NEGATIVE EXPRESSIONS IN THE SPEECH OF ONE BRAZILIAN AND ONE FRENCH CHILD: CASE STUDIES

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■ ABSTRACT: This work is a longitudinal study of two children, one Brazilian and the other French. It focuses on the development of the expressions of negation in their early speech. It aims at showing that, in the beginning, gesture and vocalization are indissociable and they are provided with meaning through the other's interpretation. We call those expressions "proto-negation". The functions of the first negative particles uttered by the children are based on the socio-pragmatic classification system of negation developed by Beaupoil-Hourdel (2013). The following categories are considered: rejection/refusal; failed expectations; absence/disappearance; prohibition/command; opposition/correction; negative pleading; epistemic negation; functional negation. The results show that rejection/refusal was the first function to emerge in the speech of both children whereas absence/disappearance was rather late. The progressive complexity of the negations may be dependent on the introduction of personal pronouns in the child´s utterances, and on more syntactic and lexical complexity, independently of the target language. On the other hand, actions and vocalizations by the children contribute to the delimitation of a meaningful whole, even with a rather restricted lexicon.

■ KEYWORDS: Language Acquisition. Negation. Portuguese. French.

Introduction

This article focuses on the characteristics of expressions of negation produced by a Brazilian child and a French child from 11 to 32 months of age, in an interactional situation with their parents. The study of the development of negation is relevant due to it presenting an insightful milestone for the observation of linguistic trajectory, initially

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through gestures and vocalizations (during the first year of life) and, subsequently, through the emergence of the first verbal markers of negation (BEAUPOIL-HOURDEL; MORGENSTERN; BOUTET, 2016).

Vasconcelos (2013) and Vasconcelos and Leitão (2016) investigated the so-called *proto-opposition behaviours,* that is, actions produced by the child throughout the first year of life, such as crying and gestures, which were interpreted by adults as being opposition to wishes, desires, purposes, and commands. In their work, the characteristics of the adult and child negation displays of the Brazilian and French subjects are investigated, with a focus in the characteristics of the proto-negations. The prefix "proto" marks the precursory character of the child's displays (gesticulatory and vocal) throughout development, which are interpreted by adults as protestations, oppositions, and negations. These are produced before the first "não/non", between 6 and 19 months of age. With the first lexicalizations in the speech of the child, we verified the different negative displays[1] produced by the child (order of emergence, the relationship between different displays, intonation, and specific gestures). The attention to the period called *proto-linguistic*, which precedes the establishment of an initial lexicon, seeks to demonstrate that, even in this period, there are vocal modulations, that is, variations in pitch, duration, and intensity, which potentially integrate the construction of the opposing meanings in this initial phase of acquisition.

"Pre-language"

Since their birth (and even before, in the intrauterine life) babies are in constant contact with the language spoken around them, progressively developing the capacity to comprehend and subsequently reproduce this language (BOYSSON-BARDIES, 1996; NAME, 2011). In this process, adults and children mutually adjust themselves, even before the emergence of the first words, accomplishing communicative exchanges organized prosodically. Since very early on, the adult refers to the baby by using language with differentiated characteristics.

In the uterus, for example, the baby is able to pick up the sounds of their mother's speech, and still in the first year of life, process them, differentiating between prosodic changes or the ordering of elements. (DESCASPER, *et al.*, 1994; NAME, 2011; BOYSSON-BARDIES, 1996). The precocity of prosodic processing, returning to characteristics of the maternal language, is equally affirmed in other research results (FRIEDERICI; FRIEDRICH; CHRISTOPHE,2007; NAZZI; JUSCZYK; JOHNSON (2000), and it is presupposed that such capacity is strongly relevant to the acquisition of language in the second year of life.

From the point of view of production, while the fixation of steps restricted to chronological age is difficult to be fulfilled, the process of language development is

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[1]   As we will see further on, they are: rejection/refusal; unmet expectations; absence/disappearance; prohibition/ command; opposition/correction; negative rogative; epistemic negation; functional negation.

commonly split into two supposedly delimited key moments: the "pre-linguistic", characterized by reflexive vocalizations such as sighs, yawns, and crying and through the production of nasal and vowel-resembling sounds; and the "linguistic" period when the child would begin to produce the babbling referred to as "late", which is characterized by non-systematic emission of vocalizations and basic syllables, in instances of expansion and variable prosody, and an initial lexicon, linked to morpho-syntactically configurations recognizable as such by the speech community.

This general developmental scheme ends up postulating certain discontinuities between the "pre" and "linguistic" periods, limiting the first year of life as the preliminary step in the development of language in which the child would only improve mechanisms of perception and production of speech. Yet, research points to the continuity between the babbling and the first words produced by the child (VIHMAN, 1992; BOYSSON-BARDIES; HALLÉ; SAGART; DURAND, 1989), observing the existence of a "proto-language" already in development. These works suggest that this period has been insufficiently described. This is the period that the literature considers as proto-linguistic, that which immediately precedes the linguistic phase itself (BLOOM, 1970). This is how some researchers show how nine-month-old babies are already capable of producing rhythmic and intonational characteristics of their birth language (KONOPCZYNSKI, 1990, 1991). As of the 9 month mark, the baby already reproduces the melodic configurations that are phonetically similar to interrogative, enunciative, and exclamatory phrases of its linguistic community, hence displaying a basic intonational contrast (DODANE, 2015), however this phonetic similarity does not necessarily indicate the same systematicity of the tones that characterize the child's speech after the introduction of a primitive lexicon (SCARPA, 1988; SCARPA; FERNANDES-SVARTMAN, 2012).

Investigating specifically the emergence of negation, Dodane & Massini-Cagliari (2010) claim that prosody allows the children to position themselves in the interaction before the emergence of morphosyntactic markers of negation and that, in the moment of the emergence of these markers, it complements and supports the other linguistic levels that are still insufficiently developed. Dodane and Martel (2009) had already stated that in productions of two French younger French children - 10 to 12 months, a decrease in the syllabic duration and in the F^0 average can be observed, concluding that the child can regulate its productions since a very young age. These productions become shorter and more structured, reaching a better interface level between the prosodic and segmental levels of utterance.

The first negations produced by the child were classified according to their functions, based on a socio-pragmatic classification system, proposed by Beaupoil-Hourdel (2013), with the following categories: *Rejection/refusal*, subdivided in refusal of a person, activity, proposition, entity, interruption of an action, or continuation of an activity. *Unsatisfied expectations*, covering references to objects functioning badly or not at all, blockage of an activity, disappointment, and inability (of the child accomplishing an activity). *Absence/disappearance* - objects or people that

were previously present, habitually present, or whose presence was anticipated in a way, but are absent. *Prohibition/command* - orders and/or interjections that aim to stop or deter the child or actions with which it is engaged. *Opposition/correction* - situations of disagreement between speakers, negations used to indicate discordance or contradiction (only possible to the child when it begins to take into considerations the opinion, beliefs, and preconceptions of their speaker). *Negative Rogative* - terms with a negative connotation such as onomatopoeias and interjections such as Ew! Ugh! Jeez! *Epistemic negation* - expressions of lack of knowledge or affirmations of which there is no determined knowledge. *Functional negation* - production of a negative declaration to which a truth value can be traced, negation dependent in the interaction with a speaker, can occur as an answer to propositions, to yes/no questions, or declarations.

Through these categories we seek to, in this essay, discuss each negation function produced by the children, comparing its emergence in the speech of the Brazilian and French child, observing which negative markers and gestures are used in the construction of each function, as there are specificities in the development of these functions in both languages. On the topic of the child's productions, we initially sought to analyze characteristics of the first productions interpreted as oppositions, protests, and subsequently, as structured linguistic negations, in the period that precedes the first productions of the word "no" phonetically accomplished as such (the first negative particle produced by the child). Therefore, we are grounded in the hypothesis that, while there are no structural continuities between the earlier child's productions and their previous linguistic constructions, there is meaningful and functional anteriority between the first productions interpreted as negations and the negations which will be subsequently grammatically structured.

Vasconcelos (2017) observed how the same children observed here, after around their second year of life, make use of prosodic elements instead of only syntactic and morphological ones in the construction of negative utterances. The analysis of the children's constructions in a period for which there is evidence of more elaborate syntactic constructions, with utterances that are slightly longer, shows the mastery of complex aspects of their language. They produce, for example, intonational prominence of displaced elements and distinguish interlocked elements through distinct prosodic curves coupled with specific gestures (open hand, pointing, and others). Our objective is to analyze the resources used by children to express negation that precedes the use of morphological and syntactic markers of negation in their birth language.

Methods and Data

This study is about the longitudinal monitoring of a monolingual Brazilian child (Portuguese speaker), recorded in naturalistic situations of interactions with their family, lasting between 30 minutes to an hour, from 04 weeks to 2 years and 8 months

old. The analyses will focus on the period between 11 and 32 months, though general characteristics of the negative productions between 6 and 11 months are cited. The observed child, V., is an only child of a middle-class family from the city of Maceió-AL; aside from the target child, the participants in the study include adults that interacted with it during the observations.

Then, data of M., a monolingual French child (female) of a middle-class family from Paris-FR, were also analyzed. The data from M. were recorded monthly between 11 and 32 months of the child's life[2]. Each registry is one hour in duration and also covers daily naturalistic situations.

Distinct aspects in the two cases such as the difference in gender and culture between the children, as well as the start date for the data registration (6 months for V. and 11 for M.) were considered; however, the analyses are not developed with the objective to directly compare the rhythm or speed of development of the two children, instead each developmental pathway is analyzed individually, especially taking into consideration the particularities of the two languages of acquisition- Portuguese and French. Comparative analysis was done longitudinally, that is, contrasting initial sections of video with the posterior sections of the same child.

In total, 43 videos were analyzed from which episodes of protonegation and negation were identified. It is noted that the first the child's productions are not considered negations as such, but it is only through adult interpretation that such productions are meaningful, structured and raised to the linguistic level, being, therefore, through them that the episodes of negation are identified.

However, the difficulty in extracting cutouts from the data remains, due to the indeterminacy of the first the child's productions; functional indeterminacy (different forms are used apparently with the same function); phonetic indeterminacy (large variation in the signal produced by the child); and indeterminacy of meaning (the same meaning can be attributed to a few different signals) (SCARPA-GEBARA, 1984). Additionally, variations in the adult's interpretations can also be observed. The adults, dealing with the undetermined range of the child's signals, engage themselves in attempts to transform these signals into signs, integrating them into the exchange of dialogues with the children. However, these attempts at initial linguistic insertion are not always organized in an explicit or consistent manner, but the interpretation of the adult can be translated into gestures and reactions that may be ambiguous and undefined. Even so, it is in the adult speech that the undetermined signals of the child find meaning, which is the reason why the situations in which the adult interprets the child's productions as negations are selected here.

All the data analyzed here were transcribed through the CLAN program, which permits the alignment between each transcribed utterance and its occurrence in video and/or audio, allowing for the visualization of the relationship between the linguistic

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2   The data belong to the Group COLAJE, coordinated by Dra. Aliyah Morgenstein and are available on the program CHILDES (MORGENSTEIN; PARISSE, 2012).

and extralinguistic elements. M's data have already been transcribed on the CHILDES platform in French. The data of V. were transcribed in the same way on the CLAN program through the CHILDES system- "Child language data exchange system", that standardizes rules of transcription of child language, facilitating its sharing and analysis in different languages. Each transcription contains lines that correspond to the orthographic transcription of the productions of the different speakers (*CHI for "child"; *MOT for "mother"; yyy = unintelligible sequence) and lines that refer to the other situations involved in communication (%act for the description of actions done by the adult or child; %sit for the description of the situation of the interaction). Subsequently, all the transcriptions were converted from the CLAN format to the PHON format. The PHON program (ROSE; WAUQUIER-GRAVELINES, 2007) has the objective of allowing the analysis of phonological data, facilitating systematic comparisons between the target production and the effectively produced speech from the segmental and prosodic point of view of the child, in addition to exporting audio segments to the PRAAT program for acoustic analysis.

The vocalizations were considered, as well as the child's body movements and gestures explicitly interpreted by the adults and negations. The denotation of actions, the direction of the gaze facial expressions and gestures during each opposition were done through the PHON program. The context of each production was equally described.

Initially, protestations, oppositions, and negations were described, as they were interpreted by the parents, produced by the children in the period that precedes the emergence of the first linguistically structured negations (around 16 months of age). Then, the first negations produced by the children were classified in functions, as they are described by Beaupoil-Hourdel (2013), observing if the different negative functions produced by the children display a specific order of emergence during acquisition, as well as if it is possible to relate certain negative functions to the use of intonations and/or specific gestures.

Results

Earliest children productions interpreted as negations

Approached here is V.'s period of development that covers the moments before her first structured linguistic negations. We analyzed the child's early productions that are interpreted as manifestations of discomfort, protests, oppositions, and denials made by the adults, such as crying, facial expressions, gestures, and vocalizations. The productions, while possessing undifferentiated an non-arbitrary character, being utilized in a series of indistinct situations and contexts that were not structured by the child, are interpreted by adults as expressions of the child's "wills" and "intentions" since very early, constituting, therefore, non-verbal predecessors of negative verbal constructions

in development. The prefix *proto* marks, therefore, the precursory character (functional and not structured) of these actions, interpreted and signified by adults as *negations*. This way, all of the child's productions qualified here as *negations* read as *protonegations*, unless some contrary consideration has been made.

In summary, what is said about the negations produced after six months of age, is observed in 15 episodes in which the infant's babbling was interpreted by the parents in the following manner:

- 5 productions interpreted as *inability* (situations in which V. tries to reach objects and can't), and
- 10 productions interpreted as *unmet expectations* through impeding an activity (8 situations in which the mother puts away an object with which V. played with and 2 in which her mother stops V. from placing an object in her mouth, situations in which the child reacts by moving and babbling).

Those productions are characterized by vowel repetition, notably central and anterior, that is many times confused by a child's cry. In such situations, the child's productions are similar to vowel repetition; they are accompanied by a crying expression, bodily tension and agitation, and many times lunging their body backwards. Those elements give evidence to the unstable character of these productions that do not seem to possess yet the distinct phonetic traces for the child (even though we can distinguish vowel-like sounds in their productions). Adding to this, it is possible to observe the emergence of the first multisyllabic productions, repeated in the context of babbling, though these seem to present the same undifferentiated character, without exhibiting the distinctive, phonological value of the adult.

Voice and gesture are practically inseparable in these emissions in their significant effect; both include multimodal elements that accompany the child's productions with the presence of corporeal tension, movement of the body as well as superior members and focusing on the child's gaze in the objects present in their surroundings, without focusing their gaze on the mother or father, adults with which they interact, even when they are directly in front of them.

The following illustrations are taken from videos made during this period and illustrate the elements described above. In the following episode (Episode 04), V. tries to reach a toy that his mother purposely placed outside of his field of reach, with the intention of making him crawl to reach it. Since V. seems not to be successful in obtaining the object, he extends his arms, elevating his body and neck, looking at the object and vocalizing. These actions are interpreted by his mother as protestations.

Episode 04 – V. tries to reach toys (16-06-12 / 6 months)

1. *CHI: 0.

2. %act: CHI looks at the toy and stretches his arm while leaning his body in its direction

3. *MOT: where is it son?[3]

4. *MOT: go![4]

5. *CHI: 0.

6. %act: CHI looks at the toy while stretching out their arm and hitting the ground

7. *MOT: jeez![5]

8. *CHI: yyy .

9. %act: CHI looks in the direction of another toy, moves their body in the direction of the toy and vocalizes

10. %sit: the toy CHI looks at has a drawing of a lion.

11. *MOT: where's the lion?[6]

12. *MOT: how does the lion go?[7]

13. %act: MOT imitates the roar of a lion

14. *CHI: yyy .

15. %act: CHI stretches his body and touches a toy, moving it further away

16. *MOT: yeah![8]

17. *MOT: say I don't like this.[9]

Figure 1 – V. tries to reach toys (16-06-12 / 6 months)[10]

Source: Authors' elaboration.

V's mother interprets that the child is displeased with the situation (line 17), incentivizing him to try to reach the toy. It is noted the way how V's mother initiates

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her statement with the verb *"diga"* (=say) (line 17). In this way, she proposes to the child an alternate linguistic channel (a full utterance) to express negation, through the staging of a small dialogue between the mother (*diga*) and the child (*eu não tô(estou) gostando não disso)* (= I don't like this), in which the point of view of both alternate in their own speech, attributing to the child a negative speech (CAVALCANTE, 1999). In this manner, undifferentiated infantile actions (vocalizations that repeat themselves in a more or less regular way in different situations) are interpreted and reinterpreted in a constant manner by the mother. This way, the functional, phonetic and semantic indeterminations of the child's productions, ally themselves to variations in the interpretations done by the adults. These, dealing with the undetermined aspects of the child's signals, engage themselves in attempts to transform these signals in linguistic signs.

From months 7 to 9, one observes three situations in which V. begins to make use of the differentiated voice quality (creaking) in productions interpreted by his parents as negations. Around the 7th month of life, V's productions seem to become more complex, as his vocalizations start to present new characteristics (alterations in the voice quality) that start to differ from crying. They are accompanied by the adult interpretation, who attribute negative intent to this type of production by the child. In addition, his gestural production is also modified, as he begins to act in a more particularized way and adapts to each situation. In this episode, for example, when V's father tries to take the piece of bread from his hands, V. yanks the bread with his two hands removing it from his mouth and moving it further away from the father, in a reaction that displays direction and intention directly opposed to that of the father.

Figure 2 – V. vocalizes and holds the bread[11]
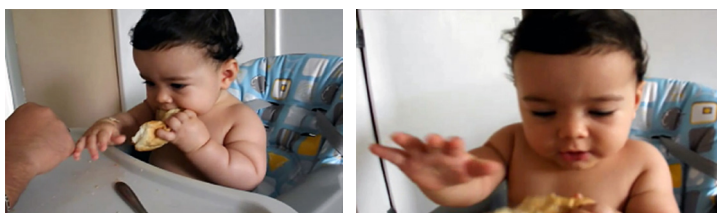
Source: Authors' Elaboration.

In such situations, the child reacts in an integrated way, synchronizing vocal production (creaking voice), action (distancing the object while simultaneously distancing the adult's hand) and the direction of the gaze (alternating his look between the object and the adult), in a complex production interpreted as negation.

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[11]   In the first image (from the left to the right) V. vocalizes and holds the bread with the left hand, at the same time he tries to distance the father's hand with his right hand. Similarly, in the second image, V. uses one of his hands to hold the bread and with the other one distances the mother's hand.

In relation to M.'s data, since her records began later, compared to those of V., only two videos cover this period, one done at 10 and the other at 11 months of age.

Episode 10 – M. tries to climb the stairs (20-02-06/ 10 months)

1. *CHI: 0.
2. %act: CHI crawls in the direction of the stairs.
3. *CHI: dada
4. %act: CHI crawls in the direction of the stairs.
5. %obs: MOT talks to the observer about one of the child's toys.
6. *CHI: 0.
7. %act: CHI stops with one hand in the step of the stairs, leaning on it and looks at the Observer
8. *CHI: da # baba dada.
9. %act: CHI looks forward again, begins climbing the stairs
10. *MOT: Madeleine Madeleine
11. *OBS: climb the stairs[12]
12. *CHI: 0.
13. %act: stops climbing the stairs, looks at her mother.
14. *MOT: no[13]
15. %act: MOT makes a gesture of negation with her head
16. *CHI: 0.
17. %act: Looks forward, begins climbing the stairs
18. *MOT: there, we come down[14]
19. *OBS: It works like a toboggan at the same time, it's good[15]
20. CHI: 0.
21. %act: continues climbing the stairs, climbs the first step, but stops and turns back around to the mother
22. *MOT: [=! laughter] She spends all her time climbing and going back down[16]
23. %act: looking at OBS.
24. *MOT: No # we come down[17]
25. %act: makes a gesture of negations with her head
26. *CHI: 0.
27. %act: CHI climbs down the stairs.

M's mother attempts to attract the attention of the child by calling her name twice, using a rising intonation (line 10). M. then turns around and looks at the mother (line 13).

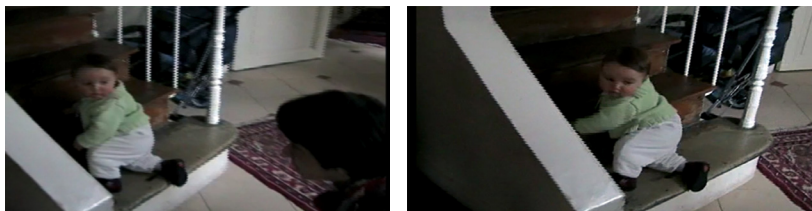[12]   Original: monter les escaliers.

[13]   Original: non

[14]   Original: non # voilà on descend

[15]   Original: ça fait toboggan au même temps #c'est bien

[16]   Original: elle passe tout le temps à monter et à descendre

[17]   Original: Non # on descend

Figure 3 – M. tries to climb the stairs (20-02-06/ 10 months)[18]

The child's mother states "*non*" (=no) with a flat intonation and makes the gesture of negations with her head (line 14), then repeats the word *"non"* (line 18). M. reacts by climbing down the stairs, as if understanding the mother's negation (line 17).

Afterwards, M. goes back to climbing the stairs, but interrupts the action, turns around and looks at her mother again, as she had done previously, even though her mother had not called her. In this moment, M. seemed to anticipate her mother's opposition already at 11 months old interrupting her action and waiting for her mother's reaction (Line 21), who effectively states *"non"* again making the gesture of negation with her head (Line 24). M. then climbs down the stairs (Line 28).

The child's mother interprets that she already understands that she should not climb the stairs, hence repeating the action of trying to go up and down the first step several times a day, according to her account. The child does indeed seem to anticipate her mother's opposition, interrupting her action and looking to her, before the negation.

On the topic of M.'s productions, it can be observed how the child does little actions that are interpreted as negations, such as, for example, pulling at a book and removing it from her mother's hands. In the following episode, the child's mother tries flipping through and showing the book, while M. tries to recover it.

Episode 11 – M. tries to recover the book that her
mother holds (20-02-06/ 11 months)

*MOT: look, this is yellow # yellow[19]
%act: opens the book in front of CHI and shows the yellow image
*CHI: 0.
%act: with her left hand she pulls the book, trying to take it from her mother, but she does not let go
*MOT: a blue pan[20]
%act: turns the book's page and shows the blue image
*CHI: 0.
%act: pulls the book again with the left hand and removes it from her mother's hand

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[18] To the right, M. turns around and looks to her mother who just called her attention. On the left, M. climbs the stairs for the second time, but stops and looks at her mother.

[19] Original: *oh ça c'est jaune # jaune*

[20] Original: *une casserole bleu*

Figure 4 – M. pulls the book away from her mother

In the same way as was described in V's similar situation, when the parents attempt to remove a piece of bread from the child, here it is also possible to interpret that M's gesture production becomes more complex, since the child acts in a particular way and her actions adapt to the situations, by pulling the object at the same time as trying to push away her mother's hand, in a reaction that displays direction and intention directly opposed to the mother's. During this period M., occupies the active role in the interaction, by making use of actions to display negation.

V and M's productions from 6 to 16 months, considered here as manifestations of discomfort, protests, and oppositions, are initially characterized by babbling and generic actions. While they do not yet possess a specialized function, not being even necessarily directed at the parents, said manifestations are, therefore, systematically interpreted as the parents as 'the child's complaints and oppositions'. We name said productions "protonegations", consisting of an initial part of the negative productions in development. Throughout the period analyzed here, those productions change due to the addition of distinct vocal quality and gestural productions that are more particularized and adapted to each situation. It is noted that still in the initial moments of the process of language acquisition, how these children begin to coordinate verbal and nonverbal actions, which makes the productions more understandable to the adult. This observation corroborates the affirmations made by Balog and Bretanti (2008), which state that children already coordinate their verbal and nonverbal productions in the temporal and directional levels in the period of one word's production.

It is possible, therefore, to affirm that even though M's data are reduced when compared to V.'s during the first year of life, through them it is possible to corroborate observations conducted with V. The analyses stress common points such as the observation that around the end of the first year of life, the two children make use of gestures that are more particularized and adapted to each situation, synchronizing vocal and gestural productions. For example, it is seen how both M. and V. start pulling objects to distance them from the adults or distancing the hand of the adult away from objects, in actions that display direction and intent directly opposed from those of the adult, sometimes accompanied by vocalizations and interpreted as negations. In this manner, they begin to occupy the more active role in the interaction, acting and not just reacting to the parents. Around this period, both families seem to also interpret that the children begin to comprehend negations and prohibitions formulated by the adults.

Negations and their Functions

In this section, the objective is to classify the negative verbal and gestural productions done by the children according to their functions, as classified by Beaupoil-Hourdel, Morgenstern & Boutet (2016). Through this classification, it can be observed how the majority of V.'s productions are classified as *rejection/refusal* (40 productions), situations in which the parents interpreted that V. rejects a proposition such as showering or lending a toy, for example. V.'s rejections were produced primarily through the word *'não'* (=no) or approximations of this word such as '*ã*' and '*nã*'. Only after 29 months of age did the functions of V.'s negative productions begin to diversify themselves, and *pposition/correction* (14), *prohibition/command* (3), *epistemic negations* (3) and *absence/disappearance* (1) are recorded. The following is a summary of V.'s productions:

Table 1 – Summary of the functional and prosodic
categorizations of V.'s negative productions

Production (quantity)	Function
Variations of sounds close to 'não'(=no) (28) Não (8) "grunt" (3) Esse não (=Not this one) (1)	Rejection/ Refusal
Não não (=no no)(5) a não (=oh no) nenê foi não (em)bora (=baby didn't go away) um não não mamãe (=a no no mommy) não não não vô parece um um um pinóquio não (=no no no am not gonna look like a a a pinocchio no) não não vou não (=no no I'm not going) não cai não cai não (=doesn't fall doesn't fall no) a mamãe a mamãe fez ti ti ti ti ti amo não (=mommy mommy didn't do love you you you you you) não não fez ti ti ti amo ta mim não (=no didn't make love you you you at me no) não fez ta mim (=didn't do at me)	Opposition/ correction
Num sei (=don't know) A num sei mamãe (=a don't know mommy) Sei mamãe (=know mommy)	Epistemic negation
Assim não (2) (=not like this (2)) É não abi a boca (=Yeah don't open the mouth)	Prohibition/ command
Sem a vaquinha (=without the little cow)	Absence/ disappearance

Source: Authors' elaboration.

Table 2 – Summary of V.'s negative productions by month starting at 11 months[21]

Month (total negations)	Negative functions (quantity)
14 months (3)	Rejection/ Refusal (3)
15 months (13)	Rejection/ Refusal (13)
16 months (18)	Rejection/ Refusal (18)
19 months (3)	Rejection/ Refusal (3)
29 months (9)	Rejection/Refusal(3), Opposition/correction(2), Absence/disappearance (1), Epistemic negation (3)
30 months (3)	Prohibition/ command (3)
31 months (10)	Opposition/correction (10)
32 months (2)	Opposition/correction (2)

Source: Authors' elaboration.

In general, V.'s negations in this period are initially used to reject and oppose parental actions and propositions; therefore, afterwards (after 29 months of age), the child starts to produce *epistemic, functional,* and *absence/disappearance* negations, producing, therefore, negative *propositions* and not only *reacting* to the parent's propositions. During this period, the child performs findings of themselves and their lack of knowledge (epistemic negation) and findings of the absence of objects in their surroundings (absence/disappearance). These child's negations are therefore observed not only through its linguistic complexifications but also through the development of the utilized negative functions, which transition from *reactions* to parental actions to negative *propositions*. Leitão and Vasconcelos (2016) arrived at similar results through the analysis of child oppositions, concluding that there are displacements in the discursive locations attributed to the child, who stops positioning themselves only as an opposer, to also occupy a proponent location in the interactions, acting towards the environment through a 'personal point of view'. During this period, the child not only reacts according to the situations created by the parents but also takes initiative to act, mobilizing aspects of the environment in often negative propositions.

Regarding the productions of the French child, a large number of negations can be observed. For this work, 462 negations of M. were considered, highlighting that this elevated number is also a consequence of the quantity and size of the French videos, that exceed the Brazilian ones.

Large part of M.'s negations are rejection/refusal (115 negations), which also is the most frequent function produced by the Brazilian child, followed by unsatisfied expectations (inability/failure) (86), *opposition/correction* (77), *functional negation*

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[21] Note that there were months when any occurrences of negation were recorded, hence they are absent from the Table. Only the explicitly negative ones are registered here.

(74), *epistemic negations* (65), *absence/disappearance* (29), *prohibition/command* (14), and *negative rogative* (2). It can be observed, in this way, a large variation in the negative functions utilized by the child. The following table presents a summary of M.'s productions:

Table 3 – Summary of the functional and prosodic
categorization of M.'s negative productions

Production (quantity)	Function
No (71) Statements with no (18) Statements without no (16) No in repetition (10)	Rejection/ Refusal
Statements without no (59) No (21) Statements with no (5) No in repetition (1)	Unmet Expectations
No (30) Statements without no (24) Statements with no (21) No in repetition (2)	Opposition/ correction
No (42) Statements without no (31) Statements with no (1)	Functional negation
Statements (56) No (9)	Epistemic negation
Statements (25) No (4)	Absence/ disappearance
Statements (11) No (3)	Prohibition/ command
Berk Euh euh	Negative Rogative

Source: Authors' elaboration.

Here follows the table summarizing M.'s negative functions produced per month:

Table 4 – Summary of M.'s negative productions per month[22]

Month (total of negations)	Negative functions (quantity)
16 months (2)	Rejection/refusal (2)
19 months (17)	Rejection/refusal (9), Absence/disappearance (4), Unmet expectations (3), Epistemic negation (1)
21 months (2)	Rejection/refusal (2)
22 months (24)	Rejection/refusal (16), Opposition/correction (3), Absence/disappearance (3), Unmet expectations (2)
23 months (16)	Rejection/refusal (14), Unmet expectations (1), Opposition/correction (1)
25 months (55)	Opposition/correction (14), Absence/disappearance (14), Rejection/refusal (12), Unmet expectations (8), Functional negation (7)
26 months (18)	Unmet expectations (6), Functional negation (3), Epistemic negation (3), Rejection/refusal (3), Opposition/correction (3)
27 months (46)	Functional negation (13), Opposition/correction (11), Epistemic negation (7), Unmet expectations (6), Rejection/refusal (5), Absence/disappearance (2), Prohibition/command (1)
28 months (56)	Functional negation (20), Epistemic negation (19), Prohibition/command (6), Rejection/refusal (5), Opposition/correction (5), Absence/disappearance (1)
29 months (82)	Unmet expectations (42), Functional negation (14), Rejection/refusal (11), Opposition/correction (6), Epistemic negation (4), Prohibition/command (2), Absence/disappearance (2), Negative rogative (1)
30 months (42)	Epistemic negation (15), Rejection/refusal (13), Unmet expectations (7), Opposition/correction (6), Functional negation (3)
31 months (71)	Opposition/correction (23), Epistemic negation (13), Functional negation (12), Unmet expectations (9), Rejection/refusal (6), Prohibition/command (5), Absence/disappearance (3)
32 months (29)	Rejection/refusal (16), Opposition/correction (5), Epistemic negation (3), Unmet expectations (2), Functional negation (2), Negative rogative (1)

Source: Authors' elaboration.

Observing the two child's productions (Brazilian and French), we can conclude that, independently of the language, a *rejection/refusal* function is the first to be expressed, as was also observed by classic studies about typology and acquisition of negation (BLOOM, 1970; PEA, 1980). In a way, this conclusion is expected when considering that functions such as *absence/disappearance*, for example, many times require complex

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[22] Note some absence in this Table. There were months when no occurrences of negation were recorded, hence they are absent from the Table. Only the explicit ones are registered here.

syntactic structures in sentences with more than one word to be expressed, while the rejection is frequently produced through simple gestures and linguistic markers such as "no". According to Pea (1980), the rejection can be observed in a nonverbal way since 8 months of age.

In the data analyzed here, the rejection is initially expressed by the French child through simple markers such as 'non'. The negation marker 'pas' arises in the expression of negation after 23 months in statements such as "*non pas avec (bro)colis*" (= not with the broccoli) when the child rejects food offered by the mother. More complex expressions such as "*je veux pas"* (= I don't want) arise at 25 months, with the utilization of the personal pronoun *je* (=I). It is noted that it is at exactly 25 months that the personal pronoun *je* emerges in M.'s productions and the use of the pronoun *moi* reaches its peak (93 productions), as related by Dodane & Massini-Cagliari (2010), contributing to the development of negation, permitting the child to position themselves in the interaction and build their point of view.

For the Brazilian child, the expression of rejection also begins with the productions that approximate to *não* such as 'na' and 'ã' and the '*não'*, which is phonetically produced at 16 months. V.'s negation expression complexifies at 29 months with the statement '*esse não*' (=not this one) when the child utilizes the demonstrative pronoun *esse* to refer to the specific object that it rejects (in this case a toy offered by the mother). The usage of the personal pronouns in V.'s registered negations is observed more belatedly, at 29 months, when the child states "*a num sei mamãe*" (= oh I don't know mommy) using the vowel 'a' as a filler that substitutes the personal pronoun 'eu'.

The function *absence/ disappearance* is only expressed once by the Brazilian child during the observed period, and it is extremely belated[23]: is relates to the expression "*sem a vaquinha*" (=without the little cow) at 29 months, when V. searches for the toy cow without finding it. At this point, the child utilizes lexico-syntactic resources in a more complex statement than those used in *rejection/refusal*.

In French, the absence is expressed through simple markers such as *"non" and* more complex expressions such as '*a plus'* in *"y a plus p(l)us poussin"* (there are no more chicks) when M. searches for toy chick at 19 months. They are still very formulaic expressions, that is, there is strong evidence of more sophisticated syntactic elaboration. Afterwards, the child utilizes expressions with the marker 'pas' (*Il y a pas - y a pas toboggan* – there is no toboggan, at only 25 months) and combinations with other lexical items '***y en** a pas*' and '***y a plus***' (there is none, there is no more). Even though she is capable of intense usage, vocally and gesticularly, connected to the rejection/ refusal function, only later does the child use lexical and morphosyntactic resources of the mother tongue to express said function.

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[23]   Differently to others subjects whose speech was analysed in researches about Brazilian Portuguese., such as De Lemos (1987) with the pair ó/ bô (= look/ gone) for appearance/ absence arising pretty early in the child's speech.

The expression of the *unmet expectations* function did not occur in the accounts in Portuguese. In French, it was initially expressed through the marker 'non', that was often used when the child could not complete an action. *Epistemic negations* arise in the Brazilian child's productions at 29 months through the expressions '*num sei*' and '*a num sei mamãe*' (=I don't know, I don't know mommy)[24].

In M.'s data, we initially observed the statement *"sais pas"* as a way of expressing the epistemic negation at 19 months of age. The absence of the personal pronoun *je* and the negation marker 'ne' in the sentence is noteworthy. However, it is emphasized that in currently spoken French, the particle *ne* is already omitted; that is, the negation in French is in the process of a linguistic change (ASHBY, 2001). M. seems to be sensitive to this change, because at 27 months she produces statements such as "*moi je sais pas chanter*" (I don't know how to sing) adding the predicate which specifies that which she affirms 'not to know'. At 28 months she produces epistemic negations about the lack of knowledge of third parties, in this case of her younger brother with only a few months of age - *Comme i(l) sait pas encore parler* (as he still does not know how to talk). In this way, she creates suppositions and affirmations about third parties and not just about herself.

On the topic of the *prohibition/command* function, it arises in the Brazilian child's productions when V. repeats prohibitions stated by his uncle "*é não abi a boca*" e "*assim não*" (=don't open the mouth, not like this) at 30 months. In M.'s data, the prohibitions are largely produced using the particle 'pas'- '*pas là faut me faire au photo*' (not here can't take my photo) at 28 months when she prohibits the observer to film in the street. In Portuguese, the *opposition/correction* is largely produced through the marker 'não' (alone or repeated), as well as complex statements that seek to negate in an explicit way the element affirmed by the mother. For example, at 29 months, V. produces the negation "*nenê foi não (em)bora*" (=baby did not go away) after the mother affirms that the child's pacifier had 'gone away'. In M.'s productions, the opposition is also expressed by the marker "non". Afterwards, the child introduces the 'pas' also opposing an adult's affirmations, such as, for example, "*i(l) dort pas*" (= he is not sleeping), produced by the child at 25 months in opposition to the observer's affirmation that the teddy bear was sleeping.

Finally, the *functional negation* function was not observed in the data registered of the Brazilian child. In M.'s data, this function was largely produced through the marker 'non' in reply to the mother's yes or no questions.

In general, similarities in the development of the two child's productions can be observed, such as, for example, the progressive complexification of the negations produced through the inclusion of personal pronouns in their sentences, as well as through the introduction of variations in the negative particles used. On the topic of utilized functions, the introduction of the *rejection/refusal* as the first function produced

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[24]   Ramos (2006) two forms, one "full" (não), the other "reduced" (num) of the negative marker. The latter one is known as "weak" or "" reduced" because it does not occur in final position of sentences, but only in pre-verbal or with quantifiers such as "nobody or "nothing" in the same sentence

by the two children and the development of the negative functions used can also be observed, which pass from *reactions* to parental actions to negative *propositions* in the two cases (VASCONCELOS; LEITÃO, 2016).

Final Considerations

Through the study of development of negation in the speech of the subjects, we strived to better understand questions concerning the constitution of the period referred to as *pre-linguistic* of development, that precedes the establishment of initial lexicon, as well as to understand how the negation functions emerge and become more complex and specialized, even in the face of an extremely restricted lexicon.

In this period, multimodal elements accompany the child's productions such as, for example, presence of a certain corporeal tension, movement of the body and superior limbs and focusing of the child's gaze in the objects present in the surroundings (object with which it plays, object that it tries to reach, or object that it tries to bring to its mouth), without focusing its gaze in the adult with which it interacts even when they are directly in front of the child. The first of the child's productions that are identified as protests, at around 6 months, are characterized by babbling. Said productions are similar to vowels in repetition (/a/), followed by expressions of crying, corporeal tensions, and agitation and, though they often present unstable and unstructured character, are frequently interpreted by the adults as expressions of infantile "wishes" and "intentions".

The gestural and vocal production of the child modifies itself. The gestures become more complex, seen as the child begins to act directly towards objects that are the focus of their attention (pulling or pushing objects, for example), as well as directly over adults (for example, pushing away the hand of the mother or father in situations of rejection), in reactions that present direction and intention directly in opposition to the adult, acting, therefore, in a more specialized way adapted to the situations.

Early vocalizations begin to present new characteristics that differentiate from crying, such as the use of different tonal qualities (such as the creaking voice used by the Brazilian child) and other elements such as syllabic repetition. In the long run, it was observed how the children began to synchronize vocal production (crying, yelling, creaking voice), action (pushing objects, distancing from parents) and direction of gaze (alternating between object and adult) in productions interpreted as negations. These observations seem to corroborate the work done by Balog and Brentari (2008), showing how still in initial moments of the process of language acquisition, the children begin to coordinate verbal and non-verbal actions, making their productions more directly comprehensible. It can be concluded, in this way, how a child's actions and vocalizations aid in the creation of a significant whole and at the start of the structuring that indicates the bridge between sound and meaning.

In this way, the analyses done here touch specifically in the theme of linguistic continuity/discontinuity, as was formulated by Jakobson and discussed by Scarpa (2005).

Through the data observed here, while it is not possible to affirm the existence of structural continuity between the first child's productions and its posterior linguistic constructions, there is functions and significative anteriority between the first productions interpreted as negations, and the negations that are grammatically structured afterwards. This anteriority seems to be constructed by the adult interpretation that attributes meaning and symbolic functions to the child's productions through linguistic elements. When the mother differentiated, for example, what she characterizes as "crying"-produced in the rhythmic and lasting way, from the whimper- like crying but presenting less height and duration, with subtle elevations and discontinued rhythm. This distinction bases itself in prosodic criteria of rhythm and duration, as pointed out by Vasconcelos & Leitão (2016), Freitas (2012) and Cavalcante (1999), attributing symbolic function to crying, in that it systematizes linguistic criteria of distinction and valorization, producing meaning through it. In this way, the adult already attributes symbolic function through the linguistic criteria to the first of the child's productions. This process promotes significative impact in the child's development, leading us to question the strict separation between the *pre-/proto-linguistic* and *linguistic* periods, as well as the comprehension of extralinguistic elements as "non-linguistic", seeing as these participate in the process of insertion of the speaker, via motherly dialects, in language.

▪ *RESUMO: O trabalho é um estudo longitudinal de duas crianças, uma brasileira e uma francesa, e focaliza o desenvolvimento das expressões de negação na fala das duas. Objetiva mostrar que, no início, nas instâncias a que chamamos de "protonegações", marcadas por gesto e vocalização, são indissociáveis e assumem sentido na interpretação do outro. As funções das primeiras partículas negativas produzidas pela criança foram construídas a partir do sistema de classificação sociopragmática das negações desenvolvido por Beaupoil-Hourdel (2013). As seguintes categorias são consideradas: rejeição/recusa; expectativas insatisfeitas; ausência/desaparição; proibição/ comando; oposição/correção; rogativa negativa; negação epistêmica; negação funcional. Os resultados mostram que a rejeição/recusa é a primeira função a emergir na fala de ambas as crianças, ao passo que a ausência/desaparição é mais tardia. A complexificação progressiva das negações produzidas pelas duas crianças podem depender da inclusão de pronomes pessoais em seus enunciados, bem como da introdução de variações nas partículas negativas utilizadas. Por outro lado, ações e vocalizações infantis auxiliam na delimitação de um todo significativo, mesmo com um léxico bastante restrito.*

▪ *PALAVRAS-CHAVE: Aquisição da linguagem. Negação. Prosódia. Português. Francês.*

REFERENCES

ASHBY, W. J. Un nouveau regard sur la chute du ne en français parlé tourangeau : s'agit-il d'un changement en cours ? **Journal of French Language Studies**, Cambridge, v. 11, n. 1, p. 1-22, 2001.

BALOG, H. L.; BRENTARI, D. The relationship between early gestures and intonation. **First Language**, London, v. 28, n. 2, p. 141-163, 2008.

BEAUPOIL-HOURDEL, P. A multimodal and corpus-based approach to children's expression of refusal and rejection. **International conference of the AFLiCO Empirical Approaches to Multi-modality and to Language Variation**, Lille, p. 15-17, 2013.

BEAUPOIL-HOURDEL, P.; MORGENSTERN, A.; BOUTET, D. A Child's Multimodal Negations from 1 to 4: The Interplay Between Modalities. *In*: LEE, C. (org.). **Negation and Polarity:** Experimental Perspectives. Springer, 2016. p. 95-123.

BLOOM, L. M. **Language development**: form and function in emerging grammars. Cambridge: M.I.T., 1970.

BOYSSON-BARDIES, B. **Comment la parole vient aux enfants**. Paris: Odile Jacob, 1996.

BOYSSON-BARDIES, B.; HALLÉ, P., SAGART, L.; DURAND, C. A crosslinguistic investigation of vowel formants in babbling. **Journal of Child Language**, Cambridge, v. 16, n. 1, p. 1–17, fev. 1989.

CAVALCANTE, M. C. B. **Da voz à língua**: a prosódia materna e o deslocamento do sujeito na fala dirigida ao bebê. 1999. 239p. Tese (Doutorado em Linguística) - Instituto de Estudos da Linguagem Universidade Estadual de Campinas, Campinas, 1999.

DECASPER, A. J. *et al.* Fetal reactions to recurrent maternal speech. **Infant behavior and development**, London, v.17, n.2, p. 159-164, 1994.

DE LEMOS, C. T. G. **On Ser And Estar In Brazilian Portuguese**. Tübingen: Gunter Narr Verlag, 1987.

DODANE, C. A emergência da linguagem: da proto-língua as primeiras formas linguísticas. *In*: ENCONTRO NACIONAL SOBRE A LINGUAGEM DA CRIANÇA – SABERES EM CONTRAPONTO, 3., 2015, Porto Alegre. **Anais** [...], Porto Alegre, 2015. Conferência de abertura.

DODANE, C.; MARTEL, K. Évolution de l'inventaire de contours de Fº chez deux enfants français de 10 à 12 mois: l'importance du contexte pour décrire le stade pré-linguistique. **Enfance**, London, v. 61, n. 3, p. 305-316, 2009.

DODANE, C.; MASSINI-CAGLIARI, G. La prosodie dans l'acquisition de la négation: étude de cas d'une enfant monolingue francaise. **ALFA:** Revista de Linguística, Araraquara, v. 54, n. 2, p. 335-360, 2010.

FREITAS, S. M. da C. **A internalização do sentido do não**: resposta à oposição por parte de uma criança em interações protoargumentativas. Recife, 2012. Relatório final de Prática de Pesquisa I.

FRIEDERICI, A. D.; FRIEDRICH, M.; CHRISTOPHE, A. Brain responses in 4 month-old infants are already language specific. **Current Biology**, Cambridge, v. 17, n. 14, p. 1208-1211, 2007.

KONOPCZYNSKI, G. **Le Langage Emergent II**: Aspects Vocaux et Mélodiques. Hambourg: Buske Verlag, 1991.

KONOPCZYNSKI, G. Le **Langage Emergent**: Caractéristiques Rythmiques. Hamburg: Buske Verlag, 1990.

MORGENSTERN, A.; PARISSE, C. The Paris Corpus. **Journal of French Language Studies**, Cambridge, v. 22, n. 1, p. 7-12, 2012.

NAME, C. A aquisição da linguagem sob a ótica do processamento. *In*: CAVALCANTE, M. C. B; FARIA, E. M. B.; LEITÃO, M. (org.). **Aquisição da linguagem e processamento linguístico**: perspectivas teóricas e aplicadas. João Pessoa, Ideia: Editora Universitária, 2011. p. 173-196.

NAZZI T.; JUSCZYK, P.; JOHNSON, E. Language discrimination by English-learning 5-month-olds: Effects of rhythm and familiarity. **Journal of Memory and Language**, Maryland Heights, v. 43, n. 1, p. 1-19, 2000.

PEA, R. The Development of Negation In Early Child Language. *In:* OLSON, D.R. (org). **The Social Foundations of Language & Thought**. New York: W.W. Norton, 1980. p. 156-186.

RAMOS, J. O processo não > num na fala. *In*: RAMOS, J.; VITRAL, L. (org.). **Gramaticalização**: uma abordagem formal. Rio de Janeiro: Tempo Brasileiro, 2006. p.119- 132.

ROSE, Y.; WAUQUIER-GRAVELINES, S. French speech acquisition: The international guide to speech acquisition, In: McLEOD, S. (org.). **The international guide to speech acquisition**. Clifton Park: Thomson Delmar Learning, 2007. p. 364-384.

SCARPA, E. M. A criança e a prosódia: uma retrospectiva e novos desenvolvimentos. **Cadernos de Estudos Linguísticos**, Campinas, v. 46, n. 2, p. 19-28, 2005.

SCARPA, E. M. Desenvolvimento da intonação e a organização da fala inicial. **Cadernos de Estudos Linguísticos**, Campinas, v. 14, p. 65-84, 1988.

SCARPA, E. M.; FERNANDES-SVARTMAN, F. Entoação e léxico inicial. **Veredas**, Juiz de Fora, v. 16, n. 1, p. 38-52, 2012.

SCARPA-GEBARA, E. **The development of intonation and dialogue processes in two Brazilian children**, 1984. 273f. Thesis (Doctor of Philosophy) - University of London, London, 1984.

VASCONCELOS, A. N. de. **Emergência da negação e prosódia**: estudo de casos de uma criança brasileira e uma criança francesa. 2017. 218f. Tese (Doutorado em Linguística) - Instituto de Estudos da Linguagem, Universidade Estadual de Campinas, Campinas, 2017.

VASCONCELOS, A. N. de. **Argumentação e desenvolvimento cognitivo**: emergência e estabilização de condutas protoargumentativas. 2013. 141 f. + DVD. Dissertação (Mestrado em Psicologia cognitiva) - Centro de Filosofia e Ciências Humanas, Universidade Federal de Pernambuco, Recife, 2013.

VASCONCELOS, A. N. de; LEITÃO, S. Desenvolvimento da protoargumentação na interação adulto-bebê. **ALFA:** Revista de Linguística, Araraquara, n. 60, p. 119-146, 2016.

VIHMAN, M.M. Early syllables and the construction of phonology. *In*: FERGUSON, C. A.; MENN, L. C. (org.). **Phonological development**: Models, research, implications. York Press, Monkton, MD, 1992. Chapter 13.