Child misarticulates it. Five minutes prior to this interaction, Mother had already requested confirmation on Child's misarticulated label.

As we have seen in Fragments 18, 19 and 20, repetitions to correct the child's pronunciation may be produced with the first syllable lengthened and detached from the rest of the word. Additionally, they present different pitch patterns from the ones found on the child's trouble source turn to initiate repair on the children's pronunciation. However, in Fragment 21 Mother's repetition follows the phonetic characteristics of repetitions to correct the child's lexical choice (see 4.3). Mother's repetition is done with a Rise-Fall (RF) pitch pattern (see line 03, /foˈgetʃi/), rising 4 ST over the lengthened stressed syllable and falling 16 ST (see Fig. 13).

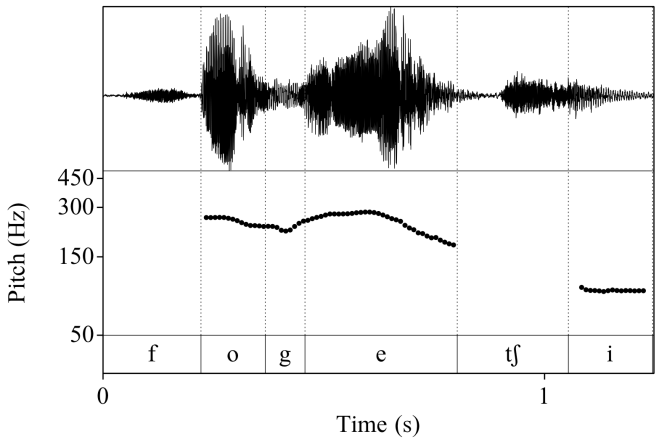

Figure 13. Mother's pitch pattern of *foguete* (second repair initiation).

The child, by providing a confirmation (see line 5, 'é'), can be said to treat the mother's repetition as a request for confirmation, instead of as a repetition to correct the child's lexical choice (see 4.3). The child's second troublesome turn (see line 07, 'é /koˈfetʃi/') and the mother's post-expansion repetition present the

same problems in manner and place of articulation as the turns represented in lines 01 and 03.

Additionally, the mother's repetition is done with a Rise-Fall (RF) pitch pattern (see line 08, '/foˈgetʃi/'**)**, rising 4 ST over the lengthened stressed syllable and falling 7 ST (see Fig. 14).

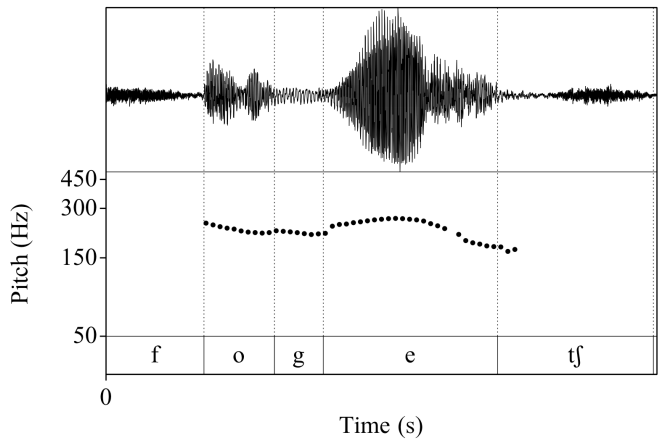

Figure 14. Mother's pitch pattern of *foguete*.

The mother's repetition sets this interaction into a loop in which the mother uses the phonetic characteristics of repetitions to correct the child's lexical choice. In this example it seems that the child's error is actually one of pronunciation, since the consonants are correct but in the wrong order. This vicious circle will be broken in line 13 ('°h((laughs))') when mother laughs and gives up on the correction and continues to play with the child's toys.

The way Mother and Child treat the mother's repetitions in Fragment 21 supports the claim put forward in this thesis that the different phonetic characteristics of the repetitions could be designed to help children distinguish the different actions they project. Thus, lexical repetitions that have similar phonetic characteristics are going to be treated as belonging to the same group, even though this repetition indexes different actions.

In this section we have seen that the mothers produce a repetition with different pitch patterns from the ones found on the child's troublesome turn in order to initiate repair on the children's pronunciation, and which may or may not have the first syllable lengthened and detached from the rest of the word. In

Fragments 18, 19 and 20, the intonation (pitch matching) is used as a cue to help the children to display their alignment with the actions proposed by their mothers.

4.3. Mother's repetitions to correct the child's lexical choice

Repetitions can also be used to prompt the child to correct his/her lexical choice. In this study (88%) of the mother's repetitions to initiate repair have this function, rather than that of correcting pronunciation. Fragment 22 is an example of this kind of repair initiation. In this example, Mother and Child are engaged in a picture labelling activity. Here Mother is testing Child's ability to remember what they ate at the picnic they went to over the weekend.

Fragment 22 (cigumartelo 27:03-27:16)

	01-M:	uhm qui qui tinha nu piquinique
		uhm what did we have on the picnic
	02-	(0,5)
	03-C:	ehm:: biscotu
		uhm:: biscuits
	04-M:	biscoi:tu (.) que mais
		biscuits *what else?*
	05-	(1,6)
	06-C:	/maiˈtʰɛ̟ɬuː/
		hammer
→	07-M	/maɹˈtɛːɬuː/
		hammer
	08-	(0,3)
	09-C:	(laughs)

Child responds to Mother's question with a correct and valid answer (see line 03 'ehm:: biscotu'). Consequently, Mother repeats Child's prior turn to display alignment and agreement with Child's response (see line 04 'biscoi:tu'). As Child does not take the floor after Mother's turn, Mother continues her turn with another test question. However Child, after taking a long pause, responds to

Mother's question with an incorrect lexical choice (see line 06 /maiˈtʰɛ̟ɬuː/). Child could have continued to list the things they ate together, but instead says something completely unrelated to their conversation topic. In this fragment, Mother repeats Child's troublesome turn (see line 07 /maɹˈtɛːɬuː/) to initiate repair on that turn. However, Child again seems to fail to understand the action done by Mother's repetition to initiate repair on Child's lexical choice. Here Child can be said to treat Mother's repetition as a confirmation of what Child said (see request for confirmation in Chapter 5), but it is clear from the context and the pause after the repetition that there is a preference for Child to self-repair (see line 08). In fact, in line 09 Child laughs (line 09) to fill in her turn (see Walker 2017), thus displaying here an inability to understand the function of Mother's repetition. Mother repeats Child's prior turn with a rise-fall pitch pattern, rising 5 ST and then falling 8 ST over the lengthened stressed syllable (see Fig. 15).

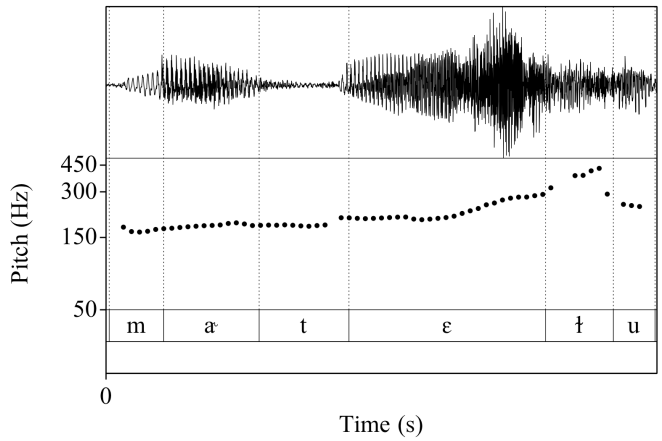

Figure 15. Mother's pitch pattern to initiate repair on Child's lexical choice (martelo).

Fragment 23 is an extended version of Fragment 17, and another example of repair initiation to correct lexical choice. In this interaction Mother and Child are talking about some Disney characters printed on the gift-wrap.

Fragment 23 (caenetamarelo 13:06-13:43)

01-M:	u mi::ckey[(.) I qui cor é essa embalagem?
	Mickey and what colour is this gift wrap?

	02-C:	[fa-
	03-	(1,0)
	04-C:	erm::
		ehm::
	05-	(1,2)
	06-C:	Mickey
		It's Mickey
	07-M:	Naum é u mickey
		It is not Mickey
	08-M:	I essa que cor que é essa
		And this what colour is it
	09-C:	/mąˈɛɬa/
		yellow
→	10-M:	/amaˈɾɛɬə/
		yellow
	11-	(0,9)
	12-C:	<<creaky>> é
		yes
	13-M:	Ah: num é amarela[nada (.) qui cor qui é?
		Oh it is not yellow (.) what colour is it?
	14-C:	[laughs
	15-	(2,1)

In the Fragment above, Mother and Child are involved in a picture-labelling activity in which Child needs to label and describe the Disney character printed on the gift-bag they have received from me (the researcher). Before this interaction started, Child had already correctly labelled the character (Mickey Mouse) printed on the bag. Mother validates the child's correct response in line 01 ('u mi::ckey[(.) I qui cor é essa embalagem?'), and starts a new test-question sequence. However, Child fails to give the correct response as she repeats the name of the character instead of saying the colour of the gift-wrap (see line 06 'Mickey'). Consequently, Mother initiates an explicit repair to correct Child's troublesome turn (see line 07 'Naum é u mickey'). Child provides a repair solution that, at first glance (see line 9, '/mąˈɛɬa/'), could be correct. However, the

colour of the gift-wrap is blue and not yellow. Thus, Mother repeats Child's troublesome turn to correct Child's lexical choice.

This repetition is done with a Rise-Fall (RF) pitch pattern (see line 10, /amaˈɾɛɬə/), rising 11 ST over the lengthened stressed syllable and falling 11 ST (see Fig. 16).

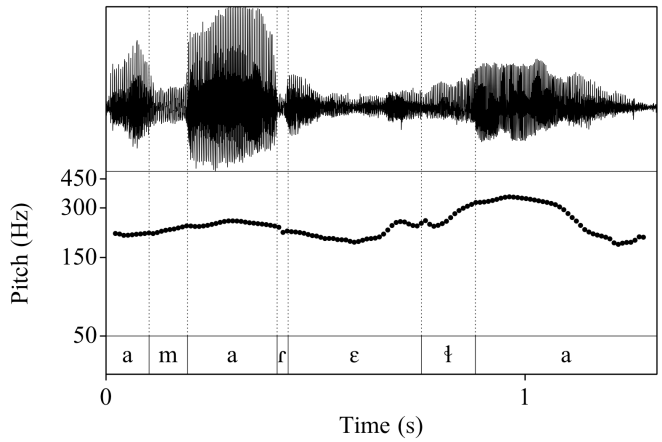

Figure 16. Pitch pattern of Mother's repetition to repair lexical choice (amarelo).

Child, by providing a confirmation (see line 12, "é"), can be said to treat Mother's repetition as a confirmation of what they said (see line 09, /amaˈɾɛɬə/); however it is clear from the context and the following talk (see line 13, "Ah: num é amarela nada") that Mother's repetition was designed to correct the child's lexical choice. In fact, in line 13 Mother does an explicit post-expansion to initiate repair ('Ah: num é amarela nada') to make it clear to Child that her repetition did not aim to confirm Child's prior turn, but rather to prompt self-correction from Child. Here, Child was expected to say the correct colour, which is not *amarela* (yellow) but blue. However, Child seems to fail to understand the action proposed by her Mother's repetition, as she laughs on the next turn (line 09) to fill in her turn (see Walker 2017). In turn 10, the Mother chooses not to pursue further correction of the child's lexical choice.

In this study, the use of lexical repetitions to initiate repair on Child's wrong colour labelling is more common than the labelling of an object incorrectly. In total, 90% of the repetitions used to correct lexical choice address problems of labelling colours. Fragments 24 and 25 provide further evidence of this phenomenon.

In Fragment 24 Child misinterprets Mother's reparative repetition as doing a different action from the one proposed by Mother. In this example Mother and Child are sitting at the kitchen table colouring a girl printed on Child's colouring book. At a certain point, Mother stops colouring the girl and initiates a picture labelling activity in which Child is expected to say the colour of the girl's hair.

Fragment 24 (neideneta_00:01:46-00:02:09)

	01-M:	qui cor qui é u cabelu dela filha?
		what colour is her hair daughter?
	02-C:	ehm:: é dzi-
		uhm:: it's of-
	03-M:	qui cor qui é essa?
		What colour is this?
	04-	(0.3)
	05-C:	é a Pami
		it's (the) Pami
	06-M:	naum mas qui cor é essa qui você tá na mão?
		No but what colour is this one that you're holding in your hands
	07-C:	é u vedzi
		it is green
	08-M:	ah::: tá (.) i essa qui a mamãe tá?
		oh::: it is and this one that mommy is holding?
	09-	(0.6)
	10-C:	é rosa
		it is pink
→	11-M:	é rosa↑↓ (.) naum num é rosa naum (.)[rosa é essi aqui
		is it pink no it is not pink pink is this one

12-C: [é
vermelhu
it is pink
13-M: ah tá é vermelhu
oh it is it is red

In the Fragment above, Mother tests Child's knowledge about the girl's hair colour. She points to the girl printed on the book and issues a test question (see line 01). In the next turn, Child initiates repair in their upcoming talk by beginning a word search (Schegloff et al. 1977; see line 02). Such repair initiations are forward-oriented as they target a possible upcoming problem in the turn to be produced (Schegloff 1979; Carroll 2005). This problem might be caused either by the fact that Child does not know how to say the colour, or that they have not learnt the colour in question yet. Either way, this kind of turn is normally constituted by a turn holding marker (e.g. um, um, ehm, 'uh') followed by a cut off that is used to indicate that the next item due is unavailable (cf. Carroll 2005; Goodwin & Goodwin 1986; Lerner 1996; Schegloff et al. 1977). Consequently, Mother re-issues the question asked in line 01(see line 03) to prompt a response from Child.

Although Child provides an answer to Mother's question in the next turn (see lines 04 and 05), the answer is incorrect since they say the name of the girl printed on the book and not the colour they used to colour the girl's hair (see line 03-05). In line 06 Mother does an overt repair initiation in which she treats Child's answer as something in need of correction. Here, Mother first overtly refutes Child's prior answer, and then she has another go at asking about the girl's hair colour. As she contests Child's incorrect answer, Mother points to the crayon Child is holding in their hand in order to check if Child knows the colour of the girl's dress. In this turn, an adjacency pair sequence is inserted in the talk to confirm if Child is capable of labelling the different colours they are using to colour the girl printed on the colouring book (see lines 09-13).

In line 07, Child's correct response to Mother's test question prompts a change of state token (ah) in which Mother treats Child as someone who knows how to label and recognise the colour Mother is pointing to (see lines 06-08). In line 08, after this display of understanding (Heritage 1984), Mother does another

test question to check if Child knows how to label the colour of the crayon in front of Child's right hand.

Different from lines 06-07, Child responds to Mother's test question after a small gap (see line 12). This time, instead of providing a wrong lexical - item from a completely different lexical group- Child says a colour (see line 10). However the colour is incorrect since the crayon is red and not pink (see lines 11-13). In line 11 Mother repeats Child previous turn to initiate repair on Child's wrong lexical choice; this repetition is done with a Rise-Fall (RF) pitch pattern (see line 10, é rosa), rising 13 ST over the last syllable and falling 07 ST (see Fig. 17).

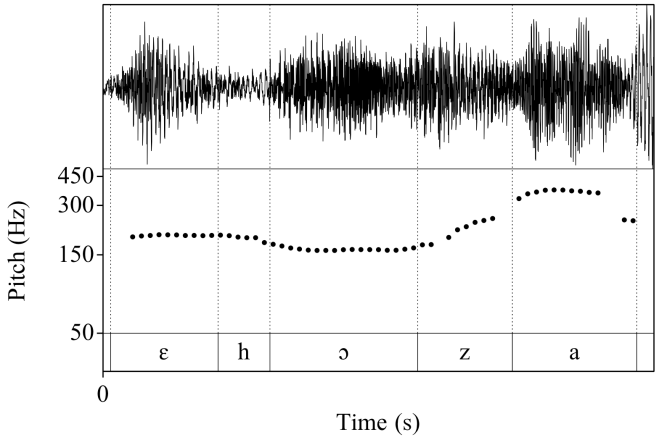

Figure 17: Pitch pattern of Mother's repair initiation (é rosa).

Nevertheless, Child seems to fail to provide an appropriate repair solution. Consequently, after a micro pause, Mother explicitly repairs Child's troublesome turn (see lines 10-11), which is followed by another micro pause and repair initiation to teach and show Child the colour pink. Here, alternatively, Child produces the correct answer (repair solution) to Mother's test question (see line 08) in overlap with Mother's repair initiation (see line 12). Finally, Mother acknowledges Childs correct response by producing a change of state token (ah) followed by Child's correct response (see line 13).

Fragment 24 differs from Fragment 23 above because Child manages to label correctly the lexical item (correct colour) after Mother's constant repair initiations (see line 11). Even so, it is not clear if Child provides the correct lexical

item because they had understood the purpose of Mother's lexical repetition (*é rosa*- see line 11), or if the series of overt repairs (*naum num é rosa naum (.)[rosa é essi aqui*) after this utterance played a more important role in addressing this issue. Actually, one could even say that Child's lack of response during the micro pause after Mother's reparative repetition could have prompted Mother to issue the overt repair initiations, however the small interval between the turns should be analysed carefully. Jefferson (1989) identified that pauses of less than one second may appear regularly in talk. Thus, it could be the case that Mother might not have allowed enough time for Child to react to her first repair initiation (*é rosa*- see line 11).

In Fragment 25, by contrast, Child does not manage to label the colour correctly. This Fragment supports Child's lack of correct answer in Fragment 23. Actually, in this example another strategy is used to display Child's inability to correctly label the colour: Child stands up and abandons the interaction. Here, Mother and Child are collaboratively colouring and drawing a girl when Mother disputes the girl's eye colour said by Child. As this interaction progresses, Mother is constantly searching for the correct answer (the colour of the girl's eye).

Fragment 25 (netaneideolhoazul)

	01-M:	qui qui você tá desenhando filha?
		What are you drawing daughter?
	02-	(0.4)
	03-C:	# ehm::# um olho azul
		# uhm::# a blue eye
→	04-M:	um olho azul filha↑↓(.)mas essi lápis não é cor de rosa?
		a blue eye daughter but isn't this pencil pink?
	05-	(0.3)
	06-M:	cadê u azul?
		Where is the blue (pencil)
	07-C:	.hh não sei
		.hh I don't know

08-M: ondi é qui tá? teim dois lápis alí qual é u azul?
where is it? There are two pencils there which one is the blue one?
09- (0.2)
10-C: ehm:: essis
uhm:: these ones
11-M: qual dessis dois é u azul?
Which of these two is the blue one?
12-C: essi aqui
this one
13-M: essi aqui é u vermelhu
this one in here is red
14-C: deixa eu buscá u outu (child stands up and goes to her room to get more crayons)
let me fetch the other one
15- (1.5)

In the fragment above, Mother initiates an adjacency pair sequence to learn more about what Child is drawing (see line 01). Nevertheless, Child only responds to Mother's question in line 03 after a pause and word searching (see lines 1-3). This response, however, is incorrect since Child fails to label the colour of the girl's eyes correctly. As a consequence, Mother treats the Child's wrong response as troublesome and repeats Child's trouble source to initiate repair on Child's wrong lexical choice (see lines 03-04). This repetition is done with a Rise-Fall (RF) pitch pattern (see line 04, *um olho azul filha*), rising 11 ST over the lengthened stressed syllable and falling 10 ST (see Fig. 18).

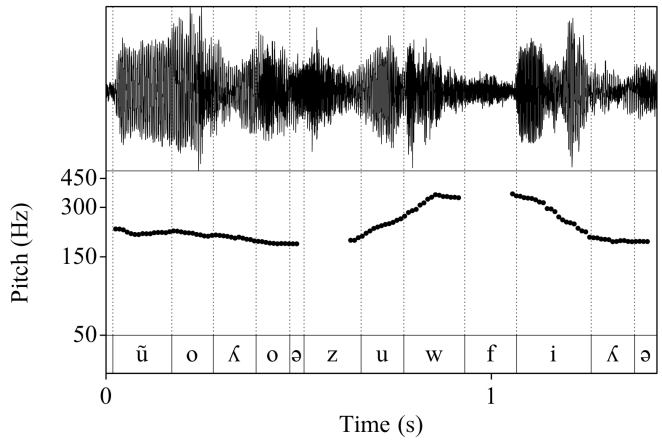

Figure 18: Pitch pattern of Mother's repair initiation (um olho azul filha).

The reparative repetition is followed by a small pause and another repair initiation in which Mother seeks to confirm if Child knows the colour of the crayon Child is using to colour one of the girl's eyes (see line 04). Child's lack of confirmation (see line 05) triggers another answer-question sequence in which Mother changes her approach on how to deal with Child's wrong lexical choice. From this moment onwards (see lines 06-15), Mother focuses on assuring whether Child can tell the difference between the target colour (pink) and blue (the wrong colour proposed by Child). Here, Mother proposes that Child look for the blue pencil, but Child does not manage to find it. As a result, Child produces a turn-initial in-breath followed by a claim in which they say they do not know where it is (see line 07).

In line 08, in response to Child's previous turn, Mother issues another adjacency pair sequence in which she prompts Child to continue looking for the blue pencil. This utterance is composed by two TCUs, in which the first one is used by Mother to prompt Child to look for the blue pencil, while the second one narrows down Child's choices of pencils by referring and pointing to only two (out of four) pencils in front of them.

However, despite Mother's efforts, Child points to both pencils (see line 10) after a small delay as a response to Mother's prior questions (see line 08). This response is preceded by another word searching *ehm*, in which Child displays that they are having problems finding the correct pencil. Nevertheless,

Child points to one of the pencils Mother is holding. Still, Child chooses the wrong colour again (see line 13). Here, the target colour is blue and not red. Child's incorrect response is treated as troublesome and an overt repair initiation and repair solution is made. This repair initiation is carried out at the same time Mother singles out the red crayon (see turns 12 and 13).

After Mother's explicit repair initiation and repair solution (see line 13), Child stands up and goes to their room to get more crayons (see lines 14-15). Child's reaction to Mother's repair initiation displays that either Child has not learnt the colour blue yet, or that they don't remember how to label it. In any case, Mother treats her repetition in line 04 as a repair initiation to correct Child's wrong lexical, since she constantly seeks Child's correct label.

In summary, the mother produces a RF repetition with different pitch patterns from the ones found on the child's troublesome turn to initiate repair on the children's lexical choice. The different pitch contour is used to display to the children their misalignment with the actions proposed by their mothers.

4.4. Conclusion

This chapter demonstrates that mothers can use two distinct phonetic practices to initiate repair on the child's prior turn: the first practice is used to correct the children's pronunciation, while the second one is used to correct their lexical choice.

When mothers repeat the children's prior turn to correct their pronunciation, the repetitions simultaneously initiate repair and provide a repair solution (model) to the children. In terms of phonetic characteristics, the first syllable of the mother's repetition may or may not be lengthened.

Additionally, the mother's repetition employs a different pitch pattern compared to the child's turn. The children from this study interpret these phonetic cues as indexing a request for correction, and they produce a repair solution that mirrors the mothers' stress, syllable, and vowel lengthening patterns. As a result, the children's repair solution is articulated more similarly to the mother's repetition and it may follow the same pitch pattern.

Alternatively, repetitions may be used to initiate repair on the child's lexical choice. In this kind of repetition, the mothers' and children's pronunciations are very similar; yet the mothers still treat the children's responses as troublesome. Here the issue to be fixed is not of articulation but of lexical choice, as the children mislabel the pictures they are looking at.

In terms of phonetic characteristics, the mothers' repetitions are not lengthened, and are done with a rise-fall pitch pattern regardless of the intonation used by the children. These repetitions only initiate repair. They do not provide a model for the repair solution.

The children treat the mothers' repetitions to initiate repair to correct lexical choice as requests for confirmation, not as repair initiations. The different phonetic characteristics can be designed to help the child distinguish the different actions they project. However, the child only seems to understand and join the mother's proposed joint action in those cases where repetitions are used to correct the children's pronunciation problems.

Yet, it is striking that children are already able to distinguish the different practices and phonetic differences in their mothers' repair initiations. The deviant cases in Section 5.4. show that, even though children may still misinterpret the repair initiations to correct pronunciation as requests for confirmation, they are already able to distinguish both practices and act upon their sequential and phonological rules.

This chapter has demonstrated that in order to attain and maintain intersubjectivity, Mother and Child need to establish a joint project in which the action projected by the mother's reparative repetition has the same meaning for both participants. This defence of intersubjectivity is locally adapted, managed, and recipient designed in order to provide opportunities for assessing and addressing divergences between the mothers' repetitions to initiate repair and their children's trouble source turns (Schegloff 1992; Schegloff 2000; Schegloff et al. 1977; Wong 2000).

A successful negotiation of the action done by the mother's repetition will lead to a successful interaction, in which the mother will take some time off to deal with and solve problems of misunderstanding in the talk, and then continue

the talk in due course. However, sometimes the child fails to successfully complete the repair sequence with an acceptable repair solution; when this happens, the mother might pursue further correction until she gives up and moves on to another topic of conversation. The following chapter will present sequential and phonetic analyses of affirmations and requests for confirmation.

5. UNDERSTANDING AND ACKNOWLEGDING THE CHILD'S CORRECT RESPONSES

This chapter presents the particularities evident in mother's repetitions to request confirmation and to affirm the child's prior turn. These repetitions are distinguished phonetically and sequentially from each other. Affirmations exhibit the following systematic differences when compared to requests for confirmation:

- Affirmations have their intonation matched to the child's prior turn.
- Affirmations have their syllables lengthened while repetitions to request confirmation do not.
- Requests for confirmation are produced with a Rise-fall intonation contour and their pitch contour differs from that of the child's prior turn.

These phonetic characteristics, together with their turn-taking position and sequential relevance, help to distinguish affirmations from requests for confirmation. This chapter gives support to Chapter 4 by showing that mothers and children orient to the phonetic and sequential differences between mothers' repetitions to initiate repair on the children's articulation and those to affirm the children's correct response. However, children seem not to distinguish mothers' repetitions to initiate repair on the children's lexical choice from requests for confirmation.

In terms of their turn-taking and sequential characteristics, the repetitions occur in the next position after the children's first saying.

Repetitions that initiate repair on the children's lexical choice, request confirmation, and affirm the children's first saying are produced containing minimal articulatory differences when compared to the children's prior turn. Their intonational contour does not match the children's first saying's (previous turn) pitch pattern. Other times, the repetitions relatively match the children's previous turn pitch pattern to affirm the children's correct answer.

These results conform to the literature in adult-child talk, in English (see (Tarplee 1993; Tarplee 1996; Tarplee 2010; Wells 2010; Wells & Stackhouse 2016). These studies show that mothers and children may match their previous speaker's pitch pattern to align with the action in progress. Mothers and children may also minimise the articulatory differences between the children's first saying and the mothers' repetitions. These differences in articulation are key when distinguishing repetitions to initiate repair on the children's articulation from the ones to affirm, request confirmation, and initiate repair on the children's lexical choice.

The current chapter shows that mothers and children orient to particular sets of norms, where the interactional and phonetic differences among the mothers' repetitions used to affirm and to confirm are revealed in the sequential unfolding. This chapter proposes that the children may misinterpret the repetitions to initiate repair on the children's lexical choice as requests for confirmation.

This chapter is structured as follows: Section 5.1. highlights the main sequential and phonetic differences found in other-initiated repetitions to repair the children's articulation and lexical choice, affirmations, and requests for confirmation. Section 5.2. presents the interactional and phonetic analyses of representative cases of requests for confirmation. Section 5.3. presents the interactional and phonetic analyses of representative cases of mother's affirmations. Section 5.4. discusses the differences and similarities among affirmations and requests for confirmation and presents a conclusion.

5.1. Distinguishing mother's lexical repetitions

As we have seen in Chapters 1 and 2, when dealing with repetitions of the children's previous turn, mothers and children need to establish a mutual understanding of why the mothers repeated the children's turn. They also have to agree on what the children should do next (Clark 1996; Schegloff 1992; Svennevig 2004; Svennevig 2008). For the children in this study, the ability to understand and distinguish the action done by their mothers' repetitions requires a substantial level of understanding of what was said before and after the repetition.

Normally, utterances that are linguistically unproblematic will simply pass unimpeded, affirmed by default. That is, the speakers will either continue talking about the on-going topic or they will choose to start a new topic of conversation without affirming the child's prior turn. This is demonstrated in Fragment 26. Here, Mother and Child are engaged in an activity in which Child needs to label the different colours of play-dough with which they are playing. The arrows are used to point to the turns this analysis is based on. Only turns that are relevant for the analysis presented in this chapter are transcribed phonetically using the IPA.

Fragment 26 (thacarcordamassinha)

	01-M:	Qui cor é essa?
		What colour is this?
→	02-C:	/ˈpetʰu̯/
		black
→	03-M:	I essa?
		And this one?
	04-	(1.6)

In the fragment above, Mother is holding a piece of play-dough and initiates a test question sequence to prompt her daughter to say the play-dough's colour (see line 1 'qui cor é essa?'). Here, Child provides the correct answer (see line 02 'petu') containing a minor articulation problem when compared to the canonical pronunciation of *preto 'black'* /ˈpɾetu/: Child does not produce the voiced alveolar tap /ɾ/ in the first syllable of /ˈpɾetu/. Yet Mother treats the Child's response as something that does not need to be corrected or affirmed. In fact, Mother opts to start a new test sequence in which she prompts Child to label a different colour (see line 03 'I essa?').

It can also happen, as we have seen in Chapter 4, that mothers may choose to momentarily suspend the progression of their talk to initiate repair in the children's prior turn. Mothers may repeat the children's first saying to initiate repair on the youngsters' articulation or lexical choice (Filipi 2009; Filipi 2014; Tarplee 1993; Tarplee 1996; Tarplee 2010).

Fragments 18-20 are an example of mothers' repetition to repair the children's articulation. In these examples, Mother initiates repair and models the correct response (correct articulation). Child then reattempts articulating the troublesome turn and produces turns that resemble Mother's repetition more closely. This similarity enables the closure of the repair sequence with Mother's endorsement of Child's correct response. Finally, a new sequence and topic of interaction can start. In terms of intonation, Mother produces the reparative repetition with a different pitch pattern than Child's troublesome turn (see Section 4.2.).

Mothers may also repeat their children's previous turn, with a rise-fall pitch pattern to initiate repair on their children's lexical choice (see Fragments 22-25). However, Child seems to fail to understand the action done by Mother's repair initiation. In these interactions, Child can be said to treat Mother's repetitions as requests for confirmation.

It can also happen that mothers may choose to momentarily suspend the progression of their talk to request confirmation. These requests for confirmation are done in third-position and differ from other-initiated repetitions to repair the children's articulation and lexical choice as reparative repetitions are used to deal with problem of acceptability, and requests for confirmation propose a candidate of understanding to be confirmed. Fragment 27 is an example of a request for confirmation. Here Mother and Child are playing with play-dough cutters.

Fragment 27 (thacarfita2)

	10- M:	fita [pra embrulhá u quê?
		A lace used to wrap which object?
	11- C:	[cotei
		I cut it
	12.	(0.7)
→	13-C:	/a maˈsĩːɲa/
		Play-dough

→	14-M:	/a maˈsiɲa/↑↓
		Play-dough
	15-C:	É
		it is
	16-M:	Hum: qui legal
		Hum that's nice
	17-	(0.7)(mother and child continue playing)

In the fragment above, Child announces they had cut their play-dough (see line 11 'cotei'). In response to Child's announcement Mother repeats Child's prior turn with a rise-fall pitch pattern. Mother's repetition is used to request confirmation (see line 14'/a maˈsiɲa/'). As we have seen in section 4.1., Tarplee (1993), Langford (1981) and Drew (1981) pointed out that requests for confirmation are not used to enact correction, but to give an opportunity for the child to self-correct. Thus, requests for confirmation thereby treat an error as a rather different manner from corrections that initiate repair. Here child is treated as someone who has supplied the correct version. Evidence for this claim is found in the following turns (see lines 15 and 16) where Child treats Mother's prior turn as a request for confirmation and provides a confirmation ('yes'/'no' answer; see line 15 'é'). Mother accepts and affiliates with Child's response, as she did not pursue any further confirmation or initiate repair.

Mother's repetition used to request confirmation has similar pronunciation when compared to Child's prior turn: in line 13 /a maˈsɨ̃ːɲa/ Child produces a nasal close front vowel /i/ followed by a voiceless palatal nasal /ɲ/, while Mother produces a close front vowel /i/ followed by a voiceless palatal nasal /ɲ/ (see line 14 /a maˈsiɲa/). When mothers use a RF intonation contour, children treat the repetitions as a request for confirmation. The fact that mothers then align with this course of action is evidence that they (the mothers) designed the turn as a request for confirmation in the first place.

At other times, mothers may affirm their children's previous response, in third position, to display that the children's response is correct (Filipi 2009b; Filipi 2014; Tarplee 1993; Tarplee 1996; Tarplee 2010; Sorjonen 2001). Fragment

28 is an example of a third position affirmation. The affirmation occurs after a question-answer sequence. Mother is asking to label the characters printed on the gift-wrap. In the fragment below, both Mother and Child are looking at the character Mother is pointing to.

Fragment 28 (thacarpresente)

	01-M:	Quem é essi daqui?
		Who is this?
	02-	(0.3)
→	03-C:	/ˈmiçei/
		Mickey
→	04-M:	u /ˈmiːkeiː/ (.) i qui cor é essa embalagem
		aqui du presentʃi?
		Mickey And what colour is this gift-wrap?
	05-	(1.1)

In Fragment 28, Mother acknowledges Child's correct response (see lines 01-04). This acknowledgment is done through an affirmation where Mother repeats Child's correct answer in order to affirm it (see line 04 '/ˈmiːkeiː/'). The Mother's affirmation is produced with minimal phonetic differences when compared to Child's prior turn (see line 03 '/ˈmiçei/' and line 04 '/ˈmiːkeiː/') : in Child's turn (see line 03 '/ˈmiçei/'), instead of an unvoiced velar plosive /k/ followed by a diphthong containing a close-mid front vowel /e/ and a close front vowel /i/, Child produces a voiceless palatal fricative /ç/ followed by a diphthong containing a close-mid front vowel /e/ and a close front vowel /i/. As noted above, both Mother and Child treat Mother's minimal phonetic differences as a cue, Mother is repeating Child's prior turn to align and affiliate with Child's correct answer. Additionally, Mother relatively matches her pitch pattern to Child's correct answer.

This section shows that mothers' repetitions index different actions (other-initiated repetition to initiate repair on the children's articulation and lexical choice, request for confirmation, and affirmation). The repetitions' multi-

functionality raises the importance of speakers establishing a mutual understanding of why mothers have repeated the child's prior turn as well as what the child has to do next. In this process, the phonetic characteristics of the mothers' repetitions, together with their turn-taking position and sequential relevance, play an important role in distinguishing the action done by each repetition. Section 5.2. presents the interactional and phonetic analyses of representative cases of requests for confirmation.

5.2. Mother's repetitions to request confirmation

In conversational interaction there is a common communicative practice that involves a speaker repeating the prior turn to seek confirmation of what was just said (Pan & Snow 1999; Perrin et al. 2003). In mother-child interactions, mothers may confirm their children's prior utterance to ensure shared knowledge of the state of affairs in question (Ervin-Tripp 1978; Huang 2012). Thus, confirmation requests open up an exchange that is comparable to an other-repair initiation (OI)-used by the mothers from this study to temporarily interrupt the current talk to confirm the children's prior turn.

This repair initiation, also called questioning repeat or echo questions (Jefferson 1972), can open a subordinate exchange in which positive responses contribute to the closing of the exchange, thereby signalling the success of the interaction. Negative replies, on the contrary, may postpone the closing of the interaction, either by cutting it short or by introducing an element of controversy. Hence, positive responses are preferred in this type of interaction. What is interesting, though, is that the children from this study only responded to the mothers' confirmation with positive responses ('yes').

Mothers repeat their children's prior turn to confirm it and thus establish a common understanding between both parts. This form of request is called: next position repetition to request confirmation, or simply: employ repetition to request confirmation. In this study (47%) of the mother's repetitions have this function. Fragment 29 is an example of mother's repetitions used to request confirmation. In this fragment Mother seeks Child's engagement in the storytelling she has just

initiated. The story is about their visit to the zoo a week before this interaction was recorded, when Mother asks a question to trigger Child to say the name of the animals they saw at the zoo. Here the speakers share the source of events necessary for the story to proceed. Mother assumes the role of co-teller (Lerner 1992), assisting Child in the delivery of the story.

Fragment 29 (naluzoo)

	01-M:	que mais qui a gentshi vai vê nu zoológico?
		What else we are going to see at the zoo?
	02-	(0.9)
→	03-C:	/ũmə tataˈwugəˑ/
		a turtle
	04-	(0.2)
→	05-M:	/ũma tartaˈɾuːga/
		a turtle
→	06-C:	/ɛ /
		it is
	07-M:	i i i a tartaruga tá sozinha?
		and and and is the turtle alone?
	08-C:	é na escola da titia
		it is at auntie's school

In the fragment above, Mother initiates a question-answer sequence (see line 01 'que mais qui a gentshi vai vê nu zoológico?') in which the first pair-part seeks more information about the animals they have seen at the zoo. Here, since it is Child's make-believe story, Mother needs to seek more information about the telling in itself before embarking on Child's fantasy. As both participants are setting the grounds for a forthcoming storytelling, Mother uses the future tense ('vai vê') when producing her utterance. The future tense gives support to Child's make-believe story as the question is not meant to test Child's memory, but used to set the mood for a storytelling in which Mother and Child use their experience at the zoo to play with the animals they have created out of play-dough.

In line 03 (/ˈumə taˈtaɬugaˑ/) Child provides an answer (second-pair part) to Mother's question (first-pair part), thus providing a character for their storytelling. In the following turn, after a small gap, (see line 05 '/ˈuma tartaˈɾuːga/'), Mother repeats Child's prior turn to confirm the information given in the previous turn. Here both Child and Mother treat the repetition as a request for confirmation. Child confirms the Mother's request in line 06 ('é').

After Child confirms Mother's prior request, Mother initiates a new test-question sequence (see line 07 'i i i a tartaruga tá sozinha?), thereby treating Child's response to her request for confirmation as an issue that has already been dealt with and resolved. In line 07 Mother proposes a setting for their storytelling that will start to take shape in the next position (see line 08 'é na escola da titia?'), when Child proposes the scenario for their story.

Child supports Mother's treatment of Child's response to her repetition, as Child embarks on Mothers' new sequence without pursuing further information about Mother's request for confirmation. Additionally, Child treats Mother's previous turn (see line 07) as additional information to their co-storytelling (Lerner 1992), as they do not repair it but rather build up their story telling by giving more information on the turtle's whereabouts.

In terms of phonetic characteristics, Child's first saying (prior turn) and Mother's repetition are articulated differently. Child produces a central close-mid vowel /ə/ at the end of the indefinite article /ˈumə/ instead of an open front vowel /a/. Additionally, Child does not produce the alveolar trill /r/ at the end of the first syllable between the open front vowel /a/ and the unvoiced alveolar plosive /t/. Finally, Child produces a velarized lateral approximant /ɬ/ instead of a lateral approximant /l/.

In terms of intonation pattern, Mother produces a rise-fall (RF) intonation contour repeat rising 3 ST over the stressed lengthened syllable and falling 5 ST to request confirmation (see Figure 20). Here, Mother does not match her pitch with Child's prior turn. Child produces a RF intonation contour rising 8 St over the stressed syllable and falling 7 ST (see Figure 19). Similar to the children

studied in Wells (2010) and Wells & Stackhouse (2016), Child treats Mother's prosodically unmatched turn as a cue to display the need for further clarification about what was said in the prior turn.

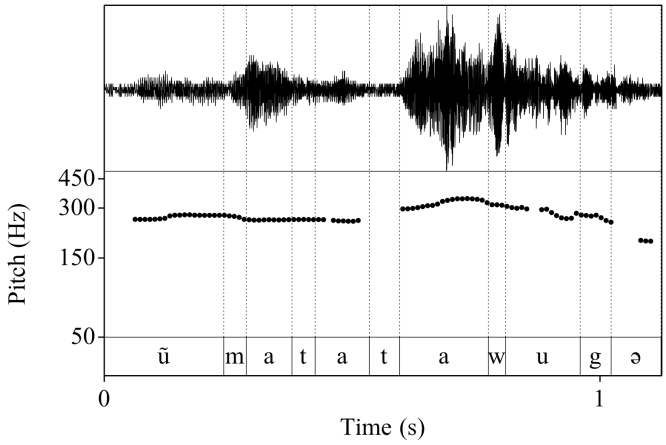

Figure 19. Child's pitch pattern of the utterance *uma tartaruga.*

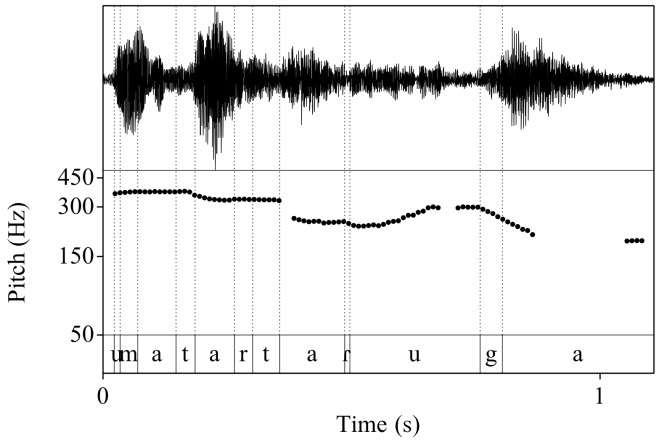

Figure 20. Mother's pitch pattern of the utterance *uma tartaruga*.

Fragment 30 is another example of Mother's repetition used to request confirmation. The participants of this interaction are playing with play-dough. This interaction occurs before Mother and Child start to 'make' their cake.

Fragment 30 (caenet3fazendoumbolo)

```
01-M:       qui qui você tá fazendu dzi gostosu pra
            agenti come?
```

		What tasty dish are you making for us?
	02-	(1.0)
	03-C:	u bolu
		a cake
	04-	(0.4)
	05-M:	ah:: cê tá fazendu um bolu? I essi aqui u qui é?
		oh you are making a cake? And this one what is it?
	06-	(0,6)
→	07-C:	/ɛ ˈmasə/
		it is dough
→	08-M:	/ɛ ˈmaːsa/↑↓
		is it dough
→	09-C:	é
		it is
	10-	(0.2)
	11-C:	pa vocês comerem
		it is for you to eat
	12-M:	Ahm qui massa?
		Uhm which dough?
	13-	(1,3)
	14-Chi:	essa rosa
		this pink one

In Fragment 30, Mother initiates a question-answer sequence (see line 05 'I essi aqui u qui é?') in which the first pair-part seeks more information about what they are going to do with the different pieces of play-dough in front of them. Here, since it is Child's make-believe story, Mother needs to seek more information about the telling in itself before embarking on Child's fantasy. In line 07 (/ɛ ˈmasa/) the child provides an answer (second-pair part) to Mother's question (first-pair part). In the following turn (see line 08, /ɛ ˈmaːsa/), Mother repeats Child's prior turn to confirm the information given in the previous turn. Here it is important to emphasise that both Child's first saying (prior turn) and Mother's repetition are similarly articulated (see turns 07-08). One could be

surprised by Mother's request for confirmation, since Child's turn (see line 07 /ɛ ˈmasə/) has only one vowel articulated differently (see the explanation about these turns' phonetic differences below). Yet Mother produces a confirmation request, and what is even more striking is that both Child and Mother seem to orient to the repetition as a request for confirmation. One possible explanation for this is that, although Mother already knows the response, she repeats Child's prior turn (see line 07 /ɛ ˈmasə/) to establish a common ground for their storytelling.

Child, by confirming Mother's request in line 9 ('é'), establishes a common ground with Mother, which allows the story to continue. Evidence for this claim is found when Child confirms Mother's prior request and continues to add extra information about the cake she is making (see line 11 'pa vocês comerem'). Mother's next position (see line 12 'Ahm qui massa?') supports the Child's treatment of Mother's repetition, as Mother does not pursue further information but instead reacts to the new information given by Child in line 11('pa vocês comerem'). In line 12 ('Ahm qui massa?') Mother starts a question sequence to learn more about what she is going to eat, thereby progressing with the storytelling.

In terms of phonetic characteristics, both Child's first saying (prior turn) and Mother's repetition have minimal differences in articulation. In this Fragment, Child produces a central close-mid vowel /ə/, while Mother produces an open front vowel /a/ at the end of their utterances. In terms of intonation patterns, Mother produces a rise-fall (RF) intonation contour rising 10 ST over the stressed lengthened syllable and falling 15 ST to request confirmation (see Figure 22). Here, Mother does not match her pitch with Child's prior turn (see Figure 21). Child produces a rise-fall contour rising 4 ST and falling 9 ST.

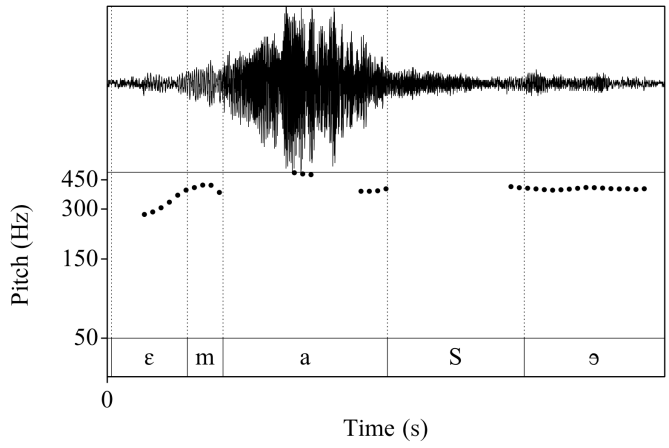

Figure 21. Child's pitch pattern of the utterance *É massa*.

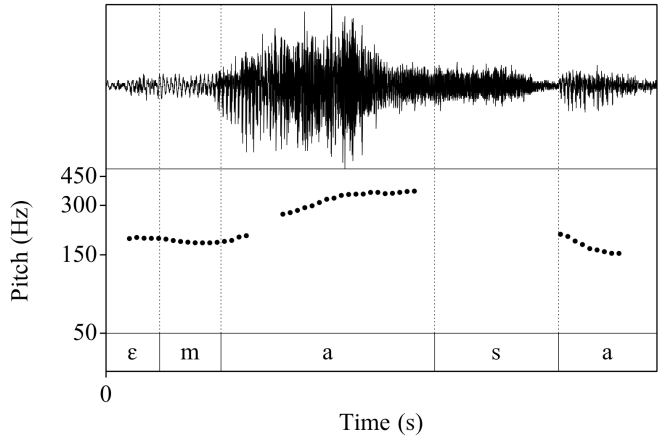

Figure 22. Mother's pitch pattern of the utterance *É massa*.

Problems in communication may also arise during picture labelling. In Fragment 31 Mother's reparative repetition is misinterpreted by Child as doing a different action from the one proposed by their mother. In this example, Mother and Child are engaged in a picture labelling activity. Here, Mother is testing Child's ability to label the colour of the crayons they are using.

Fragment 31 (thacarárvore 27:03-27:16)

01-M:	que cor é essa?
	what colour is it?
02-	(0.6)
03-C:	ehm::

uhm::

04- (2,2)

05-M: ver:

first syllable of green

06-C: melho

last two syllables of red

→ 07-M: vermelhu

red

08- (1,1)

09-C: é

it is

10- (1.5)

11- M: não é vermelhu

it is not red

12- (0.6)

13- M: vermelho é essi ó

look this one is red

14- (1.3)

15-C: essi é meme[lhu

this is red

16-M: [isso (.) e essi na sua mão?

that's right (.) and this one that you are holding?

17- (1.5)

18-C: vedi

green

19-M: ah: bom (.) si você sabe por quê você fica enganadu a mamãe?

Oh ok if you know it why are you pretending (to mummy) not to know it?

20- (4.0) (Child stands up and walk towards a toy a the other side of the living room).

In Fragment 31, Mother tests Child's knowledge about the colour of the crayon they are using to draw their picture by producing a test question (see line 01). However, Child delays their answer (Schegloff et al. 1977; see lines 02- 03). Yet, in line 04, Mother does not provide the correct answer to the test question posed in line 01. The long pause displays Mother's preference for self-correction

(Tarplee 1996; Filipi 2009; Forrester 2008, 2015; Schegloff et al., 1977). Only after this long pause does Mother initiate a collaborative word searching (see line 05) in which she produces the first syllable of the target word. Consequently, Child says the remaining syllables (*melho*) of a colour (vermelho- red) that starts with the syllable *ver* (see lines 05-06). Since Child has only said the second part of the word (melho) instead of saying the whole word, Mother produces a request for confirmation in which she repeats the full word (containing all the syllables) back to Child (see line 07). This request is meant to establish a common label for the colour both speakers are looking at. This repetition is done with a Rise-Fall (RF) pitch pattern (see line 07, vermelhu), rising 9 ST over the lengthened stressed syllable and falling 8 ST (see Fig. 23).

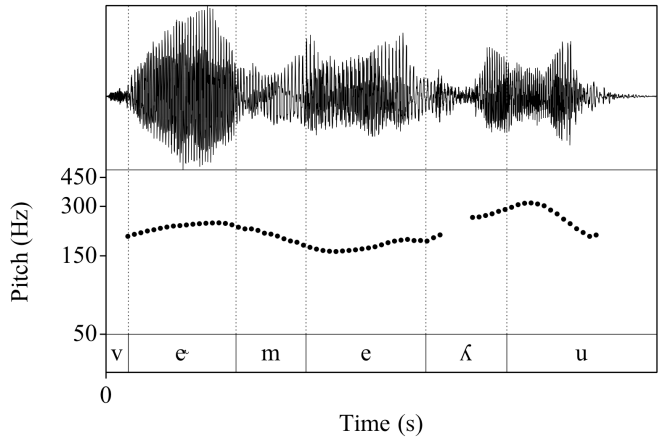

Figure 23: Pitch pattern of Mother's request for confirmation (vermelho).

Both Child and Mother treat Mother's repetition (see line 07) as a request for confirmation, since Child confirms Mother's request (see line 09), after a small pause. Following the confirmation, Mother grants some time for Child to self-repair their answer. The matter at issue here, and which prompted another series of repair initiations, is that the colour proposed by Child is wrong. Child should have said the colour green (verde) and not vermelho (red). The problem arises because in both words (verde and vermelho) the first syllable is *ver*.

Yet, Child does not initiate repair, which prompts Mother to overtly initiate repair on Child's incorrect lexical choice (see line 11). Still, in line 12, Child does not offer a repair solution to their troublesome turn (see line 06).

Therefore, Mother initiates an insertion sequence in which she teaches Child the colour red by showing the red crayon (see lines 13-16). This insertion sequence finishes when Child labels the red colour correctly, and Mother acknowledges Child's correct response and starts another test question sequence (see line 16). In this turn, Mother resumes the original purpose of her repetition in line 07; that is, correcting Child's incorrect lexical choice. Finally, after taking some time to respond, in line 18, Child correctly labels the target colour (*verde*-green). Child's correct response is affirmed by Mother in line 19, thereby closing this interaction.

Other instances when Mother may also choose to request confirmation include when Mother and Child need to agree on a common ice cream flavour. In the fragment below (fragment 32), Mother and Child are negotiating the ice cream flavour.

Fragment 32 (thacarfoguete 4 27:03-27:16)

01-M:	qual é o sabor dessi sorvetsi?
	What is this ice cream's flavour?
02-	(1.0)
03-C:	xxxxxxxx
	nonsense word
04-M:	sabor du [que?
	Which flavour?
05-C:	[celeja*
	cherry
06-	(3.0)(Child puts the ice cream in a cup and gives it to mother. Mother pretends to "eat it". When Mother is done Child offers another ice cream)
07-M:	tem gostu du que essi sorvetsi?
	Which flavour is this ice-cream
08-C:	dzi ma::: dzi-
	of ma::: of-
09-	(2.9)
10-C:	dzi::
	of::
11-	(1.4)

	12-C:	/dzi limãu/
		of lime
→	13-M:	/dzi limãw/
		of lime
	14-C:	é
		it is
	15-	(0.4)
	16-M:	ah::
		Oh::
	17-	(0.7)(Child removes the "ice cream" from its pot and puts it in a cup)
	18-C:	tó (Child hands the ice cream to Mother)
		this is for you
	19-C:	obrigada
		thank you
	20-	(4.0) (child moves on and starts to colour her colouring book)

In the fragment above, Mother starts a question-answer sequence to find out the ice cream flavour Child is making. In this interaction it is important to bear in mind that, because Mother and Child are playing with play-dough, both participants need to agree on a common ice cream flavour. This type of agreement is common in playtime activities and co-storytelling since both participants need to agree on a mutual object, or in this (particular) case, a common flavour, before they move on with their talk (cf. Lerner 1992; Hoogsteder et al. 1996; Wootton 1997).

After a delay, Mother's attempt to prompt conversation is successful since Child utters a turn that could have been a response to Mother's question (see line 03). Yet, Child's unintelligible utterance breaks the follow of the conversation. Consequently, Mother initiates an open class repair initiation (Drew 1997) to display no understanding of Child's prior turn (see 04). As a matter of fact, in this repair initiation Mother partially repeats her question in line 01 to focus on the matter at hand (getting to know the ice-cream flavour).

Child provides a repair solution which overlaps with Mother's repair initiation (see lines 04-05). Mother treats this repair solution as a plausible

response to the question (see line 01) and moves on with the conversation after Child puts the ice cream in a cup and hands it to her. Mother pretends to eat the ice cream, and when she is done eating it Child hands her another one.

Once again Mother poses another question to decide with Child on a common ice cream flavour (see line 07). This time, instead, Child starts to produce her turn. Child's utterance in line 08 could be a placeholder in which Child acknowledges that it is their time to speak. Nevertheless, Child produces the beginning of what could have been their response, followed by a cut off to display that they are still searching for a flavour to say. As we have seen in Fragment 31 (vermelho example), this word searching may be treated as a repair initiation in which Child displays a possible upcoming problem in the turn to be produced (Schegloff 1979; Carroll 2005).

Despite Child's repair initiation, Mother does not intervene in the next turn after the repair initiation to provide a candidate answer or help Child in their word searching, thus displaying a preference for self- repair (see line 09). As a matter of fact, Mother only produces another turn when Child provides an ice cream flavour (see lines 08-12). Mother repeats Child's candidate flavour to request confirmation given in the previous turn. Here, both Child and Mother treat the repetition as a request for confirmation. Child confirms Mother's request in line 06 ('é'). This repetition is done with a Rise-Fall (RF) pitch pattern (see line 13, /dzi limãw/), rising 9 ST over the stressed syllable and falling 12 ST (see Fig. 24).

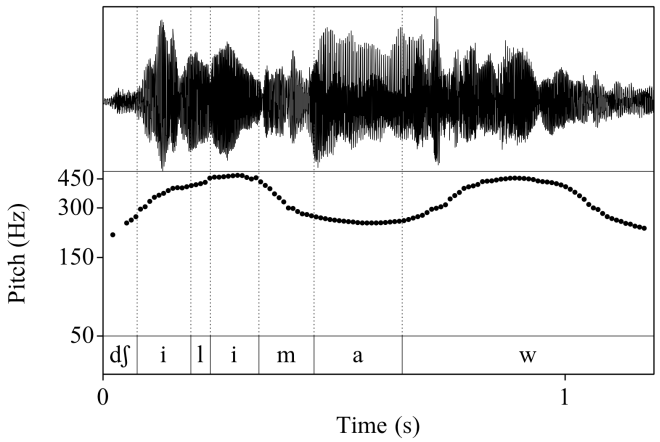

Figure 24: Pitch pattern of Mother's request for confirmation (**/dzi limãw/**).

Since Child does not provide any further information about the ice cream they handed to Mother (see line 14), Mother produces a change of state token (see line 16) to display that she had understood the ice cream flavour. This display of understanding is used to close the interaction initiated in line 01. The closure of this interaction is supported by Child's next action. Here, Child puts the ice cream in a cup and gives it to Mother without adding more information about its flavour (see lines 18-20). Moreover, in line 20 Child starts a completely unrelated activity (Child starts to colour in their colouring book), which provides further evidence to their treatment of the interaction as being finished. Additionally, in line 19, Mother thanks Child and starts to "eat the ice cream". Similar to Child's treatment, Mother's lack of pursing a follow up about the ice cream's flavour gives additional confirmation of the participants' treatment of their interaction as being finished.

This section demonstrates that mothers may partially or fully repeat, in third turn, the child's prior turn to confirm and thus come to a common understanding and agreement about the story they are telling together or the playtime activity they are engaged in. These repetitions are characterised by minimised articulatory differences when compared to the children's prior turn and they are done with a Rise-fall intonation contour. As we have seen in Section 5.2., children treat their mothers' RF repetitions as requests for confirmation. However, mothers may also use RF repetitions to initiate repair on their children's lexical choice (see Section 4.3.). In this study, the next turns after the repetition and their sequential implication are going to play and important role in distinguishing requests for confirmation from other-repetitions to initiate repair on the children's lexical choice. Section 5.3. discusses the sequential, turn-taking, and phonetic characteristics of affirmations.

5.3. Affirmations

As we have seen at the beginning of this chapter, utterances that are linguistically unproblematic will pass unimpeded, affirmed by default. This means that the

speakers may either choose to continue talking about the topic of their interaction or they may choose to start a new topic of interaction without affirming the child's prior turn (see Fragment 22).

In repetitions to affirm the children's correct response and articulation, the mother's opening question in this three-part-sequence is marked as a test question. The affirmation ratifies both the propositional content of a child's turn and also its adequacy as a linguistic display. The 'question with known answer', also known as a test question, typically shows a sequential organisation of three turns: the adult's initiation in first turn (routinely a question), a child's ensuing reply, and remarks on the adequacy or correctness of the reply in the adult's third turn (Macbeth, 2004).

This three-part sequence has been extensively explored in institutional talk (e.g. teacher-student) and in interactions between carers (mothers) and their children (Heap 1985). It is often described as sequence of Initiation-Reply-Evaluation (IRE). This sequence is organised by the understanding that teachers or parents already know the answers to their questions. In this sequence, mothers use a third-position affirmatory repetition to display being already in possession of the solicited information. Since they already know the answer, they are in a position to evaluate the correctness of the elicited answer (Tarplee 1993; Tarplee 1996). This kind of feedback made available to children is used to monitor the children's linguistic 'correctness'.

In this type of interaction, the adjacency pair is very much at the centre of the sequence organisation since it provides powerful means for discovering how the mother and her child organise their talk. The pervasiveness of the adjacency pair in the talk helps us (analysts) to understand and trace how a child is taught and begins to use both first-pair parts (answer) and second-pair parts (response) systematically (Filipi 2009). In this kind of interaction the child needs to learn not only that the preceding actions require responses, but also that these responses need to be fitted to what has been said before (Filipi 2014). Consequently, the child needs to learn that not just any response will suffice. Failure to produce a suitably fitted response makes the mother accountable to pursue a response (Pomerantz 1984b).

Tarplee (1996) suggested that mothers' third-turn affirmative repetitions are done with reduced phonetic differences between one's own version and its prior. These reduced differences function as a way of doing a repeat in talk without it coming off as correction. This property of affirmation is a recurring feature of early interactions as the mothers give constant feedback on the children's sequential and linguistic abilities (Tarplee 1996; Tarplee 2010; Filipi 2009; Filipi 2014). However, as the children grow older, affirmations are seen as dispreferred actions that should be avoided, just like repairs initiations.

As mentioned, mothers may repeat the child's prior answer to acknowledge the children's correctness. In this study (29%) of the mother's repetitions are used to affirm the children's correct response to a test question. Fragment 33 is an example of mother's repetition used to affirm the child's prior turn. Here Mother and Child are drawing their family members and Mother asks Child to say the different colours of crayon they will have to use to draw their entire family.

Fragment 33 (eveddesenhandoafamília)

	01-M:	qui cor você falou pra mamãe que você é?
		What is the colour you said to mummy your skin was?
	02-	(1.1)
	03-C:	beginha
		beige
	04-M:	a: você é beginha
		Oh you are beige
	06-	(0.9)
→	07-M:	e o tio Elê que cor que eli é?
		and uncle Elê what colour is he?
→	08-C:	/mą$^{\text{ˈh}}$xõ/
		brown
→	09-M:	/mą$^{\text{ˈ}}$xõ̩:/
		brown
	10-	(0.6)
	11-M:	I u Saci?

And Saci? (Saci is character from the Brazilian Folklore)

In the fragment above, Mother starts a test question sequence (see line 07 ‘e o tio Elê que cor qui eli é’) to prompt Child to say her uncle’s skin colour. This turn is framed as a test question, which makes an answer relevant as the next action. In fact, Child provides the correct answer to Mother’s test question (see line 08 ‘/mạˈʰxõ/’). Mother repeats Child’s prior turn (see line 09 ‘/mạˈxọ̃ː/’- brown) to affirm Child’s correct answer (see line 08 ‘/mạˈʰxõ/’- brown). Here both Mother and Child display shared understanding that Child’s label is correct, since both speakers know the person they are talking about and can see the different colours of crayons available on the table. Mother’s repetition is used to acknowledge and, at the same time, align with Child’s correct answer. This claim is evident when Child does not use the next turn after Mother’s turn, which should have been their turn, to react to Mother’s prior affirmation (see line 10). Mother instead moves on to another topic of interaction, as she starts a new test-question sequence, which works as further evidence and support that the colour is correct.

This shared understanding is supported by the phonetic characteristics of Mother’s repetition. Here the repetition is produced with minimal articulatory differences: Mother’s open front vowel /ạ/ is breathy while Child produces an open front vowel breathy and aspirated /ạʰ/. Additionally, Mother produces a more rounded close-mid back nasal vowel /ọ̃/ while Child produces a close-mid back nasal vowel /o/.

In terms of intonation, Mother relatively matches the pitch pattern of Child’s prior turn (see lines 08 and 09). Child’s pitch rises 4 ST over the first syllable /ˈmạʰ/ and falls 3 ST over the second syllable /xọ̃ː/. A similar rise can be seen in Mother’s second version, where the pitch rises 6 ST over the first syllable /mạ/ and falls 4 ST over the second syllable /xọ̃ː/. Here, Mother displays alignment with the action proposed by Child when she relatively matches her pitch pattern to Child’s prior turn (see Figures 25 and 26). The speakers treat this

alignment as a signal that both Mother and Child had understood and joined the joint project (saying the colour of Child's uncle skin) proposed by Mother's test question (see line 07 ' e o tio Elê que cor qui eli é), since neither Child nor Mother pursue further work on the colour of Child's uncle (see lines 10 and 11).

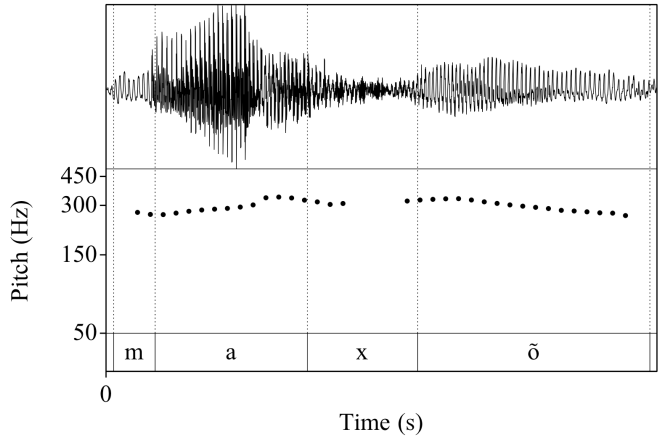

Figure 25. Child's pitch pattern of *marrom*.

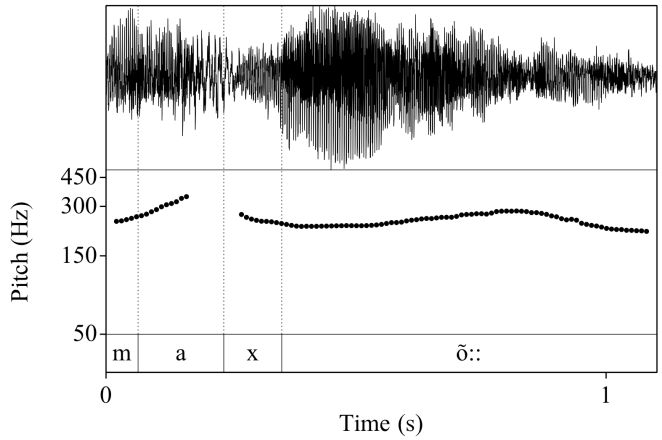

Figure 26. Mother's pitch pattern of *marrom*.

As we have seen above, affirmation occurs after a question-answer sequence. Here Child and Mother are engaged in a picture labelling activity in which Mother asks Child to label the characters shaped in Child's play-dough cutters. In the fragment below, both Child and Mother are looking at the character Mother is pointing to.

Fragment 34 (netaneidepatinho)

	01-M:	sabi u qui qui é issu?
		Do you know what is it?
	02-C:	ehm:
		uhm
	03-M:	qui qui é essi?
		Which one is this?
	04-C:	/ɛ u paˈtʃiɲu/
		it is a duck
→	05-M:	/ɛ ũ paˈtʃiɲu:/muito bem
		it is a duck
	06-	(0.5) (Mother gets more play-dough from a box)
	07-M:	vamu fazê um patinhu?
	08-	(0.2) (Mother places different colours of play-dough in front of Child)

In Fragment 34, Mother issues a test question to prompt Child to label the character shaped in Child's play-dough cutters (see line 1). In response to Mother's test question, Child begins a word search (see line 2). Mother targets Child's word search as a possible upcoming problem in the turn to be produced and poses another question in which she changes the demonstrative pronoun from *issu* (this) to *esse* (this one) to make clear to Child that she is talking about the animal shaped in the dough cutter she is holding in her hands (see lines 01 and 03). Mother's re-issued test question (see line 03) aims to prompt a response from Child.

In the following turn (see line 04), Child labels the character correctly. Thus, Mother acknowledges Child's correct response (see lines 01-05). This acknowledgment is done through an affirmation where Mother repeats Child's correct answer in order to affirm it (see line 05 'é um patinhu:- it's a duck'). The Mother's affirmation is articulated similarly to Child's prior turn since the only prominent difference between both utterances is the fact that mother nasalises the close back vowel /u/, which grammatically is used as an indefinite article (a), while Child does not.

In terms of intonation, once again, Mother relatively matches the pitch pattern of Child's prior turn (see Figures 27 and 28). Child's pitch falls 10 semitones (ST) while Mother's pitch falls 3 semitones (ST). Here, both speakers treat Mother's affirmation as an indication that Child has responded correctly and therefore joined the joint action proposed by Mother's test question (see line 03 'qui qui é essi?').

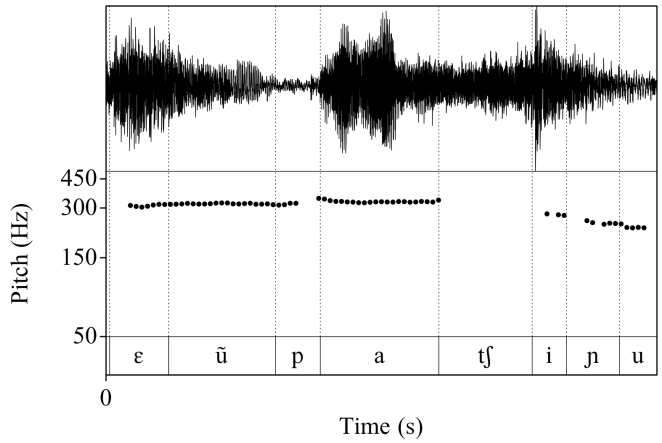

Figure 27. Child's pitch pattern of *patinhu*.

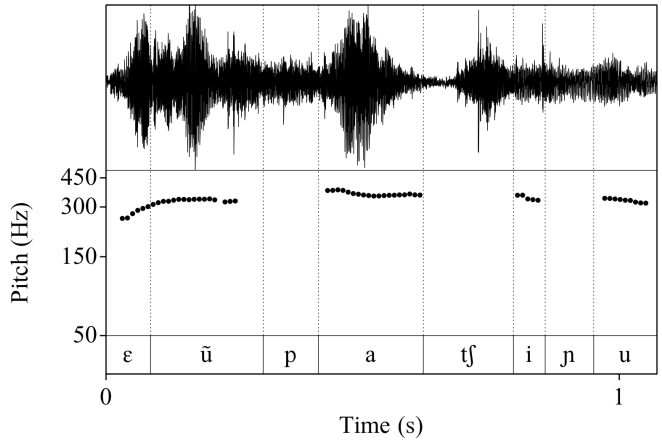

Figure 28. Mother's pitch pattern of *patinhu.*

In addition to Mother's repetition to affirm Child's correct answer, Mother reinforces the affirmation uttered in the same turn by overtly acknowledging Child's correct response (see *muito bem* in line 05). Mother and Child treat Mother's affirmation as a sequence ending turn since both participants move on

from their labelling activity to actually making the animal Child has labelled (see lines 05-08).

As we have seen above affirmations tend to occur after Child has labelled an object correctly. In Fragment 35 the researcher has given a gift to Child, and Mother uses this episode as an opportunity to ask Child to label the characters printed on the gift-wrap. In the fragment below, both Mother and Child are looking at the character Mother is pointing to.

Fragment 35 (thacarpresente)

	01-M:	Quem é essi daqui?
		Who is this?
	02-	(0.3)
	03-C:	/ˈmike/
		Mickey
→	04-M:	u /ˈmiːkeː/ (.) i qui cor é essa embalagem
		aqui du presentʃi?
		Mickey And what colour is this gift-wrap?
	05-	(1.1)

In the Fragment above, Mother poses a test question to prompt Child to label the character printed on the gift-wrap (see line 1). After a small pause, Child labels the character correctly (see line 03). Consequently, Mother acknowledges Child's correct response (see lines 01-04). This acknowledgment is accomplished through an affirmation where Mother repeats Child's correct answer in order to affirm it (see line 04 '/ˈmiːkeiː/'). The Mother's affirmation is articulated similarly to Child's prior turn. As noted above, both Mother and Child treat Mother's similar articulation as a cue, Mother is repeating Child's prior turn to align and affiliate with Child's correct answer. Additionally, Mother relatively matches her pitch pattern to Child's correct answer. Child's pitch falls 10 ST. A similar fall can be seen in Mother's repetition, where the pitch falls 8 ST (see Figs. 29 and 30). Here, Mother's and Child's match in pitch is used to display that both

speakers have understood and joined the joint action proposed by Mother's test question (see line 01 'quem é essi daqui').

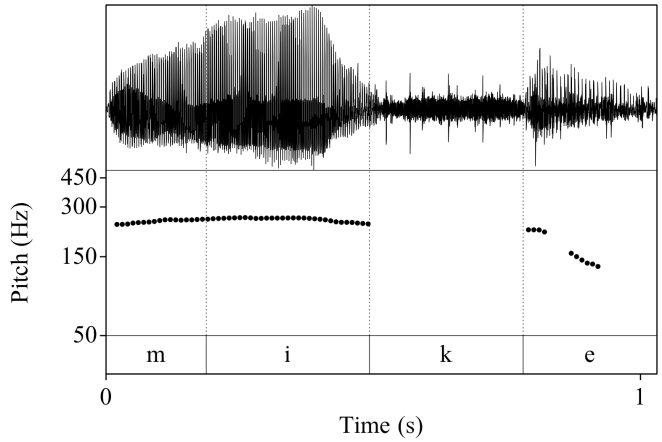

Figure 29. Child's pitch pattern of *Mickey*.

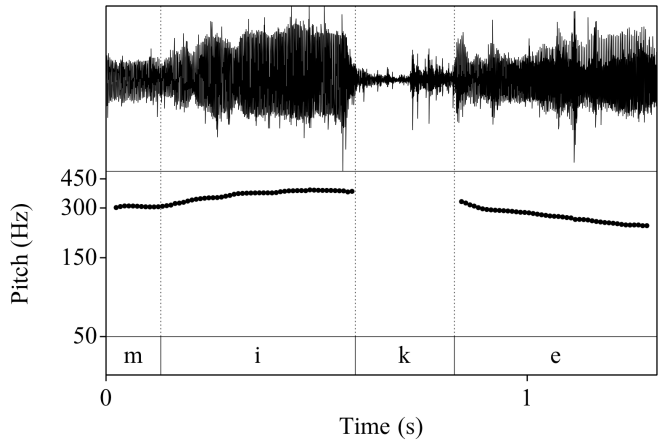

Figure 30. Mother's pitch pattern of *Mickey*.

Fragment 36 is another example of affirmation prompted by a test question sequence. Here Mother and Child are labeling the animals printed on one of the pages from the colouring book they are colouring together.

Fragment 36 (thacarbaleia)

```
01-M:       Qui qu'é issu?
            What is this?
02-C:       É u cachorro
            It is *the dog
```

	03-M:	((laugh)) cachorro filha?
		is it dog darling?
	04-	(0.8)
	05-C:	num é
		It is not
	06-M:	Num é (.) qui qui é issu?
		It is not(.)what is it?
→	07-C:	/ɛː baˈɬɛ̰iạ/
		it is whale
→	08-M:	/baˈɬɛ̰iːa/
		Whale
	09-C:	a mamãe
		the mummy

In line 5 of Fragment 36, Mother makes an explicit correction (‘num é’) and repeats the test question done in line 1 (‘qui qu'é issu’) to pursue the correct answer. Child has another go at labeling the picture (see line 7 ‘/ɛː baˈɬɛ̰iạ/’) and this time, in contrast to line 02 (‘é u cachorru’), Child labels the picture correctly. Here both participants have visual access to the picture mother is pointing to, which helps Mother to evaluate the correctness of Child’s answer and Child to accept it as correct. Similar to Fragment 35, Mother’s repetition is used to acknowledge and align with Child’s correct answer. Both Mother and Child treat Mother’s affirmation as a closure to the question-answer sequence, initiated by the test question in line 01, since Child starts a new sequence of interaction.

In Fragment 36, the phonetic characteristics of Mother’s repetition are used in parallel with its sequential characteristics to support Mother’s alignment to Child’s answer (prior turn). Here, the repetition (see line 08 ‘/baˈɬɛ̰iːa/’- whale) is produced with minimal articulatory and intonational differences: Mother’s close-mid front vowel /ɛ̰/ is more rounded than Child’s production /ɛ̰/. Child produces a creaky close-mid front vowel /ɛ̰/ and a word-final breathy open front vowel /ạ/, while Mother does not.

In terms of intonation, once again, Mother relatively matches the pitch pattern of Child’s prior turn (see Figs. 31 and 32). Child’s pitch rises 4 ST over

the first syllable /ba/ and falls 2 ST over the third creaky syllable /a̰/. A similar rise can be seen in Mother's second version, where the pitch rises 2 ST over the first syllable /ba/ and falls 2 ST over the second syllable /a/. Here, Mother relatively matches her pitch pattern to her Child's prior turn to display alignment with the action proposed by Child. Both speakers (Mother and Child) treat Mother's affirmation as a signal that they have understood and joined the joint project proposed by Mother's test question (see line 01 'qui qui é issu?').

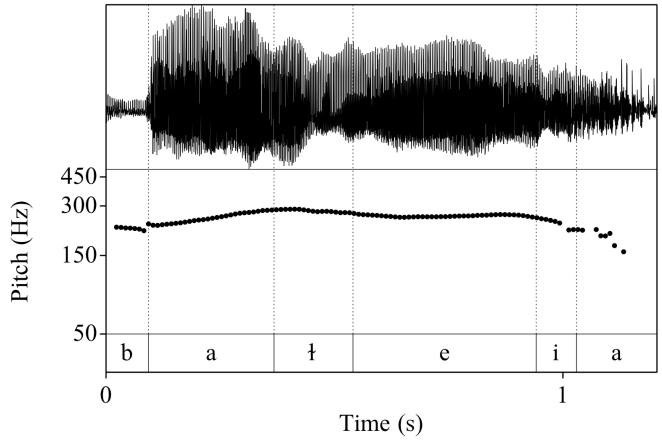

Figure 31. Child's pitch pattern of the *Baleia*.

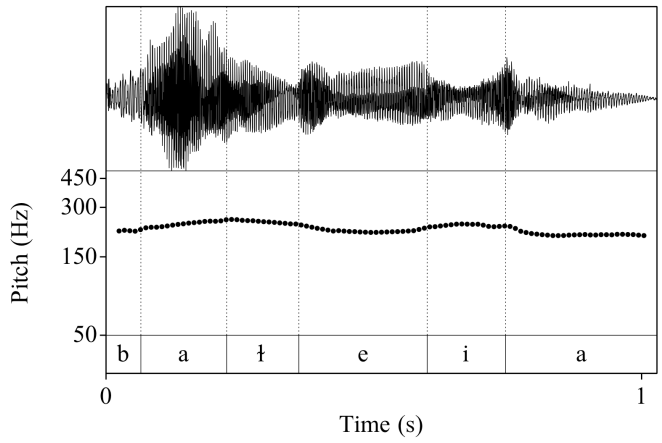

Figure 32. Mother's pitch pattern of *Baleia.*

In this section we have seen that mothers may produce affirmation to display alignment and affiliation to the child's prior turn. In terms of phonetic

characteristics, the affirmations presented in this section have minor articulatory differences and their pitch contours relatively match that of the child's production.

Affirmations differ from mothers' repetitions to initiate repair on the children's articulation and lexical choice, and from requests for confirmation, given the fact that affirmative repetitions are used to acknowledge the children's correct response to a test question. Additionally, mothers utter a turn containing small differences in articulation and relatively match their intonation contour (pitch pattern) of their affirmation to their children's correct response. The same does not happen with the repetitions to initiate repair and requests for confirmation. These results are similar to Tarplee' s (1993; 1996), Well's (2010) and Wells & Stackhouse (2016) findings for English children. Section 5.4. discusses the importance of deviant cases in supporting the argument that the sequential characteristics, the phonetic ones, and turn position play an important role in helping the speakers to distinguish one repetition from the other.

5.4. Conclusion

In this chapter we have seen that mothers' repetitions of their children's prior turn can display: affirmation of the child's correct answer in third-position, and a request for confirmation.

In terms of articulation, both varieties (requests for confirmation and affirmations) are produced containing minimal articulatory differences when compared to the children's prior turn (see sections 5.1 and 5.2), thus agreeing with the results of Tarplee (1993, 1996, 2010), Wells (2010) and Wells & Stackhouse (2016) for English speaking children.

In affirmations, the mother's repetitions match the pitch pattern of the child's prior turn to acknowledge the child's correct answer to a test question. The third position, just like in interactions between teachers and their pupils, is recurrently used to evaluate the correctness of the child's prior turn (Filipi 2009; Lee 2007; Macbeth 2004; Schegloff et al. 1977). The mother's opening question in this three-part-sequence is marked as a test question, which casts the child's response as a linguistic display that needs to be evaluated by the mother.

Another type of mothers' repetition that occurs in third position, found in this chapter, is requests for confirmation. At first sight this kind of request may seem similar to third-turn affirmations. However, the main difference between third-turn affirmations and requests for confirmation is that the former is used to acknowledge the child's correct response to a test question while the latter is a repair initiation used to confirm the child's prior turn.

Although requests for confirmation occur in the same sequential environment as affirmations, they are produced and treated differently. As already suggested in the literature (cf. Curl et al. 2006; Schegloff 1987; Tarplee 1996; Tarplee 2010; Walker 2014a; Walker 2014b; Walker & Benjamin 2017) this distinction is key to understanding the complexity of repetitions, since it is possible, but unlikely, that every function will have a distinct form.

This chapter has demonstrated that mothers may also use requests for confirmation to attain and maintain intersubjectivity. These requests can display aspects of the speakers' understanding of prior talk (Schegloff et al. 1977; Schegloff 1992; 2000; Wong 2000). As mentioned in chapter 4 (see section 4.4.), the mothers' repetition can be used as a "defence of intersubjectivity" in which the action projected by the mother's request has the same meaning for both participants.

This defence of intersubjectivity is sequential and interactional, coordinated by the mothers and children in order to achieve a joint understanding of what is going on and how the children's prior turn might have been incipiently misunderstood (Schegloff 1992). A successful negotiation of the action done by mothers' repetitions leads to a successful interaction in which mother and child take a break from their talk to solve problems of understanding and then continue their talk in due course.

The literature on repair in the interactions of young children (c.f. Filipi 2001; 2009; Forrester 2008, 2015; Tarplee 1993; Tarplee 1996; Wootton 1994) point to its importance in the acquisition of interactional and linguistic skills. These studies have generated a clear picture of the parents' repair practices and how children understand and engage in self and other-initiated repairs. In particular, these works point to the monitoring skills that are necessary for

children to acquire in order to maintain and attain intersubjectivity. These skills include the children's ability to monitor their own actions and turns, as well as stances of their caretakers, and the ability to display their understanding of sequence structure. In this study, similar to mothers' repetitions to initiate repair on the children's articulation, repair initiations used to request confirmation successfully manage to attain a satisfactory repair proper from the children. However the same does not happen with repetitions to initiate repair on the children's lexical choice (see 4.3.).

Affirmations are not used to deal with problems of understanding. Instead, they are used to acknowledge the children's correct response which, in itself, already displays an attained intersubjectivity between the speakers (mothers and their children).

In terms of phonetic characteristics, as previously mentioned, the differences in articulation between the children's prior turn and the mothers' repetitions are minimised. In addition, the turn containing the repetition has a Rise-Fall (RF) intonation contour. In this case, the mother does not match the pitch pattern of her repetition with the pitch pattern of the child's prior turn.

In this chapter both speakers (mothers and children) are able to distinguish the phonetic and sequential patterns of each form of the mother's repetitions. This ability enables mothers and children to establish a mutual understanding of how each form of repetition is used to display a different action (practice).

The following chapter will discuss further the similarities and differences between affirmations and request for confirmation by comparing them to two other repair initiation practices: mothers' repetition to initiate repair on the children's articulation, and mothers' repetition to initiate repair on the children's lexical choice.

6. Discussion and Conclusion

This chapter summarises the analysis and discusses the importance for future research in CA, language development and acquisition, and phonetics. The findings of this thesis:

- Provide a detailed and comprehensive phonetic and interactional description of the differences between the mothers' repetitions in other-initiated repair sequences, affirmations, and requests for confirmation.
- Highlight the problems of basing the analysis on experimental or non-experimental studies that do not consider the benefits of the participant's conduct, orientation and treatment of repetitions, and their phonetic and sequential characteristics.
- Provide additional evidence of the relationship between the interactional functions and the phonetic forms.
- Contribute to the literature that discusses the relationship between function and form in lexical repetitions.

Section 6.1. recaps the motivation for and the main findings of the study. In Section 6.2. we consider repetitions used to initiate repair, affirmation and request for confirmation. The repetitions' phonetic and sequential characteristics are used distinguish the different functions of the repetitions. In Section 6.3. the importance of these findings for research in language acquisition and development, phonetics, and Conversation Analysis are discussed, along with suggestions for future research stemming from questions herein. Section 6.4. discusses the limitations of this study, as well as exploring the ways in which the research could be extended.

6.1. Main findings

This thesis aims to build on the existent literature involving the correlation between the phonetic form of mothers' repetitions and their sequential characteristics produced in naturally occurring conversation. For this purpose, we investigated the function of mother's repetitions of their children's prior turn in Brazilian Portuguese. The data was collected from an hour of dyadic playtime interactions between the participants. In total this study yielded 200 repeats. 130 fitted repetitions the criteria for inclusion in the collection that was analysed herein (see Section 3.3.2.). The collection was analysed and based on the repetition's phonetic, turn position, and sequential characteristics. This collection is composed of 24% of repetitions to initiate repair (6 other-repetitions to initiate repair on the children's articulation and 22 other-repetitions to initiate repair on the children's lexical choice), 29 % affirmations, and 47 % requests for confirmation. Some conversations did not yield a single instance of mothers' repetition; others contained as many as 25.

Research that looked at the phonological relationship between repetitions and their first sayings in adult-child interaction suggested that mothers would repeat their children's deviant production as a correct phonological model (Snow et al. 1976; Snow 1976). The repetitions would facilitate the children's language learning (Snow 1972). The incidence of prosodic repetition, elsewhere called prosodic matching (see Couper-Kuhlen 1996; Reed 2011; Wells 2010; Wells & Stackhouse 2016) could be used to expand or close a sequence. These repetitions can already be found in interactions between three-month old children and their mothers. In this study the phonetic, turn position, and sequential characteristics of the mothers' repetitions of their children's prior turn are analysed to investigate how mothers and children negotiate the action done by their reproductions.

Research that has taken into consideration the participant's conduct, orientation and treatment of repetitions, and the repetition's phonetic characteristics, has mainly focused on interactions between adults (cf. Courper-Kuhlen, 1996; Curl, 2004; 2005; Curl et al. 2006). Few studies have focused on maternal repetitions and their phonetic and sequential characteristics (cf. Tarplee,

1996, 2010; Corrin, 2010; Wells & Stackhouse, 2016). However, these studies have mainly considered examples where the participants oriented and treated the repetitions as repair initiations, affirmations, repair solutions, or matched their pitch to that of the prior turns. An analysis based on the context of mothers' repetitions used to initiate repair sequences, to affirm, and to request confirmation, together with their phonetic and sequential characteristics, provides a way of investigating the claims on the phonetic and sequential organisations of particular activities. This approach also empowers us (analysts) to investigate how mothers and children orient to, distinguish, and negotiate these practices.

Most of the time,[9] the phonetic patterns of the repetitions correlate with a difference in sequential fittedness of the children's prior turn. Mothers may maximise the prosodic and phonetic differences between their repetition and the children's prior turn to display that the children's turn is unfitted sequentially, and sometimes phonetically. Repetitions with contrastive tones will be used to initiate repair on the children's lexical choice and to request confirmation (see Chapters 4 and 5).

The combination of phonetic and sequential analyses have led to the discovery of a relationship between the phonetic realisation and sequential position of the mothers' repetitions to initiate repair on the children's articulation and lexical choice, to affirm, and to request confirmation. The presentation of the main findings is going to take the following order: findings related to mothers' repetitions to initiate repair on the children's articulation and lexical choice are going to be presented first, followed by affirmations, and then requests for confirmation.

6.1.2. Other-repetitions to initiate repair on the children's prior turn

Chapter 4 shows that mothers can use two distinct phonetic practices to initiate repair on the children's prior turn, to either repair the children's pronunciation or

[9] But not in mothers' repetitions used to correct the children's lexical choice. In this kind of repetition there is relatively small contrastivity in articulation although the tone contrastivity is maintained.

their lexical choice.

The repetitions to correct the children's articulation are used both to initiate repair and to provide a repair solution for the children. The first syllable of the repeated word is lengthened and may be detached from the rest of the word. Moreover, the mother's repetition employs a different pitch pattern when compared to the child's turn.

The children interpret these phonetic cues as indexing a request for correction, and produce a repair solution that is articulated more similarly to the mother's repetition, and which may follow the same pitch pattern.

These results might suggest that the children's ability to pronounce the syllables of the word more similarly to the adult form is more important than being able to match the mother's pitch pattern. Yet, future studies should need to prove this trend.

Alternatively, repetitions used to initiate repair on the children's lexical choice are used to initiate repair on the children's 'wrong' label. With this kind of repetition, the children's pronunciation is very similar to the adults' form. However, the mothers still treat the children's responses as troublesome since the problem to be fixed is not of articulation, but of lexical choice. The mothers' repetitions are not lengthened but are carried out as a rise-fall contour regardless of the intonation used by the children.

Different from mother's repetition to initiate repair on the children's articulation, the repetitions to initiate repair on the children's lexical choice do not provide a repair proper (a model for the children to follow). The children from this study treat the mothers' repetitions as requests for confirmation and not as repair initiations to correct lexical choice.

In this study, the different phonetic characteristics of the mother's repetitions could be designed to help the children distinguish the different actions the repetitions project.

Our analysis only partly supports the already existent literature on repetition. Studies specific to the phonetic and prosodic features of mothers' repetitions (see 2.1.) have shown that repetitions addressed to children are under the influence of the phonetic characteristics of CDS (Fernald 1989; Fernald &

Mazzie 1991; Snow 1972; Snow et al. 1976). In our study the phonetic characteristics of CDS were found throughout the data, including repetitions to initiate repair on the children's articulation and lexical choice. The mothers' repetitions were produced with a higher pitch containing greater pitch variability. However, the mothers do not to match their pitch to that of their children.

Additionally, there seemed to be a higher contrast in articulation between the children's first saying and the mothers' repetition when the repair initiations were meant to initiate repair on the children's misarticulated utterances, rather than when they were meant to repair the children's lexical choice. Reparative repetitions to initiate repair on the children's articulation had different interactional purposes than those to initiate repair on the children's lexical choice. In other words, each of them had different functions (actions).

Finally, while reparative repetitions to initiate repair on the children's lexical choice were produced with a rise-fall pitch pattern, the repetitions to initiate repair on the children's articulation had their first syllable lengthened, which may or may not be detached from the rest of the word. The contrast in articulation between the children's first saying and the mothers' reparative repetition, as well as the children's pitch matching with the mothers' prior turn (reparative turn), conform to studies with English children (Tarplee 1993,1996; Wells 2010; Wells & Stackhouse, 2016).

Previous studies on maternal repetition regarded it as a homogenous category. That is, they did not take into consideration the different functions repetition could have within the talk. As a matter of fact, in these works the repetitions were considered to be 'the same' (e.g. Ochs Kennan, 1972, 1977).

As Curl (2002) and Walker (2014 a, b) suggested, it is clear that repetitions can serve different functions and have different forms. In Curl's and Walkers' studies the repetitions can be employed as reparative repetitions to initiate repair on the children's articulation and lexical choice. Thus, by demonstrating a phonetic difference between the mothers' repetitions, our work shows that repetitions cannot be considered 'the same' without a meticulous analysis of the sequential structure they are produced in.

One of the activities that reparative repetitions are alleged to perform is that of displaying problems of acceptability. Error correction literature extensively discusses syntactic and semantic features of adult-child talk, but neither the phonetic forms of the repetitions are taken into consideration, nor are the benefits of having an analysis based on the participants' orientation and treatment of the repetition as a problem of acceptance.

Our findings, discussed in this subsection, highlight the problems inherent in comparing everyday conversation with phonetic analyses of talk produced within traditional studies on repetitions. In such settings the interactional and phonetic characteristics of mothers' repetitions may be influenced by the unnatural interaction that occurs in a lab, in which the participants are asked to read something out loud or to repeat something they have just read. Studies that work with natural recordings show the pragmatic and prosodic characteristics of mothers and children's repetitions (cf. Balog & Snow 2007; Snow et al. 1977; Snow 1972). However, they still fail to relate the linguistic characteristics of repetitions to their interactional counterparts. Moreover, the prosodic characteristics of the repetitions are not analysed in tandem with their articulatory (phonetic) similarities and differences. In the following we discuss the findings and main features of affirmative repetitions and requests for confirmation.

6.1.1. Affirmative repetitions and requests for confirmation in mother-child interactions

In Chapter 5 we have seen that mothers' repetitions of their children's prior turn can be used to: affirm the child's correct answer in third position; and request confirmation of the child's prior turn. These forms of mothers' repetitions are uttered with minimal articulatory differences when compared to the children's prior turn.

In third-turn repetitions, the mothers' repetitions match the pitch contour of the children's prior turn to acknowledge the children's correct answer to a test question. Mothers' repetitions that occur in third position may also be used to request confirmation.

Third-turn affirmations are treated as displays of alignment and affiliation with the child's prior turn, while requests for confirmation are used to confirm the child's prior turn. In both cases the differences in articulation between the children's prior turn and the mothers' repetitions are minimised. Additionally, the turn containing the request for confirmation has a rise-fall intonation contour.

In this study mothers and children are able to distinguish between the sequential and phonetic patterns of repetitions to affirm and requests for confirmation. This ability enables the speakers to establish a mutual understanding of how each form of repetition may display a different action.

An approach that takes into consideration the phonetic and sequential characteristics of the talk is key to solving the problem of multi-functionality in lexical repetitions, as the same form may be used for different functions (see Walker 2014a for the distinction between form and practice in lexical repetitions).

This subsection has discussed and highlighted the main findings presented in Chapter 5, Section 6.2. discusses the similarities and differences between the repetitions analysed herein.

6.2. How the phonetic form distinguishes repetitions

This study describes the similarities and differences in the use of clusters of phonetic parameters in the production of mothers' repetitions. Aside from the descriptive value of our findings, this research allows us to begin to describe the form and function of these repetitions.

Previous literature has looked into the features of phonetic parameters (usually intonation, but also others) and how they are implemented and manipulated with certain meanings (cf. Pierrehumbert & Hirschberg, 1990; Laver, 1994; Ladd, 1996; Moraes & Colamarco, 2008). These studies showed that certain phonetic patterns could be attributed to specific meanings. Unfortunately, these works were regularly based on the researchers' intuition with regards to the utterances' form and function.

Walker (2014a, b) and Walker & Benjamin (2017) showed that studies following a CA framework could benefit from an analysis based on the

participants' orientation and treatment of the sequential and phonetic events before and after the repetition.

In this study, the other-repetitions to initiate repair on articulation and lexical choice have clear phonetic differences that may or may not help the children to do the preferred next action. The reparative repetitions to initiate repair on the children's lexical choice are produced with a rise-fall pitch pattern, while those to initiate repair and propose a repair proper to the children's articulation have their first syllable lengthened, which may be detached from the rest of the word.

The children from this study seem to understand their mothers' repetitions to initiate repair on their lexical choice as requests for confirmation, rather than repair initiations. This orientation and treatment may be related to the fact that rise-fall pitch contours are used for both forms of repair initiations. As a matter of fact, it might be the case that these results are influenced by the fact that children only acquire a full understanding of the actions done by requests and questions when they are above the age of four (see Forrester 2013). Hence, it might be too early for the children involved in this study to distinguish one form of question from another.

Still, it is striking that children are already able to distinguish between the different practices and phonetic differences in their mothers' repair initiations. The deviant cases (see 5.4.) show that children treat and orient to the rise-fall pitch pattern of mothers' repetitions to repair the children's articulation as requests for confirmation. This supports the children's orientation and treatment of rise-fall pitch patterns as one of the features of requests for confirmation.

Our findings also show that the stimulus the children receive from their mothers is richer than originally proposed (cf. Brown & Hanlon 1970; Hirsh-Pasek et al. 1984), as parents may correct their children's semantic and phonetic mistakes.

In terms of corrections and feedback, not only do parents constantly give feedback on their children's prior turn, but the children also give feedback on their understanding of the prior turn. As Tarplee (2010) suggested, turns at talk are intrinsically understood as dependent upon each other. Therefore the children's

success in correcting/not correcting the mother's repetition will depend on their language development, and on their ability to recognise whether the practice applied by their mother is fitting or not.

In contrast, affirmative repetitions differ both interactionally and phonetically from mothers' repetitions to initiate repair on the children's articulation and lexical choice, and from requests for confirmation. Both affirmations are produced with minimal articulatory differences and match the children's pitch contour, as well as being used as closure for the talk. Mothers use affirmations to give feedback on the children's correct response.

Based on these findings, one could speculate that children may acquire the ability to differentiate repetitions to initiate repair on the children's articulation from affirmations and requests for confirmation, earlier than the ability to distinguish mothers' repetitions to initiate repair on the children's lexical choice.

One possible explanation for this order of acquisition and understanding is that the similar pitch contour (form) of other initiated repetitions to initiate repair on the children's lexical choice, and that of requests for confirmation, may mislead the children's understanding of the actions (functions) done by the mothers. Thus, it is not that children are not able to distinguish the sequential and phonetic characteristics of the talk the repetitions are inserted in, but they misinterpret the sequential and phonetic characteristics of repetitions to initiate repair on their lexical choice and to request confirmation. In this study, both types of interaction are sequentially and phonetically similar (see Sections 4.3. and 5.2.), which may play a part in the children's misunderstanding.

This study demonstrates the indispensable role of the phonetic and sequential levels of organisation of talk in distinguishing one repetition from another. However, when the sequential and phonetic characteristics are similar, the children may display problems in distinguishing one function from the other, which might serve as further evidence that children can only discern the different functions done by rise-fall pitch pattern utterances when they are older. Yet, future studies should prove this trend.

6.3. Implications for research in language acquisition and development

In this section the problems raised by this study for both conversational analytic and phonetic research are discussed. Each subsection highlights the issues raised by our research, and suggests how they might be addressed.

6.3.1. The nature of mothers' repetitions

This study examines the changes in phonetic production that accompany sequential differences in mother-child talk, rather than focusing on the exact phonetic parameters that differ between two utterances of the same words. Previous literature has mainly focused on the prosodic characteristics of Child Direct Speech (CDS), without considering the importance of the difference in articulation between the children and mothers' turns and the sequential environment. In other words, these works failed to show how different mothers' repetitions are produced in naturally-occurring talk.

Although the majority of research has focused mainly on the prosodic characteristics of CDS and pitch matching in repetitions, our study shows that these features should be considered along with their sequential and phonetic characteristics.

Our findings showed that not all repetitions are alike. Even the collection of repetitions gathered for this study, including repetitions occurring in other-initiated repair sequences, affirmation sequences, and requests for confirmation, were found to have phonetic or sequential similarities and differences that may or may not help mothers and children to negotiate the action done by the repetitions.

This thesis highlights the problems inherent in using the term 'repetition' in mother-child interactions. The literature on child language acquisition has vastly discussed the characteristics of expansions, imitations, and repetitions. The researchers have constantly debated how similar the first saying is to its repetition. From a conversation analytics standpoint, no utterance is the same as its prior utterance, because each has different phonetic characteristics and occurs in a different place in the sequence. Curl (2002) suggested that at different locations, an utterance is subject to different pressures and possible interpretations. In this

study the mothers' repetitions may not always be articulated similarly to the children's first sayings, but mothers and children may orient to and treat them as repetitions (Walker 2009).

Similarly, the repetitions are not a phonetically perfect replica of their first sayings (Couper Kuhlen 1996; Tarplee 1996; Curl 2002, 2004, 2005; Curl et al. 2006). An interesting question raised by this study is that of how similar the mothers' utterance needs to be to count as a repetition of the children's prior turn.

6.3.2. Reparative repetitions

In this study, the repetitions to initiate repair on the children's lexical choice were the result of the children's incorrect response to a test question, while the ones to repair the children's articulation occurred whenever the children produced a turn that the mothers treated and oriented to as a problem in articulation that they could not let pass. Both repair initiations occurred on the next turn following the trouble source.

Even though the collection was not built to exclusively examine next turn repairs, affirmations, and requests for confirmation, the mothers' repetitions arose in these sequential positions.

The other-initiated repetitions to initiate repair on the children's misarticulated prior turn were only 6, while the ones to repair the children's lexical choice were 22, for a total of 28 repetitions. The difference in the distribution of the repetitions might imply that the mothers in our study are more concerned with correcting problems in language usage than in articulation. The small number of tokens does not allow us to give a robust response to the poverty of stimulus theory (Chomsky 1959), however it does allow us to show that parents give feedback on their children's utterances, be it to initiate repair on the children's trouble source or to affirm it.

Our findings are supported by the literature on interactional studies. Tarplee (2010) and Filipi (2009) suggested that every following turn is used to give feedback on its prior turn and on the way the talk is organised.

6.3.3. Requests for confirmation

In our investigation, the repetitions to request confirmation also occurred in the turn following the children's trouble source. In total there were 62 mothers' repetitions used to request confirmation. These repetitions are used to indicate that the mothers had some grasp of what the children had said in their prior turn, and that they were offering a candidate of understanding for the children to confirm or disconfirm (Atkinson & Heritage 1984; Heritage, 1984; Huang, 2012). Here, the problem was not that of being unable to hear what the children said in the prior turn, such as in clarification requests, but of understanding.

Sometimes the children produced their turns containing significant problems in articulation; other times they had minimal differences in articulation when compared to the adults' repetition, but were not fully understood by the mothers.

In other cases, the mothers' requests for confirmation may give us the impression of progressing the talk. However, at present, this is only speculation and still needs to be supported by empirical testing.

6.3.4. Affirmations

In this study, affirmations occurred in third positions. These types of affirmations are used to acknowledge the children's correct label. In total 40 affirmations were analysed.

The difference in distribution between the repetitions analysed (repetitions to initiate repair, affirm and request confirmation) might be related to the pedagogical characteristics of the mother-child talk (Macbeth 2004; Filipi 2009). However, Filipi proposes that one of the main challenges children face at a later stage of their language acquisition is to learn that affirmations are interruptive actions and, therefore, should be avoided.

The findings from our work support Filipi's (2014) and Tarplee's (2010) suggestions that affirmations may occur as locally relevant actions in mother-

child interactions. According to them, affirmations could momentarily suspend or interrupt the progression of the talk at any time to affirm the children's correct conduct or response. In Filipi's and Tarplee's studies, the affirmations are seen as dispreferred actions that break the flow of the talk to give feedback to the children (see Section 5.3.).

6.4. Improving and extending this study

This section discusses how the current study could be improved upon and extended. Naturally, a larger collection of mothers' repetitions could be gathered and analysed. This study analysed the phonetic and interactional differences and similarities between repetitions to initiate repair on the children's prior turn, to affirm, and to request confirmation; it would be interesting to look at all the other repetitions (e.g. as a result of open class repair initiator (Drew 1997)) produced by the mothers to compare their similarities and differences. A full analysis of children's repetitions could help support the claim of whether children match their mothers' pitch or not. Furthermore, it would be interesting to investigate the environment in which the pitch matching occurs.

With regards to the mothers' repetitions used to initiate repair on the children's articulation, a larger collection of repetitions could be gathered to look for more examples of articulation correction. It would be interesting to find additional examples that support the results found in this study. It would be also interesting to analyse this form of repetition longitudinally, to follow the milestones of children's acquisition of articulation.

Filipi (2014) suggested that one of the main challenges children have to face at a later stage of their language acquisition is to learn that affirmations are interruptive actions, which would make them inappropriate in the interest of achieving smooth, trouble free interactions. Future study should look at how parental affirmations shift and change as the child grows older. It would be interesting to do a longitudinal study to analyse the onset and the offset of affirmations in Brazilian Portuguese child-adult interactions.

Future studies should also compare requests for confirmation with

different kinds of other-repair initiations, since they are also used to take some time off from the interaction to deal with the problem of establishing a mutual understanding between the mothers and their children.

Moreover, future research should look at the acquisition of rise-fall pitch patterns to map the milestones of this acquisition, which could lead to the children's ability to differentiate mothers' repetitions to repair the children's lexical choice from the repetitions used to request confirmation.

6.5. Conclusion

This thesis demonstrates that systematic differences in the phonetic realisation of the mothers' repetition may co-occur with differences in the sequential relevance and turn-taking properties of the repeated utterance. Speakers may manipulate clusters of phonetic parameters and rely on them to distinguish one repetition from another, but when two repetitions containing different functions are produced containing the same pitch pattern occur, the children's understanding of the proposed action is put into jeopardy. The findings support a growing body of studies showing that attention to sequential organisation and fine phonetic detail are imperative to understanding the orderliness in everyday talk-in-interaction.

APPENDIX I: Phonetic characteristics of Brazilian Portuguese

This section overviews the phonetic and prosodic characteristics of Brazilian Portuguese (BP). It presents the main characteristics of BP and highlights the particularities of the Paulista accent (the accent from the city of São Paulo), which is used by the participants recorded in this study. The main phonetic characteristics of consonats, vowels, and diphontgs in CDS is discussed in 2.1.2.

1.0. Consonats, vowels, and diphtongs

The table below includes the full set of phonemes that occur in Brazilian Portuguese. The presented set contains 33 phonemes, including 21 consonants, 7 oral vowels and 5 nasal vowels. The set also includes 12 oral diphthongs and 6 nasal ones. Allophones are also included (shaded in grey) and discussed in Section 2.0. below.

IPA	Example Word	Example Transcription
p	**p**arto	/ˈ**p**aɾtu/
b	**b**ola	/ˈ**b**ɔla/
t	**t**odo	/ˈ**t**odu/
d	**d**oce	/ˈ**d**osi/
tʃ	**t**io	/ˈ**tʃ**iw/
dʒ	**d**ia	/ˈ**dʒ**ia/
k	**c**aso	/ˈ**k**azu/
g	**g**ato	/ˈ**g**atu/
f	**f**ala	/ˈ**f**ala/
v	**v**ala	/ˈ**v**ala/
ʃ	**ch**á	/ˈ**ʃ**a/
ʒ	**j**á	/ˈ**ʒ**a/

IPA	Example Word	Example Transcription
S	**s**ol	/ˈ**s**ɔw/
Z	**z**ebra	/ˈ**z**ebɾa/
M	**m**ata	/ˈ**m**ata/
N	**n**ata	/ˈ**n**ata/
ɲ	vi**nh**o	/ˈvĩ **ɲ**u/
L	cal**l**ar	/kɐˈ**l**ɐɾ/
ʎ	cal**lh**ar	/kɐˈʎɐɾ/
ɾ	car**r**o	/ˈkaɾu/
H	**R**io	/ˈ**h** iw/
R	car**r**o	/ˈka**R**u/
J	press**i**onado	/ˌpɾes**j**oˈnadu/
W	ág**u**a	/ˈag**w**a/
A	v**a**la	/ˈv**a**lɐ/
ɐ	**a**dorad**a**	/ˌ**ɐ**ˈdorad**ɐ**/
E	s**e**co	/ˈs**e**ku/
ɛ	v**e**la	/ˈv**ɛ**lɐ/
I	Deni**s**e	/deˈni**z**i/
O	b**o**lo	/ˈb**o**lu/
ɔ	b**o**la	/ˈb**ɔ**lɐ/
U	t**u**d**o**	/ˈt**u**d**u**/
ɐ̃	c**am**pestre	/k**ɐ̃**ˈpɛstɾi/
ẽ	d**en**te	/ˈdẽtʃi/
ĩ	br**in**ca	/ˈbɾ**ĩ**kɐ/
õ	c**on**to	/ˈk**õ**tu/
ũ	**um**bigo	/**ũ**ˈbigu/
aɪ̯	p**ai**	/ˈp**aɪ̯**/

IPA	Example Word	Example Transcription
eɪ̯	f**ei**to	/ˈf**eɪ̯**to/
ɛɪ̯	pap**éi**s	/pɐˈp**ɛɪ̯**s/
oɪ̯	b**oi**	/ˈb**oɪ̯**/
ɔɪ̯	paran**ói**ca	/ˌpɐɾɐˈn**ɔɪ̯**kɐ/
uɪ̯	f**ui**	/ˈf**uɪ̯**/
aʊ̯	p**au**	/ˈp**aʊ̯**/
eʊ̯	d**eu**	/ˈd**eʊ̯**/
ɛʊ̯	m**el**	/ˈm**ɛʊ̯**/
iʊ̯	abr**iu**	/aˈbɾ**iʊ̯**/
oʊ̯	**ou**tro	/ˈ**oʊ̯**tɾu/
ɔʊ̯	esc**ol**ta	/isˈk**ɔʊ̯**ta/
ãɪ̯	m**ãe**	/ˈm**ãɪ̯**/
ẽɪ̯	t**em**	/ˈtẽɪ̯/
õɪ̯	lim**õe**s	/l iˈm**õɪ̯**s/
ũɪ̯	m**ui**to	/ˈm**ũɪ̯**tu/
ãʊ̯	m**ão**	/ˈm**ãʊ̯**/
õʊ̯	b**om**	/ˈb**õʊ̯**/

Table 1: consonants, vowels, and diphtongs in Brazilian Portuguese

In BP vowels are characterised by the following phonological processes:

- Vowel /a/ is always reduced to [ɐ] when it appears after a stressed syllable (e.g. laranja, /laˈɾɐ̃ʒɐ/). Nasal realisations of /a/ and /aɪ̯/, whether in stressed or unstressed syllables, reflect this reduced pronunciation, resulting in [ɐ̃] and [ɐ̃i] respectively (e.g. *fantasma* /fɐ̃ˈtazmɐ/; *banho* /ˈbɐ̃iju/).
- Word-final mid vowels are systematically raised: /o/ → [u], /e/ -> [i]
    - *parto* /ˈpaɾtu/

- *come* /ˈkomi/

- The descending glides /ou/, /ai/, and /ei/ very often undergo a process of monophthongization. This is a tendency of spoken Portuguese that is found both in EP and BP; actual diphthongs are pronounced only in isolated or very careful speech (Braga et al. 2007), for example while dictating. While the /ou/ diphthong is systematically reduced to /o/ (e.g. mouro /ˈmoɾu/, poupa /ˈpopa/), the /ai/ diphthong is reduced only when preceding the sound /ʃ/ (e.g. caixa /ˈkaʃɐ/, baixo /ˈbaʃu/). Similarly, the /ei̯/ diphtohng is reduced when preceding /ʃ/ (peixe /ˈpeʃi/), but also before /ʒ/ (queijo /ˈkeʒu/), /ɾ/ (primeiro /pɾiˈmeru), /m/ (queimar /keˈmaɾ/), whereas it is maintained before /t/ (e.g. feito /ˈfeitu/, leitão /leiˈtɐ̃w/) (Rocha Leão 2013).
- The epenthetic vowel [i] or [I] is inserted in illegal or very difficult to pronounce consonant clusters (Barbosa & Albano 2004), in words such as:
  - *psicología* /pisikoˈlogia/
  - *pneumático* /pineu̯ˈmatʃiku/
  - *ritmo* /ˈhitʃimu/
  - *submarino* /subimaˈɾinu/
  - *advogato* /adʒivoˈgadu/

  or at the end of words, if the word ends with a consonant that is not /m/, /n/, /r/, /l/ or /s/, usually acronyms, onomatopoeias, or foreign words e.g.:
  - *SESC* /ˈsɛski/
  - *Big Mac* /ˈbigiˈmɛki/
  - *sob* /ˈsɔbi/
- When the stress falls on the last syllable of a word (or in monosyllables), diphthongisation of vowels /a/, /e/, and /o/ occurs prior to a final /s/ or /ʃ/ (Barbosa & Albano 2004): /a/ → [ai], /o/ → [oi], /u/ → [ui]
  - *paz* 'peace' /ˈpas/ → [ˈpais]

- *arroz* 'rice' /aˈhos/ → [aˈhois]
- *cruz* 'cross' /ˈkrus/ → [ˈkruis]

However, this phonological process is neutralised in the São Paulo accent if the word ending with /s/ is derived from a singular form ending with a vowel:

- *pás* 'shovels' (plural form of *pá*) /ˈpas/ → [ˈp a s]
- *avôs* 'grandparents' (plural form of *avô*) /aˈvos/ → [aˈvos]
- *crus* 'raw' (plural form of *cru*) /ˈkrus/ → [ˈkrus]
- *nu* 'naked' (plural of nus) /ˈnus/ → [ˈnus]

2.0. Allophones

Brazilian Portuguese has the following allophones (Azevedo 2005; Mateus & d'Andrade, 2002):

- The phonemes /t/ and /d/ are palatalised before the high front vowels /i/ and /ĩ/ and before non-stressed /e/, resulting in the allophones [tʃ] and [dʒ] respectively:
  - *tio* 'uncle' /ˈt iw/ → [ˈtʃiw]
  - *Norte* 'North' /ˈnɔɾte/ → [ˈnɔɾtʃi]
  - *dia* 'day' /diɐ/ → [ˈdʃiɐ]
  - *verdade* 'truth' /veɾˈdade/ → [veɾˈdadʒi]
- <r> is consistently realised as [ɾ] between vowels (e.g. *caro*, /ˈkaɾu/) and in syllable-final position, when it is not followed by <r> or <s>:
  - *mar* 'sea' [ˈmaɾ]
  - *barco* 'boat' [ˈbaɾku]
  - *verde* 'green' [ˈveɾdʒi]
- The allophone [h] is also normally used word-initially, and after /n/ or /s/, (e.g. *Enrique* /ɛnˈhiki/, and *Rio* /ˈhiw/), by São Paulo city speakers.

- <s> is systematically pronounced as [z] before voiced consonants (e.g. *mesmo* 'same' [ˈmezmu]) and between vowels ([ˈkazɐ]), and as [s] in all other contexts (e.g. *gastos* 'expenses' [ˈgastus]). Note that /s/ and /z/ are also distinct phonemes in BP and are distinguished by orthography:
    - /s/ corresponds to:
        - <s> word-initially
        - <ç> or <ss> in codas
        - <c> before vowels /e/ or /i/ or their nasal counterparts
    - /z/ corresponds to:
        - <z>
        - <s> intervocalically
        - <x> in some lexemes

In general, the grapheme-to-phoneme mapping for BP is reasonably straightforward. However the grapheme <x> is ambiguous, and can be realised as /ʃ/, /z/, or /ks/.

IPA	**Example word**	**Example transcription**
ʃ	pai**x**ão	/paiˈʃãw/
Z	e**x**ato	/iˈ**z**atu/
Ks	tá**x**i	/ˈta**ks**i/

Table 2: Ambiguous grapheme <x>

3.0. Stress

Lexical stress is contrastive in all varieties of Portuguese. Unlike European Portuguese, which is described as a stress-timed language, in which lexical stress attracts higher-level prosodic prominence, there is no consensus about the status of Brazilian Portuguese, since some speakers have stress-timed rhythm and others use syllable-timed rhythm (Azevedo 2005; Cardoso 2010).

The main acoustic correlates of lexical stress in Brazilian Portuguese are duration and intensity, with f0 contributing to the prominence of the lexically stressed syllable in words that occur at the end of a prosodic grouping (Moraes, 1998). A lexically stressed syllable will have longer syllable duration, and a fall in intensity from stressed to post-stressed position (Barbosa & Albano 2004; Fernandes 1976; Massini 1991). For words in non-final positions in the prosodic phrase, intensity and duration alone are the acoustic correlates of lexical stress, although it is noted that oxytones in these positions carry no apparent acoustic stress cues (cf. ibid). Studies using synthesized nonsense words have found that the ordering of factors influencing perceptual stress in phrase-final position are, in order of decreasing importance: fundamental frequency, duration, and intensity (Moraes & Espesser 1988).

Lexical stress can occur on the final, penultimate, or antepenultimate syllables (Barbosa & Albano 2004). Minimal triplets such as /saˈbiɐ/, 's/he knew', /sabiˈa/, a Brazilian bird, and /ˈsabiɐ/ 'wise (fem)' can be found. It is also possible to find stress on the fourth syllable leftwards, as in /faˈlavɐmʊnʊs/ '(we) talked to each other', however the proclitic position for the pronoun /ˈnʊs/, 'us', is preferred.

4.0. Prosodic phrasing

In BP, prosodic phrasing includes the levels of intonational phrases (IP) and phonological phrases (PP). As in European Portuguese (Frota, 1998) and Italian (Grice et al. 2005), there is normally a nuclear accent in the final position of an IP. However the nuclear accent, and with it, the utterance focus, can be shifted to a non-final position if required by the context of communication (Moares 1998; Moraes 2007).

Short IPs are not demoted to phonological phrases, but either retain their IP status or form a compound IP-domain with an adjacent IP (especially in European Portuguese). The IP constitutes the domain for the intonation contour, and it contains one and only one nuclear sequence. By default, nuclear prominence is in the rightmost position within an IP.

5.0. Intonation

Boundary tones in BP are associated with the right edge of intonational phrases. There are only two boundary tones, low (L%) and high (H%) (Frota & Moraes 2016; Moraes 1998; 2007). L% is the most common boundary tone. A few cases of contrastive opposition between low and high boundary tones can be found (see Table 2 below).

Pitch accents are associated with stressed syllables, normally consisting of bitonal accents such as L+H* or H+L* (Moares 2007). No trailing tones are allowed in BP. Lead tones are realised on the syllable immediately preceding the stressed syllable.

The inventory from Moraes (2007) shows that besides the basic contrast between L and H tones, three other types of contrast occur:

1) The diacritics ¡ (upstep) and ! (downstep) are used to represent relatively high and low H and L tones, respectively. Thus, ¡H stands for a particularly high H* tone (in the top range of the speaker's pitch range), while ¡L stands for a particularly high L* tone (in the middle of the speaker's pitch range, rather than in the lower range).
2) The temporal alignment of starred H tones in relation to the stressed syllable, as indicated by the diacritics < and > (early and late peaks, respectively), differentiate the function/meaning of certain patterns (e.g. L+>H* L% vs L+<H*L%) (Moraes, 2007; Moraes & Colamarco, 2007).
3) From a durational point of view, there are certain intonation patterns (mainly connected with attitude or emphasis, i.e. pragmatic effects) that present higher pitch and/or a significant lengthening of the vowel of the stressed syllable (Moraes, 2007). These lengthened pitch accents are indicated by square brackets (e.g. L+[LL]* L%)

There are eleven pitch accents and corresponding nuclear contours in total (see Table 3 below). These contours describe the main intonation patterns in BP. As can be seen, there are some minimally contrastive contours.

#	Label	Contours	Sentence type/Pragmatic meaning
1	low fall	H+L* L%	statement, wh-question, command
2	high fall	¡H+L* L%	Contradiction statement, confirmation y/n question
3	medium fall	H+¡L* L%	suggestion, self-evident statement
4	rise-fall	L+<H*L%	neutral yes/no question, echo wh-question
5	early rise-fall	L+>H*L%	request, rhetorical yes/no question
6	convex fall	L+ ¡L* L%	wh-exclamation
7	lengthened fall	H+[LL]* L%	warning
8	lengthened rise	L+[HH]* H%	intensifying emphasis

9	lengthened low level	L+[LL]* L%	disbelief
10	fall-smooth rise-fall	H+[LH]* L%	irony
11	fall-delayed rise-fall	H+[LH]* L%	incredulous yes-no question

Table 3: Nuclear contours in BP intonation, taken from Moraes (2007)

In the system reported in Table 3 (from Moraes, 2007), some of the specific characteristics of the pitch trajectories described in the labels are not captured by specific diacritics. However, events like the difference between a fall-smooth rise-fall and a fall-delayed rise-fall can be immediately appreciated in visual representations of the relevant pitch contours (see Moraes 2007).

Perception studies using resynthesized stimuli (Moraes 2006, 2007) show that in most cases, the nuclear contour alone is responsible for establishing the intonational meaning of the utterance. Minor differences in the implementation of the prenuclear pitch are irrelevant, since the nuclear accent overrules it. In the prenuclear position, there are two possible pitch accents, with one phonetic variant, as shown below:

#	**Phonological labels**	**Phonetic variants**	**Sentence type/Pragmatic meaning**
1	L+H*		statements
2	L+H*	L+!H*	wh-questions
3	L+L*		statements with disbelief

Table 4: Prenuclear pitch accents in BP

6.0. Conclusion

This section presents an overview of the phonetic and prosodic characteristics of Brazilian Portuguese. It depicts the phonetic (articulatory) features of consonants, vowels, and dipthongs in BP; as well as their allophones. It also discusses prosodic characteristics such as stress, prosodic phrasing, duration and intonation. Some of these features are enhanced when mothers are talking to their children (see 2.1.2.). Prosodic characteristcs such as stress, prosodic phrasing, and intonation were discussed with the aim of providing a full picture of the phonetic and prosodic rules a child needs to acquire to be considered a fully competent member of their community.

APPENDIX II: Information sheet

THE UNIVERSITY of York

DEPARTMENT OF
LANGUAGE AND
LINGUISTIC SCIENCE
Heslington, York, YO10 5DD, UK
E-mail:ccmx500@york.ac.uk

INFORMATION SHEET

PLEASE KEEP THIS INFORMATION SHEET AND A SIGNED COPY OF THE CONSENT FORM FOR YOUR RECORDS

You are invited to take part in a research study. Before you decide whether to participate it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully. If there is anything you do not understand, or if you want more information, please ask the researcher.

Title of study: REPETITIONS IN MOTHERS AND CHILDREN CONVERSATIONS

Researcher: Carla Cristina Munhoz Xavier

1-What is the research about?

The study concerns the relationship between advances in different aspects of language development in infancy: infants' and adults' use of repetition of what the other speaker said as a way to respond to previous speech in conversations between toddlers and caregivers. I have chosen as participants in my study Brazilian Portuguese-learning infants ages 2-3 years old. I expect that the results will help understand how repetitions are used in interactions between caretakers and children in Brazilian Portuguese (BP), and the kind of feedback parents give to children.

2-Who is carrying out the research?

This study will be carried out by Carla Cristina Munhoz Xavier, a PhD student at the Language and Linguistic Department at The University of York, UK.

3-Who can participate?

Monolingual Brazilian Portuguese speakers, caregivers and their children, can participate. The selection of the participants will be based on the children's age and on a vocabulary test the children will complete (in this test the children will be asked to name pictures). This test aims to try to get a homogenous group in terms of size of vocabulary). I will recruit only children who have no speech or hearing impairment or other developmental disorders.

4-What does the study involve?

If you agree to participate, I will visit you twice, the first time to get acquainted with you and your child and the second time to video-record you playing together with your child. You will be asked to use lapel microphones and I will be present during the recordings to set the equipment. It is important to bear in mind that I will not be involved in the conversation. I will be just present in the same room.
If at any stage, during the home sessions, your child becomes distressed, the session will be halted until the child has calmed down. If necessary the session will be stopped completely.

5-Do I have to take part?

You and your child do not have to take part in the study. If you do decide to take part you will be given this information sheet to keep and will be asked to sign two copies of the consent form (one copy is for you to keep). If you decide to take part you will still be free to withdraw without giving a reason, even during the session itself. If you withdraw from the study, we will destroy your and your child's data and will not use it in any way.

6-What are the possible risks of taking part?

There are no likely risks in taking part since I will be only filming and/or recording you and your child and you will not be asked to do anything that you won't normally do while playing with your child.

7-Are there any benefits to participating?

You will have the chance to help future studies on natural interaction in Brazilian Portuguese. You will also help us to increase the knowledge of language acquisition in Brazilian Portuguese. Moreover you will hopefully enjoy playing with your child, this being a good opportunity to spend some stress-free quality time playing with you child.

8-What will happen to the data I provide?

The data you provide will be used alongside the data of other participants to analyse the use of repetitions by parents and children. Your data will be stored securely at the Department of Language and Linguistic Science of the University of York.

9-What about confidentiality?

Your identity will be kept strictly confidential. No real names will be used in any presentations, publications or in my dissertation.

10-Will I know the results?

Participants will be given only group results; no individual results will be given. And the participants will be e-mailed a copy of the final dissertation as soon as the University of York had corrected and evaluated it.

*This study has been reviewed and approved by the Departmental Ethics Committee of the Department of Language and Linguistic Science at the University of York. If you have any questions regarding this, you can contact the chair of the L&LS Ethics Committee, Traci Walker (**email:** traci.walker@york.ac.uk; **Tel:** (0)1904 323661).*

If you have further questions regarding this study, please feel free to contact:

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email: ccmx500@york.ac.uk

Supervisors: Traci Walker (traci.walker@york.ac.uk)
Tamar Keren-Portnoy (tamar.keren-portnoy@york.ac.uk

APPENDIX III: Information sheet (Portuguese Translation)

THE UNIVERSITY of York

DEPARTAMENTO DE LÍNGUA E CIÊNCIAS LINGUISTICAS
Heslington, York, YO10 5DD, UK
E-mail:ccmx500@york.ac.uk

FOLHA DE INFORMAÇÃO

POR FAVOR GUARDE UMA CÓPIA DA FOLHA DE INFORMAÇÃO E DO FORMULÁRIO DE CONSENTIMENTO INFORMADO

Você foi convidado para participar desse estudo. Antes que você decida sobre a sua participação é muito importante que você entenda a razão da realização dessa pesquisa acadêmica e como ela será realizada. Por favor leia a informação abaixo com calma e cuidadosamente. Caso você não entenda qualquer coisa que tenha sido informado nesse document, ou caso você que saber mais sobre a pesquisa, não esite e pergunte ao pesquisador.

Título do estudo: O USO DA INTONAÇÃO NAS INTERACÕES ENTRE CRIANÇAS E SEUS CUIDADORES: UM ESTUDO DO PORTUGUÊS BRASILEIRO

PESQUISADORA: Carla Cristina Munhoz Xavier

1-Do se trata este estudo?

Este estudo tem como objetivo analisar a o desenvolvimento e avanços linguísticos no desevolvimento linguístico da criança: Eu irei analisar como crianças brasileiras adquirem o Português enquanto converam e brincam com seus cuidadores. Este estudo visa analisar o feedback e a conversa entre crianças e adultos. A única coisa que você precisa fazer para participar é brincar com o seu filho. Para esta pesquisa eu escolhi como participantes crianças brasileiras que falem Português como sua primeira língua. Além disso, as crianças serão selecionadas de acordo com a idade delas. O primiero grupo a participar (grupo 1) será composto por crianças de 2 a 2,8 anos de idade. Já o segundo grupo (grupo

2) sera compost por crianças de 3 a 3.8 anos. Os resultados dessa pesquisa irá ajudar a entender como os cuidadores e a crianças conversam entre si durante atividades corriqueiras do dia-a-dia. Além ajudará em futuras pesquisas com crianças com deficit linguístico.

2-Quem irá realizar a pesquisa?

Carla Cristina Munhoz Xavier, doutoranda do Departamento de Língua e Ciências Linguísticas da Universiade de York, Reino Unido, irá realizar essa pesquisa.

3-Quem poderá participar?

Falantes do Português Brasileiro como primeira língua e seus filhos poderão participar. A seleção dos participantes será baseada na idade da criança (grupo1- crianças de 2 a 2,8 anos; grupo 2- crianças de 3 a 3,8 anos). Somente crianças que não tenham nenhum problema auditivo ou problemas na fala poderão participar dessa pesquisa.

4-O que eu deverei fazer?

Se você concordar em participar, O pesquisador irá você e seu filho duas vezes, a primeira para nos conhecermos melhor e a segunda para gravar você e seu filho conversando enquanto estiverem brincando durante o period de uma hora. Os participantes deverão usar microfones lapela e a pesquisadora estará presente durante a gravação para anotar palavras, frases, ou ações que só poderão ser entendidas se a pesquisadora estiver presente. Contudo, a pesquisado não participará da conversa ela só participará da interação como ouvinte.
Se em qualquer momento, durante as gravações, a sua criança cansar, a sessão sera interropida até que a criança se acalme. Se necessário a gravação sera interrompida completamente.

5-Eu sou obrigado a participar?

Você e seu filho não são obrigados a participar. Caso você decida participar uma folha content toda a informação da pesquida, bem como uma cópia do seu formulário de consentimento serão entregues a você e você deverá assiná-los. Se por algum motivo você decidir abandonar a pesquisa durante o seu processo todos os dados e gravações serão destruídos.

6-Existe algum risco em participar dessa pesquisa?

Não existem riscos físicos ou psicológicos decorrente dessa pesquisa uma vez que nenhum teste científico sera realizado. A uníca coisa que será pedida para ser feita é brincar com o seu filho da maneira mais natural o possível.

7-Quais são os benefícios de participar dessa pesquisa?

Você terá a change de ajudar estudos sobre aquisição de linguagem em interações do dia-a-dia. Você também ajudará a aumentar o nosso conhecimento sobre aquisição de linguaguem em Português Brasileiro. Além disso, você poderá aproveitar de um momento de relaxamento e brincadeiras entre você e seu filho.

8-O que acontecerá com os meus dados pessoais?

Toda a informação que você der ao pesquisador, bem com as gravações serão armazenadas em um servidor altamente seguro no Departamento de Língua e Ciências Linguísticas da Universidade de York, onde somente o pesuisador terá acesso.

9-E como serão tratados os meus dados e identidade?

Sua identidade e dados serão mantidos confidenciais. Nenhum nome ou dado pessoal será usado em nenhuma apresentação oral, publicação ou em minha dissertação.

10-Como eu terei acesso aos resultados?

A nenhum participante será dado o feedback da pesquisa de maneira individual. Os resultados serão sempre baseados nos dados recolhidos nos grupos 1 e 2. Ao final da pesquisa (dissertação) os participantes receberão um e-mail com um resumo dos resultados, assim que a dissertação já tenha sido aceita e avaliada pela Universidade.

*Este estudo foi revisado e aprovado pelo Comitê de Ética do Departamento de Língua e Linguística da Universidade de York. Caso você tenha alguma pergunta a respeito dessa pesquisa e sua autencidade ética, favour entrar em contato com o responsável do Comitê, Dom Watt (**email:** dominic.watt@york.ac.uk; **Tel:** (01904) 322671).*

Caso você tenha alguma pergunta ou queria saber mais sobre essa pesquisa, sinta-se a vontade para entrar em contato com a pesquisadora:

Carla Cristina Munhoz Xavier
Department of Language and Linguistic Science
University of York, Heslington, York, YO10 5DD
email: ccmx500@york.ac.uk

Supervisoras: Traci Walker (traci.walker@york.ac.uk)
Tamar Keren-Portnoy (tamar.keren-portnoy@york.ac.uk)

APPENDIX IV: Consent form

THE USE OF INTONATION IN CHILD-CARETAKER INTERACTIONS: A STUDY OF BRAZILIAN PORTUGUESE

Lead researcher: Carla Cristina Munhoz Xavier

Consent form

This form is for you to state whether or not you agree to take part in the study. Please read and answer every question. If there is anything you do not understand, or if you want more information, please ask the researcher.

Have you read and understood the information leaflet about the study?	Yes ❒ No ❒
Have you had an opportunity to ask questions about the study and have these been answered satisfactorily?	Yes ❒ No ❒
Do you understand that the information your child provides will be held in confidence by the research team, and his/her name or identifying information about s/he will not be mentioned in any publication?	Yes ❒ No ❒
Do you understand that you may withdraw from the study at any time before the end of the data collection session without giving any reason, and that in such a case all your and your child's data will be destroyed?	Yes ❒ No ❒
Do you understand that the information you provide may be kept after the duration of the current project, to be used in future research on language?	Yes ❒ No ❒
Do you agree to take part in the study?	Yes ❒ No ❒
If yes, do you agree to your play session being recorded on audio and/or video?	Yes ❒ No ❒

Do you agree to excerpts from your audio recordings to be used in presentations or in teaching by the researcher, without disclosing your real name? Yes ❒ No ❒

Do you agree to the researcher's keeping your contact details after the end of the current project, in order that s/he may contact you in the future about possible participation in other studies? Yes ❒ No ❒

(You may take part in the study without agreeing to this).

Your name (in BLOCK letters):

_____

Your signature:

_____

Researcher's name:

_____

Date: _____

APPENDIX V: Consent form (Portuguese Translation)

O USO DA INTONAÇÃO NAS INTERACÕES ENTRE CRIANÇAS E SEUS CUIDADORES: UM ESTUDO DO PORTUGUÊS BRASILEIRO

Pesquisadora: Carla Cristina Munhoz Xavier

Formulário de Consentimento Formal

Este formulário tem como objetivo formalisar o seu consentimento em participar dessa pesquisa. Por favour leia e responda todas as perguntas. Caso você não entenda alguma pergunta, ou caso você queira saber maiores informações sobre essa pesquisa não hesite em perguntar ao pesquisador. researcher.

Você leu e entendeu a informação dada escrita na folha de informação? Have you read and understood the information leaflet about the study?	Sim ❒ Não ❒
Você teve a oportunidade de exclarecer todas as suas dúvidas a respeito dessa pesquisa?	Sim ❒ Não ❒
Você está ciente que toda a informação fornecida para este estudo será mantida em sigilo pelo o time de pesquisadores da universidade, and seu nome e de seu filho não serão mencionados em nenhuma publicação?	Sim❒ Não ❒
Você está ciente que poderá abandonar a pesquisa a qualquer momento antes e depois que as gravações tenham sido feitas. E que se você assim optar seus dados serão destruidos.	Sim ❒ Não ❒
Você está ciente que toda a informação dada será mantida de maneira anônima para ser utilizado em minha dissertação e artigos oriundos dessa pesquisa.	Sim ❒ Não ❒
Você concorda em participar dessa pesquisa?	Sim ❒ Não ❒

Se sim, você aceita que eu grave você bricando com seu filho? Sim ❒ Não ❒

Você aceite que trechos anônimos da sua gravação sejam usados em apresentações ou aulas dadas pela pesquisadora, obviamente omitindo seus nomes? Sim❒ Não ❒

Você aceita que o pesquisa mantenha os seus dados e contatos depois desse estudo, par ate convidar para participar de futuro estudos na área? *(Você poderá particioar do estudo mesmo se você não concordar com essa ultima condição.).* Sim ❒ Não ❒

Seu Nome (Letras Maiúsculas):
_____

Assinatura:
_____

Nome do pesquisador: Carla Cristina Munhoz Xavier
_____

Data: _____

APPENDIX VI: Transcription conventions

Symbols

The following symbols can be copied and pasted. Alternatively, they can be found on the keyboard or accessed as follows:- choose *insert* menu: choose *symbol* to access 'symbol' window.

⌈ a large left-hand bracket links an ongoing utterance with an overlapping

⌊ utterance or non-verbal action at the point where the overlap/simultaneous non-verbal action begins

⌉ a large right-hand bracket marks where overlapping utterances/simultaneous

⌋ non-verbal actions stop overlapping

eg. 01 PR how have you been since I last saw ⌈you⌉

02 AM ⌊not ⌋

so ⌈good ⌉

⌊((*AM shakes head*))⌋

= an equals sign marks where there is no interval between adjacent utterances

e.g. 01 DG did he really say that?=

02 FB =yes

(0.6) silences are marked in seconds and tenths of seconds

i.e. (0.6) is six tenths of a second; (1.2) is one second and two tenths of a second

(.) a full stop in single brackets indicates an interval of tenth of a second or less in the stream of talk

oh: a colon indicates an extension of the sound or syllable it follows (more colons prolong the stretch)

. a full stop indicates a stopping fall in tone, *not necessarily the end of a sentence*

, a comma indicates a continuing intonation

? a question mark indicates a rising inflection, *not necessarily a question*

! an exclamation mark indicates an animated tone, *not necessarily an exclamation*

but- a single dash indicates a halting, abrupt cut off to a word or part of a word

↑↓ marked rising and falling shifts in intonation are indicated by upward and downward pointing arrows immediately *prior* to the rise or fall

stress underlining indicates emphasis

°no° degree signs indicate a passage of talk which is *quieter* than surrounding talk

TALK capital letters indicate talk delivered at a *louder volume* than surrounding talk

h,heh indcates discernable aspiration or laughter (the more hs the longer the

hah aspiration/laughter)

fu(h)n an h in single brackets marks discernable aspiration or laughter *within* a word in an utterance

°h discernable inhalation (the more hs the longer the inhalation)

£ pound sign marks smiley voice quality

>talk< greater than signs indicate sections of an utterance delivered at a *greater speed* than the surrounding talk

<talk> lesser than signs indicate sections of an utterance delivered at a *slower speed* than the surrounding talk

⌈yes text in double brackets represents a gloss or description of some non-verbal

⌊((*nods*))aspect of the talk, and is linked to the relevant section of talk with large brackets (see above). Its often done in italics to make it stand out from the talk.

You may want to use smaller font (eg font size 9) to get this description in the space available on the transcript.

(1 syllable)

(dog) single brackets containing either a word, phrase, or syllable count (if utterance is very unclear) mark where target item(s) is/are in doubt to the transcriber

/kæt/ transcribe paraphasias and jargon between slashes, using an IPA font.

(taken from *Wilkinson. & Beeke 2012)*

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