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The acquisition of Italian prepositions

Relatore
Prof.ssa Emanuela Sanfelici

Laureanda
Camilla Gallina
n° matr.1202356 / LMLIN

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*A Giacomo, che mi ha fatta sorridere
quando non ne ero capace.*

“Un bambino può insegnare sempre tre cose a un adulto: a essere contento senza un motivo, a essere sempre occupato con qualche cosa e a pretendere con ogni sua forza quello che desidera”

Paulo Coelho

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Index

INTRODUCTION.....	7
CHAPTER 1	11
1.1 Prepositions are a hybrid category.....	11
1.2 The internal structure of prepositions – Cinque’s proposal.....	13
1.3 Prepositions are treated differently in different languages.....	16
1.4 The acquisition of prepositions	20
1.4.1 Prepositions in English.....	20
1.4.1.1 Prepositions in English - Littlefield’s analysis.....	20
1.4.1.2 Prepositions in English - Ursini and Akagi’s analysis	22
1.4.2 Prepositions in Greek - Alexaki, Kambanaros, Terzi’s analysis.....	27
1.5 My research work	30
CHAPTER 2	35
2.1 CHILDES.....	35
2.2 Analysis of the data	36
2.2.1 Analysis of children’s production.....	36
2.2.1.1 Elisa – Tonelli’s corpus	36
2.2.1.2 Gregorio – Tonelli’s corpus	37
2.2.1.3 Marco – Tonelli’s corpus	37
2.2.1.4 Camilla – Antelmi’s corpus	37
2.2.1.5 Diana – Calambrone’s corpus.....	38
2.2.1.6 Raffaello – Calambrone’s corpus.....	38
2.2.1.7 Rosa – Calambrone’s corpus	39
2.3 The Excel document	40
CHAPTER 3	53
3.1 A first overview	53
3.2 Analysis of the children’s productions during the first year.....	55
3.2.1 Analysis of the productions without preposition (e.g. “salo (:salgo) titetta (:bicicletta)).	56
3.2.2 Analysis of the children’s productions containing lexicalized preposition.....	57
3.3 Analysis of the children’s productions during the second year.....	61
3.3.1 Analysis of the productions without preposition (e.g. “(s)paro la mamma”).....	62
3.3.2 Analysis of the children’s productions containing lexicalized preposition.....	64
3.4 Analysis of the children’s productions during the third year	68
3.4.1 Analysis of the productions without preposition (e.g. “via qui”)	69
3.4.2 Analysis of the children’s productions containing lexicalized preposition.....	71
3.5 Intermediate summary.....	74
3.6 Analysis of the productions with combinations of prepositions	76
3.6.1 Analysis of lexical prepositions with a double structure	79

3.7 Summary.....	82
CHAPTER 4	85
4.1 Semantic-syntactic values.....	85
4.2 Analysis of the productions without prepositions	85
4.2.1 Analysis of the first year.....	86
4.2.2 Analysis of the second year.....	91
4.2.3 Analysis of the third year.....	95
4.3 Functional prepositions	96
4.3.1 Functional prepositions - Part 1	96
4.3.1.1 Functional preposition A	96
4.3.1.1.1 Analysis of the first year	96
4.3.1.1.2 Analysis of the second year.....	100
4.3.1.1.3 Analysis of the third year	104
4.3.1.2 Functional preposition CON	105
4.3.1.2.1 Analysis of the first year	105
4.3.1.2.2 Analysis of the second year.....	107
4.3.1.2.3 Analysis of the third year	109
4.3.1.3 Functional preposition DI	110
4.3.1.3.1 Analysis of the first year	110
4.3.1.3.2 Analysis of the second year.....	114
4.3.1.3.3 Analysis of the third year	118
4.3.1.4 Functional preposition IN	119
4.3.1.4.1 Analysis of the first year	119
4.3.1.4.2 Analysis of the second year.....	121
4.3.1.4.3 Analysis of the third year	123
4.3.1.5 Functional preposition PER	123
4.3.1.5.1 Analysis of the first year	124
4.3.1.5.2 Analysis of the second year.....	125
4.3.1.5.3 Analysis of the third year	128
4.3.1.6 Functional preposition SU	129
4.3.1.6.1 Analysis of the first year	129
4.3.1.6.2 Analysis of the second year.....	131
4.3.1.6.3 Analysis of the third year	133
4.3.1.7 Functional preposition DA.....	133
4.3.1.7.1 Analysis of the first year	134
4.3.1.7.2 Analysis of the second year.....	135
4.3.1.7.3 Analysis of the third year	138
4.3.1.8 Functional preposition TRA	140
4.3.2 Functional prepositions – Part 2	141
4.3.2.1 Analysis of the first year	141
4.3.2.2 Analysis of the second year	145
4.3.2.3 Analysis of the third year.....	154
4.4 Lexical prepositions.....	156
4.4.1 Lexical prepositions - Part 1	157
4.4.1.1 Lexical preposition SENZA.....	157
4.4.1.1.1 Analysis of the first year	157
4.4.1.1.2 Analysis of the second year.....	158
4.4.1.1.3 Analysis of the third year	160
4.4.1.2 Lexical preposition SOTTO.....	160
4.4.1.2.1 Analysis of the first year	161
4.4.1.2.2 Analysis of the second year.....	161

4.4.1.2.3 Analysis of the third year	162
4.4.1.3 Lexical preposition DENTRO	163
4.4.1.3.1 Analysis of the first year	163
4.4.1.3.2 Analysis of the second year.....	163
4.4.1.3.3 Analysis of the third year	165
4.4.1.4 Lexical preposition SOPRA.....	166
4.4.1.4.1 Analysis of the first year	166
4.4.1.4.2 Analysis of the second year.....	166
4.4.1.4.3 Analysis of the third year	168
4.4.1.5 Lexical preposition CONTRO	168
4.4.1.5.1 Analysis of the first year	168
4.4.1.5.2 Analysis of the second year.....	169
4.4.1.5.3 Analysis of the third year	169
4.4.2 Lexical prepositions – Part 2	170
4.4.2.1 Analysis of the first year	170
4.4.2.2 Analysis of the second year	170
4.4.2.3 Analysis of the third year.....	173
4.5 Combinations of prepositions.....	174
4.5.1 Combinations - Lexical prepositions with double structure	175
4.5.1.1 Combination – DI SOPRA DI	175
4.5.1.1.1 Analysis of the first year	175
4.5.1.1.2 Analysis of the second year.....	175
4.5.1.1.3 Analysis of the third year	176
4.5.1.2 Combination – SENZA DI	176
4.5.1.2.1 Analysis of the first year	176
4.5.1.2.2 Analysis of the second year.....	176
4.5.1.2.3 Analysis of the third year	177
4.5.1.3 Combination – SOTTO A.....	177
4.5.1.3.1 Analysis of the first year	177
4.5.1.3.2 Analysis of the second year.....	177
4.5.1.3.3 Analysis of the third year	178
4.5.1.4 Combination – DENTRO IN	178
4.5.1.4.1 Analysis of the first year	178
4.5.1.4.2 Analysis of the second year.....	178
4.5.1.4.3 Analysis of the third year	179
4.5.1.5 Combination – DENTRO A.....	179
4.5.1.5.1 Analysis of the first year	179
4.5.1.5.2 Analysis of the second year.....	179
4.5.1.5.3 Analysis of the third year	180
4.5.2 Combinations – “Blocks”	183
4.5.2.1 Combination – VICINO TRA.....	183
4.5.2.1.1 Analysis of the first year	183
4.5.2.1.2 Analysis of the second year.....	183
4.5.2.1.3 Analysis of the third year	184
4.5.2.2 Combination – VICINO A.....	184
4.5.2.2.1 Analysis of the first year	184
4.5.2.2.2 Analysis of the second year.....	184
4.5.2.2.3 Analysis of the third year	185
4.5.2.3 Combination – IN FONDO A.....	185
4.5.2.3.1 Analysis of the first year	185
4.5.2.3.2 Analysis of the second year.....	186
4.5.2.3.3 Analysis of the third year	186
4.5.2.4 Combination – ATTORNO A.....	186
4.5.2.4.1 Analysis of the first year	186

4.5.2.4.2 Analysis of the second year.....	187
4.5.2.4.3 Analysis of the third year	187
4.5.2.5 Combination – ACCANTO A	187
4.5.2.5.1 Analysis of the first year	187
4.5.2.5.2 Analysis of the second year.....	188
4.5.2.5.3 Analysis of the third year	188
4.5.2.6 Combination – FINO A	188
4.5.2.6.1 Analysis of the first year	189
4.5.2.6.2 Analysis of the second year.....	189
4.5.2.6.3 Analysis of the third year	189
4.6 The order of appearance of semantic-syntactic values.....	190
4.6.1 Semantic-syntactic values connected with functional prepositions	190
4.6.1.1 Functional preposition A	190
4.6.1.2 Functional preposition CON	192
4.6.1.3 Functional preposition DI	193
4.6.1.4 Functional preposition IN	194
4.6.1.5 Functional preposition PER	195
4.6.1.6 Functional preposition SU	196
4.6.1.7 Functional preposition DA.....	196
4.6.1.8 Functional preposition TRA	197
4.6.2 Semantic-syntactic values connected with lexical prepositions.....	198
4.6.2.1 Lexical preposition SENZA.....	198
4.6.2.2 Lexical preposition SOTTO.....	199
4.6.2.3 Lexical preposition DENTRO	199
4.6.2.4 Lexical preposition SOPRA.....	200
4.6.2.5 Lexical preposition CONTROLLO	200
4.7 Detailed analysis of data collected.....	201
4.7.1 Spatial semantic-syntactic values	201
4.7.1.1 Analysis of the first year	201
4.7.1.2 Analysis of the second year	205
4.7.1.3 Analysis of the third year.....	211
4.7.1.4 Intermediate summary	211
4.7.1.5 Values connected with different types of prepositions	214
4.7.1.5.1 Spatial semantic-syntactic values connected with functional prepositions	214
4.7.1.5.2 Spatial semantic-syntactic values connected with lexical prepositions.....	216
4.7.1.5.3 Spatial semantic-syntactic values connected with combinations of prepositions – Prepositions with double structure	217
4.7.1.5.4 Spatial semantic-syntactic values connected with combinations of prepositions - “Blocks”.....	217
4.7.2 Semantic-syntactic values connected with CON and SENZA.....	218
4.7.2.1 Analysis of the first year	218
4.7.2.1.1 Functional preposition CON	218
4.7.2.1.2 Lexical preposition SENZA	219
4.7.2.2 Analysis of the second year	219
4.7.2.2.1 Functional preposition CON	219
4.7.2.2.2 Lexical preposition SENZA	220
4.7.2.3 Analysis of the third year.....	220
4.7.2.4 Observations	220
4.8 Summary.....	222
CHAPTER 5	225
5.1 Phrases selected by prepositions	225
5.1.1 Phrases selected by functional prepositions.....	226

5.1.1.1 Functional preposition A	226
5.1.1.2 Functional preposition CON	232
5.1.1.3 Functional preposition DI	239
5.1.1.4 Functional preposition IN	243
5.1.1.5 Functional preposition PER	249
5.1.1.6 Functional preposition SU	252
5.1.1.7 Functional preposition DA	255
5.1.1.8 Functional preposition TRA	259
5.1.2 DP Phrases selected by lexical prepositions	259
5.1.2.1 Lexical preposition SENZA	260
5.1.2.2 Lexical preposition SOTTO	261
5.1.2.3 Lexical preposition DENTRO	262
5.1.2.4 Lexical preposition SOPRA	263
5.1.2.5 Lexical preposition CONTRO	264
5.1.3 DP Phrases selected by combinations of prepositions – Prepositions with double structure	265
5.1.3.1 Combination of prepositions DI SOPRA DI	265
5.1.3.2 Combination of prepositions SENZA DI	265
5.1.3.3 Combination of prepositions SOTTO A	266
5.1.3.4 Combination of prepositions DENTRO IN	266
5.1.3.5 Combination of prepositions DENTRO A	267
5.1.4 DP Phrases selected by combinations of prepositions – “Blocks”	268
5.1.4.1 Combination of prepositions VICINO TRA	268
5.1.4.2 Combination of prepositions VICINO A	268
5.1.4.3 Combination of prepositions IN FONDO A	269
5.1.4.4 Combination of prepositions ATTORNO A	270
5.1.4.5 Combination of prepositions ACCANTO A	270
5.1.4.6 Combination of prepositions FINO A	271
5.2 DP selected by prepositions	271
5.2.1 DP selected by functional prepositions	273
5.2.1.1 Functional preposition A	273
5.2.1.2 Functional preposition CON	276
5.2.1.3 Functional preposition DI	279
5.2.1.4 Functional preposition IN	283
5.2.1.5 Functional preposition PER	285
5.2.1.6 Functional preposition SU	288
5.2.1.7 Functional preposition DA	291
5.2.1.8 Functional preposition TRA	294
5.2.2 DP selected by lexical prepositions	294
5.2.2.1 Lexical preposition SENZA	294
5.2.2.2 Lexical preposition SOTTO	297
5.2.2.3 Lexical preposition DENTRO	299
5.2.2.4 Lexical preposition SOPRA	301
5.2.2.5 Lexical preposition CONTRO	302
5.2.3 DP selected by combinations of prepositions - Prepositions with double structure	303
5.2.3.1 Combination of preposition DI SOPRA DI	303
5.2.3.2 Combination of preposition SENZA DI	304
5.2.3.3 Combination of preposition SOTTO A	304
5.2.3.4 Combination of preposition DENTRO IN	305
5.2.3.5 Combination of preposition DENTRO A	305
5.2.4 DP selected by combinations of prepositions – “Blocks”	307
5.2.4.1 Combination of preposition VICINO TRA	308
5.2.4.2 Combination of preposition VICINO A	308
5.2.4.3 Combination of preposition IN FONDO A	311
5.2.4.4 Combination of preposition ATTORNO A	311

5.2.4.5 Combination of preposition ACCANTO A	312
5.2.4.6 Combination of preposition FINO A	312
5.4 Summary	313
<i>CONCLUSIONS</i>	315
<i>Bibliography</i>	323

INTRODUCTION

In my research work I decided to focus on an interesting topic: the acquisition of prepositions in Italian.

This work allowed me to study in depth the first stages of children's language acquisition.

Prepositions are an important and frequently used category in both English and Romance languages. In fact, in a corpus composed by one million English words, one in ten words is a preposition (Fang, 2000).

Prepositions are a hybrid category and there are different issues and features associated with them. As we will show in the following chapters, a great number of researchers tried to answer different questions related to this field.

In this work I decided to analyse the spontaneous speech of seven children: Elisa, Gregorio, Marco, Diana, Raffaello, Rosa and Camilla. These children's productions were collected in the CHILDES database by three scholars: Tonelli, Calambrone and Antelmi.

More precisely, I analysed the type, the order of appearance, and the structures of the prepositions produced by these children.

The research questions that guided my work are:

(Q1) Do children acquire before functional or lexical prepositions?

(Q2) Is there a specific order of appearance of prepositions in the group composed of functional prepositions and in the group composed of lexical prepositions?

(Q3) Which semantic-syntactic values are connected to the functional and to the lexical prepositions?

(Q4) Does each preposition select a specific structure?

I divided this thesis in five chapters.

In the first chapter I reported a summary of some works on prepositions. More precisely, I started with Cinque's analysis of the internal structure of prepositions. Later, I showed that there are differences in the use of prepositions in different languages and I demonstrated that these differences can also be observed in the children's language

acquisition. Language acquisition is an important tool to understand the nature of prepositions.

In the second chapter I described the CHILDES database and the way in which the analysed children's productions are organized in the website. For each child, I included in my analysis some information: his/her age, the number of gaming session in which he (or she) was recorded, the number and the names of the other participants in the sessions. At the end of chapter II, I also described the Excel document I used to analyse children's productions.

In the third chapter I tried to answer the first two (Q1 & Q2) of the research questions identified in chapter I: Do children acquire before functional or lexical prepositions? And also: Is there a specific order of appearance of prepositions in the group composed of functional prepositions and in the group composed of the lexical ones?

To answer these two questions, I did a quantitative study analysing the number and the types of prepositions identified in the productions and the order of appearance of these prepositions.

In the fourth chapter I tried to answer my third research question (Q3): Which semantic-syntactic values are connected with the functional and the lexical prepositions? Each preposition can be connected to a semantic-syntactic value that defines a sort of "meaning" of the preposition itself in the production in which it is pronounced. In order to answer this question in this chapter I analysed the semantic-syntactic values connected with the prepositions and I identified the order of appearance of the values connected with each one of them.

In the fifth chapter I tried to answer my fourth research question (Q4): Does each preposition select a specific structure? I started my analysis describing the different structures that each preposition introduces. As it will be presented later, there are prepositions that can introduce only some particular structures (for example, they introduce nouns that must be connected to a determiner). The analysis presented in this chapter cannot however be considered as complete. A more in-depth analysis is required to achieve a deeper understanding of the subject. I have only started a work that I hope to complete in the future.

Finally, in the chapter called "Conclusions", I tried to summarize the answers to the research questions that guided my analysis.

I hope my work may contribute to bring curiosity and interest in other people towards a fascinating subject like language acquisition.

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CHAPTER 1

1.1 Prepositions are a hybrid category

Prepositions are an important and frequently used category in both English and Romance languages. In fact, in a corpus composed by one million English words, one in ten words is a preposition (Fang, 2000).

However, there is a long-lasting debate on the nature and the properties of prepositions (Littlefield, 2005). For instance, prepositions are considered one of the four major lexical categories in addition to nouns, verbs and adjectives (Jackendoff R. , 1973); but prepositions are also taken to be a closed class, like the other functional categories. In addition, although most prepositions express semantic relations, i.e. they can assign theta roles, there are also prepositions like *of* or the dative *to* that are considered as being purely syntactic. *Of* and *to* do not add thematic properties to the structure. They are used for Case assignment. These examples are only a part of the complex characteristics of prepositions. Nevertheless, prepositions are still considered a single and homogeneous category (Rauh, 1993).

We could say, as Littlefield does, that prepositions are a hybrid category. The real problem is not represented by the conflicting characteristics of these elements, but by the will to treat them as a single and monolithic group.

Littlefield enumerates different syntactic studies in which a distinction between Functional and Lexical prepositions is expressed. We have evidence of this distinction also from language acquisition. As it will be presented in this thesis, functional and lexical prepositions are produced (and this could allow us to say that they “are acquired”) at different times.

Littlefield began her dissertation with a list of some theoretical studies that suggest a split and propose the existence of two (or more) types of prepositions.

Tremblay (1996), for example, suggests a division between lexical prepositions and semantically vacuous prepositions in French. This last group can be further divided into two classes: the class composed by Dummy Case assigners, and the class composed by “true empty” prepositions.

Cadiot (1997) studied French prepositions and divided them in colourless (e.g. *de*, *à*, *en*) and colourful (e.g. *contre*, *parmi*, *vers*). The first group of prepositions does not

contribute to the meaning of the phrase, but it is used for syntactic purposes. The second group of prepositions, instead, contributes to the meaning of the phrase.

Rauh (1993) distinguishes between lexical and non-lexical prepositions. Lexical prepositions have the same characteristics of other lexical categories, and they have their own lexical entries (*e.g. near, round*). Non-lexical prepositions, instead, have no autonomous lexical entry. For Rauh, there are two types of non-lexical prepositions: Case prepositions (*e.g. of, to*) and prepositions found in fixed phrases (she refers to prepositions that are combined with a noun to form a single syntactic unit) (*e.g. "out of shape"*).

Finally, Van Riemsdijk (1990) distinguishes prepositional elements in purely functional heads and lexical. The former are generally taken to comprise basic (i.e., stative and directional) "simple prepositions" such as "at", "to", "from", and the latter "complex prepositions" like "in front of", "under", "behind", "next to", "inside", and so on.

The just presented models differ in their formulation. However, despite differences, the listed scholars suggest an overall theme: prepositions are not a homogeneous group. This category should be considered multi-layered.

Prepositions are treated differently also in child language. Friederici (1982), for example, examined children from age five to eight. She found that children reacted more slowly when syntactic prepositions were presented to them, than when lexical prepositions were presented to them (Friederici, 1983). Moreover, the same scholar found that prepositions are treated differently in aphasia¹.

Therefore, the early child language acquisition is an important subject matter of research for the comprehension of the nature of prepositions.

¹ The term "aphasia" refers to the inability (or impaired ability) to understand and produce speech, as a result of brain damage.

1.2 The internal structure of prepositions – Cinque’s proposal

The study of the internal structure of prepositions is a subject of great importance. The analysis proposed by Cinque (2010) in this context is relevant because it is focused on the articulation of the internal structure of prepositional phrases. More precisely, Cinque focused his research work on the analysis of prepositional phrases that express spatial relations.

Cinque discussed the following implication: phrases composed by spatial prepositions, adverbs, particles and DPs do not show different structures, but they spell out different parts of the same configuration.

In the literature prepositions are usually divided in two groups: functional prepositions and lexical ones.

In the first group there are “simple prepositions” as *at*, *to*, *from*. In the second group there are “complex prepositions” as *in front of*, *under*, *behind*, *next to*, *inside*.

In different languages these two groups of prepositions have different properties.

In Italian, for example, functional prepositions can be distinguished from the lexical ones because the functional ones must take a complement and refuse preposition stranding. In addition, in Italian functional prepositions differ from the lexical ones because only the first group can assign a case directly. Lexical prepositions can (and in some cases must) be followed by the functional preposition *a* or *di*. Perhaps, one should place an unpronounced preposition when none is overt. There is the possibility to pronounce the expression “dietro l’albero” also as “dietro (al) l’albero²”.

The analysis is then focused on complex prepositions.

As Cinque proposed:

Some of the contributions to this volume converge in the postulation of a finer structure in which the complex preposition is actually a (phrasal) modifier of an unpronounced head noun PLACE, selected by a (possibly covert) stative preposition, and where the complement of the complex preposition is in a possessor relation to that unpronounced head (Cinque; 2010: 5).

² In this expression the functional preposition *a* is connected and joined to the determiner *il*.

Therefore, the structure of the phrase “under the table”, is:

(1) [PPstat (at) [DPplace [XP under [X [PP P [NPplace the table [PLACE]]]]]]]]

Complex prepositions like *under*, *above*, *behind*, *in front of* can be identified as the “axial parts” analysed by Jackendoff (1996) and Svenonius (2006) (2007) (2008). The axial parts project vectors into one of the possible axes that go out from the object that represents the “ground”, the landmark (in this case, referred to the surface of “the table”). In this way, the axial parts define a place.

For this reason, the structure proposed in (1) can be rewritten in this way:

(2) [PPstat (at) [DPplace [AXPartP under [X [PP P [NPplace the table [PLACE]]]]]]]]

Certainly, the structure proposed in (2) may vary across languages due to the presence of different types of leftward movements and for the pronunciation or nonpronunciation of some components.

In Italian and in English, for example, there is an unpronounced stative preposition that introduces the DP_{place}.

This structure can be shown in (3):

(3) I libri sono **A** sotto il tavolo PLACE / the books are **AT** under the table PLACE

In Italian this stative preposition can be pronounced if there is a measure phrase.

An example is:

(4) Si trova (**a**) due metri sotto il livelllo del mare / It is found (**at**) two meters under sea level

Moreover, as we have already said, in both Italian and English there could be an unpronounced preposition that assigns the Case to the object (the object is, in this case, “il tavolo” / “the table”).

In some languages the structure in (2) may vary due to the presence of the order DP(+case) - *under/above* and others - *at*. This order can be found in the OV languages (e.g. Japanese) and also in some VO languages (an example is the Austronesian SVO language Taba).

This order is realized “with raising of the DP (+PLACE) around the axial preposition, followed by further raising plus pied-piping around the stative preposition” (Cinque 2010: 6).

In the first part of the dissertation Cinque focused on stative location. It is also important to remember that in the literature a specific hierarchical structure was proposed for stative and directional prepositions, that is:

$$(5) [\text{DirP } P [\text{StatP } P]]$$

If we consider the differences between stative, directional prepositions and complex prepositions (defined also “axial part prepositions”) it can be assumed that the second group is composed by prepositions that cannot be placed in the head position of a PP_{Stat} , but they are modifiers of a DP_{Place} projection selected by a stative preposition that can be expressed or not. This stative preposition is selected by a directional preposition that can be expressed or not.

The structure in (2) can now be expressed in the following way:

$$(6) [\text{PP}_{\text{dir}} \text{ from } [\text{PP}_{\text{stat}} \text{ AT } [\text{DP}_{\text{place}} [\text{AXPartP } \text{ under } X [\text{PP } P [\text{NP}_{\text{place}} \text{ the table } [\text{PLACE}]]]]]]]]]]$$

Therefore, the structure can be rewritten as (7):

$$(7) [\mathbf{P}_{\text{Dir}} [\mathbf{P}_{\text{Stat}} [\mathbf{P}_{\text{AxPart}} [\mathbf{P} [\mathbf{DP}]]]]]]$$

1.3 Prepositions are treated differently in different languages

In addition to the study of the internal structure of prepositions, it is interesting to introduce here the discussion presented by Sugisaki (2016) about differences on the use of prepositions in languages.

His analysis starts from the evidence that in English spatial relationships are expressed by prepositions and prepositional particles. If we consider these prepositions, that he defines with the generical label “adpositions”, we find a cross-linguistic variation.

In some languages there is a variation in the inventory of the adpositions used. In French, for example, the meaning “under” is expressed by the preposition *sous*. In Japanese, instead, the same meaning is expressed by the use of the spatial noun *sita*.

Another interesting observation is that languages differ because the same spatial adpositions can express different spatial relations. In English, for example, the preposition *on* is used when an element is placed on a vertical surface (e.g. “the handle *on* a cupboard door”) and also when an element is placed on a horizontal surface (e.g. “a cup *on* the table”). The preposition *in* is used when is expressed a containment relation (e.g. “the apple *in* the bowl”). In Dutch, instead, there are three different prepositions (*aan*, *op*, *in*) to express these spatial situations, while in Spanish a single preposition (*de*) is used to express all these spatial situations.

If we talk about morphology, Sugisaki shows that languages may vary due to the existence of suppletive forms for certain combinations of “Preposition + Determiner” (P+D). If in a particular language there is a suppletive form as P+D, it could be an evidence that, in that language, D moves to P through head-movement.

Variation in languages is also due to the syntax of adpositions. For example, in different languages adpositions surface as prepositions or postpositions.

In the following there are other points of syntactic variation in languages: “preposition-stranding”, “pied-piping”, “swiping”, “stacking”, the possibility to use prepositions (*for*, *with*) as Case-assigning complementizers and the possibility of “event-type conversion” in compositional semantics.

When we talk about “preposition-stranding”, we refer to the extraction of a P’s complement through A-bar movement. This phenomenon is documented in English, in the North Germanic languages (Icelandic, Norwegian, Danish, Swedish), in some of the

Niger-Congo languages (Vata and Gbadi) (Koopman, 1984), and in other West Germanic languages (Frisian, for example) (Merchant, 2002).

An example from English is:

(8) Who was Peter talking with *t* ?

When we talk about “pied-piping”, we refer to the movement shown by most languages that form adpositional questions through *wh*-movement.

An example from the Spanish language is:

(9) Con quién hablaba Pedro *t* ?

When we talk about “swiping”, we refer to the possibility, in some languages, to place the P after -and not before- the *wh*-object.

An example is:

(10) John was obviously upset, but I don’t know what about.

When we talk about “stacking”, we refer to the possibility, identified at least in English, to place one or more particles over a preposition.

An example is:

(11) He stormed back on up over the hill.

English allows the use of the preposition *for* as a Case-assigning complementizer.

An example is:

(12) John wants very much [CP for [TP Mary to leave now]].

Finally, when we talk about the “event-type conversion”, we refer to the possibility, in some languages (for example in English, but not in Spanish), to create a

VP that indicates an Accomplishment, thanks to the connection between an Activity verb like *run* and a spatial prepositional phrase (PP).

An example is:

(13) John ran *(through the tunnel) in five minutes.

In Girju's work (2009) it is also reported an analysis of the behaviour of different prepositions among languages. In fact, it is difficult to identify the cross-linguistic regularities of prepositions.

More precisely, Girjus investigated the role of prepositions in the semantic interpretation of nominal phrases and compounds in English. She focused on nominal phrases with the structure N P N and also on noun compounds with the structure N N.

She wanted to understand the semantic relationship between the two nouns that composed the compositional noun phrase $N_1 N_2$. In this noun phrase, one noun represented the head and the other one represented the modifier.

In (14), for example, there is an example of a noun-noun compound:

(14) "Family estate"

In this case, the noun-noun compound expresses a *possession* relation.

In (15), instead, there is an example of a nominal phrase:

(15) "The faces of the children"

In (15) the nominal phrase expresses a *part-whole* relation.

For the correct interpretation of nominal phrases and compounds it is necessary to know different types of information, for example: the world knowledge, the lexico-syntactic information and the discourse information.

Languages express semantic relationships through different nominal phrases and compounds. In English, for example, the nominal phrases and the compounds structured as NN (*e.g.* "wood stove") and N P N (*e.g.* "book on the table") are usually translated in

the Romance languages as N P N. Romance languages have few compounds structured N N.

Besides the unproductive N N and the productive N P N phrases, Romanian uses also another productive construction: a compound in which there is the connection between a genitive-marked noun and another noun (e.g. “the beauty of the girl” is translated as “frumusetea fetei” that is -beauty - the girl-GEN). Moreover, while the English N N compounds can be defined as right-headed (e.g. *framework/Modifier law/Head*), the Romance compounds can be defined as left-headed (e.g. *legge/Head quadro/Modifier*).

In this work, Girjus observed that the Romance prepositions used in the translations of English compounds and nominal phrases may vary in ways that correlate with the semantics. In languages in which there are multiple syntactic options as English (N N or N P N) or Romanian (N N, N P N, genitive-marked N N), the choice of the construction is in part regulated by semantic factors. The author studied the distribution of semantic relations in different nominal phrases and compounds not only in one language, but also in English, French, Italian, Spanish, Portuguese, Romanian. Moreover, she analysed the similarities and the differences among different languages. The distribution of semantic relations was made using two classification tag sets: Lauer’s (1995) set of eight prepositions (*of, for, with, in, on, at, about, from*) and another list of twenty-two semantic relations created by Girjus (*possession, kinship, property, agent, temporal, depiction-depicted, part-whole, hypernymy, cause, make/produce, instrument, location, purpose, source, topic, manner, means, experiencer, measure, type, theme, beneficiary*). The author also created an algorithm that, using a training set of English nominal phrases and compounds with their translations in the five Romance languages, could learn classification rules. These rules could be used for the semantic interpretation of unseen test instances. She found that the translation of nominal phrases and compounds from a language to another language was strictly connected to the structure of each language.

1.4 The acquisition of prepositions

As we showed in section 1.1, the early child language acquisition is an important subject matter of research for the comprehension of the nature of prepositions. In this section, I considered two different languages: English and Greek. I considered the first language in section 1.4.1, and the second language in section 1.4.2. Section 1.4.1 is divided in two parts: in the first one (section 1.4.1.1) I proposed Littlefield's work (2005) about the analysis of children's acquisition of prepositions in English. In the second one (1.4.1.2) I proposed Ursini and Akagi's work (2013) about the children abilities to understand two types of logical relations between spatial prepositions in the same language. In section 1.4.2 I proposed Alexaki, Kambaranos and Terzi's work (2009) about the acquisition of prepositions in Greek.

1.4.1 Prepositions in English

1.4.1.1 Prepositions in English - Littlefield's analysis

Littlefield (2005) analyses English. She observes that, in many languages, at the early stages of linguistic development there is a great use of lexical items and a lack of functional ones (Lebeaux, 1988) (Radford, 1990) (Platzack, 1992). In these stages children's productions could be defined as "telegraphic" (Brown & Fraser, 1963) (Brown R. , 1973) (Bowerman, 1973). It is not completely true for languages that are morphologically rich, which show some functional morphology also in these stages (Caselli, Casadio, & Bates, 1999).

The generalization that Littlefield formulates is reported as follows: "From this research the generalization can be made that children begin using lexical items early on (typically around one year of age), and functional items later (typically around two)" (Littlefield 2005: 3). Littlefield proposes two predictions:

- 1- Children should produce lexical prepositions before the functional ones.
- 2- Children should make a lower number of mistakes with the lexical prepositions than with functional ones.

In particular, when she talks about functional prepositions, she only refers to *of*. When she speaks about lexical prepositions instead, she refers to all other prepositions.

Of is different from the other prepositions for some reasons.

Firstly, Hoekstra (1995) observed that lexical items have a salient semantic content while functional items have not. *Of* has little or no semantic content if compared to prepositions like *in*, *on* and *to*.

Secondly, as Rooryck (1996) stated, *of* does not assign a thematic role to its complement, contrary to other prepositions such as *with* (comitative/instrument) or *about* (theme). *Of* assigns a Case to its complement, but also this assignment is different from the assignment made by other prepositions. Other prepositions are usually considered Case-assigners that assign oblique Case to their objects. *Of* is instead the realization of an inherent case assignment in structures³ in which there are nouns or adjectives that assign a theta role to their complement, but that could not assign Case.

Littlefield's research was focused on two children in the CHILDES database (MacWhinney & Snow, 1985) (MacWhinney & Snow, 1990): Naomi and Sarah. These children were selected for the great number of productions collected in the database, for the long period in which they were recorded, and for the early age in which recording sessions started. Naomi (Sachs, 1983) (MacWhinney & Snow, 1985) was recorded from the age of 01;02;29⁴ to the age of 04;09;03 and were collected 16.634 productions. Sarah (Brown, 1973) was recorded from the age of 02;03;05 to the age of 05;01;06 and were collected 36.711 productions. In order to make a comparison between the children, their productions were divided in MLU (Mean Length of Utterances) groups. The prepositions collected were identified as lexical or functional, and errors were coded as omissions, substitutions or others. The author found 1292 prepositional contexts for Naomi, and 3518 prepositional contexts for Sarah.

From the data collected and analysed, Littlefield observed that in children's productions there was a rapid increase of lexical preposition over the time. Functional prepositions, instead, started to be pronounced when children were about 2.0-2.49 years old. In addition, after the appearance of functional prepositions, the number of lexical prepositions produced was really higher than the number of functional ones.

³ An example of an inherent Case assignment involves genitive constructions (e.g. "the mother of the groom").

⁴ Written in this way, this expression refers to the children's age in "years; months; days".

Another interesting consideration is related to the number and the type of errors made by Naomi and Sarah. The number of errors with lexical prepositions is greater than the number of errors with functional ones. Littlefield explains this asymmetry with the different number of contexts in which the lexical and functional prepositions were pronounced. The number of contexts in which there were lexical prepositions was really higher than the number of contexts with functional ones.

If errors are considered as a percentage over the total number of contexts produced for each group of prepositions, it can be observed that Naomi and Sarah make mistakes with lexical prepositions about 12% of the time, and with functional prepositions 40% and 37% of the time respectively.

Thanks to these observations, Littlefield concludes that prepositions can be divided in two categories that are acquired in different moments by the children; namely lexical prepositions are produced before functional prepositions in children's spontaneous speech.

1.4.1.2 Prepositions in English - Ursini and Akagi's analysis

The acquisition of English spatial preposition is a very complex topic and, as we have seen, different studies were proposed to explain the data.

Nevertheless, the acquisition of the semantic relations between prepositions is, as Ursini and Akagi (2013) said, "still a poorly understood phenomenon" (Ursini, Akagi 2013: 1).

We can identify the relation of *sub-set* and the relation of *entailment* (Parson, 1990) (Nam, 1995) (Feist, 2006).

An example for the *sub-set* relation is:

(16) Mario was in the park \subset Mario was at the park

An example for the relation of *entailment* is:

(17) Mario will go to the park \rightarrow Mario will be at the park

In (16) the relation between the sentences is expressed by the prepositions. Prepositions are the only elements that distinguish these two sentences. The preposition “in” indicates that an object is in the “internal” region of a space. The preposition “at”, instead, refers to a space that includes both the position of the object and its “surrounding” regions (Nam 1995) (Feist 2006) (Levinson & Meira, 2003). For this reason, the relation between the two sentences in (16) can be defined as a *sub-set*-relation.

Also in (17) the relation between sentences is expressed by the prepositions. The truth of the first sentence involves the truth of the second sentence. For this reason, the relation between these two sentences can be defined as an *entailment* relation.

In Ursini and Akagi’s work two hypotheses were discussed:

- 1- Continuity Hypothesis: children access lexical relations between spatial prepositions *after* accessing the meaning of each spatial preposition involved in the relation.
- 2- Construction Hypothesis: children access lexical relations between spatial prepositions *before* accessing the meaning of each spatial preposition involved in the relation. Therefore, children can understand in which contexts the sentences in (16) and (17) can be pronounced, but they may not know the meaning of each spatial preposition involved.

Ursini and Akagi tried to understand how children acquire and understand these two lexical relations (*sub-set* and *entailment*) and which one of these two hypotheses was the best one to explain the acquisition of spatial relations.

First of all, it is important to remember that spatial relations identify two “layers” of meaning. The first layer “denotes a relation between a located entity and a landmark object, respectively labelled as figure and ground” (Ursini, Akagi 2013: 3).

The second layer, instead, “restricts this general spatial relation to one that involves a certain sub-set of possible positions that the figure may occupy, with respect to the ground”⁵ (Ursini, Akagi 2013: 3-4).

⁵ The authors refer to Talmy’s works (Talmy T. , 1978) (Talmy L. , 2000).

In general, it can be said that the difference in the meanings of spatial prepositions is based on the specific set of implicit referents they individuate. Each spatial relation defined by these prepositions comes from their possibility to identify related sets of positions. An example is represented by the prepositions *in* and *at*. *In* identifies a set of positions in which the figure is into the ground. *At* identifies a set of positions that includes this position. For this reason, the set of positions identified by the spatial preposition *in* is included in the set of positions identified by *at*.

Before showing their work, Ursini and Akagi discussed the previous relevant findings about the acquisition of spatial prepositions meanings.

More precisely, children acquire these meanings following a “scale” of complexity: first they acquire easier spatial prepositions, and only later they acquire more difficult spatial prepositions.

Children first acquire the meaning of single spatial prepositions and connect these meanings also to other spatial prepositions that they have not acquired yet. Only later, when the knowledge of their language increases, they connect these new spatial prepositions to their real meanings.

In this process they also acquire the lexical relations between spatial prepositions.

Ursini and Akagi conducted two experiments on the acquisition of spatial prepositions. The first experiment focused on a child (Terence P.), that was recorded in the age range 3;01-3;11 years. The second experiment focused on a younger child (Fred L.), recorded in the age range 2;03-2;11 years.

Both experiments have the same design. There is an experimenter that controls a puppet. This puppet tells a story to the child. The second experimenter, instead, records the conversation. When the story ends, the puppet asks a question to the child to understand his comprehension of the target sentence. After the child’s answer, the experimenter asks the child to motivate his answer. In this way, it is possible to understand whether the child has really understood the target sentence and if his answer is justified.

For example, in a story there are some horses that are going to the lake, but one of them falls and never reaches the destination.

The investigator asks to the child:

(18) Has every horse gone to the lake?

If the child says “no”, therefore the child shows to have understood the meaning of the underlying declarative sentence. It is important to notice that, in this story or in a similar story, both the answers (yes/no) are plausible, and it depends on the ending of the story. This is the *Condition of Plausible Dissent*.

The first experiment aimed to test how the child acquired different prepositions and if the meaning of these prepositions was actually understood by the child. More precisely, the puppet told to the child several mini stories in order to verify how the child interpreted the spatial prepositions *to*, *at*, *in* in isolation, but also how the child interpreted the two lexical relations of *sub-set* and *entailment*. When the single prepositions *to*, *at*, *in* were tested, the puppet asked to the child a question like the one reported in (18). Only later, the puppet asked to the child another general question (e.g. “what happened?”) to verify the reason of the child’s answer.

In order to test the comprehension of the lexical relations of *sub-set* and *entailment*, the puppet asked to the child two questions in a row. In each question there was one of the two spatial prepositions involved in the lexical relation. These two questions were followed by two follow-up questions to verify the reason of the child’s answers.

Ursini and Akagi proposed an example of the sequence of actions done in order to test the child’s acquisition of lexical relations. In the story told to the child by the puppet, there were some tank engines that wanted to eat at the restaurant. One of these tank engines got lost during the travel and arrived late to the restaurant.

The puppet asked to the child the following question:

(19) Have all the tank engines gone to the restaurant?

When the experimenter wanted to test the lexical relation between *to* and *at* (relation of *entailment*), the story continued describing the tank engines while they were having lunch.

The puppet asked to the child the following question:

(20) Are all the tank engines eating lunch at the restaurant?

At the end of this sessions, two follow-up questions were asked to the child.

In the first experiment the scholars obtained the following results: from age 3;01, the child correctly answered the questions in which there was *to* or *in*. From age 3;05, he correctly answered those in which there was *at*. Finally, Terence P. could not correctly answer questions in which was verified the comprehension of the *sub-set* and the *entailment* relations before age 3;06. It could be observed that the preposition *at* became part of the child's grammar after age 3;03. For this reason, it could be deduced that the child first acquired the interpretation of the single spatial prepositions *in*, *at*, *to*. Once he had this information in his grammar, he could also understand the lexical relations shared by these spatial prepositions. Therefore, the first child's comprehension of lexical relations is explained better by the Continuity hypothesis than the Construction hypothesis.

The second experiment aimed to test in a younger child (Fred L.) which one of the hypotheses proposed to explain the development of lexical relations (the Continuity hypothesis and the Construction hypothesis) was better. The design of the second experiment was the same of the first one.

The result of the second experiment is the following: the child could understand the meaning of *to* and *in* only when he was 2;04 and 2;03 years old, respectively. Instead, he did not reach an adult-like comprehension of the spatial preposition *at* during the study.

While Terence P. accessed the *sub-set* and the *entailment* relations between spatial prepositions in later sessions of the experiment (only after he accessed the meanings of the single prepositions), Fred L.'s unstable interpretation of *at* allowed the scholars to speculate that "the two logical relations still had to emerge" (Ursini, Akagi 2013: 14). Fred L. could not access the interpretation of *at*, and thus he could not access the spatial relations in which *at* was involved. In this case, both the Continuity hypothesis and the Construction hypothesis could explain this process.

Ursini and Akagi end their analysis summarizing that the Continuity hypothesis explains better how lexical relations are acquired by the first child. It is also consistent with the results obtained from the second child. The Construction hypothesis, instead, could be consistent with the results obtained from the second child, but not from the first one.

1.4.2 Prepositions in Greek - Alexaki, Kambanaros, Terzi's analysis

This work analysed the acquisition of Greek Prepositional Phrases. In particular, in Greek there are different ways to express location.

Location can be expressed by:

- 1- A Complex Prepositional (P) structure
- 2- *Se* or *Apo*
- 3- An adverbial

In the following, there is an explanation for each one of the structures used to express location: (I) Complex P structure is a combination of an element that indicates a location with the preposition *se* or *apo* that introduces the following complement. The first part of this complex structure is a lexical element, while *se* and *apo* are functional elements. (II) *Se* and *apo* can be used alone to express location. These prepositions give semantic contribution in the contexts in which they are placed, and they also confer Case to their determiner phrases (DP) or noun phrases (NP) complements. (III) Lexical elements⁶ that are used alone can also express location. They are considered adverbials.

Alexaki, Kambanaros, and Terzi wanted to understand whether children acquired the lexical and the functional part of complex P structures in different ways and whether children acquired *se* and *apo* in different ways when these elements were placed in

⁶ When we spoke about Complex P structures, we referred to the first part of the combination as to a lexical element.

complex P structures or when they expressed location alone. These issues were addressed through two experimental works.

The first one was a structured experiment conducted by Xypolias and Christopoulos (2004) in which they analysed: (I) the comprehension of adverbials; (II) the comprehension of complex Ps; (III) the production of complex Ps.

The second one was an analysis of spontaneous speech. In this second experiment, data were obtained from the CHILDES database (that I also used for my research work, as we will see in the following chapter), and from a longitudinal study of three children.

The first aim of their work was to observe whether children start to use *se* and *apo* in complex Ps both in spontaneous speech and in structured experiments at the same age. The second aim of their work was to analyse whether children start to use *se* and *apo* when they were placed in complex Ps or when they expressed location alone at different ages.

In the structured experiments conducted by Xypolias and Christopoulos children gave no answers up to 2;06. Only in five (out of one hundred and three) productions they pronounced the adverbials alone, instead of complex Ps. Between 2;07 to 3;00 the number of adverbial parts of complex Ps decreases and children start to produce complex Ps productively. After age three children use complex Ps in over 90% of their productions. It can be summarized that children in a first moment produce the lexical part of complex Ps alone, and then, after age three, they begin to complete this structure in the correct way.

Using CHILDES the researchers analysed the spontaneous speech of four children, but they decided to present only Janna's data because they were available for three different ages (for example 1;11, 2;05, 2;09). The authors found a step-wise acquisition path. During the first stage (age 1;11), *se* and *apo* were omitted in almost all the productions. During the second stage (age 2;05), *se* and *apo* were pronounced in some productions, but the relevant contexts were not sufficient to allow a generalization about which of the two structures⁷ was produced earlier by the child. During the third stage (age 2;09), there were not omissions of *se* and *apo* in the productions, but also in this case there was no evidence for different behaviour of *se* and *apo* as part of complex Ps or *se* and *apo* used to express location alone.

⁷ We refer to *se* and *apo* as part of complex Ps and *se* and *apo* used alone.

In the longitudinal study the researchers instead collected for six months the spontaneous speech of three children aged two. The scholars presented at the end Dimitra's data (one of the children) in three sessions (age 2;02, 2;05; 2;08). Similar to the CHILDES analysis, a step-wise path has been individuated. During the first stage (age 2;02), the only occurrence of *apo* in a complex P was a repetition. Instead, when *apo* was not used as part of a complex P, it was almost never omitted. In these cases, it was not followed by a DP/NP complement, but it was followed by a locative adverbial (*i.e.* *apo dho*; "from here"). During the second stage (age 2;05) there were very few productions of complex Ps, and for this reason also in this case there is no evidence whether *se* and *apo* were produced more often alone or in complex Ps. In this session (age 2;05) there was a large omission of *se*, by contrast to *apo*. When *apo* was pronounced alone in this session (age 2;05) it was followed by DP/NP complements. This occurrence of *apo* followed by NP/DP complements occurs at the same age as Janna's. During the third stage (age 2;08) *se* starts to be used and for this reason it could be said that it is acquired.

At the end of their work, Alexaki, Kambanaros, and Terzi summarized their results. In particular, their analysis was focused on locative prepositions, and they considered the complex Ps, and also *se* and *apo* when they were used alone to express location.

In children's productions lexical locatives (*i.e.*, adverbials) were used earlier than the associated functional prepositions *se* and *apo*. In Janna's data the low number of complex Ps could not confirm that *se* and *apo* are acquired before alone than as functional prepositions placed in complex Ps. Nevertheless, we could speculate that at least *apo* is used earlier alone thanks to the several instances of *apo* with a DP object around 2;05 years old, in addition to the absence of the omission of this type of *apo* in both the Janna's and Dimitra's data.

1.5 My research work

The early child language acquisition is an important topic to reach a better understanding on the nature of prepositions. The development of prepositions and the meaning of prepositions in children's grammar is a fundamental tool to understand the features of this hybrid class.

For this reason, I focused my thesis on this topic.

More precisely, as I will show in detail in chapter II, I analysed the data collected in CHILDES by three scholars: Tonelli, Calambrone and Antelmi. I considered the productions of seven children overall: Elisa, Gregorio, Marco, Diana, Raffaello, Rosa and Camilla. The age range of these children was from 1;05 to 3;04 years old.

I selected and analysed all the productions in which there was a preposition and also the productions in which there was not a preposition, but it should have been there. In this way, not only could I understand the order of appearance of prepositions, but I could also identify the period in which children did not produce prepositions.

Before introducing the questions that guided my research work, I define the criteria used to identify and analyse the prepositions.

I divided prepositions in the two groups described at the beginning of this chapter: the functional prepositions and the lexical ones.

- Functional prepositions: In this group I placed the elements defined as "functional" by the grammar: *di, a, da, in, con, su, per, tra*.
- Lexical prepositions: In this group I placed all the prepositions that refer to a space; in other words, I placed in this category all the prepositions that indicate spatiality: *sopra, dentro, sotto, contro, vicino, fino, accanto, attorno*. I placed in this group the preposition *senza*, too. This preposition expresses the lack of something.

I identified the elements introduced by prepositions. As it will be presented in chapter V, there are three types of elements introduced by prepositions: DPs (Determiner Phrases), AdvPs (Adverbial Phrases) and verbs.

More precisely, we refer to DPs when prepositions select for a complement of the following types: nouns, pronouns, adjectives, numerals and possessives.

In the rest of this section I will formulate the questions (Q) that guided my research work.

(Q1) Do children acquire before functional or lexical prepositions?

I analysed the first time in which functional and lexical prepositions appear in children's productions. In the research field of the acquisition of prepositions, in fact, there is an important debate about which group of prepositions is pronounced first.

Littlefield (2005) analyses prepositions in English. As shown in section 1.4.1.1, at the end of her work she demonstrates that prepositions can be divided in two categories that are acquired in different moments by the children. More precisely, lexical prepositions are produced before functional prepositions in children's spontaneous speech. The scholar observed that it is doubtful whether this order can be generalizable to morphologically rich languages, such as Italian. Italian shows the production of some functional morphology in the early stages (Caselli, Casadio & Bates, 1999). Functional prepositions and lexical prepositions have different properties. Functional prepositions can be included into the "functional morphology" described by Caselli, Casadio & Bates. It follows that in Italian the order of appearance of prepositions may not show the lexical prepositions before the functional ones, but instead the functional prepositions before the lexical ones. Therefore, the order of appearance of prepositions in Italian may be different if compared to English, which is not a morphologically rich language.

I decided to analyse the spontaneous speech of seven children in order to identify which type of preposition was pronounced as first by the children in the gaming sessions recorded. I address question (Q1) in the third chapter of this work.

(Q2) Is there a specific order of appearance of prepositions in the group composed of functional prepositions and in the group composed of lexical prepositions?

The second aspect I focused on is the specific order of appearance of each functional and lexical preposition. In the work described in section 1.4.1.2, the scholars⁸

⁸ (Ursini & Akagi, 2013)

referred to the order of appearance of prepositions in English (the preposition *at* became part of the children's grammar after the prepositions *to* or *in*).

We could speculate that, also in Italian, for each functional and lexical preposition there is a precise order of appearance. In particular, we want to test the hypothesis that most of the functional prepositions are produced before the lexical ones, and also that the combinations of lexical and functional prepositions are pronounced only after the production of functional prepositions alone. To verify this hypothesis, I analysed the spontaneous speech of seven children collected in CHILDES in order to identify in children's productions: (I) The order of appearance of functional prepositions; (II) The order of appearance of lexical prepositions.

I address question (Q2) in the third chapter of this work.

(Q3) Which semantic-syntactic values are connected to the functional and to the lexical prepositions?

Each functional or lexical preposition is connected to one or more semantic-syntactic values. The semantic-syntactic value defines a sort of "meaning" of the preposition itself in the sentence in which it is pronounced. The same preposition can express different semantic-syntactic values in different sentences. For example, let us consider the functional preposition *a* in the following sentences:

"Sono *a* casa"

"Vado *a* scuola"

In the first sentence the functional preposition *a* is connected to the semantic-syntactic value STATIVO, while in the second sentence the functional preposition *a* is connected to the semantic-syntactic value MOTO A LUOGO. In children's productions we have analysed functional and lexical prepositions connected to different semantic-syntactic values. In each production, in fact, the preposition produced by the child expresses a particular meaning. It is interesting to observe whether the semantic-syntactic values connected with each preposition follow a specific order of appearance. In other words, it is interesting to observe whether the semantic-syntactic values connected with

each preposition follow an “implicational scale⁹” in their appearance. In according to this scale, a value X is connected with a specific preposition before the value Y, but it is connected with this preposition only after a value Z. In this example, the appearance of the value X depends on the appearance of the value that occurs as first (in this case, Z) in children’s productions. In order to study this implicational scale, it is important to contextualize our analysis in the theoretical work done by Cinque, introduced in section 1.2. He showed that in recent literature a specific hierarchical structure is generally assumed for stative and directional prepositions, with stative prepositions embedded under directional prepositions: [DirP P [StatP P]]. As a consequence, in order to produce the structure of directional prepositions, it is necessary to have acquired before the structure of stative prepositions. In the same way, we could say that each value that occupies a specific place in an “implicational scale” cannot be connected with a preposition before another value that precedes it in the scale. Let us consider for example the functional preposition A and the two sentences proposed above. In the first sentence A is connected to the semantic-syntactic value STATIVO, while in the second sentence A is connected to the semantic-syntactic value MOTO A LUOGO. If in the implicational scale connected with the functional preposition A the value STATIVO is placed before the value MOTO A LUOGO, the stative preposition needs to be embedded under the directional preposition and it will be acquired as first. Therefore, the value STATIVO must be connected with the preposition A as first.

In the fourth chapter of this work I tried to identify the semantic-syntactic values connected with prepositions and I tried also to identify the implicational scales of the values connected with each preposition.

(Q4) Does each preposition select a specific structure?

Functional and Lexical prepositions select different structures.

Prepositions, in general, can select not only different kind of phrases (i.e. DPs or AdvPs), but also verbs (in these cases, they are used as complementizers).

⁹ In the following, the expression “implicational scale” refers to the order of appearance of semantic-syntactic values connected to each preposition.

As example, let us consider the preposition *di* used in the following sentences:

“Vado *di* là”

“Mangio un po’ *di* minestra”

“Ti ho detto *di* andare a casa”

In the first sentence the functional preposition *di* selects an AdvP. In the second one it selects a DP that includes a common singular noun (NCS). Finally, in the third sentence *di* is used as a complementizer and it selects a verb.

In the fifth chapter of this work, I tried to identify and to analyse the different structures selected by each preposition (or combination of prepositions) produced by the children. Moreover, in the description of these structures I also considered the presence of determiners and modifiers. As it will be shown in chapter IV, each functional or lexical preposition is connected to one or more semantic-syntactic values that define a sort of “meaning” of the preposition itself in the production in which it is pronounced. Therefore, I tried to identify also the connection between the structures selected by a preposition and the semantic-syntactic values connected with the preposition itself.

The analysis presented in chapter V cannot however be considered complete. Due to the limited amount of time of this thesis project, I only considered nouns as a unique group, and I did not identify which lexicalized nouns are connected (or not) to a determiner. A deeper analysis is therefore required to achieve a better understanding of this subject. I only started a work that I hope to complete in the future.

CHAPTER 2

2.1 CHILDES

The research work about the Prepositional phrase (PP phrase) was carried out using CHILDES. CHILDES is an international database (<http://childes.psy.cmu.edu>) defined as the child language component of the TalkBank system: a system used for sharing and studying conversational interactions.

This website allows to have access to a large number of conversations, reading and listening the productions between children and their parents.

Children were recorded in different periods of their life; in this way it was possible to analyse their language evolution.

From the homepage of CHILDES it is possible to access different sections.

In particular, if we click on the link called “Browsable Database”, it is possible to see a list of languages, and to choose the one we want to focus on. For this study I selected “Romance”, and then “Italian”. I decided to focus my analysis on the data collected by three researchers contained in three corpora, i.e. Antelmi, Calambrone and Tonelli.

Antelmi analysed only one child: Camilla.

Calambrone analysed six children, and I considered only three of them: Diana, Raffaello, and Rosa.

Finally, I focused on all the children analysed by Tonelli: Elisa, Gregorio and Marco.

Therefore, I analysed the productions of seven children: Elisa, Gregorio, Marco, Camilla, Diana, Raffaello and Rosa.

Children’s productions are organized in different files. Files associated to each child were named accordingly to the child’s age (years-months-days).

I read the children’s spontaneous speech presented in each file and I selected only the productions described in section 2.2.

In each file there are different information:

- The age of the child
- The names of the participants in the conversation
- The productions of the child (introduced by CHI, that stands for “CHild”)

- The productions of the other participants (for example, the productions of the child's mother are introduced by MOT, that stands for "MOTHer")
- Every attitude or action of the participants in the conversation

At the beginning of every file there is the expression @BEGIN, and at the end of the file there is the expression @END.

2.2 Analysis of the data

To organize and analyse the data, I created a document on Microsoft Excel.

First of all, I copied on Excel three types of productions: (I) productions in which there was a functional or a lexical preposition; (II) productions in which there was no preposition, but it should have been there; (III) productions in which there was a combination of prepositions.

Globally, I collected 1967 children's productions.

2.2.1 Analysis of children's production

2.2.1.1 Elisa – Tonelli's corpus

The first child I analysed was Elisa (recorded by Tonelli). I selected her name in the list of the children analysed by Tonelli, and I found the eight files corresponding to the different gaming sessions in which Elisa was recorded: 011004.cha, 011018.cha, 011104.cha, 011119.cha, 020106.cha, 020120.cha, 020122.cha, 020123.cha. Elisa is an Italian two years old child. In the first four gaming sessions in which Elisa was recorded, she was ending her second year of life, while in the last four gaming sessions she was entering in her third year of life. More precisely, in the first gaming session Elisa was 1;10 years old, while in the last one she was 2;1 years old. In all Elisa's gaming sessions there was only one more participant: her mum.

2.2.1.2 Gregorio – Tonelli’s corpus

The second child recorded by Tonelli was Gregorio. In the corpus there are eight files associated to this child’s productions: [010717.cha](#), [010807.cha](#), [010822.cha](#), [010924a.cha](#), [010924b.cha](#), [011009.cha](#), [020010.cha](#), [020029.cha](#). Gregorio is close to be two years old; in the first gaming session Gregorio is 1;7 years old, and in the last one he is two years old. Differently from Elisa’s recordings, in Gregorio’s files there are different participants in addition to Gregorio’s mother. More precisely, in the fourth gaming session, named [010924a.cha](#), we can find Gregorio’s father (his productions are introduced by FAT, that stands for “FATher”). In the fifth gaming session ([010924b.cha](#)) and in the last one ([020029.cha](#)) we can find Gregorio’s grandmother (named ANN G), and in the seventh gaming session ([020010.cha](#)) we can find Gregorio’s aunt (named ANT).

2.2.1.3 Marco – Tonelli’s corpus

The third child analysed is Marco. In the website there are twenty-seven files associated to this child’s productions. They are: [010504.cha](#), [010518.cha](#), [010602.cha](#), [010622.cha](#), [010706.cha](#), [010719.cha](#), [010803.cha](#), [010817.cha](#), [010901.cha](#), [010915.cha](#), [010929.cha](#), [011012.cha](#), [011026.cha](#), [011116.cha](#), [020000.cha](#), [020014.cha](#), [020027.cha](#), [020111.cha](#), [020127.cha](#), [020211.cha](#), [020302.cha](#), [020315.cha](#), [020329.cha](#), [020413.cha](#), [020426.cha](#), [020510.cha](#), [020524.cha](#). In the first gaming session Marco is 1;5 years old, while in the last one he is 2;5 years old. In all the gaming sessions the child speaks only with his mother.

2.2.1.4 Camilla – Antelmi’s corpus

The fourth child considered is Camilla. Camilla’s productions were analysed by Antelmi. In the website there are seven files associated to this child’s productions, named: [020206.cha](#), [020406.cha](#), [020619.cha](#), [020904.cha](#), [021117.cha](#), [030100.cha](#), [030409.cha](#). In the first session Camilla is 2;2 years old, while in the last one she is 3;4 years old.

In the first four files and in the last two the only participant that speaks with the child is her mother (named DON). In the fifth file (021117.cha), in addition to her mother, there is also her father (named MIC).

2.2.1.5 Diana – Calambrone’s corpus

The last three children analysed are Diana, Raffaello and Rosa. They were recorded by another researcher named Calambrone. In the website there are nine files associated to Diana’s productions, named: 010805.cha, 011007.cha, 011107.cha, 020002.cha, 020017.cha, 020125.cha, 020501.cha, 020600.cha, 020613.cha. In the first gaming session Diana is 1;8 years old, while in the last one she is 2;6 years old. In this case, there are different participants that attend the gaming sessions in addition to her mother (MOT), that was always present. In the first gaming session there are two investigators (INV and OBS), and her aunt (AUN). In the second one there are two investigators (INV and OBS). In the third and in the fourth one there is only one investigator (INV). In the fifth one there are: an investigator (INV), her father (FAT) and an aunt (ZIA). In the sixth one there are: her father (FAT), an aunt (AUN), and two investigators (INV and OBS). In the seventh one there are: her father (FAT) and an investigator (INV). In the eighth one there are three investigators (INV, OBS, and OB2), and her aunt (AUN). In the last gaming session there are two investigators (INV and OBS).

2.2.1.6 Raffaello – Calambrone’s corpus

The second child analysed in Calambrone’s corpus is Raffaello. In the website there are seventeen files associated to Raffaello’s productions, named: 010707.cha, 010907.cha, 011020.cha, 011100.cha, 020010.cha, 020028.cha, 020115.cha, 020314.cha, 020429.cha, 020513.cha, 020613.cha, 020700.cha, 020800.cha, 020906.cha, 021109.cha, 021114.cha, 021120.cha. In the first recording this child is 1;7 years old, while in the last one he is 2;11 years old. In all the gaming sessions there is always Raffaello’s mother. In addition to Raffaello’s mother, in some recordings there are also other participants. In the

first one there are: an investigator (INV) and his father (FAT). In the second one there are two investigators (INV and OBS), his father (FAT) and his brother (FRA). In the third one there are two investigators (INV and OBS) and his father (FAT). In the fourth and fifth one there are two investigators (INV and ALE) and his grandmother (GMT). In the sixth one there are: an investigator (INV), his father (FAT), an uncle (UNC), and his grandmother (GMT). In the seventh one there are: an investigator (INV), his father (FAT), and his brother (LUC). In the eighth one there are: an investigator (INV), an uncle (UNC), his father (FAT), and his grandmother (GMT). In the ninth one there are: his father (FAT) and two investigators (ALE and INV). In the tenth one there are three investigators (INV, RIT and ALE). In the eleventh one there are two investigators (OBS and ALE) and his father (FAT). In the twelfth one there are: an uncle (UNC), his grandmother (NON), and an investigator (INV). In the thirteenth one there is an investigator (INV). In the fourteenth one there are two investigators (INV and LUC). In the fifteenth one there are three investigators (INV, OBS and ANN), his brother (LUC), and his father (FAT). In the sixteenth one there is an investigator (OBS). In the last session there is an investigator (INV).

2.2.1.7 Rosa – Calambrone’s corpus

The last child I considered in Calambrone’s corpus was Rosa. In the corpus there are twenty-one files associated to Rosa’s productions, named: 010713.cha, 010911.cha, 011008.cha, 011124.cha, 020114.cha, 020129.cha, 020211.cha, 020423.cha, 020429.cha, 020525.cha, 020629.cha, 020700.cha, 020726.cha, 020904.cha, 020924.cha, 021014.cha, 021112.cha, 021130.cha, 030024.cha, 030129.cha, 030323.cha. In the first gaming session Rosa is 1;7 years old, while in the last one she is 3;3 years old. In these gaming sessions there are many participants in addition to Rosa’s mother, that is almost always present. In the first one there are two investigators (INV and ANT). In the second, third, fifth, sixth, seventh and twelfth there is an investigator (OBS). In the fourth, ninth, tenth, sixteenth and seventeenth there is an investigator (INV). In the eighth and thirteenth one there are: an investigator (INV) and also an aunt (ZIA). In the eleventh one there are: an investigator (OBS), an aunt (ZIA), and a cousin (CUG). In the fourteenth one there are

two investigators (INV and OBS) and an aunt (ANT). In the fifteenth one – the only gaming session in which Rosa’s mother is absent - there are two investigators (INV and OBS) and her brother (ANT). In the eighteenth, nineteenth and twentieth one there are two investigators (INV and OBS). In the last one there are: an investigator (INV), her grandmother (GMT) and her brother (SIM).

2.3 The Excel document

In the Excel document the data were organized in a table. More precisely, I named the first eight columns of the document as follows:

- 1- ID: In the cells of this column I wrote the name of the child I was considering. More precisely, the children’s names are reported in this order: Elisa, Gregorio, Marco, Camilla, Diana, Raffaello and Rosa.
- 2- ETA’: In this column I wrote the child’s age when the gaming session was recorded.
- 3- GRUPPI_ANNI: In this column I organized the children into macro groups, identifying them thanks to their age labelled accordingly only to their years (not months). For this reason, I wrote into the cells of this column only three numbers: one (1), two (2), or three (3), since I did not analyse older children.
- 4- ANNI;mesi: In this column I wrote children’s age (years; months).
- 5- MESI: In this column I wrote children’s age in months.
- 6- RIGA: In these cells I wrote the line number of each production written in CHILDES. In this way, I could find the position of each production into the file.

- 7- **PRODUZIONE:** In the cells of this column I wrote the children's productions. If in a specific production there were different elements that had to be considered, I rewrote the production multiple times and I underlined the particular element I was considering in that line.
- 8- **COMMENTO:** In the cells of this column I wrote comments about productions. For example, I highlighted the productions in which there was only one word, but the preposition should have been produced, accordingly to the dialogue in which the production was pronounced.

After the collection of the productions in the Excel document, I analysed them. More precisely, I added new columns¹⁰ (9 to 16) and I wrote in these columns the following labels.

- 9- **PRESENZA-ASSENZA:** In the cells of this column I wrote P or 0 (zero). More precisely, I wrote P when in the production there was a preposition, and 0 (zero) when in the production the preposition was missing, but it should have been there.
- 10- **TIPO P:** In the cells of this column I wrote the type of preposition that was present in the production. In particular, prepositions can be divided in two major groups: functional prepositions and lexical ones. Therefore, in these cells I wrote "FUNZIONALE" or "LESSICALE". For the productions in which there was a combination of prepositions I used different labels. More precisely, I used: (I) "LESSIC-FUN" when there was a combination of a lexical preposition and a functional one (e.g. "vicino a"); (II) "FUN FUN" when there was a combination of two functional prepositions (e.g. "a in"); (III) "FUN LESS FUN" when there was a sequence of functional preposition – lexical preposition – functional preposition (e.g. "in fondo a"); (IV) "FUN-LESS-SMALL CLAUSE" when in the production there was a small clause

¹⁰ I numbered these columns with the numbering already started.

(e.g. “con dentro le caramelle”). Finally, I used 0 (zero) for all the productions in which was missing a preposition, but it should have been there.

11-P: In these cells I wrote the type of prepositions and the combinations of prepositions found in children’s productions. I wrote 0 (zero) when, in the production, preposition was missing, but it should have been there.

12- P CORRETTA: If in the production there was a wrong preposition or if in the production a preposition was missing, but it should have been there, in this column I wrote the corresponding correct preposition.

13- TIPO ARTICOLO: In these cells I wrote the different types of determiners I could find in the prepositional (PP) phrase¹¹. More precisely, I used the following values:

- 0 (zero): I wrote zero when in the production there was a PP phrase without determiners. I wrote zero also when in the production there was an isolated word without both preposition and determiner (but the preposition should have been pronounced by the child).
- IN: This is the abbreviation for “indefinite”. The articles defined in this way are: un, uno, una, un’.
- DET: This is the abbreviation for “definite”. The articles defined in this way are: il, lo, la, i, gli, le, l’.
- DIM: I used this label for all the sentences in which there was a demonstrative (questo/a, quello/a, sto/a) in the PP phrase.

14- TIPO N: In this column I specified the typology and the form of the nouns pronounced in the PP phrase. I highlighted also the presence of pronouns, pronominal adjectives and numerals in the PP phrase. Finally, I highlighted

¹¹ I will only use the expression “PP phrase”, and not the extended form “prepositional phrase” in this chapter.

the presence of verbs when prepositions were used as complementizers. I used the following abbreviations:

- NCS: I used this label for common singular nouns (e.g. “nel cielo”).
- NCPL: I used this abbreviation for plural common nouns (e.g. “in piedi”). For the names modified by the child, in the same cells I added to NCS and NCPL the abbreviations: -DIM (diminutive) (e.g. “sul vasino”), -ACC (augmentative) (e.g. “nel fornellone”), -PEG (pejorative) (e.g. “dei piedacci”) and -VEZZ (term of endearment) (e.g. “alla casetta”).
- NPRS: I used this abbreviation for singular proper nouns (e.g. dalla zia Rosetta”).
- NPRPL: I used this abbreviation for plural proper nouns (e.g. “con le Barbi”).
- PRO: I used this abbreviation when I found a pronoun into the PP phrase (e.g. “con me”).
- ADJ: I used this abbreviation when there was a substantivized adjective in the PP phrase. The substantivized adjective is an adjective used like a noun (e.g. “da sola”).
- POSS: I named in this way the possessive nouns (e.g. “nel mio”).
- NUM: I used this abbreviation for numerals not followed by names in the PP phrase (e.g. “in cinque”).
- V: I used this abbreviation when prepositions in children’s productions were used as complementizers and these complementizers were followed by verbs (e.g. “vieni a vedere”).

15- TIPO MODIFICATORE: I used this column to identify the different types of modifiers that were into the PP phrase.

I indicated the different modifiers with the abbreviations:

- POSS: I used this label for possessive adjectives (e.g. “nella mia borsa”).
- ADJ: I used this label for adjectives (e.g. “con le orecchie nera”).
- NUM: I used this label for numerals (e.g. con due mani).

- APP: I used this label for nouns. More precisely, we refer to appositions (e.g. dalla nonna Lola).
- 0 (zero): I wrote zero when in the PP phrase there was not a modifier.

16-CONTESTO: In these cells I specified the type of phrase in which the prepositional phrase (PP phrase) I analysed was used.

In particular, I used the following abbreviations for the phrases:

- DP: This is the abbreviation for “Determiner Phrase”.

In (21) there is an example:

(21) “...il pane di Teddy” Elisa; 011018

- VP: This is the abbreviation for “Verb Phrase”.

In (22) there is an example:

(22) “piove, ma non vienono (:vengono) in casa” Elisa; 011018

- IS: This abbreviation was used when the PP phrase was isolated.

In (23) there is an example:

(23) “in alto” Marco; 010929

- IS-DP: I used this abbreviation when the PP phrase was isolated but, thanks to the reading of the previous sentences, I was able to understand that the type of phrase in which the PP was used was a DP type.

In (24) there is an example:

(24) “col pomodoro” Marco; 020127

Marco and his mother are speaking about their lunch. More precisely, in the previous sentence Marco’s mother asks to the child what he ate for lunch. The child says “eh, pataciuta (:pastasciutta)”. Later, he completes this sentence and he says (4). For this reason, the PP phrase in (24) is not completely isolated, but it is included in a DP phrase.

- IS-VP: I used this abbreviation when the PP phrase was isolated but, thanks to the reading of the previous sentences, I was able to understand that the type of phrase in which the PP phrase was included was a VP type.

In (25) there is an example:

(25) “con le mace (:mazze)” Marco; 020211

Marco and his mother are speaking about instruments. In particular, Marco’s mother asks to the child which instrument is played by the character of the book. The child says “tamburo” (“drum”). Then he completes his sentence and says (25). In this way he describes how the drum is played. For this reason, the PP phrase in (25) is not completely isolated, but it is included in a VP phrase.

- DISL: This is the abbreviation for “Dislocation”. I used this label when the PP phrase was moved from its original position and was placed in the left part of the sentence.

In (26) there is an example:

(26) “in moto vado” Marco; 020211

17- VALORE SINTATTICO-SEMANTICO: Each preposition found in children's productions encoded one or more semantic-syntactic values. For each production I assigned a value to the P. In the following I will explain the meaning of the labels used to identify the semantic-syntactic values connected with each preposition (see chapter 4).

- STATIVO: this label refers to a static position.

In (27) there is an example for the value STATIVO:

(27) “questo qui tanto l’ho già a scuola” Camilla; 030409

- MOTO A LUOGO: this label refers to a movement that has a specific direction.

In (28) there is an example for the value MOTO A LUOGO:

(28) “vai nel pozzo vai nel pozzo” Camilla; 030409

- LOCATIVO: this label refers to a “space”. I assigned this value when children's productions were not clear, and I was not able to understand whether children were speaking about a static location or a movement. Therefore, when I could not choose between the value STATIVO and the value MOTO A LUOGO, I used the more generic value LOCATIVO.

In (29) there is an example for the value LOCATIVO:

(29) “...tta (:questa) nel fonno (:forno)” Diana; 020613

- MOTO DA LUOGO: this label refers to a movement that has a starting point.

In (30) there is an example for the value MOTO DA LUOGO:

(30) “(.) ndato via da qui” Camilla; 020206

- MOTO PER LUOGO: this label refers to a movement that passes through a place.

In (31) there is an example for the value MOTO PER LUOGO:

(31) “io passo daa porta” Camilla; 020206

- SPECIFICAZIONE: I used the value SPECIFICAZIONE for all the prepositions that I could not connect to a more specific value.

In (32) there is an example for the value SPECIFICAZIONE:

(32) “guarda mamma, gua’ l’abelo di Natale” Rosa; 030323

- POSSESSO: this label refers to the owner of an object.

In (33) there is an example for the value POSSESSO:

(33) “eh tieni, la mamma di Bambi!” Marco; 020329

- UNIONE: this label refers to the union of different elements.

In (34) there is an example for the value UNIONE:

(34) “il xxx col latte” Elisa; 011004

- COMPLEMENTATORE: this label was used for the complementizers connected to a verb in children’s productions.

In (35) there is an example for the value COMPLEMENTATORE:

(35) “serve per dormire?” Marco; 020111

- PARTITIVO: this label refers to the set of which we take a part.

In (36) there is an example for the value PARTITIVO:

(36) “perchè gli fai un pò di posto” Elisa; 011119

- DESTINATARIO: this label refers to the recipient of the action.

In (37) there is an example for the value DESTINATARIO:

(37) “un bacio a mamma” Gregorio; 020029

- COMITATIVO: this label refers to people that are together. I used this label also for animals when they are in group, or for groups of people and animals.

In (38) there is an example for the value COMITATIVO:

(38) “il lupo con le caprette” Marco; 020302

- AGENTE: this label refers to the person who does an action.

In (39) there is an example for the value AGENTE:

(39) “Mina, I biscotti della nonna!” Elisa; 011004

- PAZIENTE: this label refers to people or objects that are under the control of another people.

In (40) there is an example for the value PAZIENTE:

(40) “e il cacciatore hanno sparato alla mamma” Marco; 020329

- ESPERIENTE: this label refers to the person that feels an emotion or lives a situation.

In (41) there is an example for the value ESPERIENTE:

(41) “cosa fa paura al lupo” Raffaello; 020906

- STRUMENTO: this label refers to the instrument used to do something.

In (42) there is an example for the value STRUMENTO:

(42) “papa vuoi giocare con questo?” Camilla; 021117

- MODO: this label refers to how an action can be performed.

In (43) there is an example for the value MODO:

(43) “giochiamo per finta” Marco; 020027

- AMBIGUO: I used the value AMBIGUO for all the prepositions in children's productions that I could not connect to a specific meaning.

In (44) there is an example for the value AMBIGUO:

(44) “...una malapancia di bimba la vuole...” Camilla; 030409

- FINE: this label refers to the purpose of an action or object.

In (45) there is an example for the value FINE:

(45) “golfs (:golf), la palla da golft (:golf)” Marco; 020302

- TEMPORALE: this label refers to the time, that can be expressed in different ways, using different words.

In (46) there is an example for the value TEMPORALE:

(46) “voglio fare il gioco di prima” Camilla; 030409

- MATERIA: this label refers to the material of an object.

In (47) there is an example for the value MATERIA:

(47) “I sandalini di faglia (:paglia)” Diana; 011107

- QUALITA’: this label refers to the quality of an object, where “quality” means the feature that distinguishes that object.

In (48) there is an example for the value QUALITA’:

(48) “...io son(o) un cavoletto alla fragola” Marco; 020302

- QUANTITA’: this label refers to a quantity. It refers to the number of the elements of a group.

In (49) there is an example for the value QUANTITA’:

(49) “di più” Marco; 020027

- INTERIEZIONE: this label refers to exclamations produced by the children.

In (50) there is an example for the value INTERIEZIONE:

(50) “può daci (:darsi) di sì” Marco; 020000

- SECONDO TERMINE DI PARAGONE: this label refers to the second term of a comparison. In a comparison there are at least two elements: the second term of the comparison is usually introduced by a preposition. I connected with this preposition the semantic-syntactic value SECONDO TERMINE DI PARAGONE.

In (51) there is an example for the value SECONDO TERMINE DI PARAGONE:

(51) “questo (.) più bello di quello” Camilla; 020619

Finally, there are also values connected with the lexical preposition SENZA or with the combination made with this lexical preposition (SENZA DI). In particular, the values connected with this preposition express a negation of another value:

- NEG-COMITATIVO: this label expresses a negation of the value COMITATIVO.

In (52) there is an example for the value NEG-COMITATIVO:

(52) “...zenza (:senza) di me” Marco; 020211

- NEG-QUALITA’: this label expresses a negation of the value QUALITA’.

In (53) there is an example for the value NEG-QUALITA’:

(53) “teta (:senza) giuco (:guscio)” Marco; 010915

- NEG-STRUMENTO: this label expresses a negation of the value STRUMENTO.

In (54) there is an example for the value NEG-STRUMENTO:

(54) “senza pi(s)tola?” Marco; 020127

- NEG-UNIONE: this value expresses a negation of the value UNIONE.

In (55) there is an example for the value NEG-UNIONE:

(55) “adesso m metto i guanti, poi senza guanti” Camilla; 020406

18- NOTE: In the last column cells I wrote the expression “Retto da nome” only when in the productions there were:

- 1) Complementizers within a DP phrase

In (56) there is an example:

(56) “...ora di dormire” Elisa; 011119

- 2) PP phrases within a DP phrase (we refer to productions in which the PP phrase is closely connected to the DP phrase and cannot be substituted for another phrase)

In (57) there is an example:

(57) “perchè gli fai un pò di posto” Elisa; 011119

CHAPTER 3

3.1 A first overview

In this chapter I tried to answer the first (Q1) and the second (Q2) research questions:

Q1: Do children acquire before functional or lexical prepositions?

Q2: Is there a specific order of appearance of prepositions in the group composed of functional prepositions and in the group composed of lexical prepositions?

In this chapter I will show the results obtained from the analysis of the collected data. In particular, as shown in the previous chapters, these observations have been made thanks to the pivot tables built with Excel.

Figure 1 shows a first overview of the number of prepositions found in the entire dataset, regardless of the children's age. It's interesting to observe that the number of functional prepositions is higher than the number of lexical prepositions.

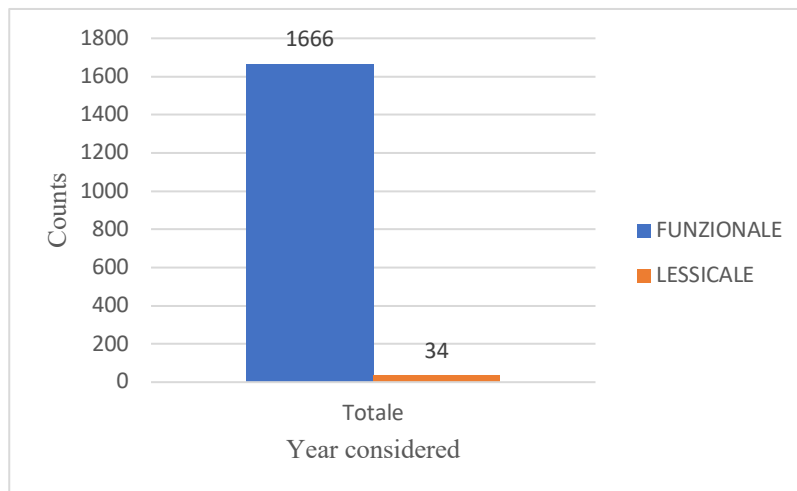


Figure 1: Overall number of functional and lexical prepositions produced during the three years by the children.

The same trend can also be found analysing each year (Figure 2) and month (Figure 3) of the children's life individually.

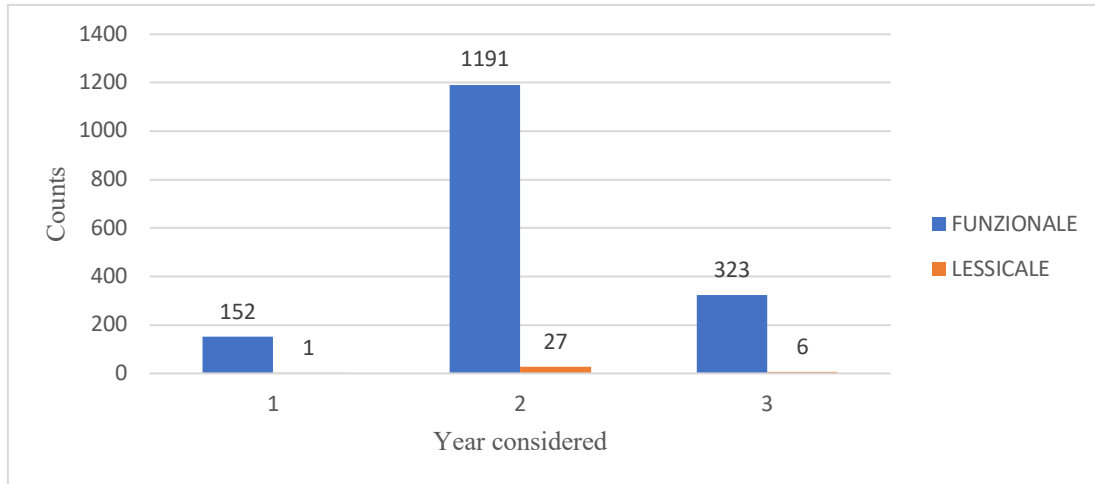


Figure 2: Number of functional and lexical prepositions produced by the children in each year considered.

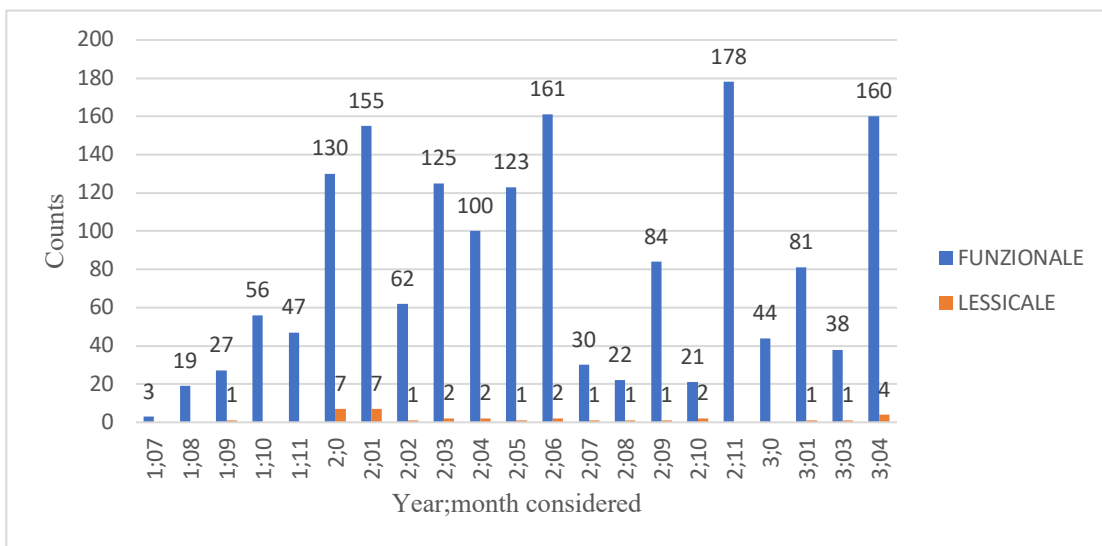


Figure 3: Number of functional and lexical prepositions produced by the children in each month analysed.

The last two figures, in particular, show that the first prepositions produced by children are the functional ones. They are produced when children are 1;07. The production of lexical prepositions is delayed as it appears at age 1;09.

Before showing the results of the analysis of the children’s productions, it is important to explain the terms that will be used in the following sections. Children were recorded from the age of 1;05 to the age of 3;04. Therefore, we have analysed three different years of their life. The age named “first year” goes from 1;05 to 1;11, and it refers to the children’s second year of life. In the similar way, the age named “second year”, that goes from 2;0 to 2;11, refers to the children’s third year of life; and the age named “third year”, that goes from 3;0 to 3;04, refers to the children’s fourth year of life.

3.2 Analysis of the children’s productions during the first year

In this section I analyse the children’s productions at age 1;1-1;11.

The first observation to be made is that children aged one do not always produce prepositions when needed.

Figure 4 shows both the percentages of productions in which the preposition is not lexicalized (37,30%) and in which the preposition is pronounced by the children (62,70%).

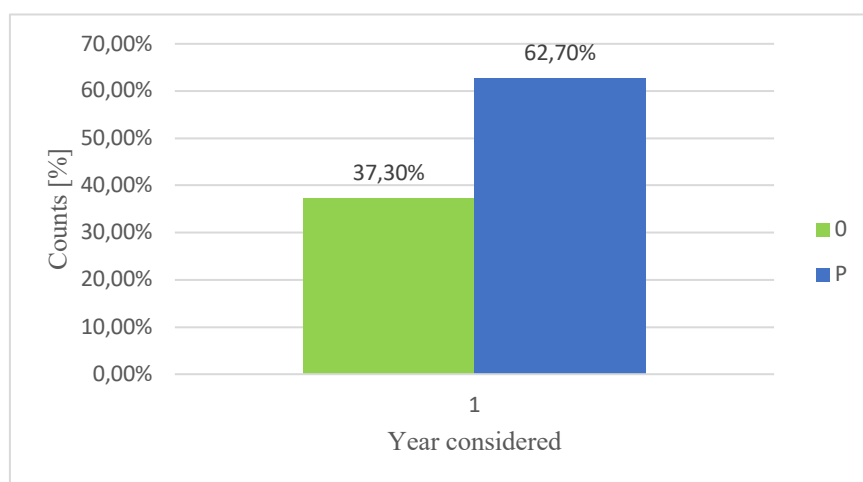


Figure 4: Percentage of absent and present prepositions during the first year.

Following this bipartite typology, I will divide this section by presenting firstly the cases in which a Preposition (P) is not lexicalized, and finally the cases in which a Preposition (P) is present.

3.2.1 Analysis of the productions without preposition (e.g “salo (:salgo) titetta (:bicicletta))¹².

Let us begin our analysis with the children’s productions¹³ in which there is no preposition overtly realized (but it should have been there).

Figure 5 reports a monthly¹⁴ based analysis of the children’s first year:

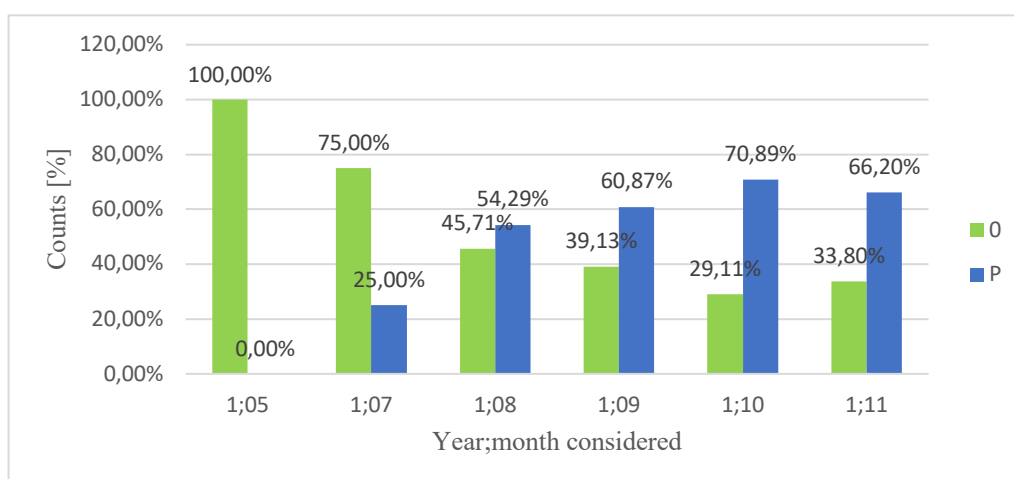


Figure 5: Percentage of absent and present prepositions in each month during the first year.

¹² Marco; 011012.

¹³ For these productions, in the Excel document I wrote 0 (zero) in: (I) The ninth column, named “PRESENZA-ASSENZA”; (II) The tenth column, named “TIPO P”; (III) The eleventh column, named “P”, where P stands for preposition.

¹⁴ It is very important to remember that, in the data collected, there are no productions for all the months. For example, the first production we have analysed was produced by a child when he was 1;05.

In particular, Figure 5 shows that at 1;05 there is the total absence of prepositions. In this phase of children’s life, the number of P is rather low than the number of zeros¹⁵. Later, when the children grow up, the number of zeros decreases and different prepositions (mainly the functional ones) start to appear.

It is interesting to analyse each production individually to identify which prepositions should have been pronounced by the children to consider their productions as adult-like ones.

This analysis is reported in Figure 6.

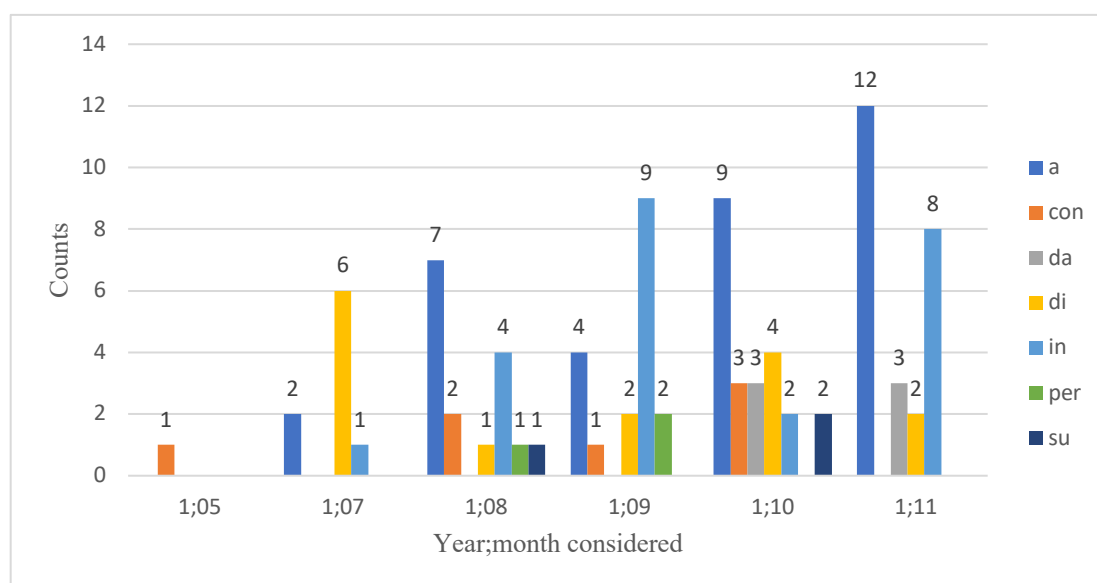


Figure 6: Prepositions that children should have produced in the first year in the productions in which prepositions are not overtly lexicalized.

Overall, children should have used thirty-four A, seven CON, six DA, fifteen DI, twenty-four IN, three PER, three SU during this year in their productions to be considered adult-like.

3.2.2 Analysis of the children’s productions containing lexicalized preposition

Let us analyse now the children’s productions in which prepositions are overtly lexicalized.

¹⁵ The expression “number of zeros” refers to the number of prepositions not overtly lexicalized in children’s productions.

The prevalence of functional prepositions over lexical ones is shown in Figure 7 and Figure 8.

The first figure shows the data of the entire first-year dataset, while the second figure exhibits each month of the first year individually.

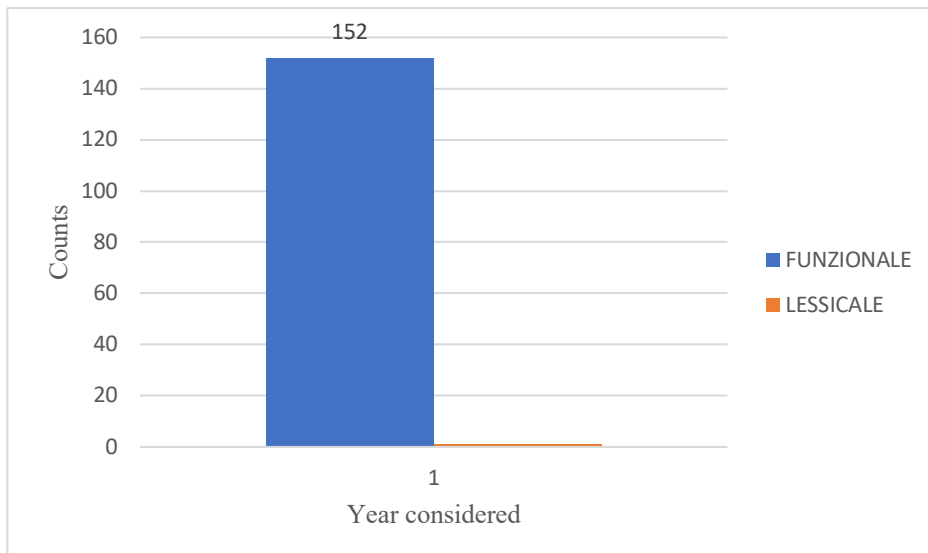


Figure 7: Number of functional and lexical prepositions produced by the children in the first year.

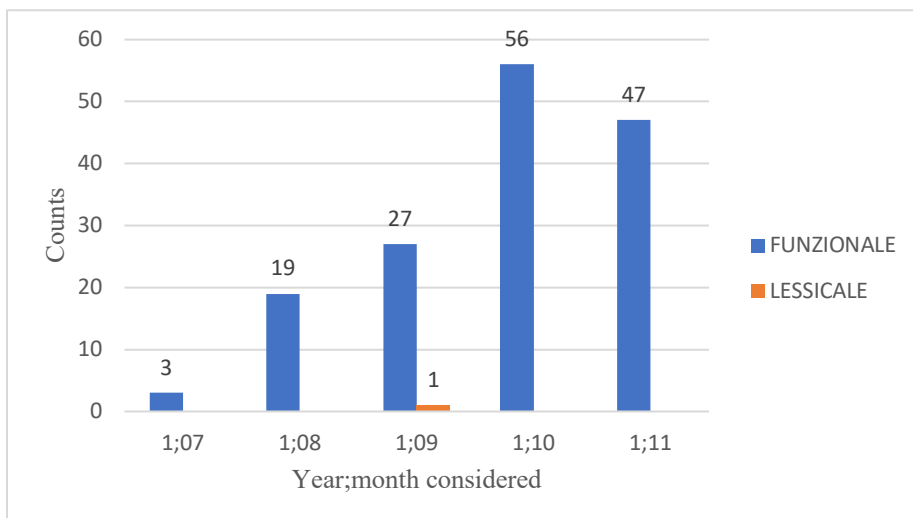


Figure 8: Number of functional and lexical prepositions produced by the children in each month in the first year.

The number and the type of the different prepositions produced in the first year can be observed in Figure 9.

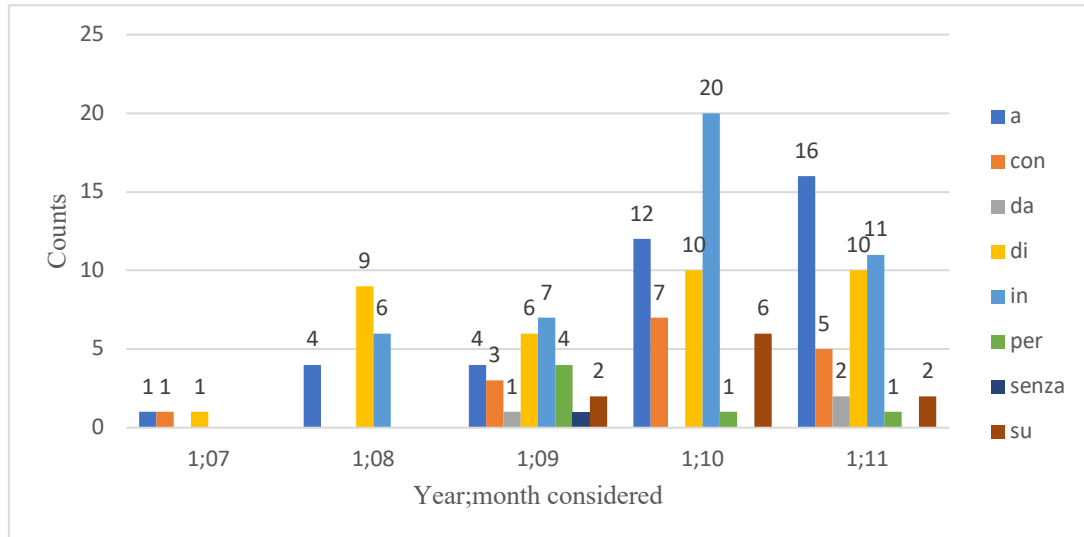


Figure 9: Functional and lexical prepositions produced by the children in each month in the first year.

It is possible to count in children's productions thirty-seven A, sixteen CON, three DA, thirty-six DI, forty-four IN, six PER, one SENZA, and ten SU.

If we perform a monthly based analysis of the prepositions produced in this year, we can identify in which month a new preposition is produced for the first time:

- One year and seven months: there is the first production of A, CON and DI.
- One year and eight months: there is the first production of IN.
- One year and nine months: there is the first production of DA, PER, SU and SENZA.

An interesting aspect to notice is that the first lexical preposition produced is SENZA. This preposition appears for the first time at 1;09. Future lexical prepositions will not be produced until the following year, when children will have officially begun their third year of life.

In order to better understand the order of appearance of prepositions in children's productions, we have also analysed the day in which prepositions start to appear in addition to the year-month analysis used in this section.

For this reason, I considered a periodization of children's age in which the age is classified year-month-day. Thanks to this modification, I found the following correlations for functional prepositions:

- One year and seven months: in the file named 010707¹⁶ (children were one year, seven months and seven days old) there is the production of A, CON, and DI. All these prepositions are produced in the same gaming session.
- One year and eight months: in the file named 010817 (children were one year, eight months and seventeen days old) there is the production of IN.
- One year and nine months: in the file named 010901 (children were one year, nine months, and only one day old) there is the production of PER. In the file named 010915 (children were one year, nine months and fifteen days old) there is the production of SU. In the file named 010924b (children were one year, nine months and twenty-four days old) there is the production of DA.

The order of appearance of the functional prepositions in the first year is - accordingly- the following one:

- A, CON, DI: it is important to remember that the precise order of acquisition cannot be established, because of lack of data.
 - IN
 - PER
 - SU
 - DA
- } There are only few days between gaming sessions in which these three prepositions were produced.

¹⁶ As said in chapter 2, the files in CHILDES are named with a combination of numbers. These numbers represent the children's age (year-month-day) when the gaming sessions were recorded.

Instead, for lexical prepositions the following fact can be established:

- One year and nine months: there is only SENZA, which is a preposition produced by Marco, the third child analysed. In particular, this preposition can be found in the file named 010915 (the child was one year, nine months and fifteen days old when the gaming session was recorded).

3.3 Analysis of the children's productions during the second year

This section reports the results of the analysis of the children's productions during the second year (third year of their life).

Once again, I will divide this section by firstly analysing the productions in which prepositions are missing, and then the productions in which prepositions are present.

Children aged two, in fact, do not always produce prepositions when needed.

Figure 10 shows both the percentages of the productions in which the preposition is missing (10,51%), and in which the preposition is overtly lexicalized by the children (89,49%).

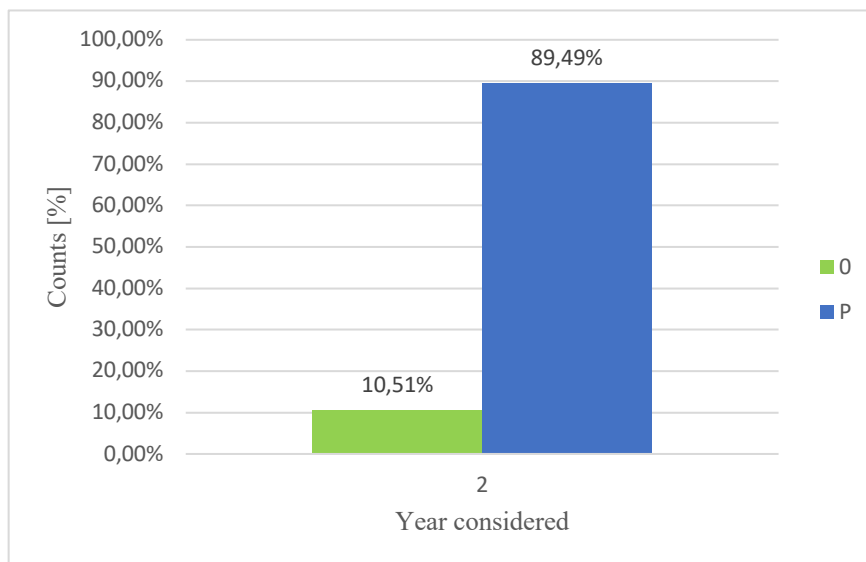


Figure 10: Percentage of absent and present prepositions during the second year.

3.3.1 Analysis of the productions without preposition (e.g. “(s)paro la mamma”)¹⁷

Let us start with the analysis of the productions¹⁸ without preposition.

Figure 11 reports the results of a monthly based analysis of children’s productions in the second year.

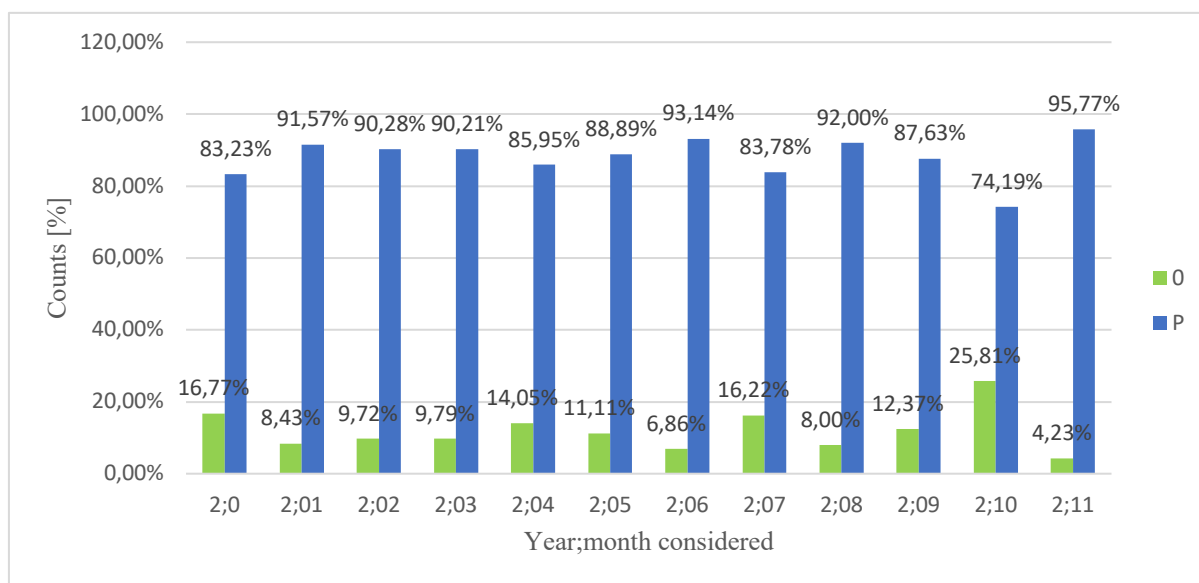


Figure 11: Percentage of absent and present prepositions in each month during the second year.

It’s clear that in each month considered the number of productions with prepositions is higher than the number of productions without prepositions.

¹⁷ Marco; 020000.

¹⁸ For these productions in the Excel document I wrote 0 (zero) in: (I) The ninth column, named “PRESENZA-ASSENZA”; (II) The tenth column, named “TIPO P”; (III) The eleventh column, named “P”, where P stands for preposition.

A comparison between the total amount of second- and first-year data can be found in Figure 12. It is evident that the number of productions without preposition in the second-year data set is lower if compared with the one in the first-year data set.

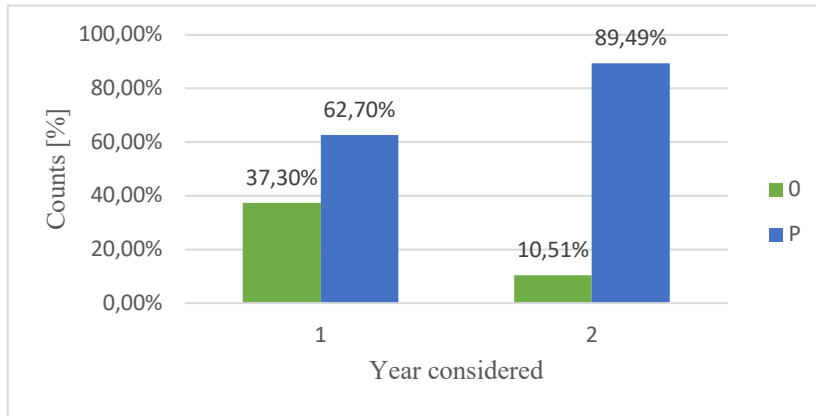


Figure 12: A comparison between the percentage of absent and present prepositions in the first and the second year.

Therefore, the number of productions with preposition is increased¹⁹ during the second year.

Next, I investigated, for all these cases without preposition, which preposition should have been inserted for the productions to be adult-like.

This analysis is reported in Figure 13.

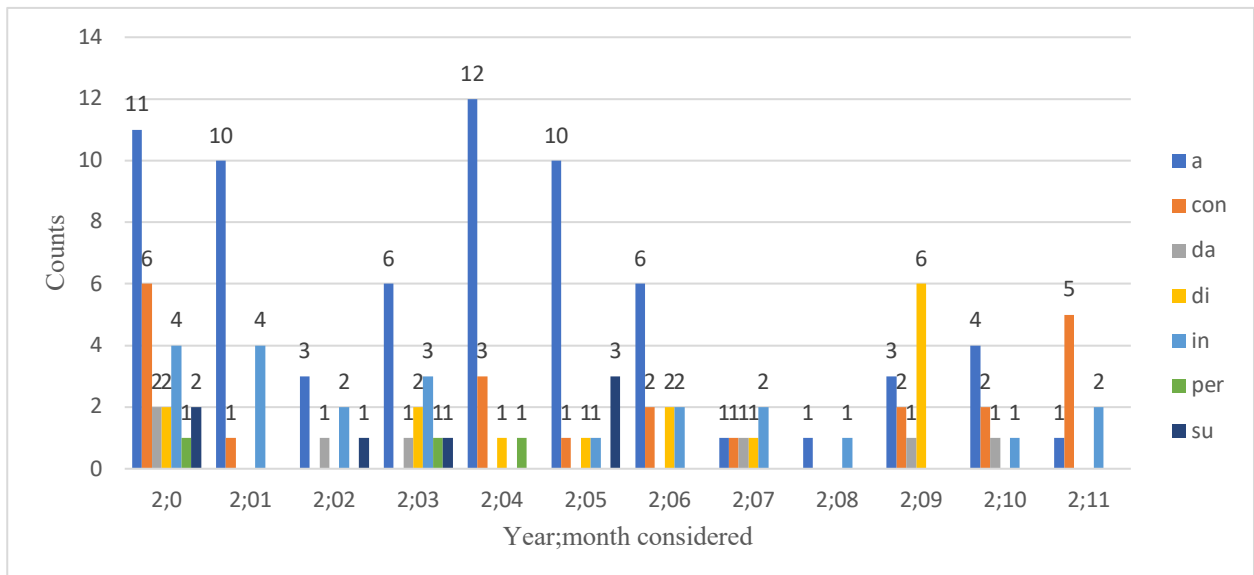


Figure 13: Prepositions children should have produced in the second year in the productions in which prepositions are not overtly lexicalized.

¹⁹ This analysis holds regardless I could not analyse each month of the first year individually.

Therefore, in the second year the following prepositions should have been produced: sixty-eight A, twenty-three CON, seven DA, fifteen DI, twenty-two IN, three PER, seven SU.

3.3.2 Analysis of the children’s productions containing lexicalized preposition

Let us now focus on the children’s productions in which prepositions are actually present in the second year. First of all, in these productions the number of the functional prepositions is higher than the number of the lexical ones, as easily observed in Figure 14 and Figure 15. The first figure refers to the entire second-year data set while the second figure performs a monthly based analysis of the same data set.

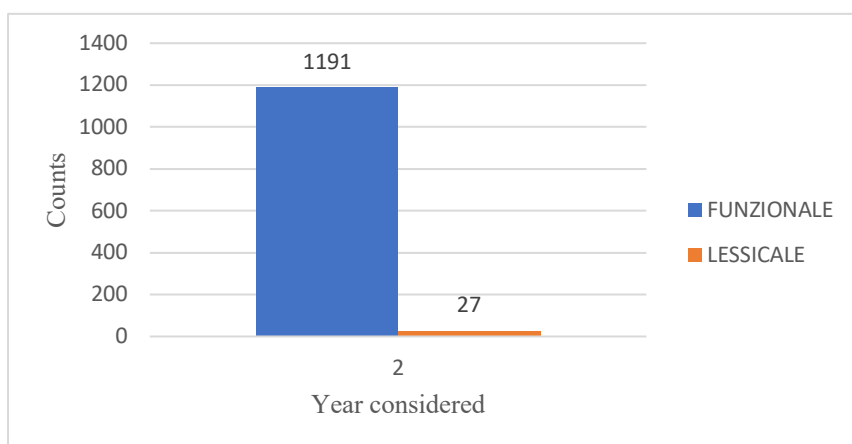


Figure 14: Number of functional and lexical prepositions produced by the children in the second year.

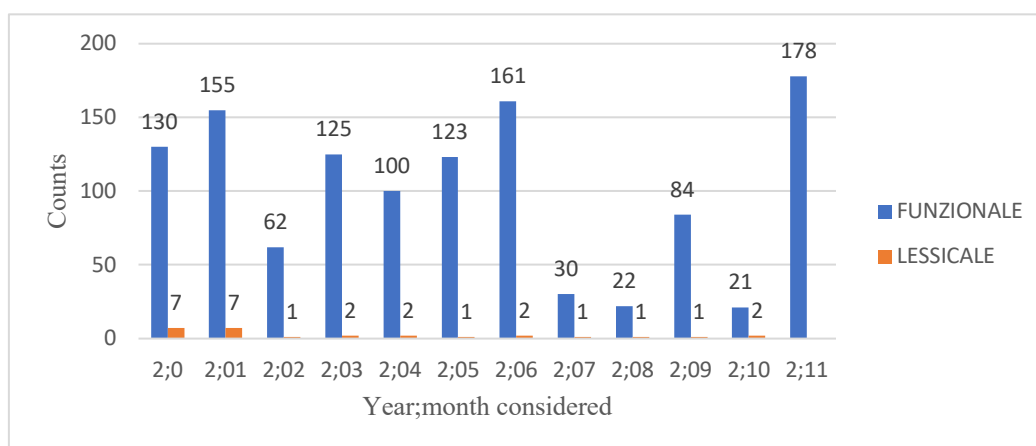


Figure 15: Number of functional and lexical prepositions produced by the children in each month in the second year.

If compared with the first-year data set, Figure 15 shows an interesting feature: the number of lexical prepositions²⁰ is increased in the second year.

The number and the type of prepositions produced by the children in the second year is shown in Figure 16 and in Figure 17.

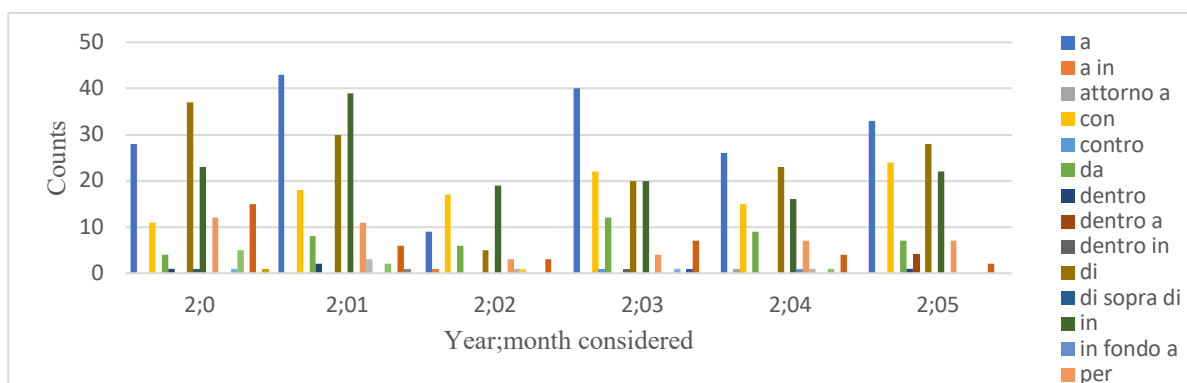


Figure 16: Prepositions produced by the children between 2;0 and 2;05.

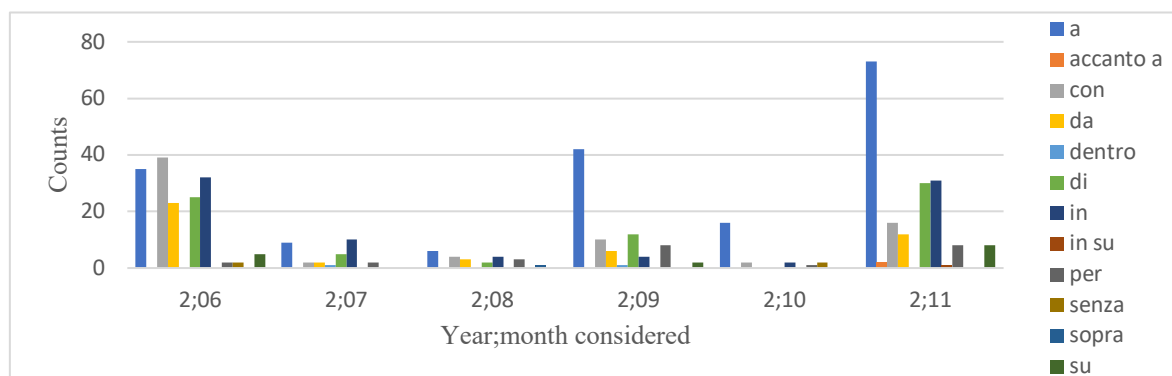


Figure 17: Prepositions produced by the children between 2;06 and 2;11.

The list of all types of prepositions presented in the second-year productions is the following: 322 A, one A IN (FUN-FUN in the Excel document), two ACCANTO A (LESSIC FUN in the Excel document), one ATTORNO A (LESSIC FUN in the Excel document), one hundred and eighty CON, one CONTRO, ninety-two DA, six DENTRO, four DENTRO A (LESSIC FUN in the Excel document), one DENTRO IN (LESSIC FUN in the Excel document), two hundred and seventeen DI, one DI SOPRA DI (FUN

²⁰ The comparison between the first- and the second-year data set is shown in Figure 18.

LESS FUN in the Excel document), two hundred and twenty-two IN, one IN FONDO A (FUN LESS FUN in the Excel document), one IN SU (FUN-FUN in the Excel document), sixty-eight PER, nine SENZA, one SENZA DI (LESSIC FUN in the Excel document), three SOPRA, eight SOTTO, one SOTTO A (LESSIC FUN in the Excel document), fifty-two SU, one VICINO A (LESSIC FUN in the Excel document), one VICINO TRA (LESSIC FUN in the Excel document).

This list shows a new interesting aspect that starts to appear for the first time in the second-year children's productions: the production of combinations of functional and lexical prepositions. These combinations will be further studied in section 3.6.

If we perform a monthly based analysis of the prepositions produced in this year, we can identify in which month a new preposition (or a new combination of prepositions) is produced for the first time:

- Two years and zero months: there is the first production of DENTRO, SOPRA, SOTTO, DI SOPRA DI, VICINO TRA.
- Two years and one month: there is the first production of VICINO A.
- Two years and two months: there is the first production of A IN, and SENZA DI.
- Two years and three months: there is the first production of CONTRO, DENTRO IN, SOTTO A.
- Two years and four months: there is the first production of ATTORNO A, and IN FONDO A.
- Two years and five months: there is the first production of DENTRO A.
- Two years and eleven months: there is the first production of ACCANTO A, and IN SU.

In order to better understand the order of appearance of prepositions in children's productions, we have analysed the day in which prepositions start to appear, in addition to the year-month analysis used in this section. I considered a periodization of children's age in which the age was classified year-month-day.

First of all, for the functional prepositions this analysis shows that there are no new prepositions that occur in this year; therefore, there are no substantial differences compared to the first-year productions analysis reported in section 3.2.2.

Differently, the lexical prepositions produced during the second year are more frequent if compared with the lexical ones produced during gaming sessions in the first year. This fact is shown in Figure 18.

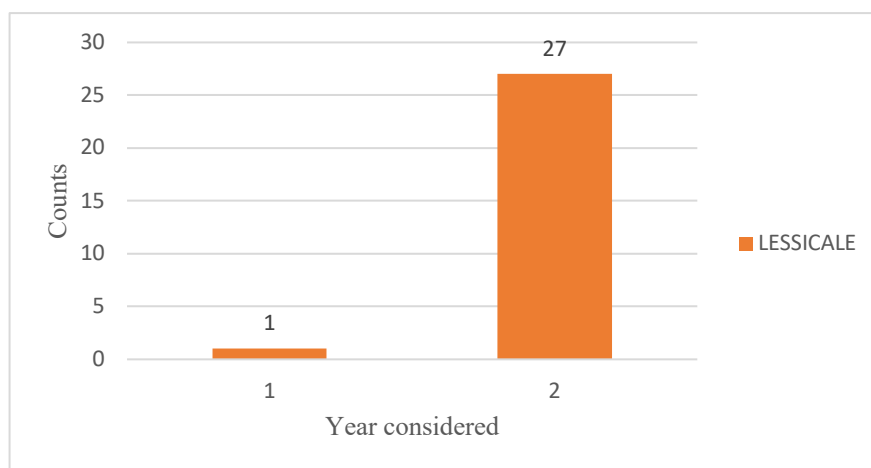


Figure 18: A comparison between the lexical prepositions produced by the children in the first and in the second year.

The acquisition order of lexical prepositions can be understood considering the months and the days in which children were recorded:

- Two years and zero months: in the file named 020000 (children were two years, zero months and zero days old) there is the production of SOTTO. In the file named 020014 (children were two years, zero months and fourteen days old) there is the production of DENTRO and SOPRA (in this case there is no possibility to identify which of the two lexical prepositions is produced first).
- Two years and three months: in the file named 020314 (children were two years, three months and fourteen days old) there is the production of CONTRO.

The acquisition order of lexical prepositions in the second year follows as:

- SOTTO²¹
- DENTRO, SOPRA: it is important to remember that the precise order of acquisition cannot be established, due to the lack of relevant data.
- CONTRO

3.4 Analysis of the children's productions during the third year

In this section I will analyse the children's productions during the third year, that refers to the children's fourth year of life.

As done for the productions produced during the first two years, we can divide the analysis in two parts. The first one concerns the analysis of the productions in which there is no preposition (but it should have been there), while the second one concerns the analysis of the productions where instead prepositions are present.

Children aged three, in fact, do not always produce prepositions when needed.

Figure 19 shows both the percentages of the productions in which the preposition is missing (1,75%), and in which the preposition is overtly realized by the children (98,25%).

²¹ SOTTO can be found in a registration that took place a few days before the registration in which the prepositions DENTRO and SOPRA were pronounced.

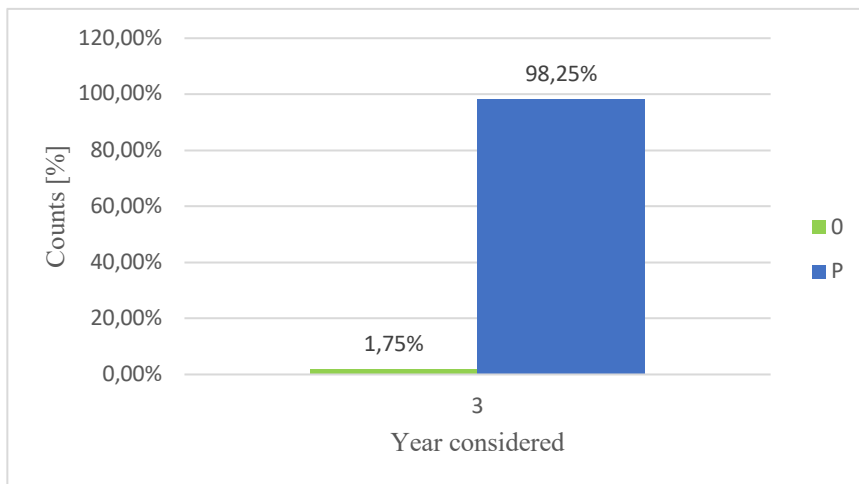


Figure 19: Percentage of absent and present prepositions during the third year.

3.4.1 Analysis of the productions without preposition (e.g. “via qui”)

Let us start with the analysis of the productions²² in which there is no preposition overtly realized (but it should have been there).

For these productions we cannot speak about acquisition, since the preposition is actually missing from the productions.

²² For these productions, in the Excel document I wrote 0 (zero) in: (I) The ninth column, named “PRESENZA-ASSENZA”; (II) The tenth column, named “TIPO P”; (III) The eleventh column, named “P”, where P stands for preposition.

Figure 20 reports a monthly²³ based analysis of the children’s productions in the third year:

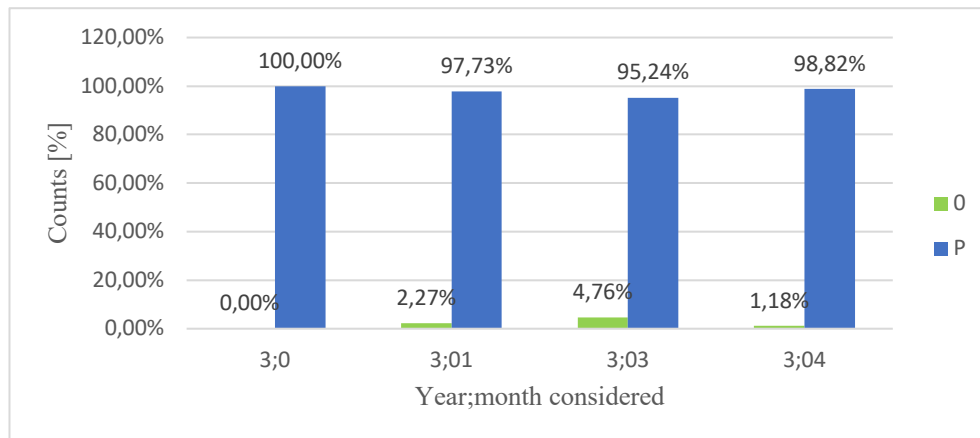


Figure 20: Percentage of absent and present prepositions in each month during the third year analysed.

It is clear that, in each month considered, the number of productions with prepositions is higher if compared with the number of productions without prepositions.

Figure 21 compares the data of Figure 19 with data of Figure 4 and Figure 10 in section 3.2 and section 3.3, respectively. It is evident that the number of productions without preposition is significantly lower in the third year²⁴ compared to the other two years.

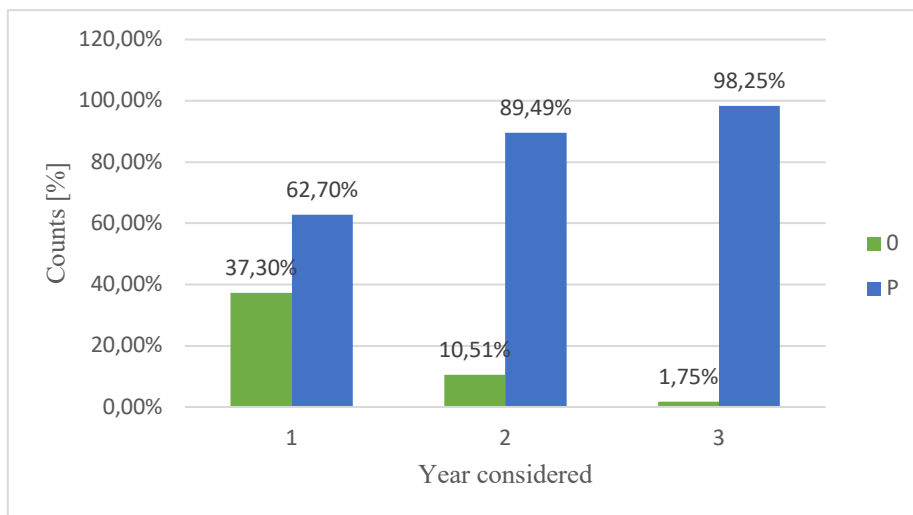


Figure 21: A comparison between the percentages of absent and present prepositions in the third year and the previous years.

²³ For the third year the last game sessions are recorded when children are 3;04, for this reason we don't have data for all the months of this year.

²⁴ The number of analysed months is lower compared to the previous year: for the third year we do not have all the months, but only four months, because the last gaming sessions were recorded when children were 3;04. The number of missing prepositions is remarkably low anyway.

Children, in their fourth year of life, can use a higher number of prepositions; and they are able to produce more complex productions.

In a similar way to what was done in the previous sections, it is interesting to observe, for all these cases without preposition, which preposition should have been inserted for the productions to be adult-like. This is reported in Figure 22.

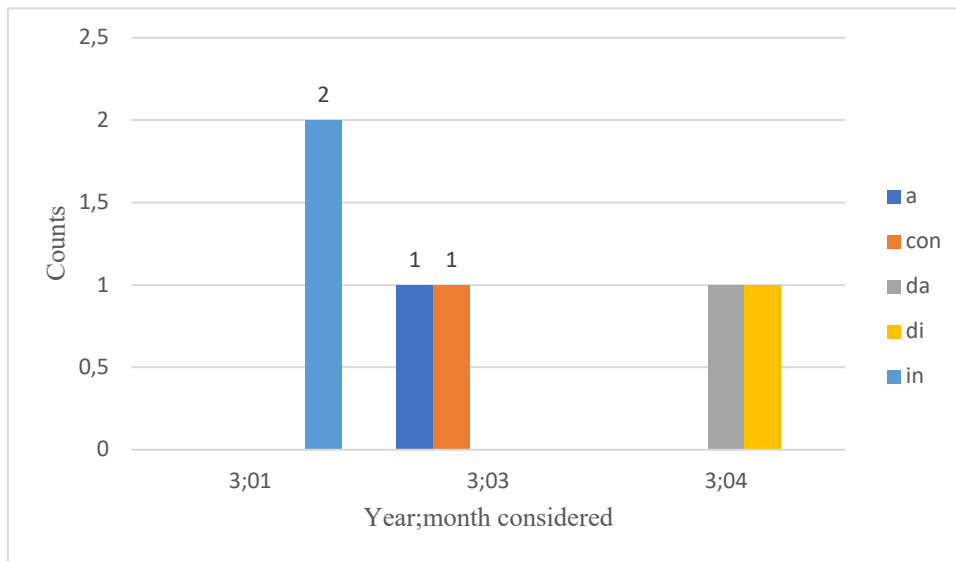


Figure 22: Prepositions children should have produced in the third year in the productions in which prepositions are not overtly lexicalized.

In the third year, children should have produced: one A, one CON, one DA, one DI, two IN overall.

3.4.2 Analysis of the children's productions containing lexicalized preposition

Let us now analyse the children's productions in which prepositions are actually present.

Figure 23 and Figure 24 show that, during the third year, in the productions with prepositions there is a significant prevalence of functional prepositions if compared with the lexical ones.

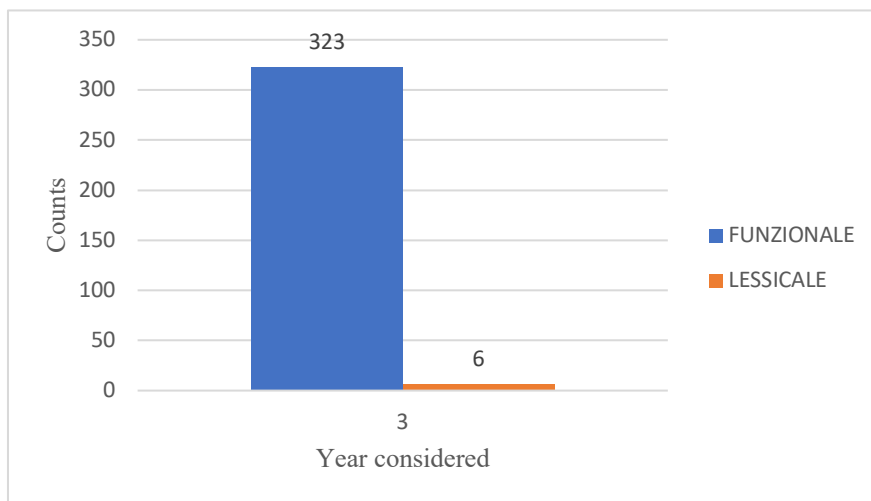


Figure 23: Number of functional and lexical prepositions produced by the children in the third year.

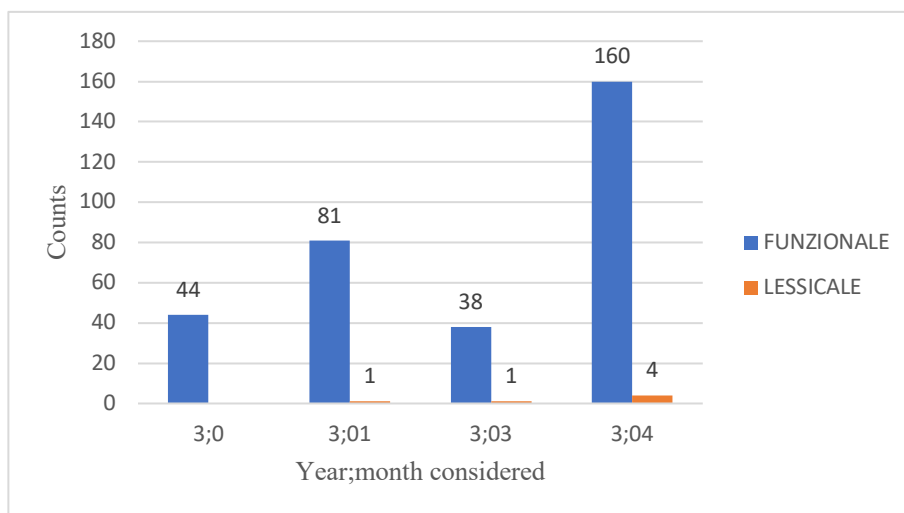


Figure 24: Number of functional and lexical prepositions produced by the children in each month in the third year.

The number and the type of prepositions produced by the children in the third year is shown in Figure 25:

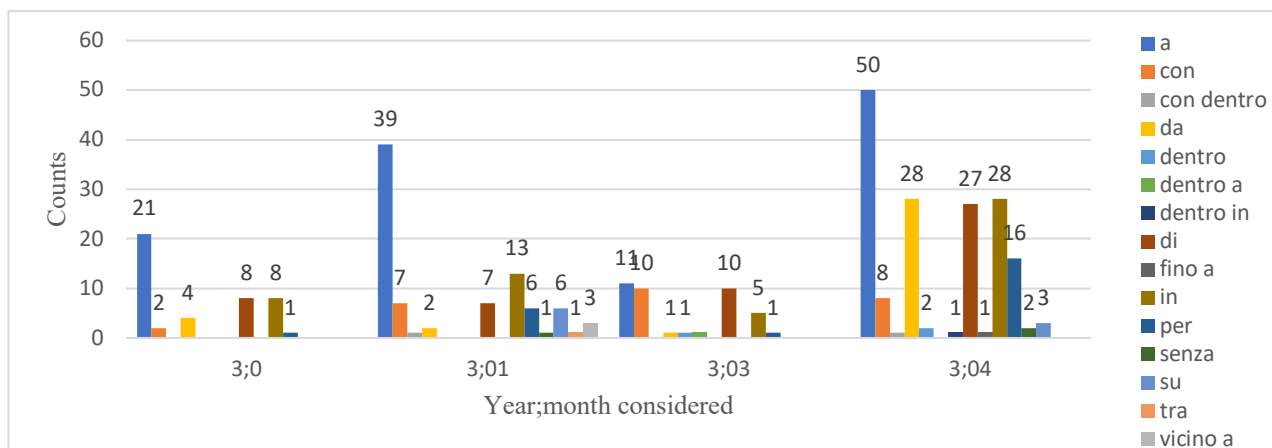


Figure 25: Functional and lexical prepositions produced by the children in each month in the third year.

In particular, during the third year we have the production of: one hundred and twenty-one A, twenty-seven CON, two CON DENTRO (FUN LESS in the Excel document), thirty-five DA, three DENTRO, one DENTRO A (LESSIC FUN in the Excel document), one DENTRO IN (LESSIC FUN in the Excel document), fifty-two DI, one FINO A (LESSIC FUN in the Excel document), fifty-four IN, twenty-four PER, three SENZA, nine SU, one TRA, three VICINO A (LESSIC FUN in the Excel document).

If we perform a monthly based analysis of the prepositions produced in the third year, we can identify in which month a new preposition (or a combination²⁵ of prepositions) is produced for the first time:

- Three years and one month: there is the first production of TRA.
- Three years and four months: there is the first production of FINO A.

²⁵ Remember that these combinations will be further studied in section 3.6.

In order to better understand the order of appearance of prepositions, instead to perform a year-month analysis, we have also analysed the day in which the prepositions start to appear.

For the functional ones:

- Three years and one month: in the file named 030100 (children were three years, one month and zero days old) there is the production of TRA.

In the case of lexical prepositions, however, there are no new prepositions that appear in these months.

3.5 Intermediate summary

In this section I report a summary of the results obtained in sections 3.2, 3.3 and 3.4. More precisely, I will summarize the analysis done on children's productions in which:

- Prepositions are not overtly lexicalized
- A functional preposition is present
- A lexical preposition is present

In section 3.2.1 we showed that, during the first year, more precisely when children are 1;05 years old, prepositions are not overtly lexicalized by children. In these cases, children do a sort of juxtaposition²⁶ of words.

Starting from one year and seven months, the productions with preposition start to increase and therefore the number of productions without preposition decrease.

The first prepositions appear when children are one year and seven months old. These prepositions are: A, CON and DI.

The preponderance of productions without preposition is evident at least up to one year and nine months (see Figure 5). When children are one year and ten months, the

²⁶ This term is not used in a theoretical way; it is only a hypothesis.

number of productions without preposition starts to decrease. A remarkable increase of functional prepositions is also noted when children approach two years old (see Figure 11). Moreover, when children approach to be two years old, there is also the appearance of lexical prepositions (see Figure 15). During the first year, more precisely when children are 1;09, is pronounced only one lexical preposition: SENZA.

As shown in the previous sections, it is possible to identify an acquisition order for the functional and the lexical prepositions, respectively. More precisely, we propose the following order for the functional prepositions:

- A, CON, DI: these prepositions were produced when children were one year, seven months and seven days old.
- IN: this preposition was produced when children were one year, eight months and seventeen days old.
- PER: this preposition was produced when children were one year, nine months and one day old.
- SU: this preposition was produced when children were one year, nine months and fifteen days old.
- DA: this preposition was produced when children were one year, nine months and twenty-four days old.
- TRA: this preposition was produced when children were three years, zero months and zero days old.

For the lexical prepositions, instead, the order suggested is:

- SENZA: this preposition was produced when children were one year, nine months and fifteen days old.
- SOTTO: this preposition was produced when children were two years, zero months and zero days old.
- DENTRO, SOPRA: these prepositions were produced when children were two years, zero months and fourteen days old.
- CONTRO: this preposition was produced when children were two years, three months and fourteen days old.

3.6 Analysis of the productions with combinations of prepositions

An important point that we have mentioned in section 3.3.2 and in section 3.4.2 concerns the combinations of prepositions. Those start to appear in children's productions during their second year of life.

In the following section we will analyse the combination of functional and lexical prepositions and we will not consider the combinations of two functional prepositions.

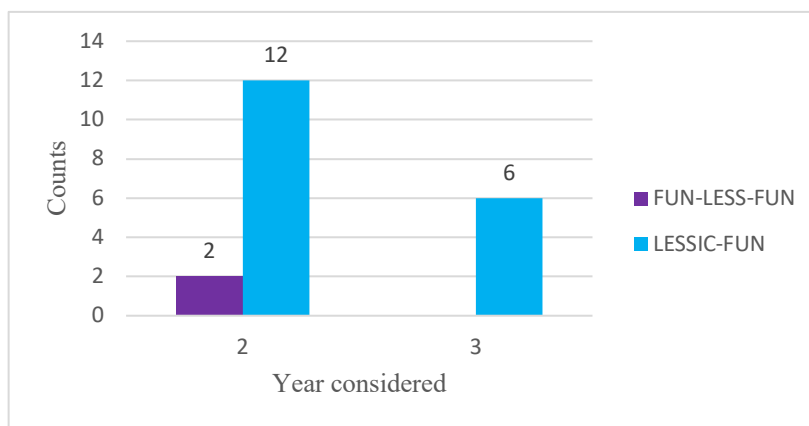


Figure 26: Type of combinations produced by the children in the years.

Figure 26 and Figure 27 show the number and the type of combinations of prepositions produced by the children in their second and third year.

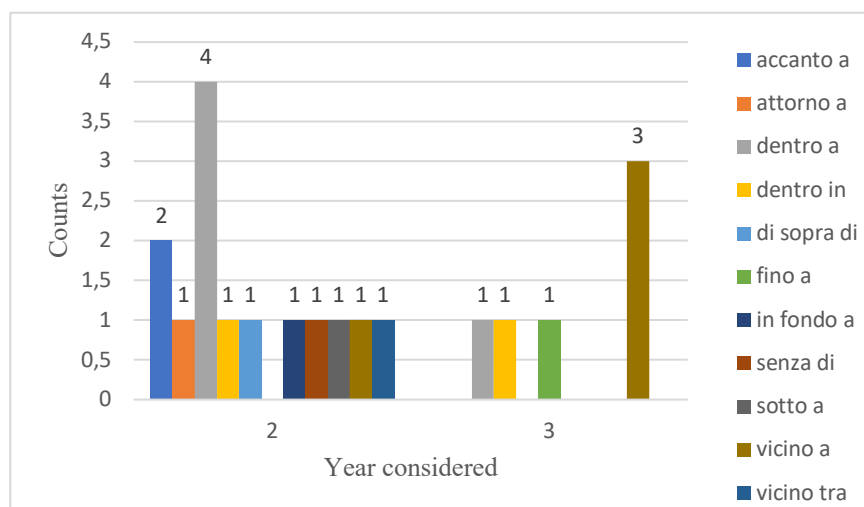


Figure 27: Combinations of prepositions produced by the children in the years.

More precisely, the combinations of prepositions produced are the following: two ACCANTO A, one ATTORNO A, five DENTRO A, two DENTRO IN, one DI SOPRA DI, one FINO A, one IN FONDO A, one SENZA DI, one SOTTO A, four VICINO A, one VICINO TRA.

In order to better understand the order of appearance of combinations of prepositions, instead to perform a year-month analysis, we have also analysed the day in which these combinations start to appear.

For the second year we identified the following combinations:

- Two years and zero months: in the file named 020017 (children were two years, zero months and seventeen days old) there is the production of DI SOPRA DI. In the file named 020027 (children were two years, zero months and twenty-seven days old) there is the production of VICINO TRA.
- Two years and one month: in the file named 020120 (children were two years, one month and twenty days old) there is the production of VICINO A.
- Two years and two months: in the file named 020206 (children were two years, two months and six days old) there is the production of A IN. In the file named 020211 (children were two years, two months and eleven days old) there is the production of SENZA DI.
- Two years and three months: in the file named 020302 (children were two years, three months and two days old) there is the production of SOTTO A. In the file named 020315 (children were two years, three months and fifteen days old) there is the production of DENTRO IN.
- Two years and four months: in the file named 020406 (children were two years, four months and six days old) there is the production of IN FONDO A. In the file named 020426 (children were two years, four months and twenty-six days old) there is the production of ATTORNO A.
- Two years and five months: in the file named 020510 (children were two years, five months and ten days old) there is the production of DENTRO A.
- Two years and eleven months: in the file named 021112 (children were two years, eleven months and twelve days old) there is the production of ACCANTO A. In

the file named 021130 (children were two years, eleven months and thirty days old) there is the production of IN SU.

For the third year, instead, there are the following combinations:

- Three years and zero months: in the file named 030100 (children were three years, one months and zero days old) there is the production of CON DENTRO.
- Three years and four months: in the file named 030409 (children were three years, four months and nine days old) there is the production of FINO A.

This analysis shows that in the combinations of functional and lexical prepositions we can identify two different elements: 1) prepositions that children have already pronounced individually; 2) prepositions that children did not pronounce yet.

To distinguish these two groups, it is sufficient to list the prepositions that children never pronounced individually (the ones labelled as 2)). For instance: VICINO (that in this case is combined with TRA or A), FONDO (that in this case is preceded by IN and is followed by A), ATTORNO (that in this case is combined with A), ACCANTO (that in this case is combined with A), FINO (that in this case is combined with A).

For all the other cases (the ones with prepositions already pronounced by the children in the previous months), we can say that the prepositions appear in a combined form.

The combinations done with prepositions not actually used by the children can then be labelled as “blocks” or “unique groups”, because their structure is correct only if it has both the lexical and the functional part. The lexical part could not be connected to a simple article. For example, we cannot say “attorno il tavolo”, but the correct form necessarily is “attorno al tavolo”.

In these productions, children pronounce these blocks in the correct way. Only VICINO TRA represents an incorrect combination, but also in this case we can assume that the child who pronounced this combination of prepositions understood that VICINO must be connected to a specific kind of element, in particular to a functional preposition.

Another hypothesis to justify the usage of VICINO TRA could be the following one: there is a pause in the children’s speech between the lexical part and the functional

part of the combination, namely between VICINO and TRA. In this case, we shouldn't therefore consider this group of prepositions as a combination but as separate elements. Unfortunately, the missing of the audio recording does not allow to verify this hypothesis.

3.6.1 Analysis of lexical prepositions with a double structure

For now, let us leave aside the combinations we have defined in the previous section as “unique blocks” and let us analyse instead the lexical prepositions that have a double structure, namely those that allow for two types of complements: (a) DP; (b) PP with a functional preposition.

These prepositions are listed below, where we have also reported the age of the children who produced them. We will take into consideration both the lexical prepositions that appear alone (and not followed by a PP with a functional preposition), and the lexical prepositions that occur together with a functional one and create a combination.

Thanks to this summary, the functional prepositions that are connected to the lexical ones can be highlighted as follows:

- SENZA: this lexical preposition allows for a DP as complement in the file named 010915 (children were one year, nine months and fifteen days old).
- SOTTO: this lexical preposition allows for a DP as complement in the file named 020000 (children were two years, zero months and zero days old).
- DENTRO, SOPRA: these lexical prepositions allow for a DP as complement in the file named 020014 (children were two years, zero months and fourteen years old).
- DI SOPRA DI: this combination of prepositions can be found in the file named 020017 (children were two years, zero months and seventeen days old).
- SENZA DI: the lexical preposition SENZA allows for a PP with the functional preposition DI as complement in the file named 020211 (children were two years, two months and eleven days old).
- SOTTO A: the lexical preposition SOTTO allows for a PP with the functional preposition A as complement in the file named 020302 (children were two years, three months and two days old).

- CONTRO: this lexical preposition allows for a DP as complement in the file named 020314 (children were two years, three months and fourteen days old).
- DENTRO IN: the lexical preposition DENTRO allows for a PP with the functional preposition IN as complement in the file named 020315 (children were two years, three months and fifteen days old).
- DENTRO A: the lexical preposition DENTRO allows for a PP with the functional preposition A as complement in the file named 020510 (children were two years, five months and ten days old).

The list of lexical prepositions with double structure is instead reported in the following summary:

- SENZA: this preposition allows for a DP as complement when children are one year, nine months and fifteen days old; it allows for a PP with the functional preposition DI as complement when children are two years, two months and eleven days old.
- SOTTO: this preposition allows for a DP as complement when children are two years, zero months and zero days old; it allows for a PP with the functional preposition A as complement when children are two years, three months and two days old.
- DENTRO: this preposition allows for a DP as complement when children are two years, zero months and fourteen days old; it allows for a PP with the functional preposition IN as complement when children are two years, three months and fifteen days old; it allows for a PP with the functional preposition A as complement when children are two years, five months and ten days old.
- SOPRA: this preposition allows for a DP as complement when children are two years, zero months and fourteen days old; it is preceded by the functional preposition DI and simultaneously it allows for a PP with the functional preposition DI as complement when children are two years, zero months and seventeen days old.
- CONTRO: this preposition only allows for a DP as complement when children are two years, three months and fourteen days old.

For all the prepositions which allow for a double structure, i.e. DP or they can be followed by a PP with a functional preposition, there is the following sequence: in a first moment, the lexical preposition is only followed by a DP, in a second moment the combinations are built because the lexical prepositions are followed by a PP with a functional preposition.

We saw at the beginning of this chapter as in the first-year productions, more precisely when children are 1;05, there are not prepositions. In the same way, even in the combinations of prepositions, up to a specific moment -more precisely until children are two years old- there are only the lexical prepositions and the space of functional one is empty. The functional prepositions are added only later, and the combinations start to be correctly pronounced.

Between the combinations produced by children, there is one in particular that could be considered incorrect: DI SOPRA DI. In this case, however, one might think that this production is correct, but it is a dialectal form²⁷, like “di sopra del”.

In addition to the just introduced double structure prepositions, starting from the second year, we also noted the presence of prepositions “blocks” (groups of functional and lexical prepositions with a structure that cannot be modified).

In the following summary there are both the lexical prepositions with double structure, and also the combinations labelled as “blocks”. In this way, we can infer the order of their production as follows:

- SENZA: this preposition can be found in the file named 010915 (children were one year, nine months and fifteen days old).
- SOTTO: this preposition can be found in the file named 020000 (children were two years, zero months and zero days old).
- DENTRO, SOPRA: these prepositions can be found in the file named 020014 (children were two years, zero months and fourteen days old).
- DI SOPRA DI: this combination can be found in the file named 020017 (children were two years, zero months and seventeen days old).

²⁷ Presumably the child that produced this combination is Tuscan.

- VICINO TRA: this combination can be found in the file named 020027 (children were two years, zero months and twenty-seven days old).
- VICINO A: this combination can be found in the file named 020120 (children were two years, zero months and twenty days old).
- SENZA DI: this combination can be found in the file named 020211 (children were two years, two months and eleven days old).
- SOTTO A: this combination can be found in the file named 020302 (children were two years, three months and two days old).
- CONTRO: this preposition can be found in the file named 020314 (children were two years, three months and fourteen days old).
- DENTRO IN: this combination can be found in the file named 020315 (children were two years, three months and fifteen days old).
- IN FONDO A: this combination can be found in the file named 020406 (children were two years, four months and six days old).
- ATTORNO A: this combination can be found in the file named 020426 (children were two years, four months and twenty-six days old).
- DENTRO A: this combination can be found in the file named 020510 (children were two years, five months and ten days old).
- ACCANTO A: this combination can be found in the file named 021112 (children were two years, eleven months and twelve days old).
- FINO A: this combination can be found in the file named 030409 (children were three years, four months and nine days old).

3.7 Summary

I: In this chapter I tried to answer the two research questions introduced in chapter

Q1: Do children acquire before functional or lexical prepositions?

Q2: Is there a specific order of appearance of prepositions in the group composed of functional prepositions and in the group composed of lexical prepositions?

Let us consider the first question (Q1). From the data proposed in this chapter, it is clear that Italian children produce (we could also say “acquire”) functional prepositions before lexical ones. The first functional preposition is pronounced when children were 1;07 years old. The first lexical preposition, instead, is pronounced when children were 1;09 years old. During the first year, in fact, it was produced only one lexical preposition: SENZA. The lexical prepositions increase during the second year.

Let us consider from now on the second question (Q2). From the data proposed in this chapter it can be observed that there is a specific order of appearance of prepositions in the group composed of functional prepositions and in the group composed of lexical prepositions. In particular, for the functional prepositions I identified the following order of appearance:

- A, CON, DI (01;07;07)
- IN (01;08;17)
- PER (01;09;01)
- SU (01;09;15)
- DA (01;09;24)
- TRA (03;00;00)

For the lexical prepositions I identified instead the following order of appearance:

- SENZA (01;09;15)
- SOTTO (02;00;00)
- DENTRO, SOPRA (02;00;14)
- CONTRO (02;03;14)

I also identified a specific order of appearance for the combinations of prepositions. More precisely, for the combinations of prepositions defined as “blocks” I found the following order:

- VICINO TRA (02;00;27)
- VICINO A (02;01;20)
- IN FONDO A (02;04;06)

- ATTORNO A (02;04;26)
- ACCANTO A (02;11;12)
- FINO A (03;04;09)

Finally, for the combinations composed by a double structure lexical preposition and a PP with a functional preposition, I found the following order:

- DI SOPRA DI (02;00;17)
- SENZA DI (02;02;11)
- SOTTO A (02;03;02)
- DENTRO IN (02;03;15)
- DENTRO A (02;05;10)

CHAPTER 4

4.1 Semantic-syntactic values

In this chapter I tried to answer the third (Q3) research questions:

(Q3) Which semantic-syntactic values are connected to the functional and to the lexical prepositions?

In chapter 3 we showed the order of appearance of prepositions.

Each preposition (or combination of prepositions) just introduced can be connected to a semantic-syntactic value.

Table named GENERALE in the Excel document shows, in the column named VALORE SINTATTICO-SEMATICO, the semantic-syntactic values associated to each analysed preposition or combination of prepositions.

In this chapter I will examine in great detail the semantic-syntactic values connected with the prepositions produced (or not produced) by the children.

4.2 Analysis of the productions without prepositions

In this section I will report the results of the analysis of the children's productions in which the preposition is not overtly lexicalized in the production (but it should have been lexicalized there). In this case, since the preposition was missing, I associated a semantic-syntactic value to the preposition that children should have produced. For clarity, I divided the productions in which a preposition is not overtly lexicalized using their year of production.

4.2.1 Analysis of the first year

Figure 28 shows the semantic-syntactic values connected with the prepositions that children should have pronounced in productions where the preposition is not overtly lexicalized in the first year.

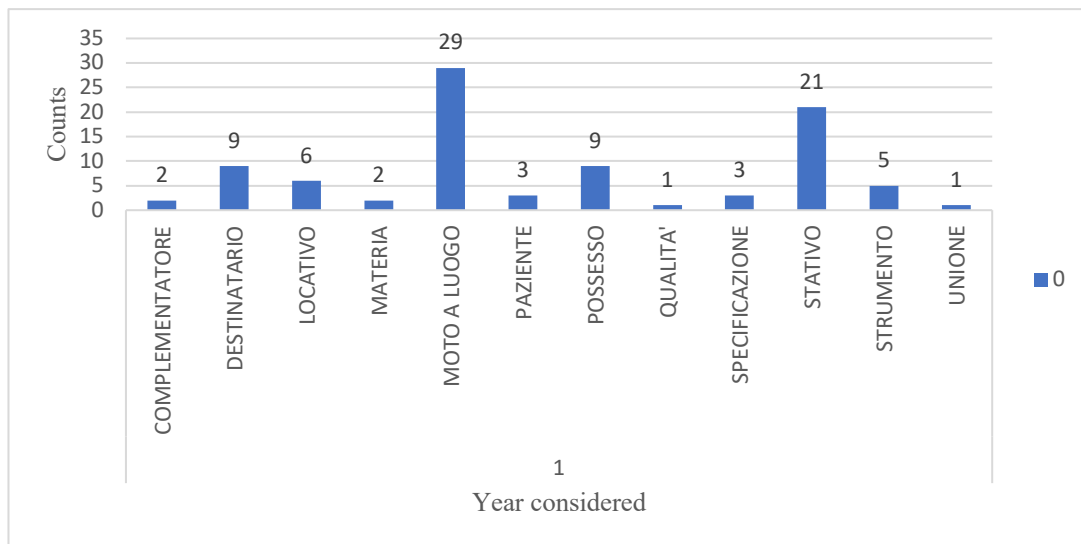


Figure 28: Values connected with zero in the first year.

In particular, in the first year there are the following values: two COMPLEMENTATORE, nine DESTINATARIO, six LOCATIVO, two MATERIA, twenty-nine MOTO A LUOGO, three PAZIENTE, nine POSSESSO, one QUALITA', three SPECIFICAZIONE, twenty-one STATIVO, five STRUMENTO, one UNIONE.

In the following we will report some examples to clarify each one of these values.

The value COMPLEMENTATORE was connected with productions like:

(58) “fare pacchetti” Marco; 011116

In (58) the complementizer A is missing from the production. It should have been combined with the verb “fare”. Marco and his mother are speaking about the character of a story. This character is angry because it cannot make packages. Marco’s mother asks to the child the reason why the character is angry as follows: “perchè non riesce a fare che

cosa?”. The child should have said “a fare pacchetti”, but he does not pronounce the complementizer A. For this reason, the value COMPLEMENTATORE is connected with this zero.

The value DESTINATARIO was connected with productions like:

(59) “papà Paolo //, Paolo” Marco; 010803

In (59) the preposition A is missing from the production. Marco and his mother are speaking about a medal. Marco wants to show this medal to Paolo, his father, that is a recipient of the action. This is the reason why the mother says to the child: “a chi l’andiamo a mostrare?”. The child should have said “a papà Paolo”, but he does not pronounce the preposition A. The value DESTINATARIO is connected with this zero.

The value LOCATIVO refers to a “space”. I wrote this value when children’s productions were not enough clear to associate to them the more specific value STATIVO or the value MOTO A LUOGO²⁸.

For example, the value LOCATIVO was connected with productions like:

(60) “Teddy altalena” Gregorio; 010822

In (60) the child should have pronounced the functional preposition SU.

Gregorio and his mother are speaking about Teddy. Gregorio’s mother says to the child “cosa fa qua Teddy?”. Gregorio says (60). The verb is missing from the production and we do not know whether the child speaks about a movement or a static position of the object, therefore I used LOCATIVO.

The value MATERIA was connected with productions like:

(61) “tapili (:grappoli) l’uva” Marco; 011012

²⁸ The examples for the value STATIVO and the value MOTO A LUOGO are written below.

In (61) the child is speaking about grapes. He refers to the matter with whom bunches are made. Marco's mother listens to (61) and says: "grappoli d'uva sono?". Thanks to this sentence, we can understand that the preposition that is absent in (61) is DI.

The value MOTO A LUOGO was connected with productions like:

(62) "Niki nanna" Gregorio, 010822

Thanks to the complete dialogue between the child and his mother, we can understand that in (62) Gregorio says that Niki goes to bed, therefore he is speaking about a movement. In the previous sentences Gregorio completes his mum's production and says "Niki a cuccia". He orders Niki to go into her kennel. In the same way, in (62) Gregorio orders Niki to go into her kennel and sleep there. The child should have pronounced the preposition A. The value associated to this zero is MOTO A LUOGO.

The value PAZIENTE was connected with productions like:

(63) "<bretto cellini> / (li)bretto (por)cellini" Marco; 010929

In (63) the preposition DI is missing from the production. Marco's mother, after the child's sentence, says: "libretto dei porcellini?". They are speaking about a book. This book tells a story of pigs, that are the subjects of the story. For this reason, we used the value PAZIENTE.

The value POSSESSO was associated to productions like:

(64) "palali/palali (:pedali) bici" Marco, 010719

In (64) the preposition DI is missing from the production. Marco's mother, after the child's sentence, says: "I pedali della bici, sì". Marco is speaking about a bike, more precisely he speaks about the bicycle pedals. These pedals are part of the bike; therefore, we used the value POSSESSO.

The value QUALITA' was associated to productions like:

(65) “vali (:stivali)” Marco; 010803

In (65) there is an isolated word. The preposition CON is missing, but we can deduce it from the dialogue. Marco's mother in the previous sentence mentions a cat and, after the child's production in (65), she repeats the combination “con gli stivali”. The child and his mother refer to the Puss in boots²⁹. The boots can be considered as a sort of quality of the cat that is recognized thanks to this distinctive element. The value connected with this zero is QUALITA'.

The value SPECIFICAZIONE was connected with productions like:

(66) “l'abbero (:l'albero) Nadale (:Natale)” Marco; 011116

The value SPECIFICAZIONE was used when we could not connect a more specific value with the preposition.

In (66), for example, the preposition DI is missing from the sentence. After this production, Marco's mother repeats: “l'albero di Natale”. The production in (66) is a recurring combination of words, and SPECIFICAZIONE is the most advisable value for this zero.

The value STATIVO was connected with productions like:

(67) “rotra/rotra (:rotola) fatta (:sabbia)” Marco; 010803

Marco's mother, after this production, repeats the correct sentence: “si rotola nella sabbia”. For this reason, we can say that in (67) the preposition IN is missing from the production. In the action described by the child there is not a change of location. However,

²⁹ The Puss in boots is the protagonist of the European popular fairy tale of the same name written by Charles Perrault.

all the movements happen in the same place. For this reason, the correct value for this zero is STATIVO.

The value STRUMENTO was connected with productions like:

(68) “chieri (:bicchieri)” Marco, 010803

(68) can be understood thanks to the complete dialogue between the child and his mother. The mother asks to the child what can be used to toast; more precisely she says: “cosa // con che cosa fanno cincin@0”. He says (68) but he does not pronounce the preposition CON. Later, his mother repeats the correct sentence: “con i bicchieri”. Glasses are the instruments used to toast; accordingly, the value connected with this zero is STRUMENTO.

The value UNIONE was connected only with one production that appears in the first year (69):

(69) “futa (:frutta)” Marco, 010504

In (69) the preposition CON is missing from the production. This isolated word can be understood thanks to the reading of the complete dialogue. The child says that he would like to eat pasta at dinner. His mother says: “con cosa?”, and the child says (69). Later, the mother repeats the correct sentence: “con la frutta”. Marco says he wants to eat pasta with fruit for dinner. For this reason, I connected the value UNIONE with this zero.

The first-year data set cannot be considered as complete. In CHILDES children are recorded only from the age of 1;05 (the sentences produced in the previous months are missing).

In the first year there are two values that stand out for the high number of productions they are connected with. These values are MOTO A LUOGO and STATIVO (see Figure 31).

More precisely, the first value is connected with twenty-nine zeros and the second one is connected with twenty-one zeros.

4.2.2 Analysis of the second year

Figure 29 shows the semantic-syntactic values connected with the prepositions that children should have pronounced in productions where the preposition is not overtly lexicalized in the second year.

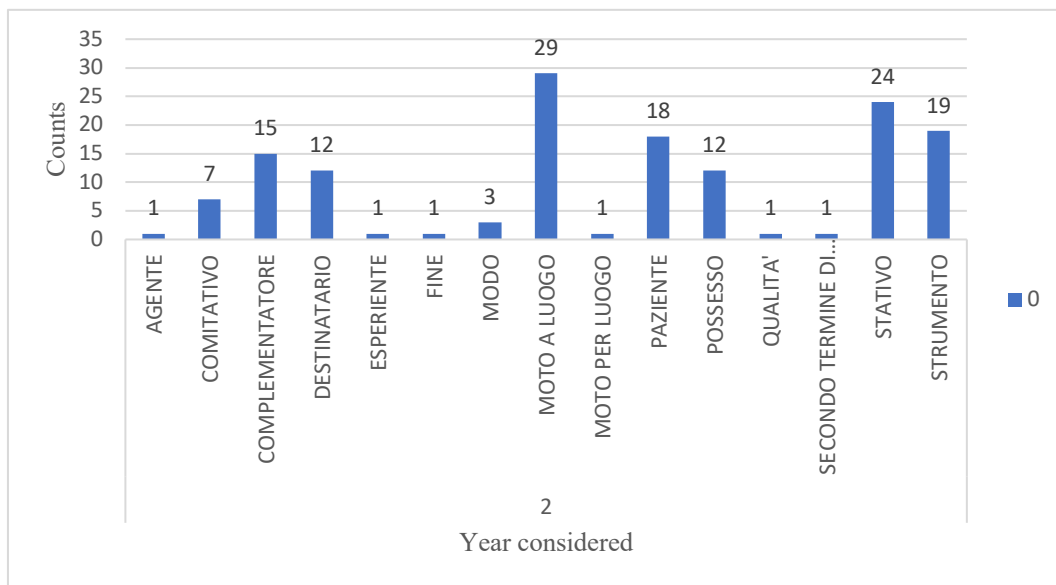


Figure 29: Values associated to zeros in the second year.

Precisely, in the second year we found the following semantic-syntactic values: one AGENTE, seven COMITATIVO, fifteen COMPLEMENTATORE, twelve DESTINATARIO, one ESPERIENTE, one FINE, three MODO, twenty-nine MOTO A LUOGO, one MOTO PER LUOGO, eighteen PAZIENTE, twelve POSSESSO, one QUALITA', one SECONDO TERMINE DI PARAGONE, twenty-four STATIVO, nineteen STRUMENTO.

It is interesting to notice that during the second year there is the appearance of some semantic-syntactic values that do not appear in the first year. These values are

AGENTE, COMITATIVO, ESPERIEN TE, FINE, MODO, MOTO PER LUOGO, SECONDO TERMINE DI PARAGONE.

In particular, the value AGENTE was connected with productions like:

(70) “anche 0w me” Raffaello; 020513

In (70) the preposition A is missing from the production. Thanks to the reading of the dialogue between the child, the mother and the investigator, it is clear that Raffaello wants to do the same action done by the investigator. In the previous sentence Raffaello’s mother says to the investigator: “prova a farlo fare anche a lui”, and she pronounces the correct preposition A. Raffaello wants to act, and this is the reason why I connected the value AGENTE with this zero.

The value COMITATIVO was connected with expressions like:

(71) “Sala, non vojo [: voglio] giocare_0 Sala [: Sara]” Diana; 020613

In (71) the preposition CON is missing from the production. In the previous sentences Diana’s mother asks to the child who does not want to play. Diana says (71), but she should have said “non voglio giocare con Sara”. The child says she does not want to play with Sara, another child. The value that was connected with this zero refers to “stay together”.

The value ESPERIEN TE was connected with expressions like:

(72) “anche 0w lei?” Raffaello; 020906

In (72) the preposition A is missing from the production. Raffaello and the investigator are speaking about whales and fishes. In the previous sentence of the dialogue the investigator asks to Raffaello if he likes fishes and he says to the child: “e ti piacciono?”. The child says (72) and asks to the investigator if also the whale likes fishes.

The child should have said “anche a lei?”. Therefore, the value connected with this zero is ESPERIENZE because the whale has tastes and lives experiences.

The value FINE was connected with expressions like:

(73) “en@p prendere a@p camella 0w a@p tosse” Raffaello; 020429

In (73) the functional preposition PER is missing from the production. Raffaello says (73) and later his mother repeats the correct sentence: “devi prendere la caramella per la tosse poi anche...”. The child wants the candy to placate his cough. For this reason, the value connected with this zero is FINE (this Italian label corresponds to the English “goal”).

The value MODO was connected with expressions like:

(74) “mangia 0w sola” Rosa; 021014

In (74) the functional preposition DA is missing from the production. Rosa says (74) and later her mother repeats the correct sentence: “mangia da sola vai”. The child should have said “mangia da sola”. Rosa is speaking about a doll, in particular she says to her mother that this doll can eat by herself. She specifies how the doll eats, therefore the correct value connected with this zero is MODO (this Italian label corresponds to the English “way”).

The value MOTO PER LUOGO was connected with productions like:

(75) “eh qui esce Pinocchio 0w questo buco ecco” Raffaello; 020700

In (75) the functional preposition DA is missing from the production. The child says (75) and later the investigator repeats the correct sentence: “esce Pinocchio da questo buco?”. The correct production should have been “eh qui esce Pinocchio da questo buco ecco”.

The child is speaking about Pinocchio³⁰. He says that Pinocchio comes out of the whale through a hole. He refers to a movement, therefore the correct value for this zero is MOTO PER LUOGO.

The value SECONDO TERMINE DI PARAGONE was connected with productions like:

(76) “que(s)to è pi(ù) in dietro 0 questo” Marco; 020524

In (76) the functional preposition DI is missing from the production. The child says (76) and his mother asks to the child: “quale è più indietro?”. The child should have said “questo è più indietro di questo”. Marco is comparing two toys, more precisely two small cars, and he is saying that one of them is placed further back than the other one. He does a comparison, and the second “questo” in the sentence is the second term for the comparison. For this reason, we can link this zero to the value SECONDO TERMINE DI PARAGONE.

In the second year there is a greater variety of values connected with zero. The value MOTO A LUOGO is connected with twenty-nine zeros. The value STATIVO is connected with twenty-four zeros. The value STRUMENTO is connected with nineteen zeros, and the value PAZIENTE is connected with eighteen zeros.

In the second year, differently from the first year (see chapter 3), children start however to produce a greater number of prepositions. Children begin to use various lexical prepositions and also combinations of prepositions begin to appear.

³⁰ Pinocchio is the protagonist of the famous novel written by Collodi.

4.2.3 Analysis of the third year

Figure 30 shows the semantic-syntactic values connected with the prepositions that the children should have pronounced in productions where the preposition is not overly lexicalized in the third year.

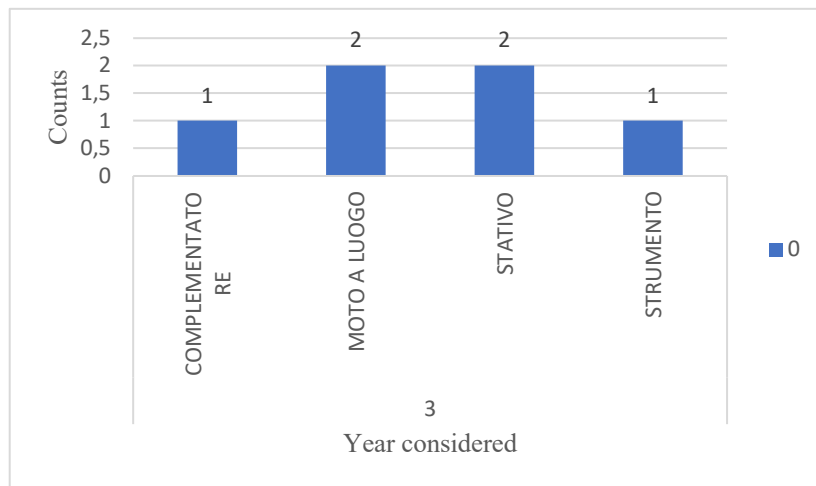


Figure 30: Values associated to zeros in the third year.

More precisely, in the third year we found the following semantic-syntactic values: one COMPLEMENTATORE, two MOTO A LUOGO, two STATIVO, one STRUMENTO.

During the third year there are not new values connected with zero.

Furthermore, there is a great reduction of the number of zeros³¹. Children have more control in the use of prepositions.

³¹ As observed in chapter 3, the number of months analysed in the third year is less than the number of months analysed in the second year; in the last gaming sessions in which children were recorded, they only were 3;04. The number of absent prepositions in the third year is considerably low anyway.

4.3 Functional prepositions

In this section I will report the results of the analysis of the semantic-syntactic values connected with functional prepositions.

The functional prepositions are the most numerous in the data set and they start to appear in children's productions when children are 1;07.

This section is divided in two parts:

- In section 4.3.1 I will show the order of appearance of semantic-syntactic values connected with each functional preposition. I considered the functional prepositions in the order presented in chapter 3. More precisely, the order is: A, CON, DI, IN, PER, SU, DA, TRA.
- In section 4.3.2 I will instead show the order of appearance of the semantic-syntactic values in children's productions, regardless of the prepositions they are connected with.

4.3.1 Functional prepositions - Part 1

4.3.1.1 Functional preposition A

The first preposition considered is A. This preposition is produced for the first time when children are one year and seven months old.

4.3.1.1.1 Analysis of the first year

Figure 31 shows the semantic-syntactic values connected with the functional preposition A in the first year.

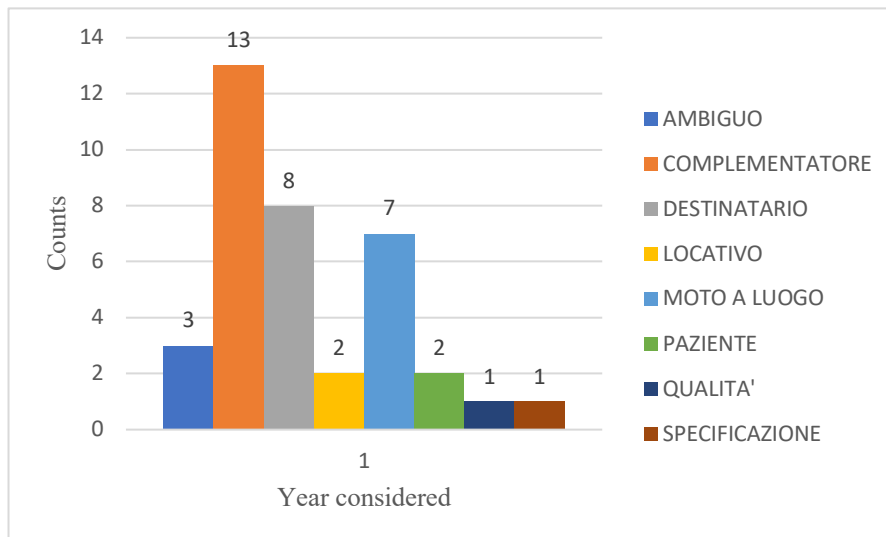


Figure 31: Semantic-syntactic values connected with the functional preposition A in the first year.

More precisely, during the first year the functional preposition A is connected to these semantic-syntactic values: thirteen COMPLEMENTATORE, eight DESTINATARIO, two LOCATIVO, seven MOTO A LUOGO, two PAZIENTE, one QUALITA', one SPECIFICAZIONE. Three prepositions are also connected to the semantic-syntactic value AMBIGUO, because the sentence was not clear enough to be connected to a more specific value.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition A was connected to a specific value for the first time.

Before showing this order, it is important to explain the strategy used to introduce the data. Firstly, for every preposition, I considered only the months in which the preposition is produced. Finally, I wrote only the months in which there are new values connected with the preposition.

- One year and seven months: the value LOCATIVO, connected with the preposition A, can be found in the file named 010707³² (children were one year, seven months and seven days old when they were recorded).

³² The name of the files in which children's productions are written represents the children's age when the gaming sessions were recorded.

- One year and ten months: the value QUALITA' can be found in the file named 011004 (children were one year, ten months and four days old).

In (83) there is an example for the value QUALITA':

(83) "invece che io mangio le mele le xxx ai lamponi" Elisa; 011004

In (83) the value QUALITA' is connected with the functional preposition A. The child is speaking about a food and this food tastes like a raspberry.

4.3.1.1.2 Analysis of the second year

Figure 32 shows the semantic-syntactic values connected with the functional preposition A in the second year.

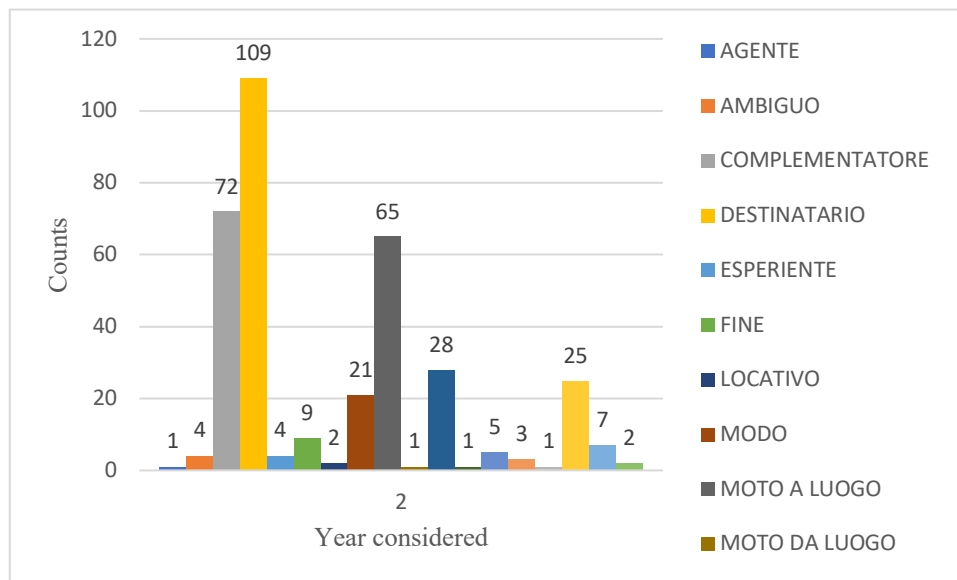


Figure 32: Semantic-syntactic values connected with the functional preposition A in the second year.

More precisely, during the second year the preposition A is connected to the following values: one AGENTE, seventy-two COMPLEMENTATORE, one hundred and nine DESTINATARIO, four ESPERIENTE, nine FINE, two LOCATIVO, twenty-one MODO, sixty-five MOTO A LUOGO, one MOTO DA LUOGO, twenty-eight PAZIENTE, one POSSESSO, five QUALITA', three SECONDO TERMINE DI PARAGONE, one SPECIFICAZIONE, twenty-five STATIVO, seven STRUMENTO, two TEMPORALE. Finally, four prepositions were defined as AMBIGUO, since I could not link them to a more specific value.

Each of the values associated to the preposition A was analysed accordingly to its order of appearance. More precisely, we investigated the month and the day in which the functional preposition A was connected to a specific value for the first time.

- Two years and zero months: the value ESPERIENTE and the value MODO can be found in the file named 020002 (children were two years, zero months and two days old). The value STATIVO and the value TEMPORALE can be found in the file named 020027 (children were two years, zero months and twenty-seven days old). The value FINE can be found in the file named 020029 (children were two years, zero months and twenty-nine days old).

In (84) there is an example for the value ESPERIENTE:

(84) “la pioggia a te?” Diana; 020002

In (84) the value ESPERIENTE is connected with the functional preposition A. The child asks to her mother if she likes the rain. The mother has tastes and lives an experience.

In (85) there is an example for the value MODO:

(85) “a modino” Diana; 020002

In (85) the value MODO is connected with the functional preposition A. The child says objects need to be placed in the correct position, only in this way they will be placed “a modino” (that corresponds to the English “in the correct way”).

In (86) there is an example for the value STATIVO:

(86) “qua a casa” Marco; 020027

In (86) the value STATIVO is connected with the functional preposition A. The child, in fact, does not speak about a movement, but he speaks about a static position.

In (87) there is an example for the value TEMPORALE:

(87) “ad un certo punto vadano (:vanno) a(l) mare” Marco; 020027

In (87) the value TEMPORALE is connected with the functional preposition A. The child with the sentence “ad un certo punto” refers to a specific moment. He speaks about time.

In (88) there is an example for the value FINE:

(88) “a letto” Gregorio; 020029

This example is interesting because the child makes a mistake. He uses the preposition A, but he should have pronounced the preposition DA. In fact, he is speaking about socks or about a particular kind of shoes used to sleep. He should have said “scarpe da letto”.

- Two years and two months: the value STRUMENTO can be found in the file named 020211 (children were two years, two months and eleven days old).

In (89) there is an example for the value STRUMENTO:

(89) “suonando alla tromba” Marco; 020211

In (89) the value STRUMENTO is connected with the functional preposition A. The trumpet, in fact, is the instrument used to play the music.

- Two years and five months: the value MOTO DA LUOGO can be found in the file named 020513 (children were two years, five months and thirteen days old).

In (90) there is an example for the value MOTO DA LUOGO:

(90) “cresce, cresce, cresce 0 latte a puppe” Raffaello; 020513

In (90) the child makes a mistake. He pronounces the preposition A, but he should have pronounced the preposition DA. He is speaking about udders, and he says that the milk comes out from these organs.

- Two years and nine months: the value AGENTE and the value SECONDO TERMINE DI PARAGONE can be found in the file named 020904 (children were two years, nine months and four days old).

In (91) there is an example for the value AGENTE:

(91) “mettelo a potto te perchè è caccato (:cascato) a te” Rosa; 020904

In (91) the child says that the dishes fell down and her mother is responsible for this mistake. The mother is the one who acts.

In (92) there is an example for the value SECONDO TERMINE DI PARAGONE:

(92) “è guale a me questo” Rosa; 020904

In (92) the child does a comparison and defines herself as the second element for this comparison.

- Two years and eleven months: the value POSSESSO can be found in the file named 021112 (children were two years, eleven months and twelve days old).

In (93) there is an example for the value POSSESSO:

(93) “è mano a mme” Rosa; 021112

In (93) the child says that she wants to have an object in her hand. For this reason, the value connected with the functional preposition A is POSSESSO.

4.3.1.1.3 Analysis of the third year

Figure 33 shows the semantic-syntactic values connected with the functional preposition A in the third year.

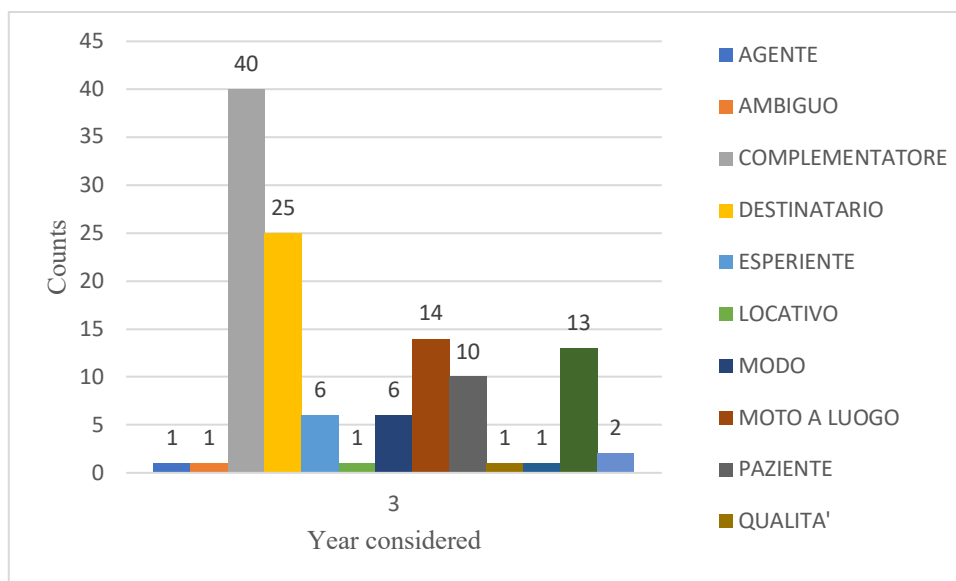


Figure 33: Semantic-syntactic values connected with the functional preposition A in the third year.

More precisely, during the third year the preposition A is connected to the following values: one AGENTE, forty COMPLEMENTATORE, twenty-five DESTINATARIO, six ESPERIENTE, one LOCATIVO, six MODO, fourteen MOTO A LUOGO, ten PAZIENTE, one QUALITA', one SECONDO TERMINE DI PARAGONE, thirteen STATIVO, two STRUMENTO. Only one A was defined as AMBIGUO since it could not be connected to a more specific value.

In the third year there are not values connected with the functional preposition A for the first time.

4.3.1.2 Functional preposition CON

The second preposition we have considered is CON. This preposition is produced for the first time when children are one year and seven months old.

4.3.1.2.1 Analysis of the first year

Figure 34 shows the semantic-syntactic values connected with the functional preposition CON in the first year.

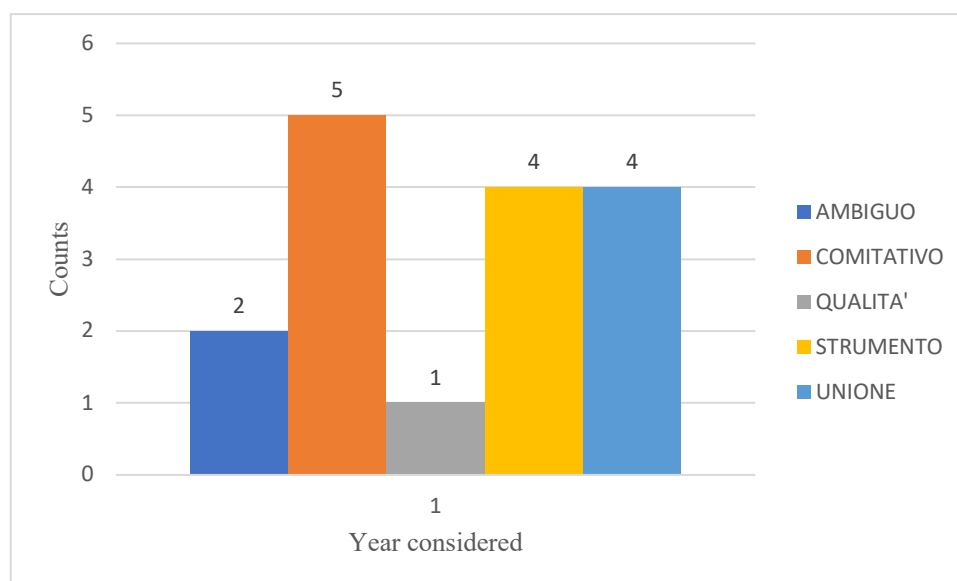


Figure 34: Semantic-syntactic values connected with the functional preposition CON in the first year.

More precisely, during the first year the functional preposition CON is connected to these values: five COMITATIVO, one QUALITA', four STRUMENTO, four UNIONE. Only two prepositions were connected to values defined as AMBIGUO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition CON was connected to a specific value for the first time.

- One year and seven months: the value STRUMENTO can be found in the file named 010707 (children were one year, seven months and seven days old).

In (94) there is an example for the value STRUMENTO:

(94) "con phon" Raffaello; 010707

In (94) the value STRUMENTO is connected with the functional preposition CON. The child says that he wants to use an object. More precisely, he wants to dry the horse tail with the hair dryer.

- One year and nine months: the value UNIONE can be found in the file named 010924b (children were one year, nine months and twenty-four days old).

In (95) there is an example for the value UNIONE:

(95) "Lorolo con la valigia" Gregorio; 010924b

In (95) the value UNIONE is connected with the functional preposition CON. Probably Gregorio is watching a photo, and he sees himself with a suitcase.

- One year and ten months: the value COMITATIVO can be found in the file named 011018 (children were one year, ten months and eighteen days old).

In (96) there is an example for the value COMITATIVO:

(96) “anche tu vuoi venire con me?” Elisa; 011018

In (96) the value COMITATIVO is connected with the functional preposition CON. Elisa asks to her mother if she wants to go away with her and all her toys.

- One year and eleven months: the value QUALITA' can be found in the file named 011119 (children were one year, eleven months and nineteen days old).

In (97) there is an example for the value QUALITA':

(97) “una giacchetta/una giacchetta (.) col cappuccetto” Elisa; 011119

In (97) the value QUALITA' is connected with the functional preposition CON. Elisa speaks about a jacket that is characterized by the hood.

4.3.1.2.2 Analysis of the second year

Figure 35 shows the semantic-syntactic values connected with the functional preposition CON in the second year.

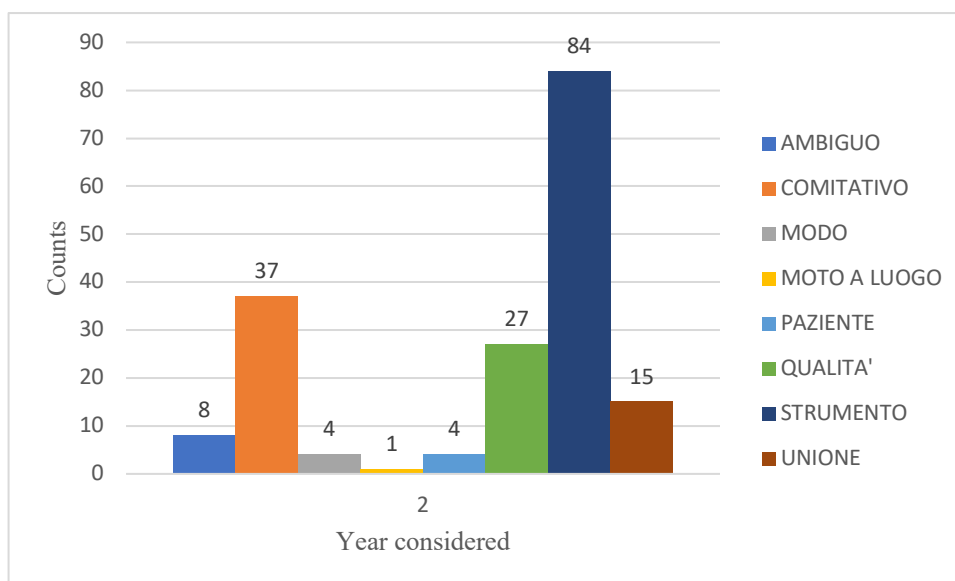


Figure 35: Semantic-syntactic values connected with the functional preposition CON in the second year.

More precisely, during the second year the preposition CON is connected to the following values: thirty-seven COMITATIVO, four MODO, one MOTO A LUOGO, four PAZIENTE, twenty-seven QUALITA', eighty-four STRUMENTO, fifteen UNIONE. In the second year the value AMBIGUO was connected with the preposition CON for eight times.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition CON was connected to a specific value for the first time.

- Two years and zero months: the value MODO can be found in the file named 020000 (children were two years, zero months and zero days old). The value PAZIENTE can be found in the file named 020027 (children were two years, zero months and twenty-seven days old).

In (98) there is an example for the value MODO:

(98) “con/con la teta (:testa) bum@o” Marco; 020000

In (98) the value MODO is connected with the functional preposition CON. The child, in fact, says that his mother is going to fall down and bang the head.

In (99) there is an example for the value PAZIENTE:

(99) “io mangiavo con la carne con le patate” Marco; 020027

In (99) the value PAZIENTE is connected with the functional preposition CON. The child describes the food he is eating. The food was eaten by the child, so it is subordinate to the child's will.

- Two years and three months: the value MOTO A LUOGO can be found in the file named 020329 (children were two years, three months and twenty-nine days old).

In (100) there is an example for the value MOTO A LUOGO:

(100) “con/co(n) il letto” Marco; 020329

In (100) the child makes a mistake. He pronounces the preposition CON, but he should have produced the preposition SU. In fact, he says to his mother that he wants to go to the bed with the shoes.

4.3.1.2.3 Analysis of the third year

Figure 36 shows the semantic-syntactic values connected with the functional preposition CON in the third year.

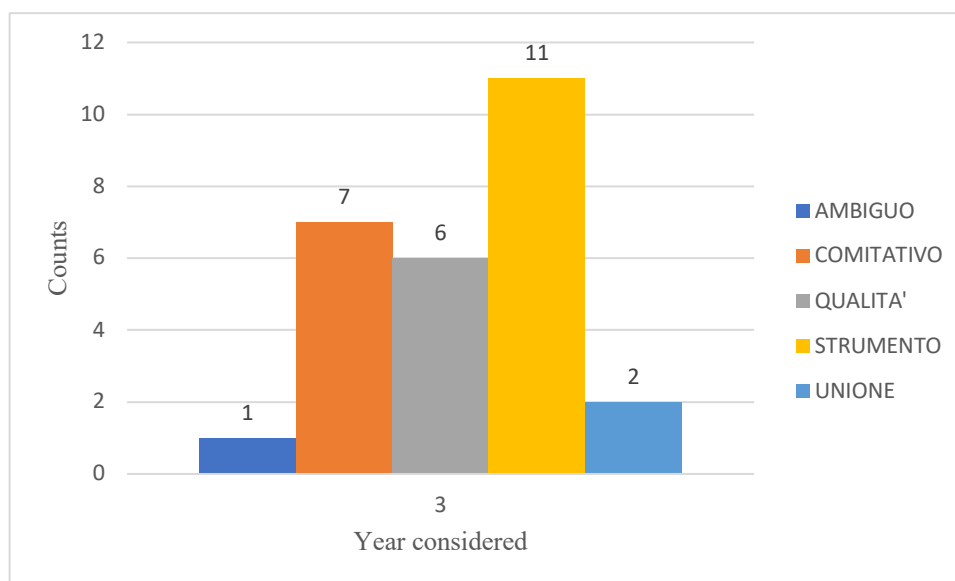


Figure 36: Semantic-syntactic values connected with the functional preposition CON in the third year.

More precisely, in the third years there are the following values connected with the preposition CON: seven COMITATIVO, six QUALITA', eleven STRUMENTO, two UNIONE. Only one preposition is connected to the value AMBIGUO.

In the third year there are no values connected with the functional preposition CON for the first time.

4.3.1.3 Functional preposition DI

The third preposition considered is DI. This preposition is produced for the first time when children are one year and seven months old.

4.3.1.3.1 Analysis of the first year

Figure 37 shows the semantic-syntactic values connected with the functional preposition DI in the first year.

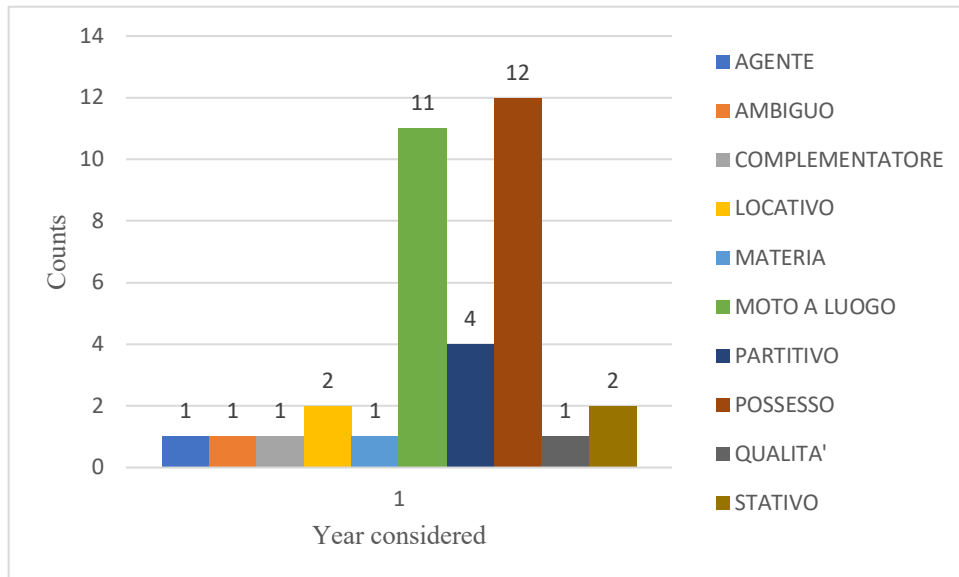


Figure 37: Semantic-syntactic values connected with the functional preposition DI in the first year.

More precisely, during the first year the functional preposition DI is connected to these values: one AGENTE, one COMPLEMENTATORE, two LOCATIVO, one MATERIA, eleven MOTO A LUOGO, four PARTITIVO, twelve POSSESSO, one QUALITA', two STATIVO. Only one preposition was connected to the value AMBIGUO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition DI was connected to a specific value for the first time.

- One year and seven months: the value LOCATIVO can be found in the file named 010707 (children were one year, seven months and seven days old).

In (101) there is an example for the value LOCATIVO:

(101) “di là/filo” Raffaello; 010707

In (101) the value LOCATIVO is connected with the functional preposition DI. As shown in section 4.3.1.1, the value LOCATIVO refers in general to a “space” (it is different from the more specific values STATIVO and MOTO A LUOGO) and since the

meaning of (44) was not clear enough, we associated to (44) the more generic value LOCATIVO.

- One year and eight months: the value POSSESSO can be found in the file named 010805 (children were one year, eight months and five days old). The value MOTO A LUOGO can be found in the file named 010817 (children were one year, eight months and seventeen days old).

In (102) there is an example for the value POSSESSO:

(102) “è de(l) bi(m)bo...a@p bimkina” Diana; 010805

In (102) the value POSSESSO is connected with the functional preposition DI. The child, in fact, is speaking about an ownership.

In (103) there is an example for the value MOTO A LUOGO:

(103) “di là” Marco; 010817

In (103) the value MOTO A LUOGO is connected with the functional preposition DI. This production can be understood thanks to the reading of the complete dialogue. The child says to his mother to go away. (103) describes a movement.

- One year and ten months: the value PARTITIVO can be found in the file named 011004 (children were one year, ten months and four days old). The value STATIVO can be found in the file named 011012 (children were one year, ten months and twelve days old).

In (104) there is an example for the value PARTITIVO:

(104) “vogliamo (.) ancora un pò di moine” Elisa; 011004

In (104) the value PARTITIVO is connected with the functional preposition DI.
In (104) the child says that she wants more cuddles.

In (105) there is an example for the value STATIVO:

(105) “di pa (:qua)?” Marco; 011012

In (105) the child shows to his mother the part of the sheet of paper in which he is drawing. He speaks about a specific position; therefore, we used the value STATIVO.

- One year and eleven months: the value AGENTE can be found in the file named 011104 (children were one year, eleven months and four days old). The value MATERIA can be found in the file named 011107 (children were one year, eleven months and seven days old). The value QUALITA' can be found in the file named 011116 (children were one year, eleven months and sixteen days old). The value COMPLEMENTATORE can be found in the file named 011119 (children were one year, eleven months and nineteen days old).

In (106) there is an example for the value AGENTE:

(106) “Mina, I biscotti della nonna!” Elisa; 011104

In (106) the value AGENTE is connected with the functional preposition DI. The child is speaking about the biscuits made by her grandmother.

In (107) there is an example for the value MATERIA:

(107) “I sandalini di faglia (:paglia)” Diana; 011107

In (107) the value MATERIA is connected with the functional preposition DI. Diana is speaking about sandals made with straw. The straw is the material of this kind of shoes.

In (108) there is an example for the value QUALITA’:

(108) “di rosso” Marco; 011116

In (108) the value QUALITA’ is connected with the functional preposition DI. This production can be understood after reading the dialogue between Marco and his mother. He is speaking about a dress; this dress is characterized by the red colour. The colour can be considered as a property of the dress.

In (109) there is an example for the value COMPLEMENTATORE:

(109) “tutti dormono qui (.) perchè è ora di dormire” Elisa; 011119

In (109) the complementizer DI is combined with the verb “dormire”. For this reason, the value COMPLEMENTATORE was chosen.

4.3.1.3.2 Analysis of the second year

Figure 38 shows the semantic-syntactic values connected with the functional preposition DI in the second year.

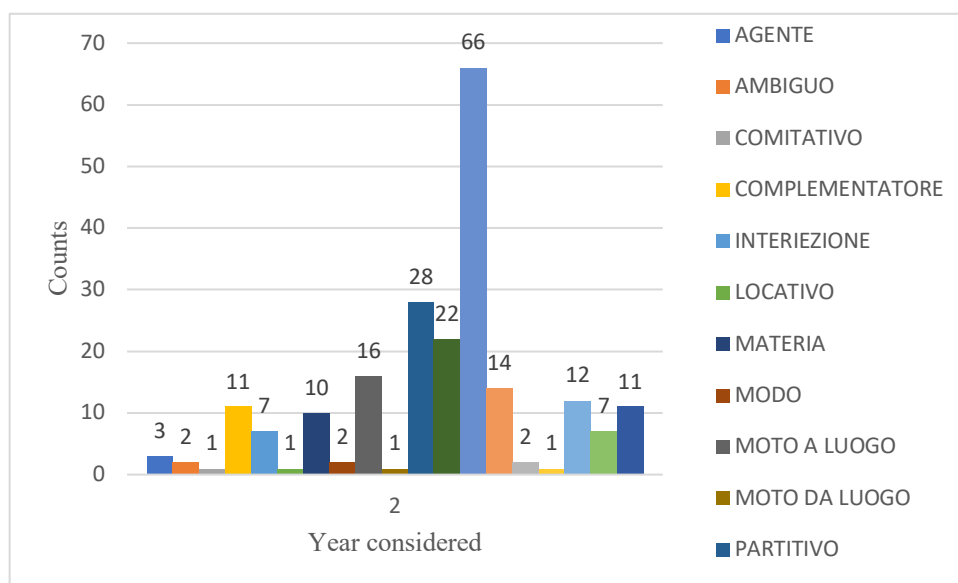


Figure 38: Semantic-syntactic values connected with the functional preposition DI in the second year.

More precisely, during the second year the functional preposition DI is connected to these values: three AGENTE, one COMITATIVO, eleven COMPLEMENTATORE, seven INTERIEZIONE, one LOCATIVO, ten MATERIA, two MODO, sixteen MOTO A LUOGO, one MOTO DA LUOGO, twenty-eight PARTITIVO, twenty-two PAZIENTE, sixty-six POSSESSO, fourteen QUALITA', two QUANTITA', one SECONDO TERMINE DI PARAGONE, twelve SPECIFICAZIONE, seven STATIVO, eleven TEMPORALE. In the second year two functional prepositions were also connected to the value AMBIGUO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition DI was connected to a specific value for the first time.

- Two years and zero months: the value INTERIEZIONE and the value TEMPORALE can be found in the file named 020000 (children were two years, zero months and zero days old). The value QUANTITA' can be found in the file named 020027 (children were two years, zero months and twenty-seven days old).

In (110) there is an example for the value INTERIEZIONE:

(110) “può daci (:darsi) di sì” Marco; 020000

In (110) there is an exclamation produced by the children, therefore we used the value INTERIEZIONE.

In (111) there is an example for the value TEMPORALE:

(111) “quella di prima &to / &to” Marco; 020000

In (111) the child is speaking about a medicine. He refers to the time and this is the reason why we used the value TEMPORALE.

In (112) there is an example for the value QUANTITA':

(112) “di più” Marco; 020027

This production can be understood thanks to the reading of the complete dialogue between the child and his mother. The child is saying that he wants to play more.

- Two years and one month: the value PAZIENTE can be found in the file named 020111 (children were two years, one month and eleven days old). The value SPECIFICAZIONE can be found in the file named 020122 (children were two years, one month and twenty-two days old). The value MODO can be found in the file named 020127 (children were two years, one month and twenty-seven days old).

In (113) there is an example for the value PAZIENTE:

(113) “quello di Paperino” Marco; 020111

In (113) the child is speaking about a book. The book tells the story of Donald Duck³³. It is the subject of the story. For this reason, we used the value PAZIENTE.

In (114) there is an example for the value SPECIFICAZIONE:

(114) “sai xxx, il libro del bagnetto” Elisa; 020122

The child is speaking about a particular book. She reads this book when she takes a bath. I used the value SPECIFICAZIONE for all the prepositions that I could not connect to a more specific value.

³³ It is a cartoon character created by Disney.

In (115) there is an example for the value MODO:

(115) “vanno di f(r)etta (.) bimba qua” Marco; 020127

In (115) the child describes the movement of the characters of a story.

- Two years and five months: the value COMITATIVO and the value MOTO DA LUOGO can be found in the file named 020501 (children were two years, five months and one day old).

In (116) there is an example for the value COMITATIVO:

(116) “ola (:ora) le metto qui con Pinocchio e di Milapo” Diana; 020501

In (116) the child makes a mistake. He should have said “con Milapo” instead of “di Milapo”. In this production the value COMITATIVO is connected with the functional preposition DI. The child says that he will put his toys together with two characters of his book.

In (117) there is an example for the value MOTO DA LUOGO:

(117) “...l’uccellino azza (:alza) di terra” Diana; 020501

In (117) the child makes a mistake. He should have said “l’uccellino si alza da terra”. The value MOTO DA LUOGO is connected with the functional preposition DI. Diana says that a little bird raises from the ground and goes away.

- Two years and six months: the value SECONDO TERMINE DI PARAGONE can be found in the file named 020619 (children were two years, six months and nineteen days old).

In (118) there is an example for the value SECONDO TERMINE DI PARAGONE:

(118) “questo (.) più bello di quello” Camilla; 020619

The child makes a comparison between two elements. The second one is the second term for comparison.

4.3.1.3.3 Analysis of the third year

Figure 39 shows the semantic-syntactic values connected with the functional preposition DI in the third year.

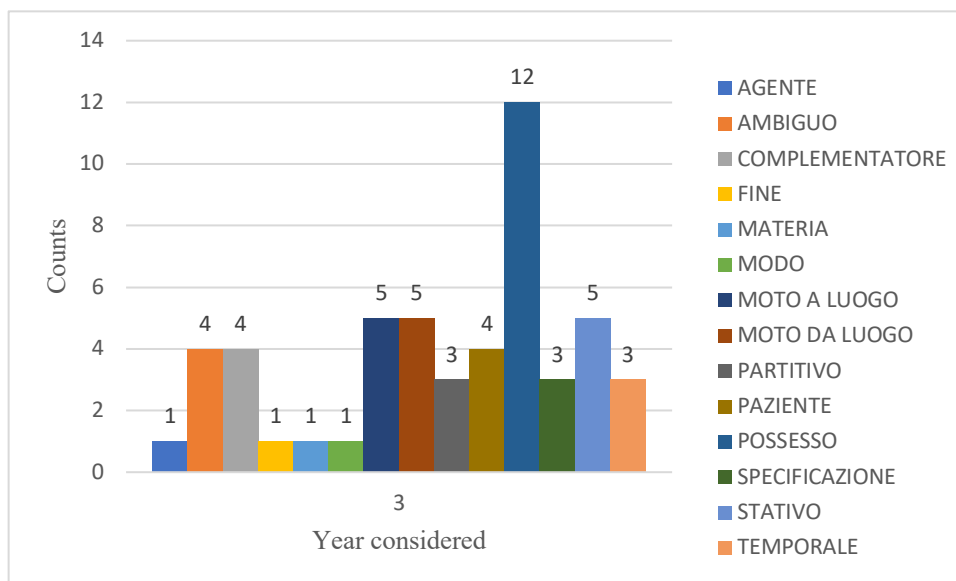


Figure 39: Semantic-syntactic values connected with the functional preposition DI in the third year.

More precisely, in the third year there are the following semantic-syntactic values: one AGENTE, four COMPLEMENTATORE, one FINE, one MATERIA, one MODO, five MOTO A LUOGO, five MOTO DA LUOGO, three PARTITIVO, four PAZIENTE, twelve POSSESSO, three SPECIFICAZIONE, five STATIVO, three TEMPORALE. The value AMBIGUO was connected with the functional preposition DI four times.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition DI was connected to a specific value for the first time.

- Three years and four months: the value FINE can be found in the file named 030409 (children were three years, four months and nine days old).

In (119) there is an example for the value FINE:

(119) “biglietto di Amsterdam” Camilla; 030409

In (119) the child is speaking about the ticket that is used to go to Amsterdam.

4.3.1.4 Functional preposition IN

The fourth preposition considered is IN. This preposition is produced for the first time when children are one year and eight months.

4.3.1.4.1 Analysis of the first year

Figure 40 shows the semantic-syntactic values connected with the functional preposition IN in the first year.

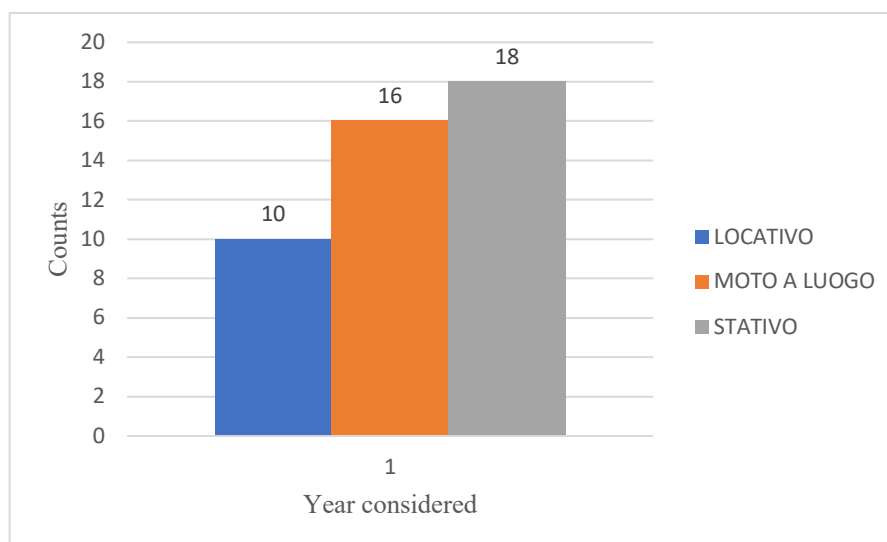


Figure 40: Semantic-syntactic values connected with the functional preposition IN in the first year.

More precisely, during the first year the functional preposition IN is connected to these values: ten LOCATIVO, sixteen MOTO A LUOGO, eighteen STATIVO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition IN was connected to a specific value for the first time.

- One year and eight months: the value LOCATIVO, the value MOTO A LUOGO and the value STATIVO can be found in the file named 010817 (children were one year, eight months and seventeen days old).

In (120) there is an example for the value LOCATIVO:

(120) “in alto” Marco; 010817

In (120) the value LOCATIVO is connected with the functional preposition IN. The value LOCATIVO refers in general to a “space”. Since the meaning of (120) is not completely clear, we used the generic value LOCATIVO instead to use a more specific one.

In (121) there is an example for the value MOTO A LUOGO:

(121) “nel cestino” Marco; 010817

In (121) the value MOTO A LUOGO is connected with the functional preposition IN. The child says to his mother that he wants to put some small flags into a basket. He wants to do a movement.

In (122) there is an example for the value STATIVO:

(122) “carote nel latte” Marco; 010817

In (122) the value STATIVO is connected with the functional preposition IN. The child is speaking about carrots that are into the milk. He describes their position.

4.3.1.4.2 Analysis of the second year

Figure 41 shows the semantic-syntactic values connected with the functional preposition IN in the second year.

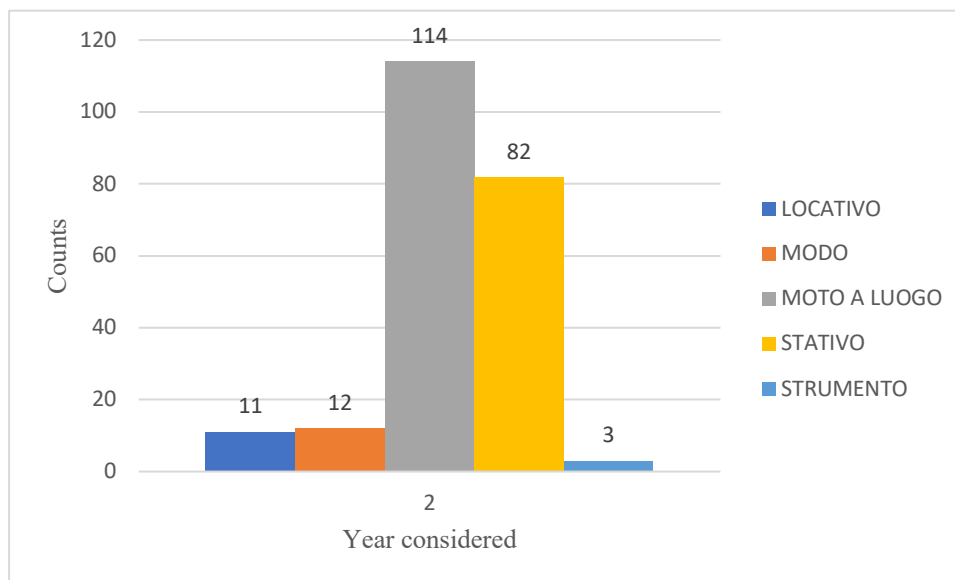


Figure 41: Semantic-syntactic values connected with the functional preposition IN in the second year.

More precisely, during the second year the functional preposition IN is connected to these values: eleven LOCATIVO, twelve MODO, one hundred and fourteen MOTO A LUOGO, eighty-two STATIVO, three STRUMENTO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition IN was connected to a specific value for the first time.

- Two years and one month: the value MODO can be found in the file named 020127 (children were two years, one month and twenty-seven days old).

In (123) there is an example for the value MODO:

(123) “xxx mpappa (.) in pedan@p pedan!” Rosa; 020129

In (123) the value MODO is connected with the functional preposition IN. The child says to her mother that she wants to stand.

- Two years and two months: the value STRUMENTO can be found in the file named 020211 (children were two years, two months and eleven days old).

In (124) there is an example for the value STRUMENTO:

(124) “in moto vado” Marco; 020211

In (124) the value STRUMENTO is connected with the functional preposition IN.

The child says that he wants to ride a motorcycle. The motorcycle can be considered like an instrument, therefore we associated to this sentence the value STRUMENTO.

4.3.1.4.3 Analysis of the third year

Figure 42 shows the semantic-syntactic values connected with the functional preposition IN in the third year.

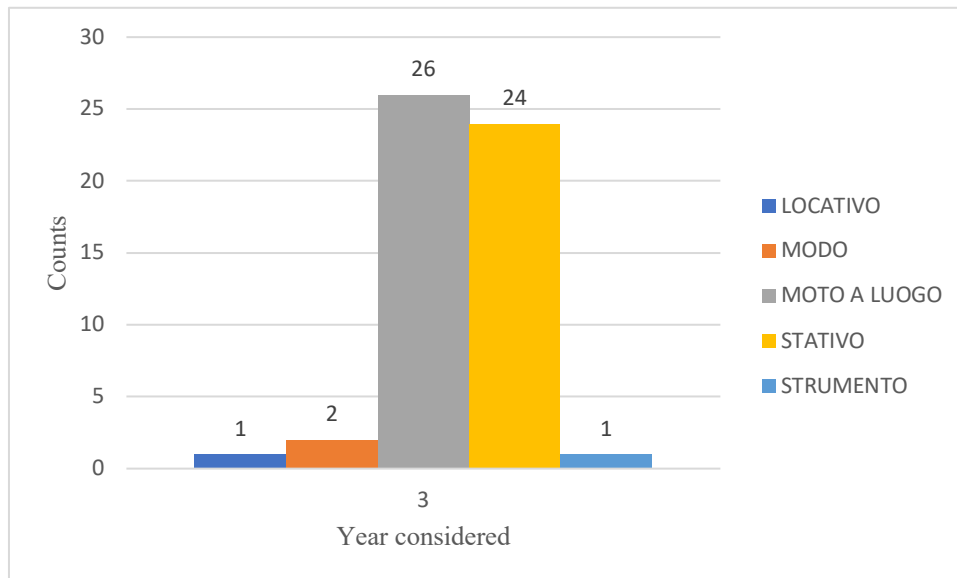


Figure 42: Semantic-syntactic values connected with the functional preposition IN in the third year.

More precisely, during the third year the functional preposition IN is connected to these values: one LOCATIVO, two MODO, twenty-six MOTO A LUOGO, twenty-four STATIVO, one STRUMENTO.

During this year there are not new values connected with the functional preposition IN for the first time.

4.3.1.5 Functional preposition PER

The fifth preposition considered is PER. This preposition is produced for the first time when children are one year and nine months old.

4.3.1.5.1 Analysis of the first year

Figure 43 shows the semantic-syntactic values connected with the functional preposition PER in the first year.

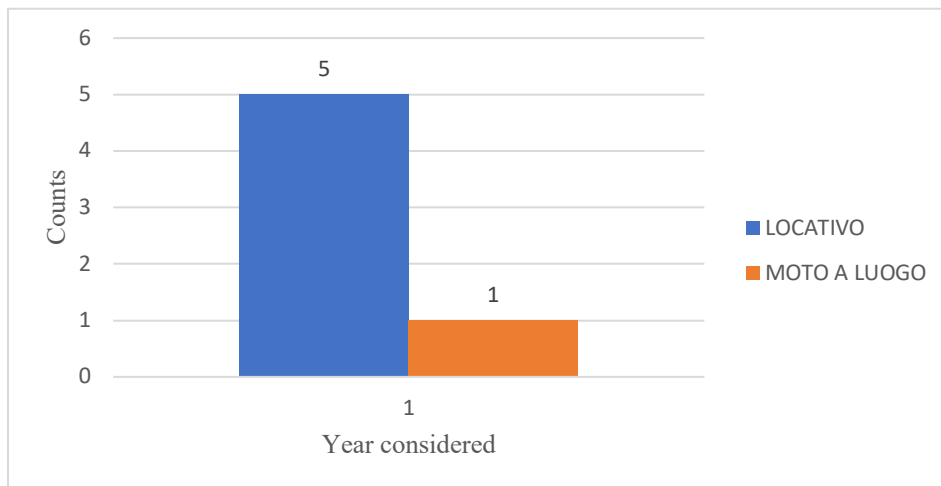


Figure 43: Semantic-syntactic values connected with the functional preposition PER in the first year.

More precisely, during the first year, we can count five values LOCATIVO and one value MOTO A LUOGO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition PER was connected to a specific value for the first time.

- One year and nine months: the value LOCATIVO can be found in the file named 010901 (children were one year, nine months and one day old).

In (125) there is an example for the value LOCATIVO:

(125) “per terra” Marco; 010901

In (125) the value LOCATIVO is connected with the functional preposition PER, since the meaning of this sentence was not enough clear in the dialogue.

- One year and eleven months: the value MOTO A LUOGO can be found in the file named 011107 (children were one year, eleven months and seven days old).

In (126) there is an example for the value MOTO A LUOGO:

(126) “...cacca (:casca) tutti per terra” Diana; 011107

In (126) the value MOTO A LUOGO is connected with the functional preposition PER. The child says that everybody falls down. He describes a movement.

4.3.1.5.2 Analysis of the second year

Figure 44 shows the semantic-syntactic values connected with the functional preposition PER in the second year.

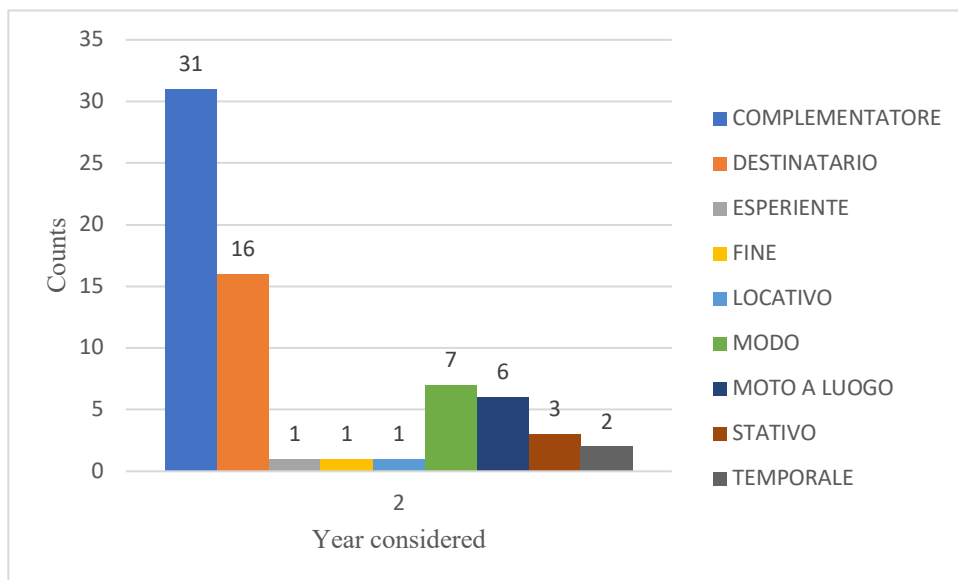


Figure 44: Semantic-syntactic values connected with the functional preposition PER in the second year.

More precisely, during the second year we can identify the following values: thirty-one COMPLEMENTATORE, sixteen DESTINATARIO, one ESPERIENTE, one FINE, one LOCATIVO, seven MODO, six MOTO A LUOGO, three STATIVO, two TEMPORALE.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition PER was connected to a specific value for the first time.

- Two years and zero months: the value DESTINATARIO can be found in the file named 020000 (children were two years, zero months and zero days old). The value COMPLEMENTATORE can be found in the file named 020014 (children were two years, zero months and fourteen days old). The value MODO can be found in the file named 020027 (children were two years, zero months and twenty-seven days old).

In (127) there is an example for the value DESTINATARIO:

(127) “medicina per Topo(lino)” Marco; 020000

The child says that there is a medicine for Mickey Mouse³⁴. Mickey Mouse is the recipient of the drug.

In (128) there is an example for the value COMPLEMENTATORE:

(128) “per leggere” Marco; 020014

In (128) the value COMPLEMENTATORE is connected with the complementizer PER.

³⁴ Mickey Mouse is the main character of the cartoon of the same name. It was created by Walt Disney.

In (129) there is an example for the value MODO:

(129) “giociamo per finta” Marco; 020027

In (129) the child says he wants to simulate a game. For him, this is a type of game.

- Two years and one month: the value STATIVO can be found in the file named 020111 (children were two years, one month and eleven days old).

In (130) there is an example for the value STATIVO:

(130) “giù per terra è meglio” Marco; 020111

The child is speaking with his mother. He says that he wants to play on the ground. Therefore, he refers to a specific position and not to a movement.

- Two years and three months: the value TEMPORALE can be found in the file named 020315 (children were two years, three months and fifteen days old).

In (131) there is an example for the value TEMPORALE:

(131) “...quelli per domani lasci...” Marco; 020315

In (131) the child speaks about balloons. He wants to keep them to inflate them the next day.

- Two years and four months: the value FINE can be found in the file named 020406 (children were two years, four months and six days old).

In (132) there is an example for the value FINE:

(132) “pe’ favour, posso toccare chello?” Camilla; 020406

In (132) the value FINE is connected with the functional preposition PER. The child is asking for a favour.

- Two years and six months: the value ESPERIENTE can be found in the file named 020600 (children were two years, six months and zero days old).

In (133) there is an example for the value ESPERIENTE:

(133) “per me” Diana; 020600

The child is speaking about her opinion with the investigator. This fact was inferred thanks to the reading of the complete dialogue between the child and the investigator.

4.3.1.5.3 Analysis of the third year

Figure 45 shows the semantic-syntactic values connected with the functional preposition PER in the third year.

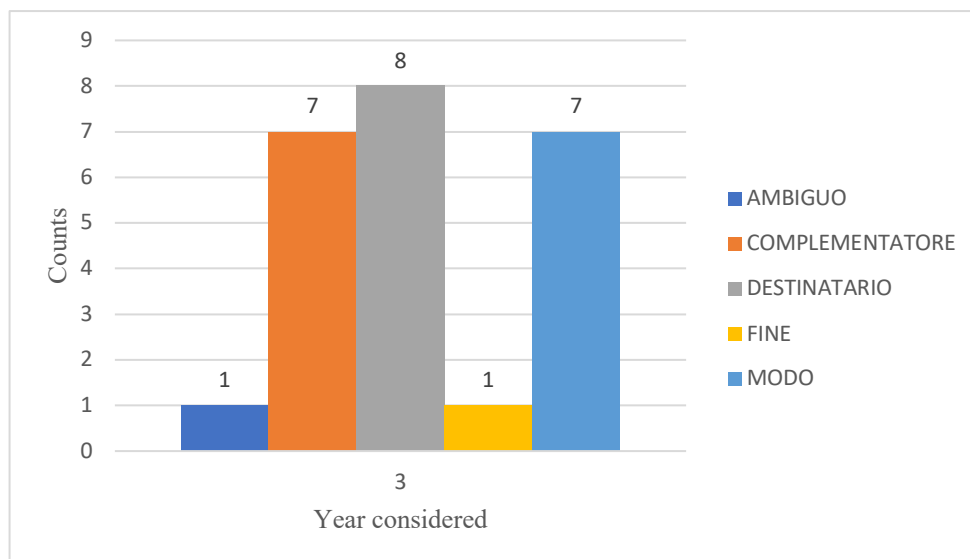


Figure 45: Semantic-syntactic values connected with the functional preposition PER in the third year.

More precisely, during the third year the functional preposition PER is connected to these values: seven COMPLEMENTATORE, eight DESTINATARIO, seven MODO, and one FINE. Only one preposition was connected to the value AMBIGUO.

During this year there are not new values connected with the functional preposition PER for the first time.

4.3.1.6 Functional preposition SU

The sixth preposition considered is SU. This preposition is produced for the first time when children are one year and nine months old.

4.3.1.6.1 Analysis of the first year

Figure 46 shows the semantic-syntactic values connected with the functional preposition SU in the first year.

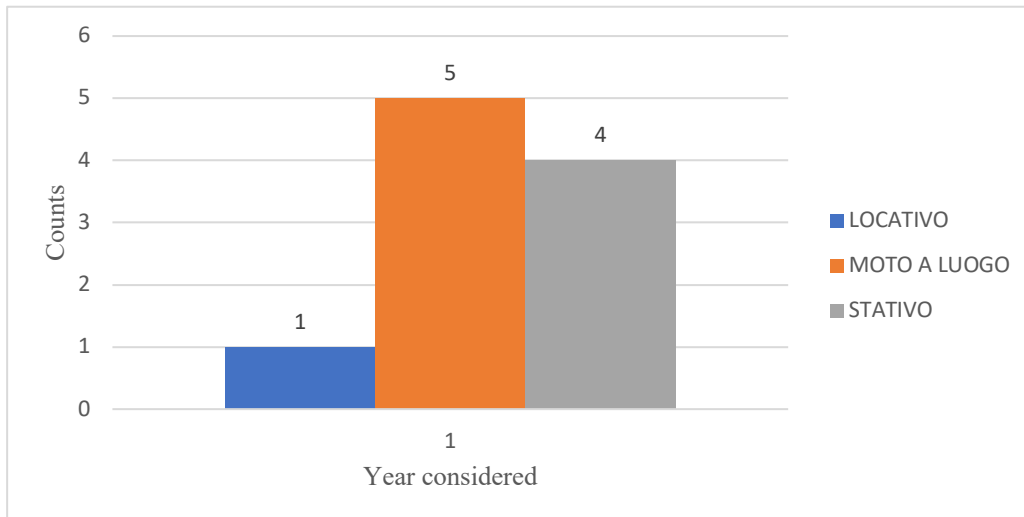


Figure 46: Semantic-syntactic values connected with the functional preposition SU in the first year.

More precisely, during the first year the functional preposition SU is connected to these values: one LOCATIVO, five MOTO A LUOGO, four STATIVO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition SU was connected to a specific value for the first time.

- One year and nine months: the value MOTO A LUOGO can be found in the file named 010915 (children were one year, nine months and fifteen days old).

In (134) there is an example for the value MOTO A LUOGO:

(134) “su/su muro” Marco; 010915

The child says to his mother that he wants to go on the wall with his bike. He is speaking about a movement. This fact was inferred thanks to the reading of the complete dialogue between the child and the mother.

- One year and ten months: the value LOCATIVO and the value STATIVO can be found in the file named 011004 (children were one year, ten months and four days old).

In (135) there is an example for the value LOCATIVO:

(135) “e xxx sul pavimento” Elisa; 011004

In (135) the value LOCATIVO is connected with the functional preposition SU. The meaning of this sentence is not clear in the dialogue: we cannot understand whether the child refers to a movement or to a specific position, therefore we used the generic value LOCATIVO.

In (136) there is an example for the value STATIVO:

(136) “allora xxx sulla strada” Elisa; 011004

In (136) the child is speaking about the static position of objects, therefore we used the value STATIVO.

4.3.1.6.2 Analysis of the second year

Figure 47 shows the semantic-syntactic values connected with the functional preposition SU in the second year.

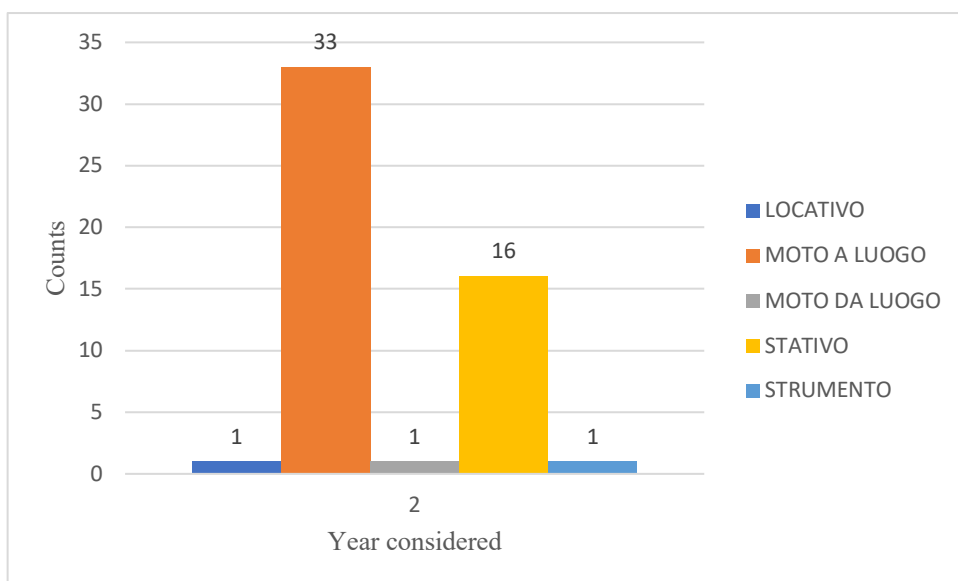


Figure 47: Semantic-syntactic values connected with the functional preposition SU in the second year.

More precisely, during the second year the functional preposition SU is connected to these values: one LOCATIVO, thirty-three MOTO A LUOGO, one MOTO DA LUOGO, sixteen STATIVO, one STRUMENTO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition SU was connected to a specific value for the first time.

- Two years and five months: the value MOTO DA LUOGO can be found in the file named 020510 (children were two years, five months and ten days old).

In (137) there is an example for the value MOTO DA LUOGO:

(137) “perchè cadono sull’albero” Marco; 020510

In (137) the child makes a mistake. He should have said “perchè cadono dall’albero”, therefore he should have used the preposition DA instead to use the preposition SU.

- Two years and eleven months: the value STRUMENTO can be found in the file named 021117 (children were two years, eleven months and seventeen days old).

In (138) there is an example for the value STRUMENTO:

(138) “...sta scivolando sulla pallina” Camilla; 021117

The child says that the character of her book is sliding on a ball. The ball can be considered as an instrument used to slide.

4.3.1.6.3 Analysis of the third year

Figure 48 shows the semantic-syntactic values connected with the functional preposition SU in the third year.

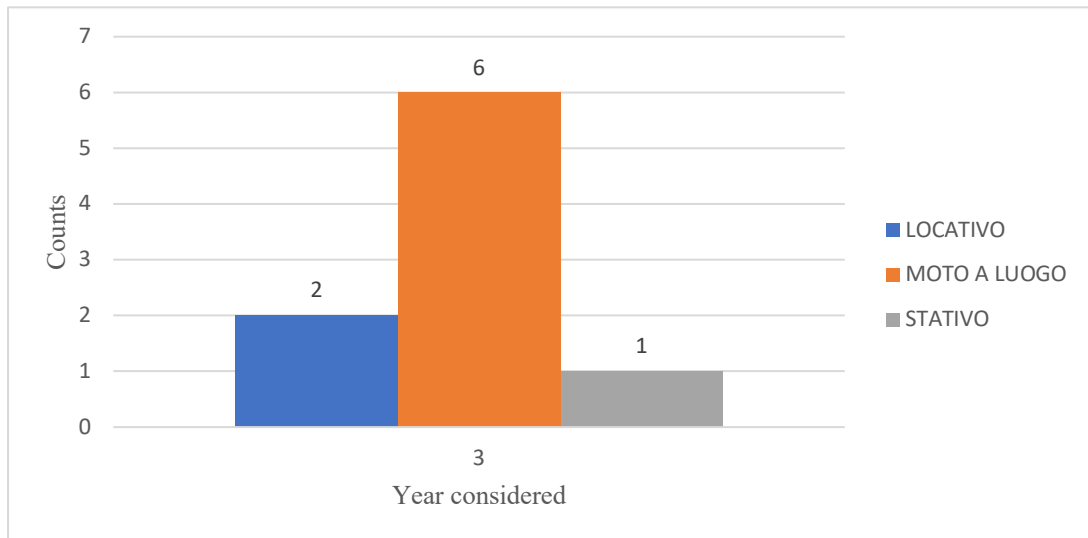


Figure 48: Semantic-syntactic values connected with the functional preposition SU in the third year.

More precisely, during the third year the functional preposition SU is connected to these values: two LOCATIVO, six MOTO A LUOGO, one STATIVO.

During this year there are not new values connected with the functional preposition SU for the first time.

4.3.17 Functional preposition DA

The seventh preposition considered is DA. This preposition is produced for the first time when children are one year and nine months old.

4.3.1.7.1 Analysis of the first year

Figure 49 shows the semantic-syntactic values connected with the functional preposition DA in the first year.

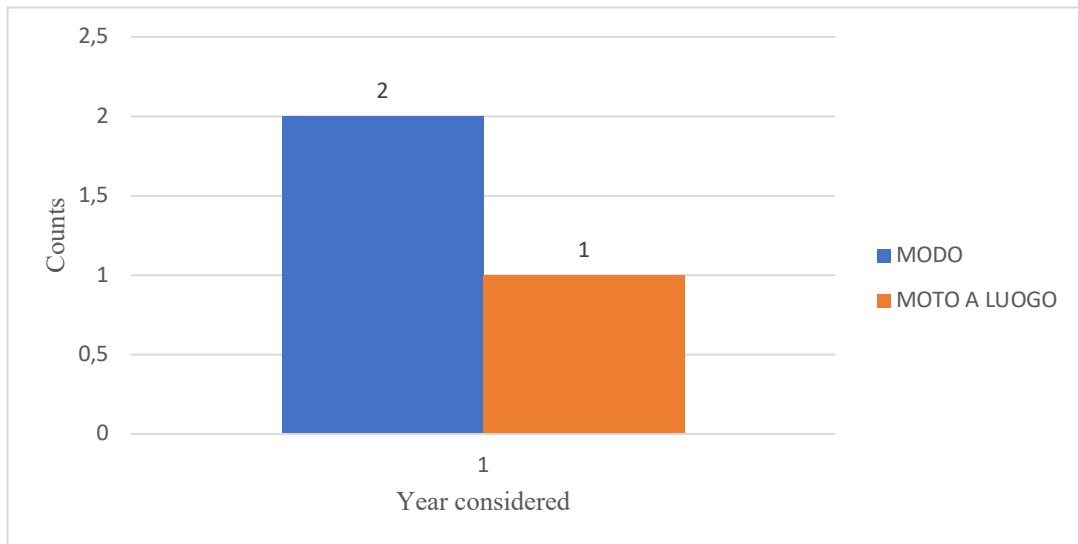


Figure 49: Semantic-syntactic values connected with the functional preposition DA in the first year.

More precisely, during the first year the functional preposition DA is connected to these values: two MODO and one MOTO A LUOGO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition DA was connected to a specific value for the first time.

- One year and nine months: the value MODO can be found in the file named 010924b (children were one year, nine months and twenty-four days old).

In (139) there is an example for the value MODO:

(139) “ancora acqua Lololo (:Lorolo) da solo” Gregorio; 010924b

More precisely, during the second year the functional preposition DA is connected to these values: one AGENTE, thirty-four COMPLEMENTATORE, eight FINE, eleven MODO, nine MOTO A LUOGO, seven MOTO DA LUOGO, six MOTO PER LUOGO, seven QUALITA', nine STATIVO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition DA was connected to a specific value for the first time.

- Two years and zero months: the value QUALITA' can be found in the file named 020027 (children were two years, zero months and twenty-seven days old). The value STATIVO can be found in the file named 020029 (children were two years, zero months and twenty-nine days old).

In (141) there is an example for the value QUALITA':

(141) "ero ve(s)tito <da caubo@wp>" Marco; 020027

In (141) the child says that he was dressed as a cowboy. His dress was characterized by the features of the cowboy.

In (142) there is an example for the value STATIVO:

(142) "dalla zia Rosetta" Gregorio; 020029

In (142) the value STATIVO is connected with the functional preposition DA. The child is speaking about another person, Nicola, and he says that Nicola is in the aunt's home.

- Two years and one month: the value COMPLEMENTATORE can be found in the file named 020120 (children were two years, one month and twenty days old). The value MOTO DA LUOGO can be found in the file named 020125 (children were two years, one month and twenty-five days old).

In (143) there is an example for the value **COMPLEMENTATORE**:

(143) “ora ti faccio da mangiare...” Elisa; 020120

In (143) the value **COMPLEMENTATORE** is connected with the complementizer **DA**. In fact, **DA** is followed by the verb “mangiare”.

In (144) there is an example for the value **MOTO DA LUOGO**:

(144) “&sa venuda (:venuta) vi (:qui) da/da via...” Diana; 020125

In (144) the child says that she left a place to arrive there.

- Two years and two months: the value **MOTO PER LUOGO** can be found in the file named 020206 (children were two years, two months and six days old).

In (145) there is an example for the value **MOTO PER LUOGO**:

(145) “io passo daa porta” Camilla; 020206

In (145) the child is speaking about the place she passes through.

- Two years and three months: the value **FINE** can be found in the file named 020302 (children were two years, three months and two days old).

In (146) there is an example for the value **FINE**:

(146) “golfs (:golf), la palla da golf...” Marco; 020302

In (146) the value **FINE** is connected with the functional preposition **DA**. The child is speaking about a ball used to play tennis.

More precisely, during the third year the functional preposition DA is connected to these values: one AGENTE, thirteen COMPLEMENTATORE, eight DESTINATARIO, two MODO, six MOTO A LUOGO, one QUALITA', two TEMPORALE. Only two prepositions were connected to the value AMBIGUO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the functional preposition DA was connected to a specific value for the first time.

- Three years and four months: the value DESTINATARIO and the value TEMPORALE can be found in the file named 030409 (children were three years, four months and nine days old).

In (148) there is an example for the value DESTINATARIO:

(148) “questa borsa (.) da grandi” Camilla; 030409

The child is speaking about a bag that is only for adult people.

In (149) there is an example for the value TEMPORALE:

(149) “(.) nata da tanti giorni” Camilla; 030409

The child is speaking about a child. This child was born few days before the dialogue was recorded. The value connected with this preposition concerns with time; therefore, I used TEMPORALE.

4.3.1.8 Functional preposition TRA

The eighth preposition considered is TRA. This preposition is produced for the first time when children are three years and one month old.

In the files analysed there is only one sentence in which this preposition is produced. We can find it in the third year, in the file named 030100. In this production the functional preposition TRA is connected to the value TEMPORALE.

In (150) there is an example of the value TEMPORALE:

(150) “e tra un pò cominceranno a prenderlo i bambini...” Camilla; 030100

The child is speaking about salt. She says that maybe in the future children will eat salt. The value connected with this preposition concerns time.

4.3.2 Functional prepositions – Part 2

In this section I will report the result of the analysis of the order of appearance of semantic-syntactic values regardless of the prepositions they are connected with.

In particular, I have limited my analysis only to children's productions with preposition.

4.3.2.1 Analysis of the first year

During the first year the values connected with the functional prepositions are: one AGENTE, six AMBIGUO, five COMITATIVO, 14 COMPLEMENTATORE, eight DESTINATARIO, twenty LOCATIVO, one MATERIA, two MODO, forty-one MOTO A LUOGO, four PARTITIVO, two PAZIENTE, twelve POSSESSO, three QUALITA', one SPECIFICAZIONE, twenty-four STATIVO, four STRUMENTO, four UNIONE.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which a value was connected with a functional preposition for the first time.

Before showing the order of the values connected with the prepositions during the first year, it is important to explain the strategy used to introduce the data. Firstly, I only wrote the months in which we found values connected with a preposition for the first time. Finally, I did not consider the values identified as AMBIGUO, because the prepositions connected to them were not produced in clear sentences.

- One year and seven months: the value LOCATIVO and the value STRUMENTO can be found in the file named 010707 (children were one year, seven months and seven days old when they were recorded).
- One year and eight months: the value POSSESSO can be found in the file named 010805 (children were one year, eight months and five days old). The values MOTO A LUOGO, SPECIFICAZIONE and STATIVO can be found in the file named 010817 (children were one year, eight months and seventeen days old). The value PAZIENTE can be found in the file named 010822 (children were one year, eight months and twenty-two days old).

- One year and nine months: the value DESTINATARIO can be found in the file named 010911 (children were one year, nine months and eleven days old). The value COMPLEMENTATORE can be found in the file named 010924a (children were one year, nine months and twenty-four days old). The values MODO and UNIONE can be found in the file named 010924b (children were one years, nine months and twenty-four days old).
- One year and ten months: the values PARTITIVO and QUALITA' can be found in the file named 011004 (children were one year, ten months and four days old). The value COMITATIVO can be found in the file named 011018 (children were one year, ten months and eighteen days old).
- One year and eleven months: the value AGENTE can be found in the file named 011104 (children were one year, eleven months and four days old). The value MATERIA can be found in the file named 011107 (children were one year, eleven months and seven days old).

Figure 52 and Figure 53 show the values connected with functional prepositions in each month during the first year.

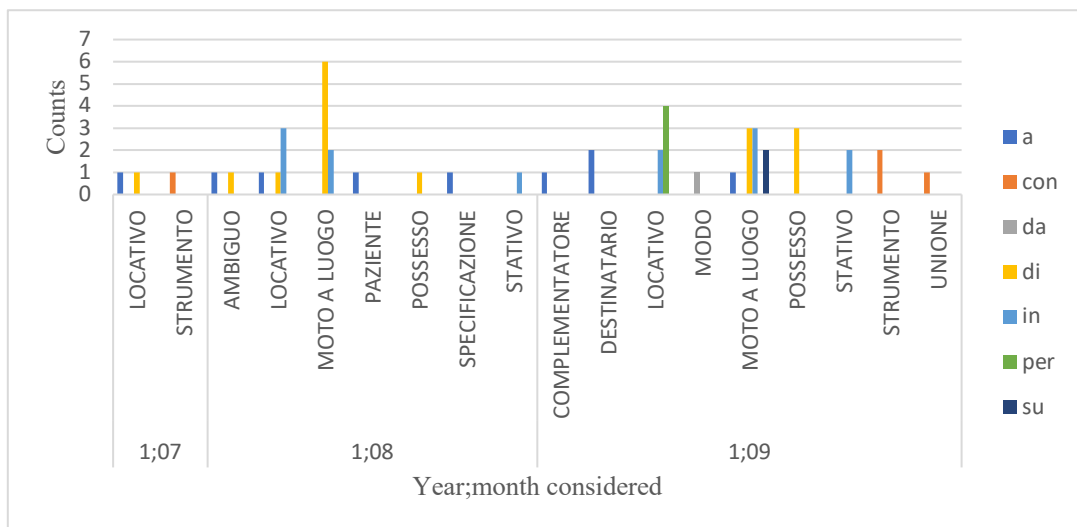


Figure 52: Values connected with functional prepositions from 1;07 to 1;09.

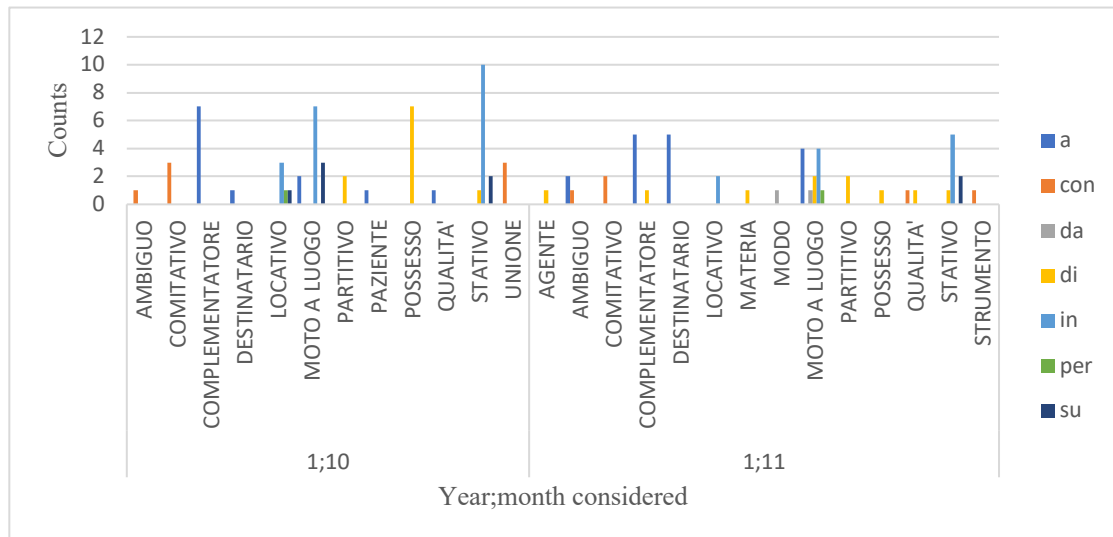


Figure 53: Values connected with functional prepositions from 1;10 to 1;11.

Figure 52, Figure 53 and the values summarized at the beginning of this section show that during the first year some semantic-syntactic values are connected with prepositions significantly more than others.

We refer to:

- 1) The spatial LOCATIVO, STATIVO, MOTO A LUOGO
- 2) COMPLEMENTATORE
- 3) POSSESSO
- 4) DESTINATARIO

In the following we will analyse each one of these values:

- 1) Spatial values. The value LOCATIVO was connected with a functional preposition for the first time when children are 1;07. The values MOTO A LUOGO and STATIVO instead were connected with a functional preposition for the first time when children are 1;08. The number of spatial values starts to increase at 1;08.

In the following we list the order of appearance of functional prepositions connected to each one of these spatial values during the first year:

- LOCATIVO: this value is connected with the preposition A and to the preposition DI in the file named 010707 (children were one year, seven months and seven days old when they were recorded). This value is connected with the preposition IN in the file named 010817 (children were one year, eight months and seventeen days old). This value is connected with the functional preposition PER in the file named 010901 (children were one year, nine months and one day old). This value is connected with the functional preposition SU in the file named 011004 (children were one year, ten months and four days old).
- STATIVO: this value is connected with the functional preposition IN in the file named 010817 (children were one year, eight months and seventeen days old). This value is connected with the functional preposition SU in the file named 011004 (children were one year, ten months and four days old). This value is connected with the functional preposition DI in the file named 011012 (children were one year, ten months and twelve days old).
- MOTO A LUOGO: this value is connected with the functional prepositions DI and IN in the file named 010817 (children were one year, eight months and seventeen days old). This value is connected with the functional preposition SU in the file named 010915 (children were one year, nine months and fifteen days old). This value is connected with the functional preposition A in the file named 010924a (children were one year, nine months and twenty-four days old). This value is connected with the functional preposition DA in the file named 011104 (children were one year, eleven months and four days old). This value is connected with the functional preposition PER in the file named 011107 (children were one year, eleven months and seven days old).

2) COMPLEMENTATORE. The values defined as COMPLEMENTATORE begin to appear when children are 1;09. The number of prepositions used as complementizers increases since 1;09.

We list the order of appearance of functional prepositions connected to this value during the first year:

This value is connected with the functional preposition A in the file named 010924a (children were one year, nine months and twenty-four days old). This value is connected with the functional preposition DI in the file named 011119 (children were one year, eleven months and nineteen days old).

- 3) POSSESSO. The value POSSESSO was connected with a functional preposition for the first time when children are 1;08. The number of the values defined as POSSESSO starts to increase at 1;08.

During the first year this value is only connected with the functional preposition DI and is connected with DI for the first time in the file named 010805 (children were one years, eight months and five days old).

- 4) DESTINATARIO. The value DESTINATARIO was connected with a functional preposition for the first time when children are 1;09. The number of the values defined as DESTINATARIO starts to increase at 1;09.

During the first year this value is connected only with the functional preposition A. This value is connected with A for the first time in the file named 010911 (children were one year, nine months and eleven days old).

4.3.2.2 Analysis of the second year

During the second year the values connected with functional prepositions are: five AGENTE, fourteen AMBIGUO, thirty-eight COMITATIVO, one hundred and forty-nine COMPLEMENTATORE, one hundred and twenty-five DESTINATARIO, five ESPERIENTE, eighteen FINE, seven INTERIEZIONE, sixteen LOCATIVO, ten MATERIA, fifty-seven MODO, two hundred and forty-three MOTO A LUOGO, ten MOTO DA LUOGO, six MOTO PER LUOGO, twenty-eight PARTITIVO, fifty-four PAZIENTE, sixty-seven POSSESSO, fifty-three QUALITA', two QUANTITA', four

SECONDO TERMINE DI PARAGONE, thirteen SPECIFICAZIONE, one hundred and forty-two STATIVO, ninety-five STRUMENTO, fifteen TEMPORALE, fifteen UNIONE.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which a value was connected with a functional preposition for the first time.

Before showing the order of the values connected with the prepositions during the second year, it is important to explain the strategy used to introduce the data. Firstly, I only wrote the months in which there were values connected with a preposition for the first time. Finally, I did not consider the values identified as AMBIGUO, because the prepositions connected to them were not produced in clear sentences.

- Two years and zero months: the value INTERIEZIONE can be found in the file named 020000 (children were two years, zero months and zero days old when they were recorded). The value ESPERIENZE can be found in the file named 020002 (children were two years, zero months and two days old). The value QUANTITA' and the value TEMPORALE can be found in the file named 020027 (children were two years, zero months and twenty-seven days old). The value FINE can be found in the file named 020029 (children were two years, zero months and twenty-nine days old).
- Two years and one month: the value MOTO DA LUOGO can be found in the file named 020125 (children were two years, one month and twenty-five days old).
- Two years and two months: the value MOTO PER LUOGO can be found in the file named 020206 (children were two years, two months and six days old).
- Two years and six months: the value SECONDO TERMINE DI PARAGONE can be found in the file named 020619 (children were two years, six months and nineteen days old).

Figure 54, 55, 56, 57, 58, and 59 report the values connected with functional prepositions in each month during the second year.

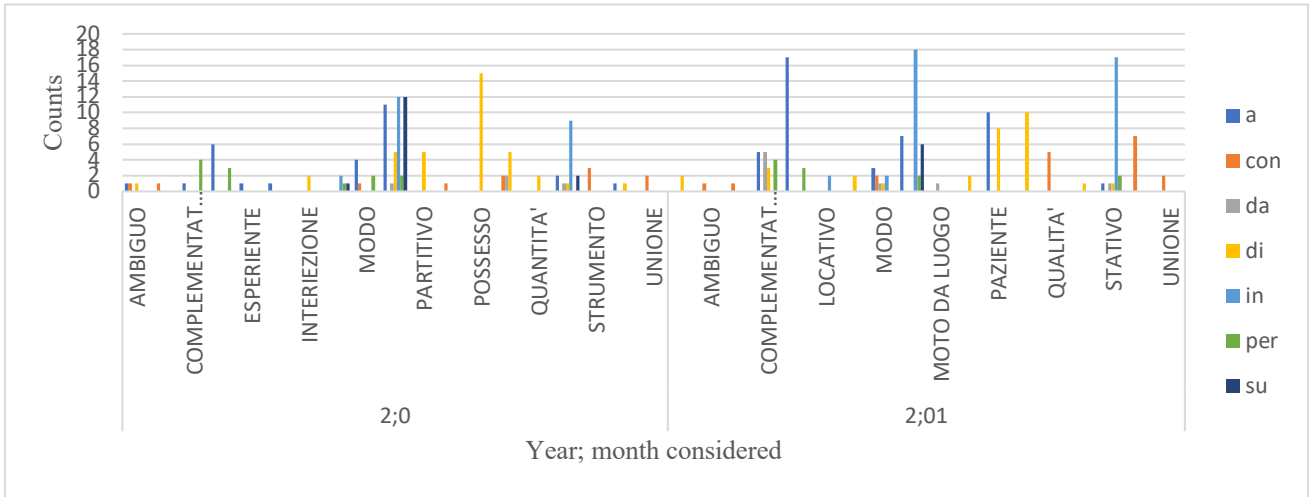


Figure 54: Values connected with functional prepositions from 2;0 to 2;01.

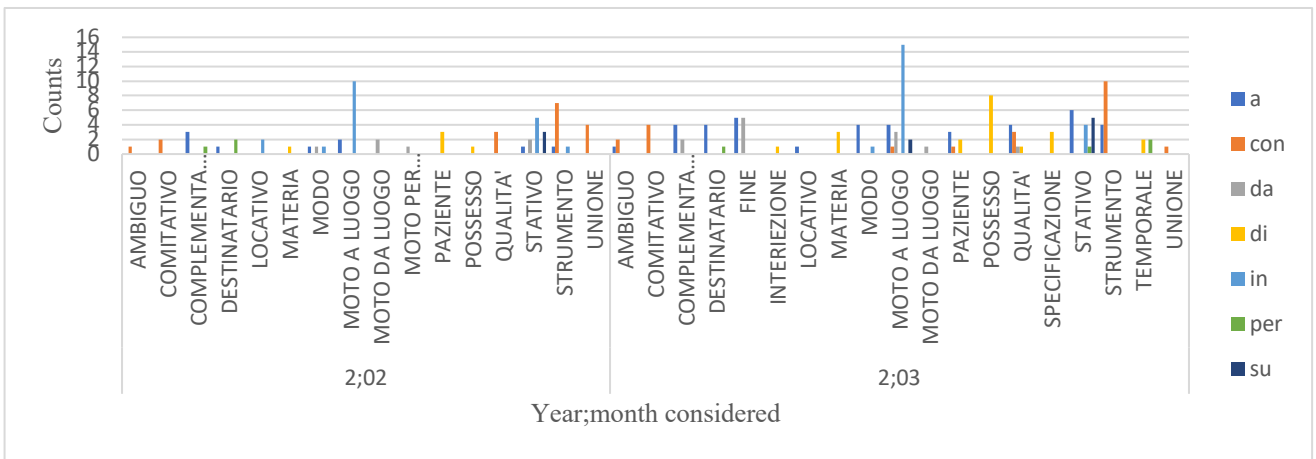


Figure 55: Values connected with functional prepositions from 2;02 to 2;03.

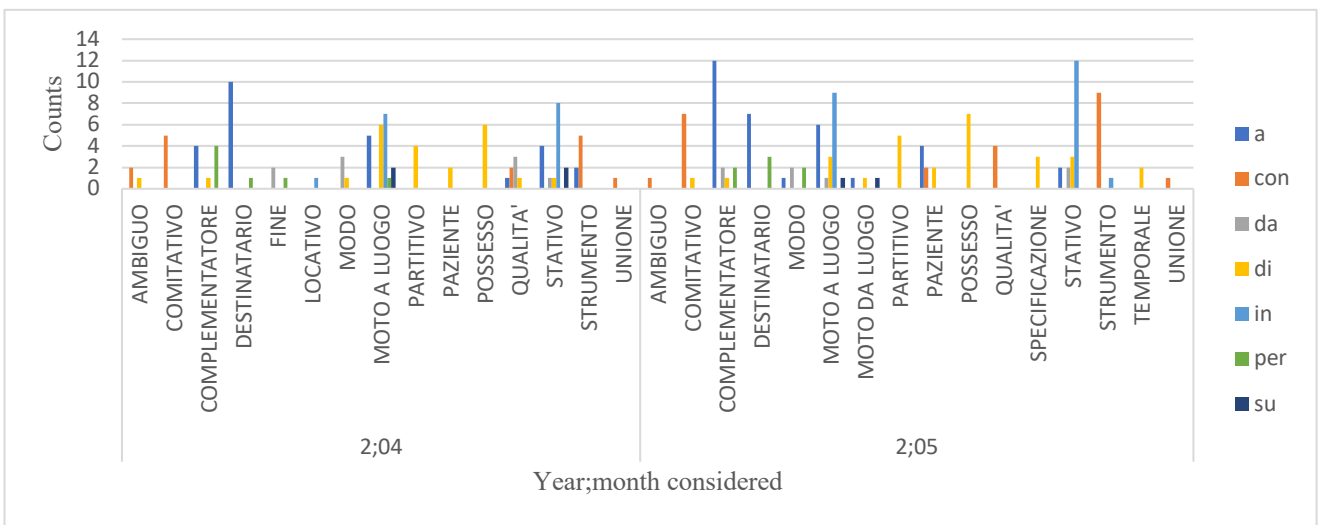


Figure 56: Values connected with functional prepositions from 2;04 to 2;05.

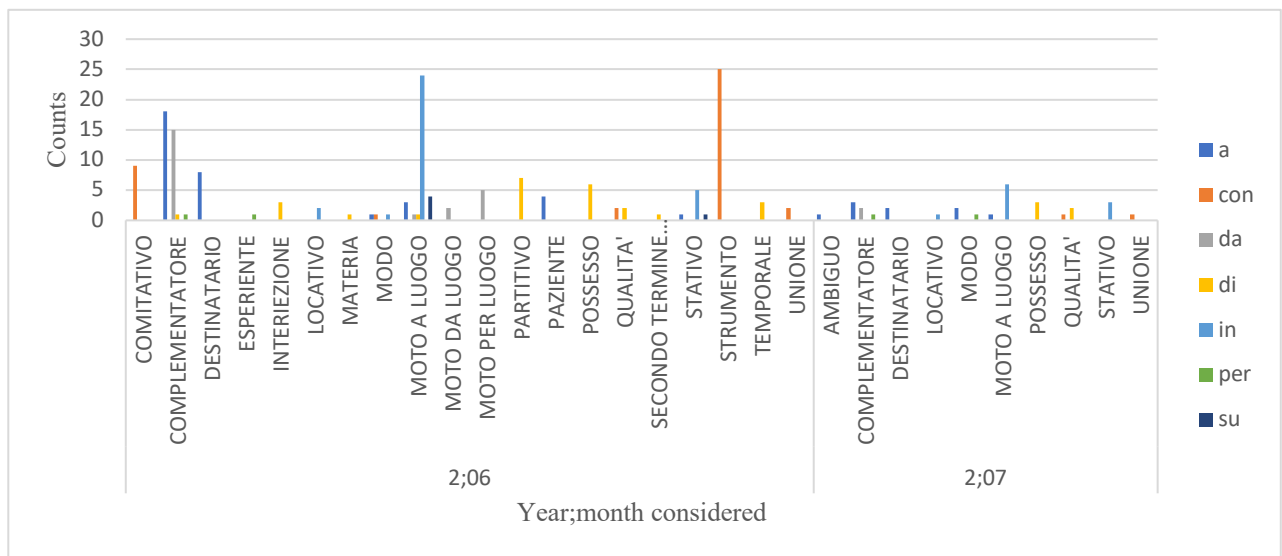


Figure 57: Values connected with functional prepositions from 2;06 to 2;07.

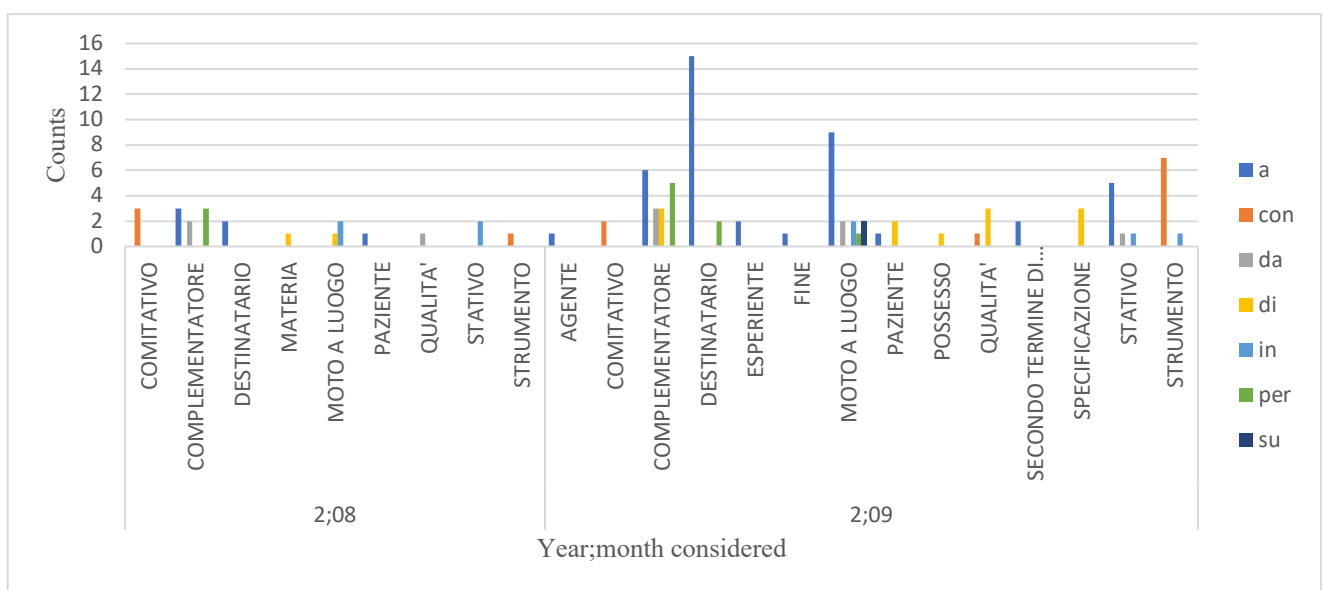


Figure 58: Values connected with functional prepositions from 2;08 to 2;09.

connected with the functional preposition DA in the file named 020120 (children were two years, one month and twenty days old).

- 2) Spatial values. During this year there are also other two spatial values that are connected with functional prepositions: MOTO DA LUOGO and MOTO PER LUOGO.

We list the order of the appearance of functional prepositions connected to each one of these spatial values during the second year:

- LOCATIVO. This value is not connected for the first time with other functional prepositions during the second year.
- STATIVO. This value is connected with the functional preposition A in the file named 020027 (children were two years, zero months and twenty-seven days old). This value is connected with the functional preposition DA in the file named 020029 (children were two years, zero months and twenty-nine days old). This value is connected with the functional preposition PER in the file named 020111 (children were two years, one month and eleven days old).
- MOTO A LUOGO. This value is connected with the functional preposition CON in the file named 020329 (children were two years, three months and twenty-nine days old).
- MOTO DA LUOGO. This value is connected with the functional preposition DA in the file named 020125 (children were two years, one month and twenty-five days old). This value is connected with the functional preposition DI in the file named 020501 (children were two years, five months and one day old). This value is connected with the functional preposition SU in the file named 020510 (children were two years, five months and ten days old). This value is connected with the functional preposition A in the file named 020513 (children were two years, five months and thirteen days old).
- MOTO PER LUOGO. This value is connected with the functional preposition DA in the file named 020206 (children were two years, two months and six days old).

- 3) POSSESSO. This value is connected with the functional preposition A in the file named 021112 (children were two years, eleven months and twelve days old).
- 4) DESTINATARIO. This value is connected with the functional preposition PER in the file named 020000 (children were two years, zero months and zero days old).
- 5) STRUMENTO. This value is connected with the functional preposition CON in the file named 020000 (children were two years, zero months and zero days old). This value is connected with the functional prepositions A and IN in the file named 020211 (children were two years, two months and eleven days old). This value is connected with the functional preposition SU in the file named 021117 (children were to years, eleven months and seventeen days old).

During the first and the second year some values are connected with few functional prepositions. In particular, we can identify: (I) some semantic-syntactic values connected with functional prepositions only in the second year and not in the first one; (II) some semantic-syntactic values that in the first year and in the second year are connected with different prepositions.

More precisely, these values are:

- MODO: During the first year this value can be found only two times. In both these productions, it is connected with the functional preposition DA. This value can be found for the first time in the file named 010924b (children were one year, nine months and twenty-four days old).

During the second year, instead, this value is connected with the functional preposition CON in the file named 020000 (children were two years, zero months and zero days old). It is also connected with the functional preposition A in the file named 020002 (children were two years, zero months and two days old). This value is also connected with the functional preposition PER in the file named

020027 (children were two years, zero months and twenty-seven days old). It is connected with the functional prepositions DI and IN in the file named 020127 (children were two years, one month and twenty-seven days old).

- FINE: During the first year this value is not connected with functional prepositions.

This value appears for the first time in the second year. More precisely, this value is connected with the functional preposition A in the file named 020029 (children were two years, zero months and twenty-nine days old). It is connected with the functional preposition DA in the file named 020302 (children were two years, three months and two days old). It is connected with the functional preposition PER in the file named 020406 (children were two years, four months and six days old).

- PAZIENTE: During the first year this value can be found only two times. In both these productions, it is connected with the functional preposition A. This value can be found for the first time in the file named 010822 (children were one year, eight months and twenty-two days old).

During the second year, instead, this value is connected with the functional preposition CON in the file named 020027 (children were two years, zero months and twenty-seven days old). It is connected with the functional preposition DI in the file named 020111 (children were two years, one month and eleven days old).

- QUALITA': During the first year this value is connected with a functional preposition only three times. More precisely, it is connected with the functional preposition A in the file named 011004 (children were one year, ten months and four days old). It is connected with the functional preposition DI in the file named 011116 (children were one year, eleven months and sixteen days old); and it is connected with the functional preposition CON in the file named 011119 (children were one year, eleven months and nineteen days old).

During the second year, this value is connected with the functional preposition DA in the file named 020027 (children were two years, zero months and twenty-seven days old).

- **COMITATIVO:** During the first year this value is connected with a functional preposition five times. In all these cases it is connected with the functional preposition CON. This value can be found for the first time in the file named 011018 (children were one year, ten months and eighteen days old).

During the second year, instead, this value is connected with the functional preposition DI in the file named 020501 (children were two years, five months and one day old).

- **SECONDO TERMINE DI PARAGONE:** During the first year this value is not connected with functional prepositions.

This value appears for the first time during the second year. More precisely, this value is connected with the functional preposition DI in the file named 020619 (children were two years, six months and nineteen days old). It is connected with the functional preposition A in the file named 020904 (children were two years, nine months and four days old).

- **ESPERIENZE:** During the first year this value is not connected with functional prepositions.

This value appears for the first time in the second year. More precisely, this value is connected with the functional preposition A in the file named 020002 (children were two years, zero months and two days old). It is connected with the functional preposition PER in the file named 020600 (children were two years, six months and zero days old).

- **SPECIFICAZIONE:** During the first year this value is connected with a functional preposition only one time. More precisely, it is connected with the functional preposition A in the file named 010817 (children were one year, eight months and seventeen days old).

During the second year this value is connected with the functional preposition DI in the file named 020122 (children were two years, one month and twenty-two days old).

- AGENTE: During the first year this value is connected with a functional preposition only one time. More precisely, it is connected with the functional preposition DI in the file named 011104 (children were one year, ten months and four days old).

During the second year this value is connected with the functional preposition A in the file named 020904 (children were two years, nine months and four days old). It is connected with the functional preposition DA in the file named 021117 (children were two years, eleven months and seventeen days old).

- TEMPORALE: During the first year this value is not connected with functional prepositions.

During the second year this value is connected with the functional preposition DI in the file named 020000 (children were two years, zero months and zero days old). It is connected with the functional preposition A in the file named 020027 (children were two years, zero months and twenty-seven days old). It is connected with the functional preposition PER in the file named 020315 (children were two years, three months and fifteen days old).

4.3.2.3 Analysis of the third year

During the third year the values connected with functional prepositions are: three AGENTE, nine AMBIGUO, seven COMITATIVO, sixty-five COMPLEMENTATORE, forty-one DESTINATARIO, six ESPERIENDE, one FINE, four LOCATIVO, one MATERIA, eighteen MODO, fifty-seven MOTO A LUOGO, five MOTO DA LUOGO, three PARTITIVO, fourteen PAZIENTE, twelve POSSESSO, eight QUALITA', one SECONDO TERMINE DI PARAGONE, three SPECIFICAZIONE, forty-three STATIVO, fourteen STRUMENTO, six TEMPORALE, two UNIONE.

During the third year there are not new values connected with a functional preposition for the first time.

Figure 60 and Figure 61 report the values connected with functional prepositions in each month during the third year.

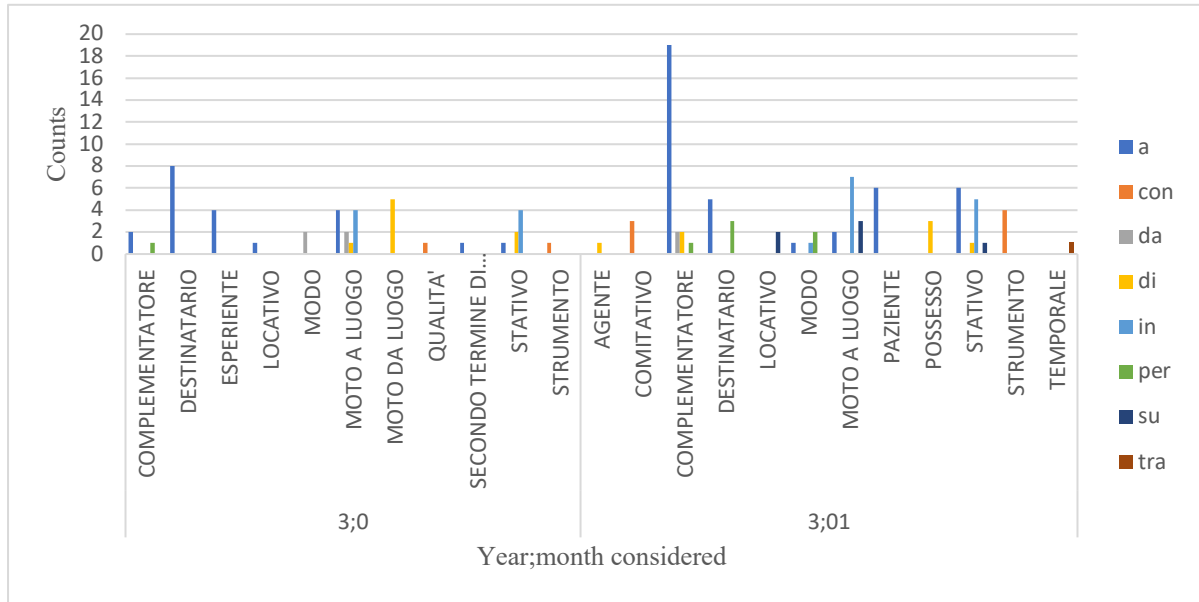


Figure 60: Values connected with functional prepositions from 3;0 to 3;01.

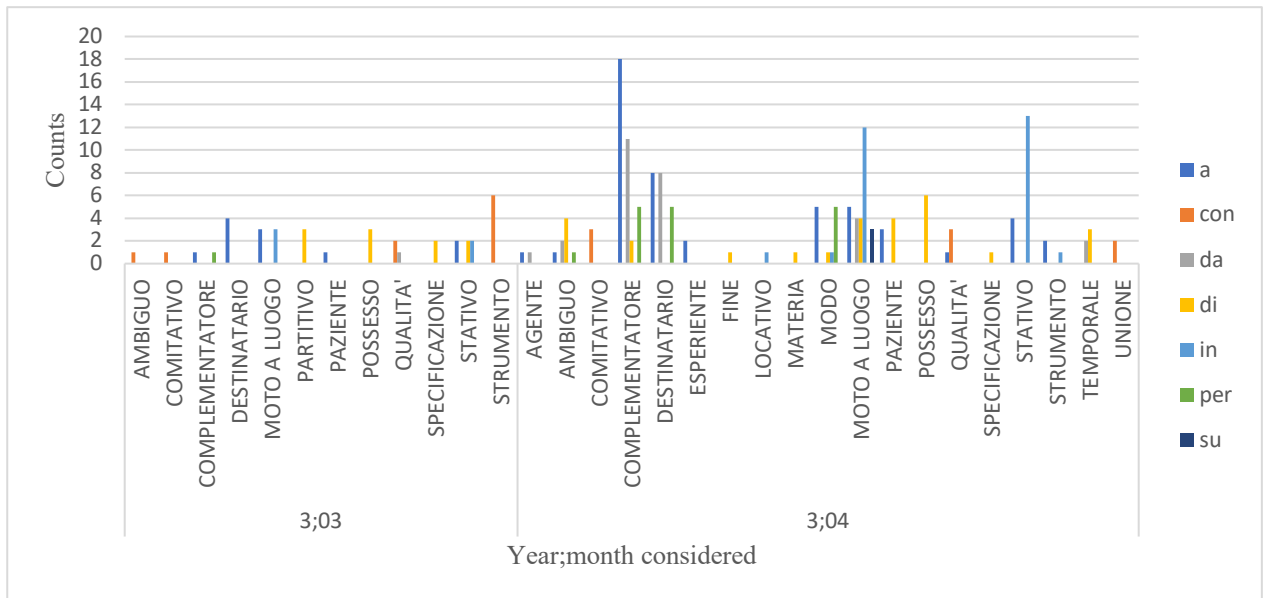


Figure 61: Values connected with functional prepositions from 3;03 to 3;04.

Figure 60 and Figure 61 show, in agreement with the second year, that during the third year some semantic-syntactic values increase significantly more than others. These values are: COMPLEMENTATORE, LOCATIVO, STATIVO, MOTO A LUOGO, MOTO DA LUOGO, POSSESSO, DESTINATARIO.

The value MOTO PER LUOGO is the only spatial value that is not connected with functional prepositions during the third year.

The value DESTINATARIO is connected with the functional preposition DA in the file named 030409 (children were three years, four months and nine days old).

All the other values, instead, are not connected with new functional prepositions during the third year; they are connected with prepositions reported in section 4.3.2.2.

During the second year and the third year some values are connected with few functional prepositions. In particular, there are semantic-syntactic values that in the second year and in the third year are connected with different prepositions.

These values are:

- TEMPORALE: During the third year this value is connected with the functional preposition TRA in the file named 030100 (children were three years, one month and zero days old). This value is connected with the functional preposition DA in the file named 030409 (children were three years, four months and nine days old).
- FINE: During the third year this value is connected with the functional preposition DI in the file named 030409 (children were three years, four months and nine days old).

4.4 Lexical prepositions

In this section we report the analysis of the values connected with lexical prepositions.

The first lexical preposition appears in children's productions when children are 1;09. The number of lexical prepositions increases during the second year (children enter in their third year of life).

This section is divided in two parts:

- In section 4.4.1 I analysed the order of appearance of values connected with each lexical preposition. I considered the lexical prepositions in the order presented in chapter 3. More precisely, the order is: SENZA, SOTTO, DENTRO, SOPRA, CONTRO.
- In section 4.4.2 I analysed the order of appearance of values in children's productions regardless of the prepositions they are connected with.

4.4.1 Lexical prepositions - Part 1

4.4.1.1 Lexical preposition SENZA

The first preposition produced is SENZA. This preposition is produced for the first time when children are one year and nine months old.

4.4.1.1.1 Analysis of the first year

During the first year the lexical preposition SENZA is only connected to the value NEG-QUALITA'. We can find this preposition in one production only: (151), in the file named 010915 (the child who pronounced this preposition was one year, nine months and fifteen days old).

(151) "teta (:senza) giuco (:guscio)" Marco; 010915

The child is talking about a snail and he says that this snail has not the shell. The snails usually are characterized by their shells, the shell is a sort of quality of the snail. In (151) this quality is denied, therefore I used NEG-QUALITA'.

4.4.1.1.2 Analysis of the second year

Figure 62 shows the semantic-syntactic values connected with the lexical preposition SENZA in the second year.

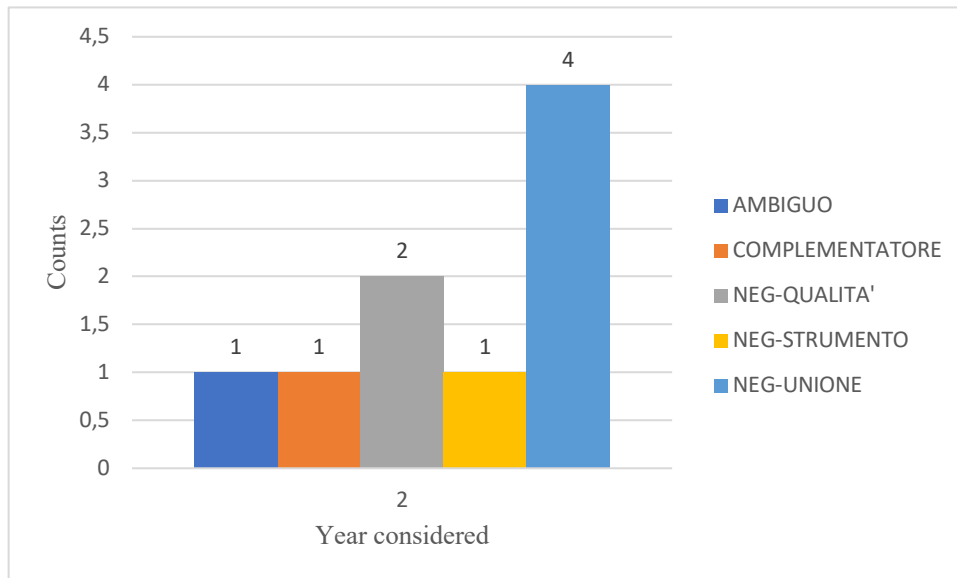


Figure 62: Semantic-syntactic values connected with the lexical preposition SENZA during the second year.

More precisely, during the second year the lexical preposition SENZA is connected to these values: one COMPLEMENTATORE, two NEG-QUALITA', one NEG-STRUMENTO, four NEG-UNIONE, and finally one preposition was connected to the value AMBIGUO, because the sentence was not enough clear to connect it to a more specific value.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the lexical preposition SENZA was connected to a specific value for the first time.

Before showing this order, it is important to say that I wrote only the months in which I found new values connected with the preposition.

- Two years and one month: this lexical preposition is connected to the value NEG-UNIONE in the file named 020106 (children were two years, one month and six days old). The preposition is connected to the value NEG-STRUMENTO in the

file named 020127 (children were two years, one month and twenty-seven days old).

In (152) there is an example for the value NEG-UNIONE:

(152) “andare senza quetto (:questo) che sennò...” Elisa; 020106

This production can be understood thanks to the reading of the complete dialogue between the child and her mother. The child is probably speaking about two objects that cannot stay together.

In (153) there is an example for the value NEG-STRUMENTO:

(153) “senza pi(s)tola?” Marco; 020127

In (153) the child is asking to his mother how she can shoot without a gun. The gun, in fact, is the instrument used to shoot.

- Two years and six months: this lexical preposition is connected to the value COMPLEMENTATORE in the file named 020613 (children were two years, six months and thirteen days old).

In (154) there is an example for the value COMPLEMENTATORE:

(154) “babbo Bambi e@p esto senza mangiare.” Raffaello; 020613

In (154) the value COMPLEMENTATORE is connected with the complementizer SENZA. SENZA, in fact, is followed by the verb “mangiare”.

4.4.1.1.3 Analysis of the third year

Figure 63 shows the semantic-syntactic values connected with the lexical preposition SENZA in the third year.

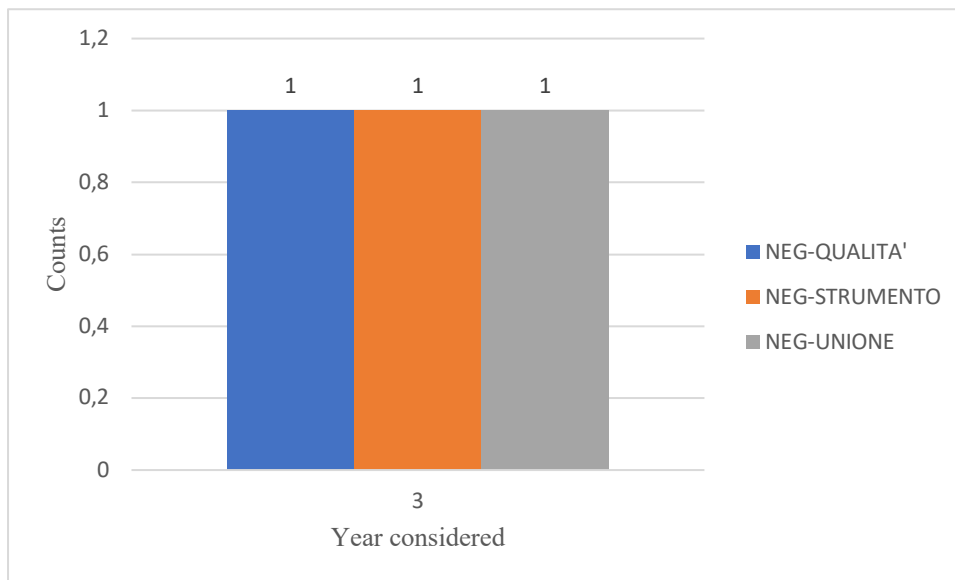


Figure 63: Semantic-syntactic values connected with the lexical preposition SENZA in the third year.

More precisely, during the third year the preposition SENZA is connected to the following values: one NEG-QUALITA', one NEG-STRUMENTO, one NEG-UNIONE.

In the third year there are not values connected with the lexical preposition SENZA for the first time.

We can summarize that SENZA in the first year and at the beginning of the second one is connected to values that express a negation (NEG-QUALITA', NEG-UNIONE, NEG-STRUMENTO). Only later, when children are two years and six months, SENZA is used as a complementizer.

4.4.1.2 Lexical preposition SOTTO

The second preposition considered is SOTTO. This preposition is produced for the first time when children are two years and zero months old.

4.4.1.2.1 Analysis of the first year

During the first year the lexical preposition SOTTO is not produced by the children.

4.4.1.2.2 Analysis of the second year

Figure 64 shows the semantic-syntactic values connected with the lexical preposition SOTTO in the second year.

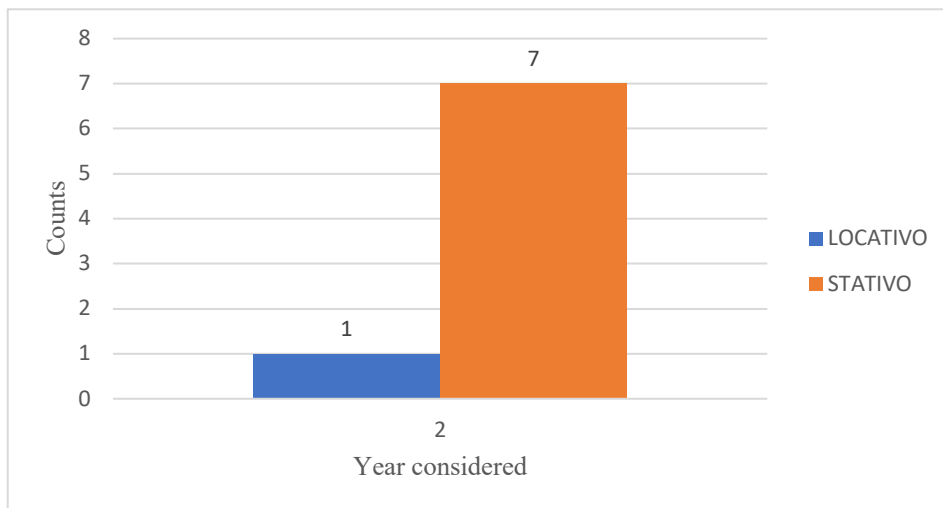


Figure 64: Semantic-syntactic values connected with the lexical preposition SOTTO in the second year.

More precisely, during the second year the lexical preposition SOTTO is connected to these semantic-syntactic values: one LOCATIVO and seven STATIVO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the lexical preposition SOTTO was connected to a specific value for the first time.

Before showing this order, it is important to say that I wrote only the months in which I found new values connected with the preposition.

- Two years and zero months: this lexical preposition is connected to the value STATIVO in the file named 020000 (children were two years, zero months and zero days old).

In (155) there is an example for the value STATIVO:

(155) “eh sotto la punta poi sotto la punta” Marco; 020000

In (155) the child is speaking with his mother and he refers to the static position of objects.

- Two years and four months: this lexical preposition is connected to the value LOCATIVO in the file named 020426 (children were two years, four months and twenty-six days old).

In (156) there is an example for the value LOCATIVO:

(156) “xxx sotto cusino (:cuscino)” Marco; 020426

For this production we used the more general value LOCATIVO since the production was not enough clear to understand whether the child refers to a movement that he wants to do or to a static position of an object.

4.4.1.2.3 Analysis of the third year

During the third year there are not productions in which there is the lexical preposition SOTTO.

We can summarize that the lexical preposition SOTTO is always connected to spatial values.

4.4.1.3 Lexical preposition DENTRO

The third preposition considered is DENTRO. This preposition is produced for the first time when children are two years and zero months old.

4.4.1.3.1 Analysis of the first year

During the first year the lexical preposition DENTRO is not produced by the children.

4.4.1.3.2 Analysis of the second year

Figure 65 shows the semantic-syntactic values connected with the lexical preposition DENTRO in the second year.

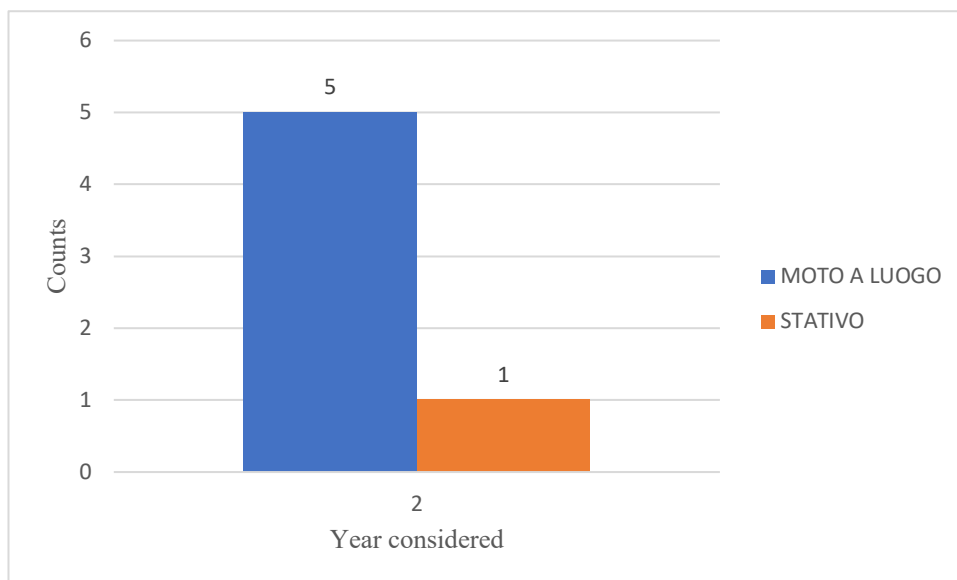


Figure 65: Semantic-syntactic values connected with the lexical preposition DENTRO in the second year.

More precisely, during the second year the lexical preposition DENTRO is connected to these values: five MOTO A LUOGO, one STATIVO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the lexical preposition DENTRO was connected to a specific value for the first time.

Before showing this order, it is important to say that I wrote only the months in which I found new values connected with the preposition.

- Two years and zero months: this lexical preposition is connected to the value MOTO A LUOGO in the file named 020014 (children were two years, zero months and fourteen days old).

In (157) there is an example for the value MOTO A LUOGO:

(157) “detro (:dentro) il lettino” Marco; 020014

In (157) the child says to his mother that he wants to go to bed. He wants to do a movement.

- Two years and one month: this lexical preposition is connected to the value STATIVO in the file named 020114 (children were two years, one month and fourteen days old).

In (158) there is an example for the value STATIVO:

(158) “dento (:dentro) detta (:questa)” Rosa; 020114

This production can be understood reading the complete dialogue between Rosa, the investigator and Rosa’s mother, available in CHILDES. The child is looking for something, and for this reason he says that he is looking into a recipient.

4.4.1.3.3 Analysis of the third year

Figure 66 shows the semantic-syntactic values connected with the lexical preposition DENTRO in the third year.

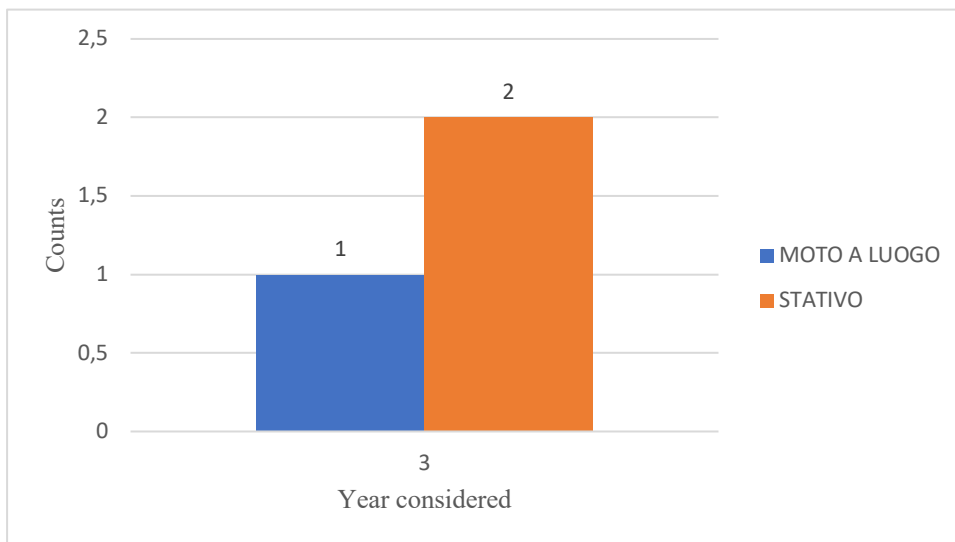


Figure 66: Semantic-syntactic values connected with the lexical preposition DENTRO in the third year.

More precisely, during the third year the lexical preposition DENTRO is connected to these values: one MOTO A LUOGO and two STATIVO.

In the third year there are not values connected with the lexical preposition DENTRO for the first time.

We can summarize that the lexical preposition DENTRO is always connected to spatial values.

4.4.1.4 Lexical preposition SOPRA

The fourth preposition considered is SOPRA. This preposition is produced for the first time when children are two years and zero months old.

4.4.1.4.1 Analysis of the first year

During the first year the lexical preposition SOPRA is not produced by the children.

4.4.1.4.2 Analysis of the second year

Figure 67 shows the semantic-syntactic values connected with the lexical preposition SOPRA in the second year.

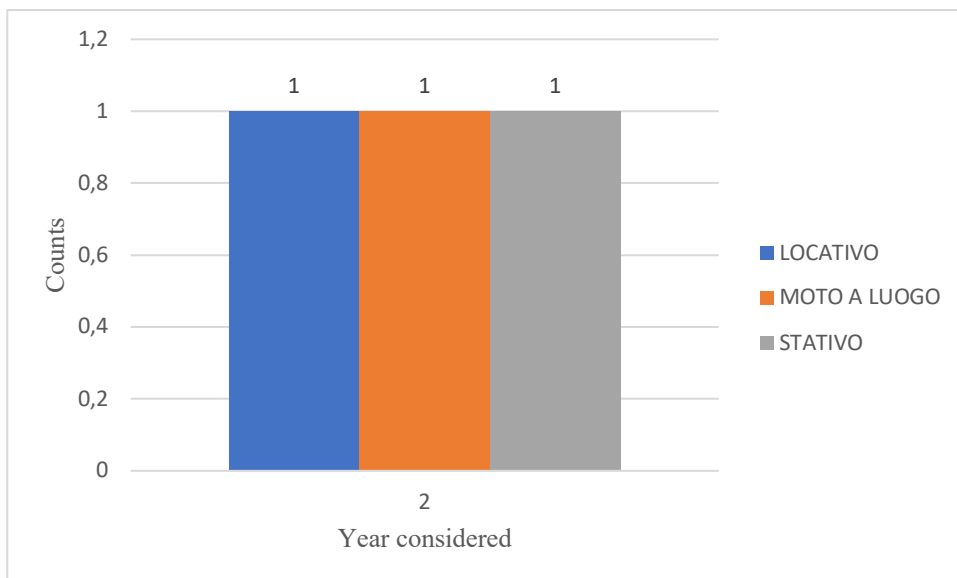


Figure 67: Semantic-syntactic values connected with the lexical preposition SOPRA in the second year.

More precisely, during the second year the lexical preposition SOPRA is connected to these values: one LOCATIVO, one MOTO A LUOGO, one STATIVO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which the lexical preposition SOPRA was connected to a specific value for the first time.

Before showing this order, it is important to say that I wrote only the months in which I found new values connected with the preposition.

- Two years and zero months: this lexical preposition is connected to the value MOTO A LUOGO in the file named 020014 (children were two years, zero months and fourteen days old).

In (159) there is an example for the value MOTO A LUOGO:

(159) “sedo (:siedo) sopra questa tata@wp...” Marco; 020014

In (159) the child says that he wants to go and sit on an undefined object. He wants therefore to do a movement.

- Two years and three months: this lexical preposition is connected to the value LOCATIVO in the file named 020302 (children were two years, three months and two days old).

In (160) there is an example for the value LOCATIVO:

(160) “xxx sopra (s)ch(i)ena” Marco; 020302

The child is speaking about the characters of a book. These characters are dogs. Marco describes an image in which a little dog is above its mum’s back. This production is however not clear because the verb of the production is not understood by the investigator. We don’t know if the child is speaking about a movement or he is speaking about a static position of the little dog. Therefore, we used the generic value LOCATIVO.

- Two years and eight months: this lexical preposition is connected to the value STATIVO in the file named 020800 (children were two years, eight months and zero days old).

In (161) there is an example for the value STATIVO:

(161) “sopra una collina abbaiano fanno bu@o e bu@o” Raffaello; 020800

In (161) the child is speaking about the characters of a book. These characters are dogs. They are on the top of a hill and they are barking.

4.4.1.4.3 Analysis of the third year

During the third year there are not productions in which there is the lexical preposition SOPRA.

We can summarize that the lexical preposition SOPRA is always connected to spatial values.

4.4.1.5 Lexical preposition CONTRO

The fifth preposition considered is CONTRO. This preposition is produced for the first time when children are two years and three months old.

4.4.1.5.1 Analysis of the first year

During the first year the lexical preposition CONTRO is not produced by the children.

4.4.1.5.2 Analysis of the second year

During the second year the lexical preposition CONTRO is produced only one time in (162) and it is connected to the value MOTO A LUOGO. This production can be found in the file named 020314 (children were two years, three months and fourteen days old).

(162) “conto (:contro) 0w latte” Raffaello; 020314

This production can be understood thanks to the reading of the complete dialogue between the father and the child. The father begins a sentence in which he describes the movement of another child. Raffaello continues this description and he says that the child hit the milk bottle. It is clear that Raffaello and his father are describing a movement.

4.4.1.5.3 Analysis of the third year

During the third year there are not productions in which there is the lexical preposition CONTRO.

We can summarize that the lexical preposition CONTRO is only connected to spatial values.

4.4.2 Lexical prepositions – Part 2

In this section I analyse the order of appearance of semantic-syntactic values, regardless of the prepositions they are connected with.

4.4.2.1 Analysis of the first year

During the first year only one value is connected with the lexical preposition: NEG-QUALITA'.

In the first-year productions this value was connected in fact with the lexical preposition SENZA, produced at 1;09.

4.4.2.2 Analysis of the second year

During the second year the values connected with a lexical preposition are: one AMBIGUO, one COMPLEMENTATORE, two LOCATIVO, seven MOTO A LUOGO, two NEG-QUALITA', one NEG-STRUMENTO, four NEG-UNIONE, nine STATIVO.

These values were analysed accordingly to their order of appearance. More precisely, we investigated the month and the day in which a value was connected to a lexical preposition for the first time.

Before showing the order of the values connected with the prepositions during the second year, it is important to explain the strategy used to introduce the data. Firstly, I only wrote the months in which there were values connected with a preposition for the first time. Finally, I did not consider the values identified as AMBIGUO, because the prepositions they were connected with were not produced into clear sentences.

- Two years and zero months: the value STATIVO can be found in the file named 020000 (children were two years, zero months and zero days old when they were recorded). The value MOTO A LUOGO can be found in the file named 020014 (children were two years, zero months and fourteen days old).
- Two years and one month: the value NEG-UNIONE can be found in the file named 020106 (children were two years, one month and six days old). The value

NEG-STRUMENTO can be found in the file named 020127 (children were two years, one month and twenty-seven days old).

- Two years and three months: the value LOCATIVO can be found in the file named 020302 (children were two years, three months and two days old).
- Two years and six months: the value COMPLEMENTATORE can be found in the file named 020613 (children were two years, six months and thirteen days old).

In Figure 68 are reported the values connected with different lexical prepositions during the second year.

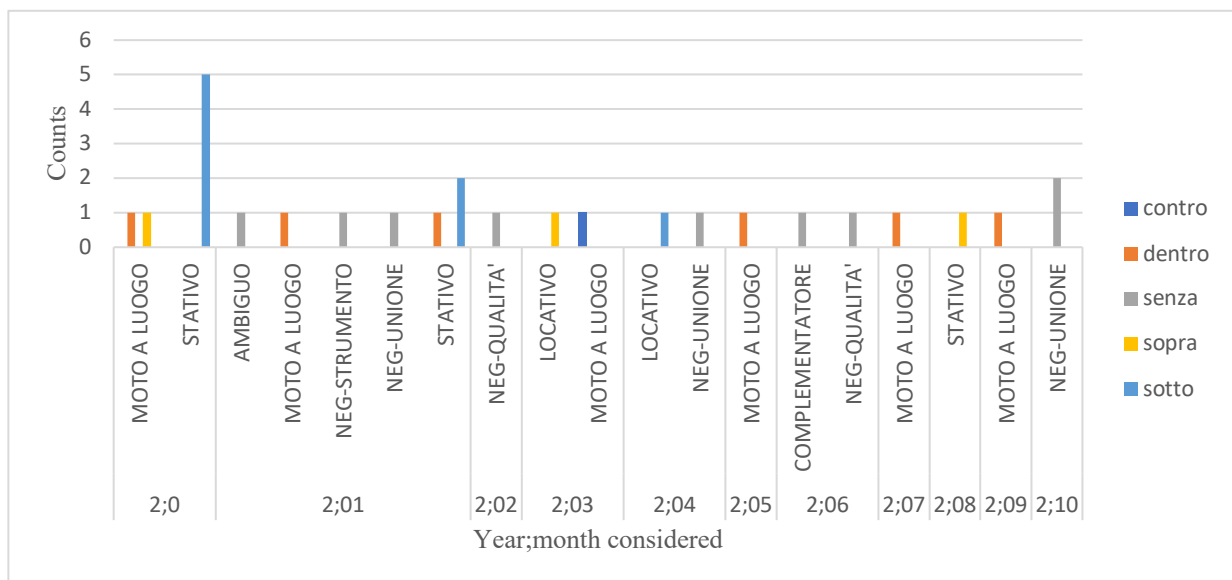


Figure 68: Values connected with lexical prepositions in the second year.

Figure 68 shows that during the second year there are mainly two types of semantic-syntactic values:

- 1) Values that express a negation of other values
- 2) Values that express a “space”

In the following I will analyse each one of these values.

- 1) Values that express a negation of other values. These values increase during the second year. More precisely, during the second year, in addition to NEG-QUALITA' (this value was connected to a lexical preposition during the first year), we can also find NEG-UNIONE and NEG-STRUMENTO.

The lexical preposition linked to NEG-UNIONE and NEG-STRUMENTO in both cases is SENZA.

In particular:

- NEG-UNIONE. This value is connected with the lexical preposition SENZA in the file named 020106 (children were two years, one month and six days old).
 - NEG-STRUMENTO. This value is connected with the lexical preposition SENZA in the file named 020127 (children were two years, one month and twenty-seven days old).
- 2) Spatial values. These values are LOCATIVO, STATIVO and MOTO A LUOGO.

In the following we list the order of the appearance of lexical prepositions connected to these values for the first time during the second year:

- LOCATIVO. This value is connected with the lexical preposition SOPRA in the file named 020302 (children were two years, three months and two days old). This value is connected with the lexical preposition SOTTO in the file named 020426 (children were two years, four months and twenty-six days old).
- STATIVO. This value is connected with the lexical preposition SOTTO in the file named 020000 (children were two years, zero months and zero days old). This value is connected with the lexical preposition DENTRO in the file named 020114 (children were two years, one month and fourteen days old). This value is connected with the lexical preposition SOPRA in the file named 020800 (children were two years, eight months and zero days old).

- MOTO A LUOGO. This value is connected with the lexical preposition DENTRO in the file named 020014 (children were two years, zero months and fourteen days old). This value is connected with the lexical preposition SOPRA in the file named 020014 (children were two years, zero months and fourteen days old). This value is connected with the lexical preposition CONTRO in the file named 020314 (children were two years, three months and fourteen days old).

4.4.2.3 Analysis of the third year

During the third year the values connected with lexical prepositions are: one MOTO A LUOGO, one NEG-QUALITA', one NEG-STRUMENTO, one NEG-UNIONE, two STATIVO.

During the third year there are not values that are connected for the first time with lexical prepositions.

In Figure 69 we report the values connected with lexical prepositions in each month during the third year.

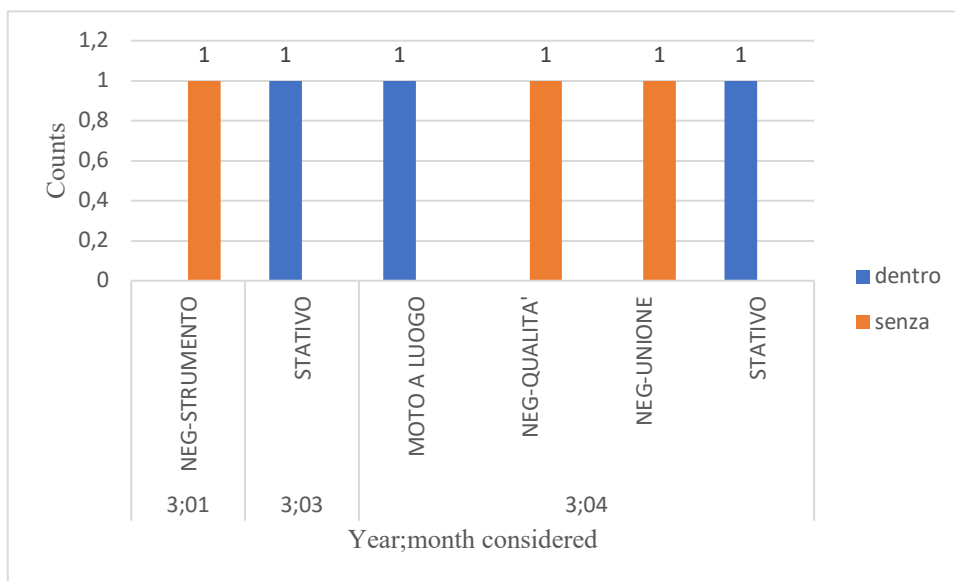


Figure 69: Values connected with lexical prepositions in the third year.

Between Figure 68 and 69 there are no substantial differences in values. In the third year it is possible to identify two types of values:

- Values that express a negation of other values (NEG-STRUMENTO, NEG-QUALITA' and NEG-UNIONE)
- Values that express a “space” (STATIVO, MOTO A LUOGO)

In the third year the number of semantic-syntactic values decreases. This is due to the few gaming sessions in which children were recorded during the fourth year of their life. The last gaming session was in fact recorded when children were 3;04.

4.5 Combinations of prepositions

In chapter 3, more precisely in section 3.6, we analysed the combinations of prepositions produced by the children. In particular, we found two kinds of combinations:

- Combinations made by lexical prepositions with double structure
- Combinations defined as “blocks” or “unique groups”

In section 4.5.1 I will analyse the values connected with the first kind of combinations, while in section 4.5.2 I will analyse the values connected with the second kind of combinations.

4.5.1 Combinations - Lexical prepositions with double structure

In this section I will analyse lexical prepositions with double structure. More precisely, those lexical prepositions allow for two types of complements:

- A DP
- A PP with a functional preposition

In this section I will consider the combinations made by lexical prepositions followed by PPs with functional prepositions.

4.5.1.1 Combination – DI SOPRA DI

The first combination considered is DI SOPRA DI. This combination was produced for the first time when children are two years and zero months old.

4.5.1.1.1 Analysis of the first year

During the first year the combination of prepositions DI SOPRA DI is not produced by the children.

4.5.1.1.2 Analysis of the second year

During the second year, the combination DI SOPRA DI is produced only one time and it is connected to the value MOTO A LUOGO.

More precisely, this combination of prepositions can be found in the file named 020017 (children were two years, zero months and seventeen days old):

(163) “qui di sopra di tavola” Diana; 020017

In (163) the child says she has to go and put her cup on the table. She says that she has to do a movement.

4.5.1.1.3 Analysis of the third year

During the third year this combination of prepositions is not produced by the children.

4.5.1.2 Combination – SENZA DI

The second combination considered is SENZA DI. This combination was produced for the first time when children are two years and two months old.

4.5.1.2.1 Analysis of the first year

During the first year this combination of prepositions is not produced by the children.

4.5.1.2.2 Analysis of the second year

During the second year, the combination SENZA DI is produced only one time and is connected to the value NEG-COMITATIVO.

More precisely, this combination of prepositions can be found in the file named 020211 (children were two years, two months and eleven days old):

(164) “<senza di> // zenza (:senza) di me” Marco; 020211

The meaning of (164) can be understood thanks to the reading of the complete dialogue between the child and his mother, available in CHILDES. The child says that his mother is going away and he will not go with her.

4.5.1.2.3 Analysis of the third year

During the third year this combination of prepositions is not produced by the children.

4.5.1.3 Combination – SOTTO A

The third combination considered is SOTTO A. This combination was produced for the first time when children are two years and three months old.

4.5.1.3.1 Analysis of the first year

During the first year this combination of prepositions is not produced by the children.

4.5.1.3.2 Analysis of the second year

During the second year, the combination SOTTO A is produced only one time and is connected to the value MOTO A LUOGO.

More precisely, this combination of prepositions can be found in the file named 020302 (children were two years, three months and two days old):

(165) “vado sotto (:sotto) al treno@wp”

Marco; 020302

In (165) the child says to his mother that he wants to go under an object. The child wants therefore to do a movement.

4.5.1.3.3 Analysis of the third year

During the third year this combination of prepositions is not produced by the children.

4.5.1.4 Combination – DENTRO IN

The fourth combination considered is DENTRO IN. This combination was produced for the first time when children are two years and three months old.

4.5.1.4.1 Analysis of the first year

During the first year this combination of prepositions is not produced by the children.

4.5.1.4.2 Analysis of the second year

During the second year, the combination DENTRO IN is produced only one time and is connected to the value STATIVO.

More precisely, this combination of prepositions can be found in the file named 020315 (children were two years, three months and fifteen days old):

(166) “xxx no dentro nel lettino” Marco; 020315

The child and his mother are looking for a book. The child says that this book is not “into” the bed. He refers to a static position of the object.

4.5.1.4.3 Analysis of the third year

During the third year, the combination DENTRO IN is produced only one time and is connected to the value MOTO A LUOGO.

More precisely, this combination of prepositions can be found in the file named 030409 (children were three years, four months and nine days old):

(167) “...dentro nel baule” Camilla; 030409

The production in (167) can be understood thanks to the reading of the complete dialogue between the child and her mother, available in CHILDES.

The child is speaking about animals and she is saying that animals are running away, and they are going inside the trunk. She speaks about a movement.

4.5.1.5 Combination – DENTRO A

The fifth combination considered is DENTRO A. This combination was produced for the first time when children are two years and five months old.

4.5.1.5.1 Analysis of the first year

During the first year this combination of prepositions is not produced by the children.

4.5.1.5.2 Analysis of the second year

During the second year this combination of prepositions is produced only four times, and in all these productions it is connected to the value STATIVO.

The value STATIVO is connected with DENTRO A for the first time in the file named 020510 (children were two years, five months and ten days old).

The first production in which we find this value is (168):

(168) “dentro allo scivolo” Marco; 020510

This production can be understood thanks to the reading of the complete dialogue between Marco and his mother. The child describes the position of his mother’s foot. He says that her foot is “into” the slide.

4.5.1.5.3 Analysis of the third year

During the third year this combination of prepositions is produced only one time, and it is connected to the value STATIVO.

As shown in chapter 3 (section 3.6), lexical prepositions with double structure have the following sequence: in a first moment, the lexical preposition is only followed by a DP, in a second moment the combinations are built because the lexical prepositions are followed by a PP with a functional preposition.

In section 4.4 we analysed the lexical prepositions followed by a DP. More precisely, we found the values connected to each of them.

In section 4.5, instead, we analysed the combinations of lexical and functional prepositions finding the values connected with these combinations of prepositions.

From the data observed in section 4.4 and 4.5, we can notice that lexical prepositions with double structure are connected to the same values in both their structures (with and without the functional preposition). See Figure 70, 71, 72 and 73.

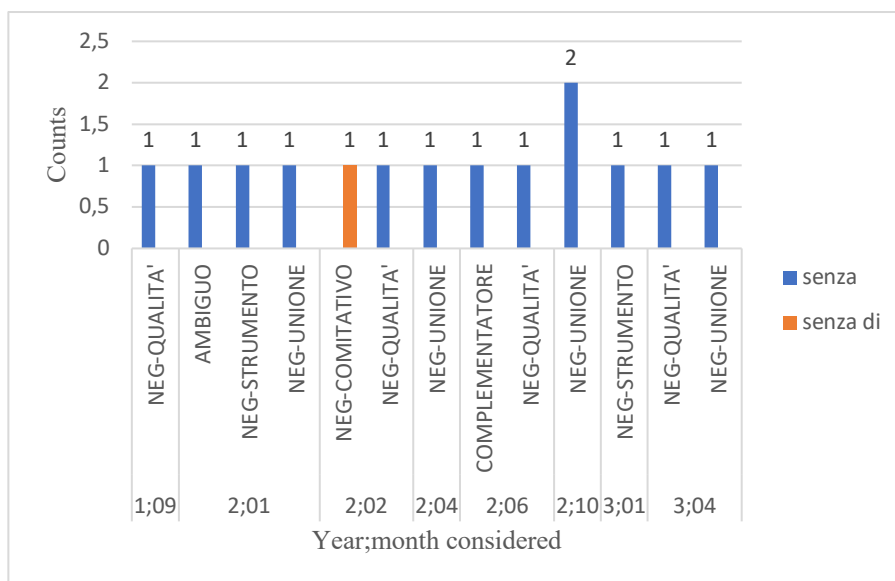


Figure 70: Values connected with a lexical preposition with double structure (SENZA).

Figure 70 shows that the combination of the lexical preposition and the functional one is connected to the value NEG-COMITATIVO. This value, like the values³⁵ described in section 4.4.1.1, expresses a negation of another value (in this case, the value COMITATIVO).

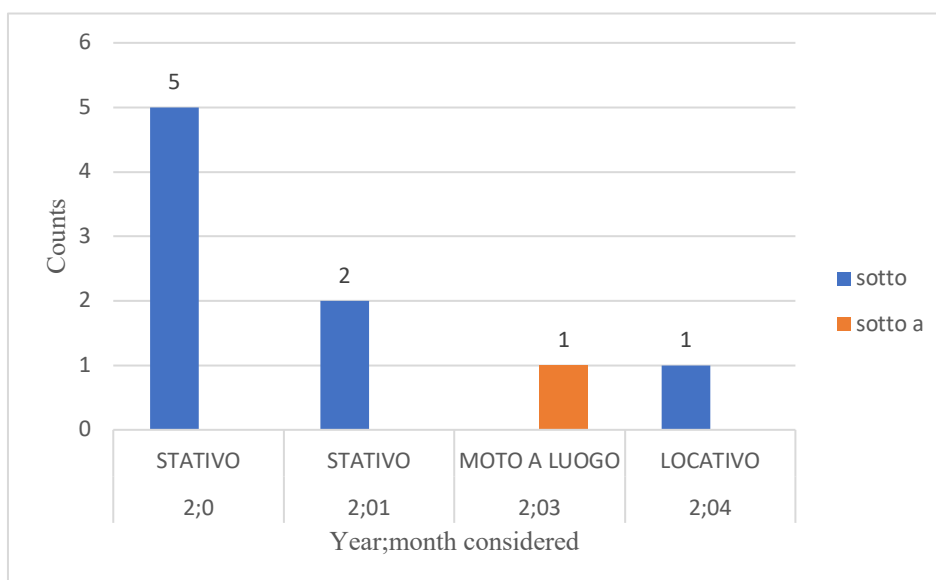


Figure 71: Values connected with a lexical preposition with double structure (SOTTO).

³⁵ We refer to values connected with the lexical preposition SENZA.

Figure 71 shows that the combination of the lexical preposition and the functional one is connected to the value MOTO A LUOGO. This value, like the values³⁶ described in section 4.4.1.2, is a spatial value.

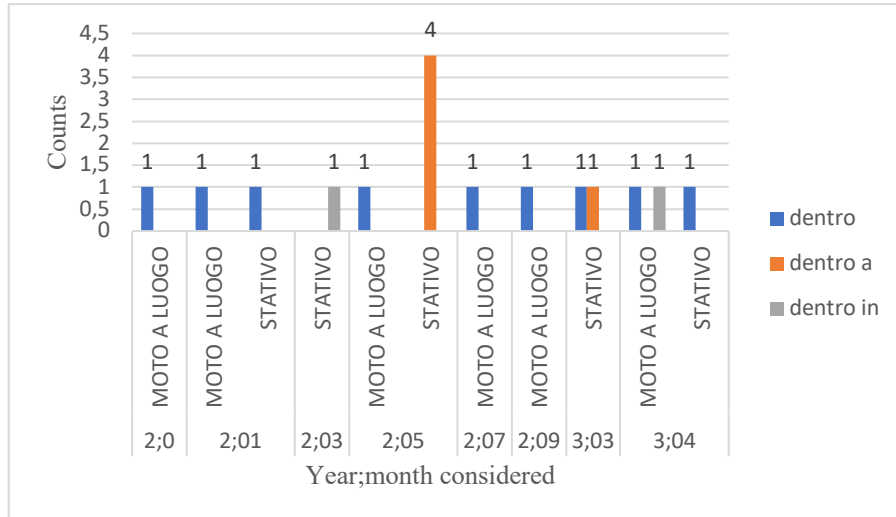


Figure 72: Values connected with a lexical preposition with double structure (DENTRO).

Figure 72 shows that the combinations of the lexical prepositions and the functional ones are connected to the value STATIVO and to the value MOTO A LUOGO. These values, like the values³⁷ described in section 4.4.1.3, are spatial values.

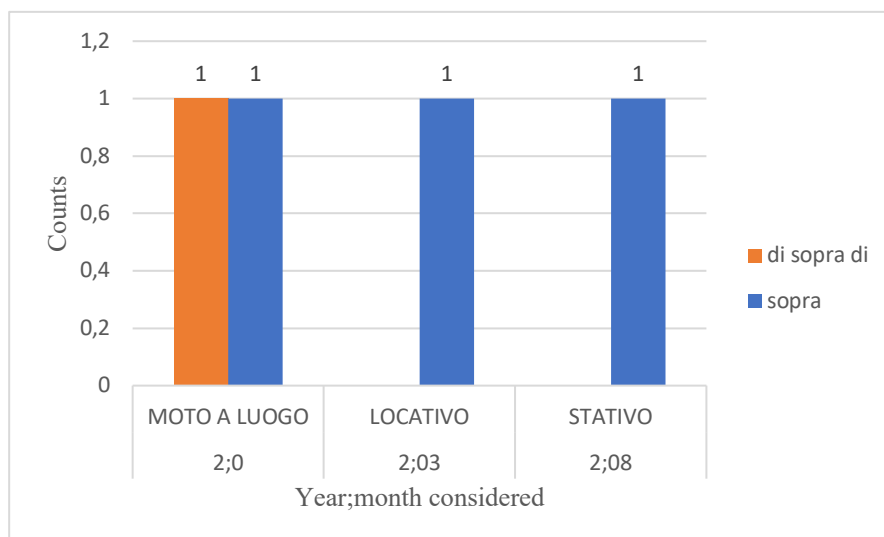


Figure 73: Values connected with a lexical preposition with double structure (SOPRA).

³⁶ We refer to values connected with the lexical preposition SOTTO.

³⁷ We refer to values connected with the lexical preposition DENTRO.

Figure 73 shows that the combination of the lexical preposition and the functional one is connected to the value MOTO A LUOGO. This value, like the other values³⁸ described in section 4.4.1.4, is a spatial value.

4.5.2 Combinations – “Blocks”

In this section we will report the results of the analysis connected to the second kind of combinations. In particular we will refer to the combinations defined previously as “blocks” because they can be considered “right” only if the lexical part is pronounced with the functional part.

4.5.2.1 Combination – VICINO TRA

The first combination considered is VICINO TRA. This combination was produced for the first time when children are two years and zero months old.

4.5.2.1.1 Analysis of the first year

During the first year this combination of prepositions is not produced by the children.

4.5.2.1.2 Analysis of the second year

During the second year, the combination VICINO TRA is produced only one time and is connected to the value STATIVO.

More precisely, this combination of prepositions can be found in the file named 020027 (children were two years, zero months and twenty-seven days old).

³⁸ We refer to values connected with the lexical preposition SOPRA.

(169) “è vicino tra sedia”

Marco; 020027

In (169) the child makes a mistake. He should have said “è vicino alla sedia”, instead he says “è vicino tra sedia”³⁹. The child is speaking about a static position of an object, and not about a movement. Therefore, we used the value STATIVO.

4.5.2.1.3 Analysis of the third year

During the third year this combination of prepositions is not produced by the children.

4.5.2.2 Combination – VICINO A

The second combination considered is VICINO A. This combination was produced for the first time when children are two years and one month old.

4.5.2.2.1 Analysis of the first year

During the first year this combination of prepositions is not produced by the children.

4.5.2.2.2 Analysis of the second year

During the second year, the combination VICINO A is produced only one time and is connected to the value STATIVO.

³⁹ Another hypothesis to justify the usage of VICINO TRA could be the following one (see chapter 3): there is a pause between the lexical part and the functional part of the combination, namely between VICINO and TRA. In this case, we shouldn't therefore consider this group of prepositions as a combination but as separate elements. Unfortunately, the missing of the audio recording does not allow us to verify this hypothesis.

More precisely, this combination of prepositions can be found in the file named 020120 (children were two years, one month and twenty days old).

(170) “...tutti a pezzettini qui vicino alla banana” Elisa; 020120

The child is speaking about the static position of an object.

4.5.2.2.3 Analysis of the third year

During the third year, the combination VICINO A is produced only three times and is always connected to the value MOTO A LUOGO.

These combinations of prepositions can be found in the file named 030129 (children were three years, one month and twenty-nine days old).

(171) “mettelo (.) vicino a chiamion...” Rosa; 030129

The child says to her mother that she has to put an object next to a toy. The child is speaking about a movement.

4.5.2.3 Combination – IN FONDO A

The third combination considered is IN FONDO A. This combination was produced for the first time when children are two years and four months old.

4.5.2.3.1 Analysis of the first year

During the first year this combination of prepositions is not produced by the children.

4.5.2.3.2 Analysis of the second year

During the second year, the combination IN FONDO A is produced only one time and is connected to the value STATIVO.

More precisely, this combination of prepositions can be found in the file named 020406 (children were two years, four months and six days old).

(172) “...son là, in fondo a quella campana (.) viola” Camilla; 020406

The child in this production is speaking about a static position of an object.

4.5.2.3.3 Analysis of the third year

During the third year this combination of prepositions is not produced by the children.

4.5.2.4 Combination – ATTORNO A

The fourth combination considered is ATTORNO A. This combination was produced for the first time when children are two years and four months old.

4.5.2.4.1 Analysis of the first year

During the first year this combination of prepositions is not produced by the children.

4.5.2.4.2 Analysis of the second year

During the second year, the combination ATTORNO A is produced only one time and is connected to the value MOTO A LUOGO.

More precisely, this combination of prepositions can be found in the file named 020426 (children were two years, four months and twenty-six days old).

(173) “mettiam tutte le macchie (:machine) attorno a lei” Marco; 020426

In this production the child describes a movement that he wants to do.

4.5.2.4.3 Analysis of the third year

During the third year this combination of prepositions is not produced by the children.

4.5.2.5 Combination – ACCANTO A

The fifth combination considered is ACCANTO A. This combination was produced for the first time when children are two years and eleven months old.

4.5.2.5.1 Analysis of the first year

During the first year this combination of prepositions is not produced by the children.

4.5.2.5.2 Analysis of the second year

During the second year, the combination ACCANTO A is produced only two times. In the first production, ACCANTO A is connected to the value MOTO A LUOGO; while in the second production it is connected to the value STATIVO.

The first combination of prepositions (the one connected to the value MOTO A LUOGO) can be found in the file named 021112 (children were two years, eleven months and twelve days old).

(174) “mette accanto a te eh...” Rosa; 021112

The child is speaking with her mother. She asks to her mother to do a movement.

The second combination of preposition (the one connected to the value STATIVO) can be found in the file named 021117 (children were two years, eleven months and seventeen days old).

(175) “eh, dove, accanto al cimena” Camilla; 011117

In (175) the child speaks about the position of a place.

4.5.2.5.3 Analysis of the third year

During the third year this combination of prepositions is not produced by the children.

4.5.2.6 Combination – FINO A

The sixth combination considered is FINO A. This combination was produced for the first time when children are three years and four months old.

4.5.2.6.1 Analysis of the first year

During the first year this combination of prepositions is not produced by the children.

4.5.2.6.2 Analysis of the second year

During the second year this combination of prepositions is not produced by the children.

4.5.2.6.3 Analysis of the third year

During the third year, the combination FINO A is produced only one time and is connected to the value MOTO A LUOGO.

More precisely, this combination of prepositions can be found in the file named 030409 (children were three years, four months and nine days old).

(176) “e questa lunga lunga lunga, ti arriva fino alla gamba” Camilla; 030409

In (176) the child is speaking about something (maybe a chewing gum) that grows up to the leg.

All the values connected with the combinations of prepositions analysed in section 4.5.2 are spatial values. Therefore, for each “block” of prepositions there is a spatial value (MOTO A LUOGO or STATIVO).

4.6 The order of appearance of semantic-syntactic values

In this section I will summarize the order of appearance of semantic-syntactic values connected with the functional and lexical prepositions produced by the children during the three years considered.

In particular I will consider:

- In section 4.6.1 the values connected with functional prepositions
- In section 4.6.2 the values connected with lexical prepositions

4.6.1 Semantic-syntactic values connected with functional prepositions

In this section I will summarize the order of appearance of semantic-syntactic values connected with the functional prepositions produced by the children during the three years considered. In particular I analysed the functional prepositions in the order presented in chapter 3. More precisely, the order is: A, CON, DI, IN, PER, SU, DA, TRA.

4.6.1.1 Functional preposition A

The order of appearance of semantic-syntactic values connected with the functional preposition A is⁴⁰:

- LOCATIVO (01;07;07)
- SPECIFICAZIONE (01;08;17)
- PAZIENTE (01;08;22)
- DESTINATARIO (01;09;11)
- COMPLEMENTATORE, MOTO A LUOGO (01;09;24)
- QUALITA' (01;10;04)
- ESPERIENZE, MODO (02;00;02)

⁴⁰ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the functional preposition for the first time.

- STATIVO, TEMPORALE (02;00;27)
- FINE (02;00;29)
- STRUMENTO (02;02;11)
- MOTO DA LUOGO (02;05;13)
- AGENTE, SECONDO TERMINE DI PARAGONE (02;09;04)
- POSSESSO (02;11;12)

As shown in the previous summary, the functional preposition A was connected to: (I) the value LOCATIVO when children were one year, seven months and seven days old, (II) the value SPECIFICAZIONE when children were one year, eight months and seventeen days old, (III) the value PAZIENTE when children were one year, eight months and twenty-two days old, (IV) the value DESTINATARIO when children were one year, nine months and eleven days old, (V) the value COMPLEMENTATORE and the value MOTO A LUOGO when children were one year, nine months and twenty-four days old, (VI) the value QUALITA' when children were one year, ten months and four days old, (VII) the value ESPERIENZE and the value MODO when children were two years, zero months and two days old, (VIII) the value STATIVO and the value TEMPORALE when children were two years, zero months and twenty-seven days old, (IX) the value FINE when children were two years, zero months and twenty-nine days old, (X) the value STRUMENTO when children were two years, two months and eleven days old, (XI) the value MOTO DA LUOGO when children were two years, five months and thirteen days old, (XII) the value AGENTE and the value SECONDO TERMINE DI PARAGONE when children were two years, nine months and four days old. Finally, it was connected to the value POSSESSO when children were two years, eleven months and twelve days old.

4.6.1.2 Functional preposition CON

During the three years considered, the order of appearance of semantic-syntactic values connected with the functional preposition CON is⁴¹:

- STRUMENTO (01;07;07)
- UNIONE (01;09;24)
- COMITATIVO (01;10;18)
- QUALITA' (01;11;19)
- MODO (02;00;00)
- PAZIENTE (02;00;27)
- MOTO A LUOGO (02;03;29)

As shown in the previous summary, the functional preposition CON was connected to: (I) the value STRUMENTO when children were one year, seven months and seven days old, (II) the value UNIONE when children were one year, nine months and twenty-four days old, (III) the value COMITATIVO when children were one year, ten days and eighteen days old, (IV) the value QUALITA' when children were one year, eleven months and nineteen days old, (V) the value MODO when children were two years, zero months and zero days old, (VI) the value PAZIENTE when children were two years, zero months and twenty-seven days old, (VII) the value MOTO A LUOGO when children were two years, three months and twenty-nine days old.

⁴¹ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the functional preposition for the first time.

4.6.1.3 Functional preposition DI

During the three years considered, the order of appearance of semantic-syntactic values connected with the functional preposition DI is⁴²:

- LOCATIVO (01;07;07)
- POSSESSO (01;08;05)
- MOTO A LUOGO (01;08;17)
- PARTITIVO (01;10;04)
- STATIVO (01;10;12)
- AGENTE (01;11;04)
- MATERIA (01;11;07)
- QUALITA' (01;11;16)
- COMPLEMENTATORE (01;11;19)
- INTERIEZIONE, TEMPORALE (02;00;00)
- QUANTITA' (02;00;27)
- PAZIENTE (02;01;11)
- SPECIFICAZIONE (02;01;22)
- MODO (02;01;27)
- COMITATIVO, MOTO DA LUOGO (02;05;01)
- SECONDO TERMINE DI PARAGONE (02;06;19)

As shown in the previous summary, the functional preposition DI was connected to: (I) the value LOCATIVO when children were one year, seven months and seven days old, (II) the value POSSESSO when children were one year, eight months and five days old, (III) the value MOTO A LUOGO when children were one year, eight months and seventeen days old, (IV) the value PARTITIVO when children were one year, ten months and four days old, (V) the value STATIVO when children were one year, ten months and twelve days old, (VI) the value AGENTE when children were one year, eleven months

⁴² I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the functional preposition for the first time.

and four days old, (VII) the value MATERIA when children were one year, eleven months and seven days old, (VIII) the value QUALITA' when children were one year, eleven months and sixteen days old, (IX) the value COMPLEMENTATORE when children were one year, eleven months and nineteen days old, (X) the value INTERIEZIONE and the value TEMPORALE when children were two years, zero months and zero days old, (XI) the value QUANTITA' when children were two years, zero months and twenty-seven days old, (XII) the value PAZIENTE when children were two years, one month and eleven days old, (XIII) the value SPECIFICAZIONE when children were two years, one month and twenty-two days old, (XIV) the value MODO when children were two years, one month and twenty-seven days old, (XV) the value COMITATIVO and the value MOTO DA LUOGO when children were two years, five months and one day old, (XVI) the value SECONDO TERMINE DI PARAGONE when children were two years, six months and nineteen days old.

4.6.1.4 Functional preposition IN

During the three years considered, the order of appearance of semantic-syntactic values connected with the functional preposition IN is⁴³:

- LOCATIVO; MOTO A LUOGO; STATIVO (01;08;17)
- MODO (02;01;27)
- STRUMENTO (02;02;11)

As shown in the previous summary, the functional preposition IN was connected to: (I) the values LOCATIVO, MOTO A LUOGO and STATIVO when children were one year, eight months and seventeen days old, (II) the value MODO when children were two years, one month and twenty-seven days old, (III) the value STRUMENTO when children were two years, two months and eleven days old.

⁴³ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the functional preposition for the first time.

4.6.1.5 Functional preposition PER

During the three years considered, the order of appearance of semantic-syntactic values connected with the functional preposition PER is⁴⁴:

- LOCATIVO (01;09;01)
- MOTO A LUOGO (01;11;07)
- DESTINATARIO (02;00;00)
- COMPLEMENTATORE (02;00;14)
- MODO (02;00;27)
- STATIVO (02;01;11)
- TEMPORALE (02;03;15)
- FINE (02;04;06)
- ESPERIENZE (02;06;00)

As shown in the previous summary, the functional preposition PER was connected to: (I) the value LOCATIVO when children were one year, nine months and one day old, (II) the value MOTO A LUOGO when children were one year, eleven months and seven days old, (III) the value DESTINATARIO when children were two years, zero months and zero days old, (IV) the value COMPLEMENTATORE when children were two years, zero months and fourteen days old, (V) the value MODO when children were two years, zero months and twenty-seven days old, (VI) the value STATIVO when children were two years, one month and eleven days old, (VII) the value TEMPORALE when children were two years, three months and fifteen days old, (VIII) the value FINE when children were two years, four months and six days old, (IX) the value ESPERIENZE when children were two years, six months and zero days old.

⁴⁴ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the functional preposition for the first time.

4.6.1.6 Functional preposition SU

During the three years considered, the order of appearance of semantic-syntactic values connected with the functional preposition SU is⁴⁵:

- MOTO A LUOGO (01;09;15)
- LOCATIVO, STATIVO (01;10;04)
- MOTO DA LUOGO (02;05;10)
- STRUMENTO (02;11;17)

As shown in the previous summary, the functional preposition SU was connected to: (I) the value MOTO A LUOGO when children were one year, nine months and fifteen days old, (II) the value LOCATIVO and the value STATIVO when children were one year, ten months and four days old, (III) the value MOTO DA LUOGO when children were two years, five months and ten days old, (IV) the value STRUMENTO when children were two years, eleven months and seventeen days old.

4.6.1.7 Functional preposition DA

During the three years considered, the order of appearance of semantic-syntactic values connected with the functional preposition DA is⁴⁶:

- MODO (01;09;24)
- MOTO A LUOGO (01;11;04)
- QUALITA' (02;00;27)
- STATIVO (02;00;29)
- COMPLEMENTATORE (02;01;20)
- MOTO DA LUOGO (02;01;25)

⁴⁵ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the functional preposition for the first time.

⁴⁶ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the functional preposition for the first time.

- MOTO PER LUOGO (02;02;06)
- FINE (02;03;02)
- AGENTE (02;11;17)
- DESTINATARIO, TEMPORALE (03;04;09)

As shown in the previous summary, the functional preposition DA was connected to: (I) the value MODO when children were one year, nine months and twenty-four days old, (II) the value MOTO A LUOGO when children were one year, eleven months and four days old, (III) the value QUALITA' when children were two years, zero months and twenty-seven days old, (IV) the value STATIVO when children were two years, zero months and twenty-nine days old, (V) the value COMPLEMENTATORE when children were two years, one month and twenty days old, (VI) the value MOTO DA LUOGO when children were two years, one month and twenty-five days old, (VII) the value MOTO PER LUOGO when children were two years, two months and six days old, (VIII) the value FINE when children were two years, three months and two days old, (IX) the value AGENTE when children were two years, eleven months and seventeen days old. Finally, it was connected to the value DESTINATARIO and to the value TEMPORALE when children were three years, four months and nine days old.

4.6.1.8 Functional preposition TRA

During the three years considered, the functional preposition TRA was connected only with one semantic-syntactic value⁴⁷:

- TEMPORALE (03;01;00)

The functional preposition TRA was connected to this value when children were three years, one month and zero days old.

⁴⁷ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the functional preposition for the first time.

4.6.2 Semantic-syntactic values connected with lexical prepositions

In this section I will summarize the order of appearance of semantic-syntactic values connected with the lexical prepositions produced by the children during the three years considered. In particular, I analysed the lexical prepositions in the order presented in chapter 3. More precisely, the order is: SENZA, SOTTO, DENTRO, SOPRA, CONTRO.

4.6.2.1 Lexical preposition SENZA

During the three years considered, the order of appearance of semantic-syntactic values connected with the lexical preposition SENZA is⁴⁸:

- NEG-QUALITA' (01;09;15)
- NEG-UNIONE (02;01;06)
- NEG-STRUMENTO (02;01;27)
- COMPLEMENTATORE (02;06;13)

As shown in the previous summary, the lexical preposition SENZA was connected to: (I) the value NEG-QUALITA' when children were one year, nine months and fifteen days old, (II) the value NEG-UNIONE when children were two years, one month and six days old, (III) the value NEG-STRUMENTO when children were two years, one month and twenty-seven days old, (IV) the value COMPLEMENTATORE when children were two years, six months and thirteen days old.

⁴⁸ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the lexical preposition for the first time.

4.6.2.2 Lexical preposition SOTTO

During the three years considered, the order of appearance of semantic-syntactic values connected with the lexical preposition SOTTO is⁴⁹:

- STATIVO (02;00;00)
- LOCATIVO (02;04;26)

As shown in the previous summary, the lexical preposition SOTTO was connected to the value STATIVO when children were two years, zero months and zero days old, and to the value LOCATIVO when children were two years, four months and twenty-six days old.

4.6.2.3 Lexical preposition DENTRO

During the three years considered, the order of appearance of semantic-syntactic values connected with the lexical preposition DENTRO is⁵⁰:

- MOTO A LUOGO (02;00;14)
- STATIVO (02;01;14)

As shown in the previous summary, the lexical preposition DENTRO was connected to the value MOTO A LUOGO when children were two years, zero months and fourteen days old and to the value STATIVO when children were two years, one month and fourteen days old.

⁴⁹ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the lexical preposition for the first time.

⁵⁰ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the lexical preposition for the first time.

4.6.2.4 Lexical preposition SOPRA

During the three years considered, the order of appearance of semantic-syntactic values connected with the lexical preposition SOPRA is⁵¹:

- MOTO A LUOGO (02;00;14)
- LOCATIVO (02;03;02)
- STATIVO (02;08;00)

As shown in the previous summary, the lexical preposition SOPRA was connected to the value MOTO A LUOGO when children were two years, zero months and fourteen days old, to the value LOCATIVO when children were two years, three months and two days old, and to the value STATIVO when children were two years, eight months and zero days old.

4.6.2.5 Lexical preposition CONTRO

During the three years considered, the lexical preposition CONTRO was connected only to one semantic-syntactic values, that is⁵²:

- MOTO A LUOGO (02;03;14)

The lexical preposition CONTRO was connected to the value MOTO A LUOGO when children were two years, three months and fourteen days old.

⁵¹ I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the lexical preposition for the first time.

⁵² I wrote in parenthesis the children's age (in years-months-days) when the specific semantic-syntactic value was connected with the lexical preposition for the first time.

4.7 Detailed analysis of data collected

In this section I will analyse two aspects neglected in the previous sections. More precisely:

- In section 4.7.1 I will analyse the spatial semantic-syntactic values and the prepositions they are connected with.
- In section 4.7.2 I will analyse the semantic-syntactic values connected with the functional preposition CON and with the lexical preposition SENZA.

4.7.1 Spatial semantic-syntactic values

In this section I will analyse the spatial semantic-syntactic values connected with each preposition (or combinations of prepositions) identifying, in particular, which prepositions were connected for the first time to these values.

With the expression “spatial values” I refer to the values connected to a “space”. More precisely, these values are: LOCATIVO, STATIVO, MOTO A LUOGO, MOTO DA LUOGO, MOTO PER LUOGO.

4.7.1.1 Analysis of the first year

In this section I will report the results of the analysis of spatial semantic-syntactic values connected with prepositions (or combinations of prepositions) during the first year.

- When children are one year and seven months old, the semantic-syntactic value LOCATIVO is connected with the prepositions:

A (01;07;07)⁵³

DI (01;07;07)

⁵³ In parenthesis, as I did in the previous sections of this chapter, I have written the children’s age in years; months; days when the preposition was pronounced.

- When children are one year and eight months old, different prepositions are connected to spatial semantic-syntactic values for the first time. In particular:

The semantic-syntactic value LOCATIVO is connected with the preposition:

IN (01;08;17)

The semantic-syntactic value STATIVO is connected with the preposition:

IN (01;08;17)

The semantic-syntactic value MOTO A LUOGO is connected with the prepositions:

DI (01;08;17)

IN (01;08;17)

- When children are one year and nine months old, different prepositions are connected to spatial semantic-syntactic values for the first time. In particular:

The semantic-syntactic value LOCATIVO is connected with the preposition:

PER (01;09;01)

The semantic-syntactic value MOTO A LUOGO is connected with the prepositions:

SU (01;09;15)

A (01;09;24)

- When children are one year and ten months old, different prepositions are connected to spatial semantic-syntactic values for the first time. In particular:
The semantic-syntactic value LOCATIVO is connected with the preposition:

SU (01;10;04)

The semantic-syntactic value STATIVO is connected with the prepositions:

SU (01;10;04)

DI (01;10;12)

- When children are one year and eleven months old, different prepositions are connected to spatial semantic-syntactic values for the first time. In particular:

The semantic-syntactic value MOTO A LUOGO is connected with the prepositions:

DA (01;11;04)

PER (01;11;07)

In the first year, spatial semantic-syntactic values are only connected with functional prepositions. Children, in fact, start to produce lexical prepositions connected to spatial semantic-syntactic values only in the second year; see chapter 3, section 3.3.2.

The first spatial value connected with a functional preposition is LOCATIVO (children were 1;07 years old). I used this value when children's productions were not clear enough to understand whether children spoke about a static location or a movement. Therefore, when I could not choose between the value STATIVO and the value MOTO A LUOGO, I chose the more generic value LOCATIVO. When children were 1;07 years old, the value LOCATIVO was connected with the functional preposition A and with the functional preposition DI.

When children were 1;08 years old, the value LOCATIVO was connected with the functional preposition IN (01;08;17). The values STATIVO and MOTO A LUOGO

appear for the first time at 1;08 years old. The first one was connected with the functional preposition IN (01;08;17), while the second one was connected with the functional prepositions IN and DI (01;08;17).

When children were 1;09 years old, spatial values were connected with new prepositions. The value LOCATIVO was connected with the functional preposition PER (01;09;01). The value MOTO A LUOGO was connected with the functional preposition SU (01;09;15) and with the functional preposition A (01;09;24).

When children were 1;10 years old, the value LOCATIVO was connected with the functional preposition SU (01;10;04). The value STATIVO was connected with the functional preposition SU (01;10;04) and with the functional preposition DI (01;10;12).

When children were 1;11 years old the value MOTO A LUOGO was connected with the functional preposition DA (01;11;04) and with the functional preposition PER (01;11;07).

Each spatial semantic-syntactic value is connected with different functional prepositions. The following summary shows the order of appearance of the functional prepositions connected to each value.

- Prepositions connected to the semantic-syntactic value LOCATIVO:

A; DI (01;07;07)
IN (01;08;17)
PER (01;09;01)
SU (01;10;04)

- Prepositions connected to the semantic-syntactic value STATIVO:

IN (01;08;17)
SU (01;10;04)
DI (01;10;12)

- Prepositions connected to the semantic-syntactic value MOTO A LUOGO:

DI; IN (01;08;17)

SU (01;09;15)

A (01;09;24)

DA (01;11;04)

PER (01;11;07)

4.7.1.2 Analysis of the second year

In this section I will report the results of the analysis of spatial semantic-syntactic values connected with prepositions (or combinations of prepositions) during the second year.

- When children are two years and zero months old, different prepositions are connected to spatial semantic-syntactic values for the first time. In particular:

The semantic-syntactic value STATIVO is connected with the prepositions and combinations of prepositions:

SOTTO (02;00;00)⁵⁴

A; VICINO TRA (02;00;27)

DA (02;00;29)

⁵⁴ In parenthesis, as I did in the previous sections of this chapter, I have written the children's age in years; months; days when the preposition was pronounced.

The semantic-syntactic value MOTO A LUOGO is connected with the prepositions and combinations of prepositions:

DENTRO; SOPRA (02;00;14)

DI SOPRA DI (02;00;17)

- When children are two years and one-month old, different prepositions are connected to spatial semantic-syntactic values for the first time. In particular:

The semantic-syntactic value STATIVO is connected with the prepositions and combinations of prepositions:

PER (02;01;11)

DENTRO (02;01;14)

VICINO A (02;01;20)

The semantic-syntactic value MOTO DA LUOGO is connected with the preposition:

DA (02;01;25)

- When children are two years and two months old, the semantic-syntactic value MOTO PER LUOGO is connected with the preposition:

DA (02;02;06)

- When children are two years and three months old, different prepositions are connected to spatial semantic-syntactic values for the first time. In particular:

The semantic-syntactic value LOCATIVO is connected with the preposition:

SOPRA (02;03;02)

The semantic-syntactic value STATIVO is connected with the combination of preposition:

DENTRO IN (02;03;15)

The semantic-syntactic value MOTO A LUOGO is connected with the prepositions and combinations of prepositions:

SOTTO A (02;03;02)

CONTRO (02;03;14)

CON (02;03;29)

- When children are two years and four months old, different prepositions are connected to spatial semantic-syntactic values for the first time. In particular:

The semantic-syntactic value LOCATIVO is connected with the preposition:

SOTTO (02;04;26)

The semantic-syntactic value STATIVO is connected with the combination of prepositions:

IN FONDO A (02;04;06)

The semantic-syntactic value MOTO A LUOGO is connected with the combination of prepositions:

ATTORNO A (02;04;26)

- When children are two years and five months old, different prepositions are connected to spatial semantic-syntactic values for the first time. In particular:

The semantic-syntactic value STATIVO is connected with the combination of prepositions:

DENTRO A (02;05;10)

The semantic-syntactic value MOTO DA LUOGO is connected with the prepositions:

DI (02;05;01)

SU (02;05;10)

- When children are two years and eight months old, the semantic-syntactic value STATIVO is connected with the preposition:

SOPRA (02;08;00)

- When children are two years and eleven months old, the semantic-syntactic value STATIVO is connected with the combination of prepositions:

ACCANTO A (02;11;17)

In the second year children start to produce lexical prepositions and combinations of prepositions. Moreover, there are two spatial semantic-syntactic values that start to be connected with prepositions: MOTO DA LUOGO and MOTO PER LUOGO.

When children were two years and zero months old, the value STATIVO was connected for the first time with: (I) the lexical preposition SOTTO (02;00;00), (II) the functional preposition A (02;00;27), (III) the combination of prepositions VICINO TRA (02;00;27), (IV) the functional preposition TRA (02;00;29). The value MOTO A LUOGO was connected with the lexical prepositions DENTRO, SOPRA (02;00;14) and with the combination of prepositions DI SOPRA DI (02;00;17).

When children were two years and one month old, the value STATIVO was connected with: (I) the functional preposition PER (02;01;11), (II) the lexical preposition

DENTRO (02;01;14), (III) the combination of prepositions VICINO A (02;01;20). The value MOTO DA LUOGO was connected with the functional preposition DA (02;01;25).

When children were two years and two months old, the value MOTO PER LUOGO was connected with the functional preposition DA (02;02;06).

When children were two years and three months old, the value LOCATIVO was connected with the lexical preposition SOPRA (02;03;02). The value STATIVO was connected with the combination of prepositions DENTRO IN (02;03;15). The value MOTO A LUOGO was connected with: (I) the combination of prepositions SOTTO A (02;03;02), (II) the lexical preposition CONTRO (02;03;14), (III) the functional preposition CON (02;03;29).

When children were two years and four months old, the value LOCATIVO was connected with the lexical preposition SOTTO (02;04;26). The value STATIVO was connected with the combination of prepositions IN FONDO A (02;04;06). The value MOTO A LUOGO was connected with the combination of prepositions ATTORNO A (02;04;26).

When children were two years and five months old, the value STATIVO was connected with the combination of prepositions DENTRO A (02;05;10). The value MOTO DA LUOGO was connected with the functional preposition DI (02;05;01) and with the functional preposition SU (02;05;10).

When children were two years and eight months old, the value STATIVO was connected with the lexical preposition SOPRA (02;08;00).

When children were two years and eleven months old, the value STATIVO was connected with the combination of prepositions ACCANTO A (02;11;17).

Each spatial semantic-syntactic value is connected with different prepositions or combinations of prepositions in the second year. The following summary shows the order of appearance of prepositions and combinations of prepositions connected to each value.

- Prepositions connected to the semantic-syntactic value LOCATIVO:

SOPRA (02;03;02)

SOTTO (02;04;26)

- Prepositions and combinations of prepositions connected to the semantic-syntactic value STATIVO:

SOTTO (02;00;00)

A, VICINO TRA (02;00;27)

DA (02;00;29)

PER (02;01;11)

DENTRO (02;01;14)

VICINO A (02;01;20)

DENTRO IN (02;03;15)

IN FONDO A (02;04;06)

DENTRO A (02;05;10)

SOPRA (02;08;00)

ACCANTO A (02;11;17)

- Prepositions and combinations of prepositions connected to the semantic-syntactic value MOTO A LUOGO:

DENTRO, SOPRA (02;00;14)

DI SOPRA DI (02;00;17)

SOTTO A (02;03;02)

CONTRO (02;03;14)

CON (02;03;29)

ATTORNO A (02;04;26)

- Prepositions connected to the semantic-syntactic value MOTO DA LUOGO:

DA (02;01;25)

DI (02;05;01)

SU (02;05;10)

- Prepositions connected to the semantic-syntactic value MOTO PER LUOGO:

DA (02;02;06)

4.7.1.3 Analysis of the third year

In this section I considered the spatial semantic-syntactic values connected with prepositions or combinations of prepositions in the third year.

- When children are three years and one month old, the semantic-syntactic value MOTO A LUOGO is connected with the combination of prepositions:

VICINO A (03;01;29)⁵⁵

- When children are three years and four months old, the semantic-syntactic value MOTO A LUOGO is connected with the combinations of prepositions:

DENTRO IN, FINO A (03;04;09)

In the third year the semantic-syntactic value MOTO A LUOGO was connected with three combinations of prepositions: VICINO A (030129), DENTRO IN and FINO A (030409).

4.7.1.4 Intermediate summary

Each spatial semantic-syntactic value is connected with different prepositions or combinations of prepositions during the three years considered. The following summary shows the order of appearance of prepositions and combinations of prepositions connected to each value.

⁵⁵ In parenthesis, as I did in the previous sections of this chapter, I have written the children's age in years; months; days when the preposition was pronounced.

- Prepositions connected to the semantic-syntactic value LOCATIVO are:

A, DI (01;07;07)⁵⁶

IN (01;08;17)

PER (01;09;01)

SU (01;10;04)

SOPRA (02;03;02)

SOTTO (02;04;26)

- Prepositions and combinations of prepositions connected to the semantic-syntactic value STATIVO:

IN (01;08;17)

SU (01;10;04)

DI (01;10;12)

SOTTO (02;00;00)

A, VICINO TRA (02;00;27)

DA (02;00;29)

PER (02;01;11)

DENTRO (02;01;14)

VICINO A (02;01;20)

DENTRO IN (02;03;15)

IN FONDO A (02;04;06)

DENTRO A (02;05;10)

SOPRA (02;08;00)

ACCANTO A (02;11;17)

⁵⁶ In parenthesis, as I did in the previous sections of this chapter, I have written the children's age in years; months; days when the preposition was pronounced.

- Prepositions and combinations of prepositions connected to the semantic-syntactic value MOTO A LUOGO:

DI, IN (01;08;17)

SU (01;09;15)

A (01;09;24)

DA (01;11;04)

PER (01;11;07)

DENTRO, SOPRA (02;00;14)

DI SOPRA DI (02;00;17)

SOTTO A (02;03;02)

CONTRO (02;03;14)

CON (02;03;29)

ATTORNO A (02;04;26)

VICINO A (03;01;29)

DENTRO IN, FINO A (03;04;09)

- Prepositions connected to the semantic-syntactic value MOTO DA LUOGO:

DA (02;01;25)

DI (02;05;01)

SU (02;05;10)

- Preposition connected to the semantic-syntactic value MOTO PER LUOGO:

DA (02;02;06)

4.7.1.5 Values connected with different types of prepositions

In this section I will analyse the spatial semantic-syntactic values from a different prospective. More precisely, I will list the semantic-syntactic values connected with each type of preposition individually.

This section is organized in four parts:

- In section 4.7.1.5.1 I analysed the spatial semantic-syntactic values connected with functional prepositions
- In section 4.7.1.5.2 I analysed the spatial semantic-syntactic values connected with lexical prepositions
- In section 4.7.1.5.3 I analysed the spatial semantic-syntactic values connected with combinations of prepositions – Prepositions with double structure
- In section 4.7.1.5.4 I analysed the spatial semantic-syntactic values connected with combinations of prepositions - “Blocks”

4.7.1.5.1 Spatial semantic-syntactic values connected with functional prepositions

- The value LOCATIVO was connected with the functional prepositions:

A, DI (01;07;07)⁵⁷

IN (01;08;17)

PER (01;09;01)

SU (01;10;04)

- The value STATIVO was connected with the functional prepositions:

IN (01;08;17)

SU (01;10;04)

DI (01;10;12)

⁵⁷ In parenthesis, as I did in the previous sections of this chapter, I have written the children’s age in years; months; days when the preposition was pronounced.

A (02;00;27)
DA (02;00;29)
PER (02;01;11)

- The value MOTO A LUOGO was connected with the functional prepositions:

DI, IN (01;08;17)
SU (01;09;15)
A (01;09;24)
DA (01;11;04)
PER (01;11;07)
CON (02;03;29)

- The value MOTO DA LUOGO was connected with the functional prepositions:

DA (02;01;25)
DI (02;05;01)
SU (02;05;10)

- The value MOTO PER LUOGO was connected with the functional prepositions:

DA (02;02;06)

The first functional prepositions produced by the children (when children were 1;07 years old) were connected to the spatial semantic-syntactic value LOCATIVO. Later, when children were 1;08 years old, the functional prepositions were connected to the values STATIVO and MOTO A LUOGO. Only when children exceed the threshold of two years of age, functional prepositions started to be connected to the values MOTO DA LUOGO and MOTO PER LUOGO.

4.7.1.5.2 Spatial semantic-syntactic values connected with lexical prepositions

- The value LOCATIVO was connected with the lexical prepositions:

SOPRA (02;03;02)⁵⁸

SOTTO (02;04;26)

- The value STATIVO was connected with the lexical prepositions:

SOTTO (02;00;00)

DENTRO (02;01;14)

SOPRA (02;08;00)

- The value MOTO A LUOGO was connected with the lexical prepositions:

DENTRO, SOPRA (02;00;14)

CONTRO (02;03;14)

Spatial semantic-syntactic values started to be connected with lexical prepositions when children were two years old. More precisely, lexical prepositions were connected to the value STATIVO and to the value MOTO A LUOGO. Only when children were 2;03 years old, lexical prepositions were connected to the value LOCATIVO.

⁵⁸ In parenthesis, as I did in the previous sections of this chapter, I have written the children's age in years; months; days when the preposition was pronounced.

4.7.1.5.3 Spatial semantic-syntactic values connected with combinations of prepositions – Prepositions with double structure

- The value STATIVO was connected with the combinations of prepositions:

DENTRO IN (02;03;15)⁵⁹

DENTRO A (02;05;10)

- The value MOTO A LUOGO was connected with the combinations of prepositions:

DI SOPRA DI (02;00;17)

SOTTO A (02;03;02)

This type of combinations was connected to the value MOTO A LUOGO when children were 2;0 years old. The value STATIVO was connected with this type of combinations when children were 2;03 years old.

4.7.1.5.4 Spatial semantic-syntactic values connected with combinations of prepositions - “Blocks”

- The value STATIVO was connected with the combinations of prepositions:

VICINO TRA (02;00;27)⁶⁰

VICINO A (02;01;20)

IN FONDO A (02;04;06)

ACCANTO A (02;11;17)

⁵⁹ In parenthesis, as I did in the previous sections of this chapter, I have written the children's age in years; months, days when the preposition was pronounced.

⁶⁰ In parenthesis, as I did in the previous sections of this chapter, I have written the children's age in years; months; days when the preposition was pronounced.

- The value MOTO A LUOGO was connected with the combinations of prepositions:

ATTORNO A (02;04;26)

This type of combinations, defined as “blocks” in section 3.6, were connected to the value STATIVO when children were 2;0 years old. The value MOTO A LUOGO was connected with this type of combinations when children were 2;04 years old.

4.7.2 Semantic-syntactic values connected with CON and SENZA

In this section I will analyse the semantic-syntactic values connected with these two prepositions in each of the years considered.

4.7.2.1 Analysis of the first year

4.7.2.1.1 Functional preposition CON

The values connected with the functional preposition CON in the first year are:

- STRUMENTO (01;07;07)⁶¹
- UNIONE (01;09;24)
- COMITATIVO (01;10;18)
- QUALITA' (01;11;19)

In the first year the functional preposition CON was connected to: (I) the value STRUMENTO (children were one year, seven months and seven days old), (II) the value UNIONE (children were one year, nine months and twenty-four days old), (III) the value

⁶¹ In parenthesis, as I did in the previous sections of this chapter, I have written the children's age in years; months; days when the preposition was pronounced.

COMITATIVO (children were one year, ten months and eighteen days old), (IV) the value QUALITA' (children were one year, eleven months and nineteen days old).

4.7.2.1.2 Lexical preposition SENZA

The value connected with the lexical preposition SENZA in the first year is:

- NEG-QUALITA' (01;09;15)

In the first year the lexical preposition SENZA was connected to the value NEG-QUALITA' (children were one year, nine months and fifteen days old).

4.7.2.2 Analysis of the second year

4.7.2.2.1 Functional preposition CON

The values connected with the functional preposition CON in the second year are:

- MODO (02;00;00)⁶²
- PAZIENTE (02;00;27)
- MOTO A LUOGO (02;03;29)

In the second year the functional preposition CON was connected to: (I) the value MODO (children were two years, zero months and zero days old), (II) the value PAZIENTE (children were two years, zero months and twenty-seven days old), (III) the value MOTO A LUOGO (children were two years, three months and twenty-nine days old).

⁶² In parenthesis, as I did in the previous sections of this chapter, I have written the children's age in years; months; days when the preposition was pronounced.

4.7.2.2.2 Lexical preposition SENZA

The values connected with the lexical preposition SENZA in the second year are:

- NEG-UNIONE (02;01;06)
- NEG-STRUMENTO (02;01;27)
- COMPLEMENTATORE (02;06;13)

In the second year the lexical preposition SENZA was connected to: (I) the value NEG-UNIONE (children were two years, one month and six days old), (II) the value NEG-STRUMENTO (children were two years, one month and twenty-seven days old), (III) the value COMPLEMENTATORE (children were two years, six months and thirteen days old).

4.7.2.3 Analysis of the third year

During the third year there are no semantic-syntactic values connected with the preposition CON and the preposition SENZA for the first time.

4.7.2.4 Observations

The lexical preposition SENZA is connected to semantic-syntactic values that express a negation of other values. For this reason, the names of the semantic-syntactic values connected with the lexical preposition SENZA are composed of two parts:

- The label -NEG, where NEG stands for “NEGation”
- The value denied by the lexical preposition SENZA

If we observe the data introduced in section 4.7.2, it is clear that some of the semantic-syntactic values connected with the functional preposition CON and the semantic-syntactic values connected with the lexical preposition SENZA are related.

More precisely, the functional preposition CON is connected to the following semantic-syntactic values: QUALITA', UNIONE and STRUMENTO.

The lexical preposition SENZA, instead, is connected to the semantic-syntactic values: NEG-QUALITA', NEG-UNIONE and NEG-STRUMENTO.

We could say that the values connected with the functional preposition CON express an “inclusion semantics⁶³”. These values, in fact, express the addition of elements in the action described by the verb, or the addition of elements in the description of objects.

The values connected with the lexical preposition SENZA, instead, express a negation of the values connected with the functional preposition CON.

The correlation between the values connected with the functional preposition CON and the values connected with the lexical preposition SENZA could be defined as a correlation between values and negation of values.

It is interesting to observe whether children, for each couple “value; neg-value” considered, pronounced first the functional preposition CON or the lexical preposition SENZA. More precisely, whether children express first the value or the negation of that value.

- QUALITA': In this case children produced first the lexical preposition SENZA, and then the functional preposition CON. More precisely, the value QUALITA' is first denied, and then it is conferred.
- UNIONE: In this case children produced first the functional preposition CON, and then the lexical preposition SENZA. More precisely, the value UNIONE is first conferred, and then it is denied.
- STRUMENTO: In this case children produced first the functional preposition CON, and then the lexical preposition SENZA. More precisely, the value STRUMENTO is first conferred, and then it is denied.

⁶³ This expression is not used with a scientific value.

For the value UNIONE and for the value STRUMENTO the acquisition order is clear: the value is first conferred, and then it is denied by children.

There is a difference in the couple of values QUALITA'; NEG-QUALITA'. Children express first the negation of the value QUALITA' (NEG-QUALITA'), and then the value QUALITA' itself.

This difference could be connected to the meaning of the semantic-syntactic value QUALITA': this value refers to a property of the element we are speaking about. The value UNIONE and the value STRUMENTO, instead, refer to elements that are "external" to objects we are speaking about. In fact, there is a difference between the values connected with the functional preposition CON in the two following productions:

“La tartaruga con il guscio”

“Taglio il pane con il coltello”

In the first production the functional preposition CON is connected to the semantic-syntactic value QUALITA'. In this sentence, in fact, the PP phrase expresses a feature (the bark) of the subject (the turtle).

In the second production the functional preposition CON is connected to the semantic-syntactic value STRUMENTO. In this sentence, in fact, the PP phrase expresses the instrument used to cut the bread. This instrument is an element that is unconnected to the object “bread”.

4.8 Summary

In this chapter I tried to answer the third research question introduced in chapter I:

(Q3) Which semantic-syntactic values are connected to the functional and to the lexical prepositions?

This question refers to the semantic-syntactic values connected with each functional preposition, lexical preposition and combination of functional and lexical prepositions. In this chapter I identified the semantic-syntactic values connected with those groups. More precisely, I listed the values connected with each preposition or combination of prepositions in each of the years considered.

I also observed that the semantic-syntactic values connected with each preposition (or combination of prepositions) followed a specific order of appearance. In other words, I observed that the semantic-syntactic values connected with each preposition followed an “implicational scale” in their appearance.

As explained in chapter I (section 1.5) the expression “implicational scale” refers to the order of appearance of semantic-syntactic values connected to each preposition. In according to this order, the value X is connected with a preposition before the value Y, but it is connected with the same preposition only after the value Z. In this case, the appearance of the value X depends on the moment in which, in children’s productions, appears the value that occurs as first (in this case, Z).

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CHAPTER 5

5.1 Phrases selected by prepositions

In this chapter I tried to answer the fourth (Q4) research questions:

(Q4) Does each preposition select a specific structure?

In this chapter I analysed the phrases pronounced by the children selected by prepositions.

There are three types of elements selected by prepositions: DPs (Determiner Phrases), AdvPs (Adverbial phrases) and verbs (we can speak about sentences).

More precisely, we refer to DPs when prepositions select nouns, pronouns, adjectives, numerals and possessives.

Instead, we refer to AdvP when prepositions select an adverb.

This chapter is organized in four sections:

- In section 5.1.1 I analysed phrases selected by functional prepositions
- In section 5.1.2 I analysed phrases selected by lexical prepositions
- In section 5.1.3 I analysed phrases selected by combinations of prepositions (Prepositions with double structure)
- In section 5.1.4 I analysed phrases selected by combinations of prepositions (“Blocks”)

In each section I analysed the prepositions (or combinations of prepositions) in the order presented in chapter 3. The description of the complement phrases, in particular, is organized as follows: firstly, I divided phrases on the basis of the element they presented into: adverbs (ADV), adjectives (ADJ), numbers (NUM), pronouns (PRO), possessives (POSS), common nouns (NC), proper nouns (NPR). Secondly, for each element I listed the type of determiner it was connected to: 0 (zero), definite article (DET), indefinite article (IN), demonstrative (DIM); and for each combination of determiner-element I listed the type of modifier it was connected to: 0 (zero), adjective (ADJ), numeral (NUM), possessive (POSS). Finally, I highlighted the presence of prepositions used as complementizers and followed by verbs (V).

5.1.1 Phrases selected by functional prepositions

In this section I considered all the functional prepositions present in children's productions during the three years analysed. In particular, I focused on the phrases selected by prepositions. The functional prepositions were analysed in the order presented in chapter 3: A, CON, DI, IN, PER, SU, DA, TRA.

In this analysis I did not consider the children's age when the phrases were selected by functional prepositions for the first time in children's productions.

5.1.1.1 Functional preposition A

The first preposition considered is A. In this section I listed the different types of phrases selected by this functional preposition.

- DP that includes a pronominal adjective (ADJ). (Six productions in total)

In these productions there are not determiners or other modifiers.

(177) is an example:

(177) "a@p metto a@p solo" Raffaello; 020314

- DP that includes a common plural noun (NCPL). (Sixteen productions in total)

In these productions we can identify:

Seven productions without determiners and modifiers.

An example is:

(178) "io sparo a anieri" Raffaello; 020513

Eight productions with the definite article (DET) as determiner and with the absence of modifiers.

An example is:

(179) “il sale ai bambini no” Camilla; 030100

One production with a demonstrative (DIM) as the determiner and with the absence of modifiers.

An example is (180):

(180) “facciamo le carrozzine a questi bambini” Camilla; 030100

- DP that includes a common plural noun in the diminutive form (NCPL-DIM). (Four productions in total)

In these productions we can identify:

Three productions with zero determiners and with the absence of modifiers.

An example is (181):

(181) “Mina me l’hai fatta a pezzetti(ni)” Elisa; 020100

One production with a demonstrative (DIM) as the determiner and with the absence of modifiers.

An example is (182):

(182) “...si dà una martellata a quette (queste) palline” Diana; 020501

- DP that includes a common singular noun (NCS). (One hundred and eighty-five productions in total)

In these productions we can identify:

One hundred and twenty-one productions with zero determiners.

In particular, we identified:

- (I) One hundred and sixteen productions with zero modifiers (see example 183):

(183) “vado a scuola” Rosa; 030323

- (II) One production with an adjective (ADJ) as postnominal modifier (see example 184):

(184) “sono andati a casa loro” Marco; 020329

- (III) Four productions with a possessive (POSS) as modifier (see example 185):

(185) “...potta a a@ sua mamma” Rosa; 020716

Fifty-eight productions with a definite article (DET) as determiner.

In particular, we identified:

- (I) Fifty-four productions with zero modifiers (see example 186):

(186) “cosà fa paura al lupo” Raffaello; 020906

- (II) Two productions with an adjective (ADJ) as postnominal modifier (see example 187):

(187) “no, all’orso cattivo” Raffaello; 020513

(III) Two productions with a possessive (POSS) as modifier (see example 188):

(188) “tirare palle alla sua mamma” Marco; 02029

Three productions with a demonstrative (DIM) as the determiner. In these productions there is not a modifier.

An example is:

(189) “a questo tavolo” Rosa; 030323

Three productions with an indefinite article (IN) as determiner.

In particular, we identified:

(I) Two productions with zero modifiers (see example 190):

(190) “innegna a una cola, vero?” Rosa; 021014

(II) One production with an adjective (ADJ) as modifier (see example 191):

(191) “ad un certo punto vadano (:vanno) al mare” Marco; 020027

- DP that includes a common singular noun in the increasing form (NCS-ACC).
(One production)

In this production there is not a determiner or a modifier.

An example is:

(192) “pronto tita (:partita) a parone (:pallone)” Marco; 010817

- DP that includes a common singular noun in the diminutive form (NCS-DIM). (Seven productions)

In these productions we can identify:

Six productions with zero determiners. In these productions there are not modifiers.

An example is:

(193) “dice a sorellina di saltare sull’elefante” Camilla; 020904

One production with a definite article (DET) as determiner. In this production there is an adjective as modifier.

An example is:

(194) “questo lo mettiamo qua all’altro lettino” Elisa; 011119

- DP that includes a common singular noun in the form of endearment (NCS-VEZZ). (One production)

In this production there is a definite article (DET) as determiner and the modifier is missing.

An example is:

(195) “corse alla casetta dei sette nani” Camilla; 030409

- DP that includes a plural proper noun (NPRPL). (One production)

In this production there is not a determiner and there is an apposition (APP) as modifier.

An example is:

(196) “eo tdata a zardia Azelio (: a Giardini Azeglio) Camilla; 020206

- DP that includes a proper singular noun (NPRS). (Forty-one productions in total)
In these productions we can identify:

Forty productions with zero determiners.

In particular, we identified:

- (I) Thirty-seven productions with zero modifiers (see example 197):

(197) “va a Verona” Raffaello; 020429

- (II) One production with an adjective (ADJ) as modifier (see example 198):

(198) “...verso un dono a piccolo Sesò (:Gesù) Rosa; 030024

- (III) Two productions with an apposition (APP) as modifier (see example 199):

(199) “telefona a zio Gianni” Marco; 020413

One production with a definite article (DET) as determiner. In this production there is an apposition as modifier.

An example is:

(200) “++ alla gatta Vittoria” Raffaello; 021109

- DP that includes a numeral (NUM). (Three productions)
In these productions there are not determiners or modifiers.

An example is:

(201) “eh a dieci e mezzo” Raffaello; 021114

- DP that includes a pronoun (PRO). (One hundred and twenty-eight productions in total)

In these productions there are not determiners or modifiers.

An example is:

(202) “anche a me!” Rosa; 030024

- In one hundred productions the functional preposition A is used as a complementizer and it is followed by a verb (V).

An example is:

(203) “a ballare” Rosa; 030129

5.1.1.2 Functional preposition CON

The second preposition considered is CON. In this section I listed the different types of phrases selected by this functional preposition.

- DP that includes a pronominal adjective (ADJ). (Two productions)

In these productions there is a demonstrative (DIM) as the determiner, and there are not modifiers.

In (204) there is an example:

(204) “con quella rossa” Marco; 020510

- DP that includes a common plural noun (NCPL). (Forty-one productions in total)
In these productions we can identify:

Seven productions with zero determiners.

In particular, we identified:

- (I) Four productions with zero modifiers (see example 205):

(205) “con macce “mazze” Marco; 020211

- (II) One production with an adjective (ADJ) as postnominal modifier (see example 206):

(206) “non spocare (.) co piedi (.) sporchi” Camilla; 020406

- (III) One production with a numeral (NUM) as modifier (see example 207):

(207) “co due mani, vedi” Camilla; 020619

- (IV) One production with a possessive (POSS) as modifier (see example 32):

(208) “vai, co tuoi (.) bambini...” Camilla; 030100

Thirty-four productions with a definite article (DET) as determiner.

In particular, we identified:

(I) Twenty-six productions with zero modifiers (see example 209):

(209) “coi non(n)i” Marco; 020329

(II) Seven productions with an adjective (ADJ) as postnominal modifier (see example 210):

(210) “con l’orecchie nere” Marco; 020127

(III) One production with a numeral (NUM) as modifier (see example 211):

(211) “invece con l due mani non cade” Camilla; 020619

- DP that includes a common plural noun in the diminutive form (NCPL-DIM). (Five productions)

In these productions we can identify:

Four productions with a definite article (DET) as determiner and in which was missing a modifier.

An example is (212):

(212) “il lupo con le caprette” Marco; 020302

One production with a demonstrative (DIM) as the determiner and in which was missing a modifier.

An example is (213):

(213) “...con queti (:questi) pezzetti” Marco; 020014

- DP that includes a common singular noun (NCS). (One-hundred and five productions)

In these productions we can identify:

Twenty-one productions with zero determiners.

In particular, we identified:

- (I) Seventeen productions with zero modifiers (see example 214):

(214) “con mamma” Raffaello; 020613

- (II) Three productions with an adjective (ADJ) as postnominal modifier (see example 215):

(215) “...con 0w bici grande” Raffaello; 020613

- (III) One production with a possessive (POSS) as modifier (see example 216):

(216) “con mio papà” Marco; 020315

Seventy-six productions with a definite article (DET) as determiner.

In particular, we identified:

- (I) Seventy-three productions with zero modifiers (see example 217):

(217) “con l’uva” Raffaello; 021120

- (II) Two productions with an adjective (ADJ) as postnominal modifier (see example 218):

(218) “con la parte giusta” Marco; 020127

(III) One production with a possessive (POSS) as modifier (see example 219):

(219) “perché arriva col suo...” Marco; 020111

Two productions with a demonstrative (DIM) as the determiner and in which was missing a modifier.

An example is (220):

(220) “con (que)sta palla...” Marco; 020315

Six productions with an indefinite article (IN) as determiner.

In particular, we identified:

(I) Five productions with zero modifiers (see example 221):

(221) “con una pecora” Marco; 020211

(II) One production with an adjective (ADJ) as modifier (see example 222):

(222) “co una sola mano cade, invece” Camilla; 020619

- DP that includes a common singular noun in the increasing form (NCS-ACC). (One production)

In this production there is a definite article (DET) as determiner, and there are not modifiers.

In (223) there is an example:

(223) “col pallone...” Gregorio; 020029

- DP that includes a common singular noun in the diminutive form (NCS-DIM).
(Seven productions)

In all these productions there is a definite article (DET) as determiner.

In these productions we can identify:

- (I) Six productions with zero modifiers (see example 224):

(224) “que(s)to no col fagottino” Marco; 020211

- (II) One production with a possessive (POSS) as modifier (see example 225):

(225) “...te lo do col mio bicchierino” Elisa; 020120

- DP that includes a common singular noun as a term of endearment (NCS-VEZZ).
(Three productions)

In these productions we can identify:

One production with zero determiners. In this production there is not a modifier.

An example is:

(226) “facciamo un bambino con scopetta@wp” Marco; 020027

Two productions with a definite article (DET) as determiner. In these productions there is not a modifier.

An example is:

(227) “un machietto (:maschietto) con la femminuccia” Marco; 020413

- DP that includes a plural proper noun (NPRPL). (One production)

In this production there is a definite article (DET) as determiner and the modifier is missing.

An example is:

(228) "...io so(no) venuta a giocare (:giocare) colle Babbi" Diana; 020613

- DP that includes a singular proper noun (NPRS). (Ten productions)

In these productions we can identify:

Nine production with zero determiners.

In particular, we identified:

- (I) Seven productions with zero modifiers (see example 229):

(229) "con Diana" Raffaello; 021109

- (II) Two productions with an apposition (APP) as modifier (see example 230):

(230) "con nonna Piera?" Marco; 020211

One production with a definite article (DET) as determiner. In this production the modifier is missing.

An example is:

(231) "con la Uno" Raffaello; 020613

- DP that includes a pronoun (PRO). (Forty-eight productions in total).

In all these productions there are not determiners and modifiers.

An example is:

(232) “con questo” Raffaello; 021120

5.1.1.3 Functional preposition DI

The fourth preposition considered is DI. In this section I listed the different types of phrases selected by this functional preposition.

- DP that includes a pronominal adjective (ADJ). (Ten productions)

In these productions there are not determiners and modifiers.

In (233) there is an example:

(233) “cosa c’hai di bello!” Raffaello; 021109

- AdvP that includes an Adverb (ADV). (Seventy-one productions in total)

In these productions there are not determiners or modifiers.

In (234) there is an example:

(234) “di là” Raffaello; 020800

- DP that includes a common plural noun (NCPL). (Thirty-four productions in total)

In these productions we can identify:

Thirteen productions without determiners or modifiers.

An example is:

(235) “perché è ghiotta di pesci” Raffaello; 021109

Twenty-one productions with a definite article (DET) as determiner.

In particular, we identified:

(I) Twenty productions with zero modifiers (see example 236):

(236) “camion d(e)i pompieri” Marco; 020302

(II) One production with a numeral (NUM) as modifier (see example 237):

(237) “corse alla casetta dei sette nani” Camilla; 030409

- DP that includes a common plural noun in the pejorative form (NCPL-PEG). (One production)

In this production there is a definite article (DET) as determiner and there are not modifiers.

An example is:

(238) “hanno dei piedacci” Marco; 020413

- DP that includes a common singular noun (NCS). (Ninety-six productions in total)

In these productions we can identify:

Forty-five productions without determiners or modifiers.

An example is:

(239) “un po’ di minettla (:minestra)” Diana; 020613

Fifty productions with a definite article (DET) as determiner. In particular, there are:

(I) Forty-eight productions with zero modifiers (see example 240):

(240) “questa è del camion” Raffaello; 021109

(II) One production with an adjective (ADJ) as postnominal modifier (see example 241):

(241) “no, è la storia de del cilindro morto” Camilla; 030409

(III) One production with a possessive (POSS) as modifier (see example 242):

(242) “...questo (.) amico del tuo bambino” Camilla; 030100

One production with a demonstrative (DIM) as the determiner. In this production there is not a modifier.

An example is:

(243) “...mangia di quello tempo...” Diana; 020600

- DP that includes a common singular noun in the diminutive form (NCS-DIM). (Four productions)

In all these productions there is a definite article (DET) as determiner and the modifier is missing.

An example is:

(244) “del lettino?” Marco; 020315

- DP that includes a common singular noun as a term of endearment (NCS-VEZZ).
(Two productions)

In all these productions there is a definite article (DET) as determiner and the modifier is missing.

An example is:

(245) “e queste sono dell’orsetto” Elisa; 011004

- DP that includes a proper singular noun (NPRS). (Fifty-two productions)
In these productions we can identify:

Fifty-one productions with zero determiners.

In particular, we identified:

- (I) Fifty productions with zero modifiers (see example 246):

(246) “pappagallo di Luca” Diana; 020600

- (II) One production with an apposition (APP) as modifier (see example 247):

(247) “sì, il tamburo di zia Laura” Marco; 020315

One production with a definite article (DET) as determiner. In this production the modifier is missing.

An example is:

(248) “quello della / della Rubini” Marco; 020127

- DP that includes a pronoun (PRO). (Nineteen productions)

In these productions we can identify:

Eighteen productions with zero determiners. In all the productions the modifiers are missing.

An example is:

(249) “xxx, un pezzo di questo” Raffaello; 021120

One production with a definite article (DET) as determiner. In this production the modifier is missing.

An example is:

(250) “del chi mi ama” Camilla; 030409

- In sixteen productions the functional preposition DI is used as a complementizer and it is followed by a verb (V).

An example is:

(251) “ho paura di cadere (.)” Camilla; 020406

5.1.1.4 Functional preposition IN

The fifth preposition considered is IN. In this section I listed the different types of phrases selected by this functional preposition.

- DP that includes a pronominal adjective (ADJ). (Five productions)

In these productions we can identify:

Three productions without determiners or modifiers.

An example is:

(252) “pottami (:portami) in / in ultimo (:ultimo)” Diana; 020501

One production with a definite article (DET) as determiner. In this production the modifier is missing.

An example is:

(253) “è caduto nel &le e bagnato” Marco; 020329

One production with a demonstrative (DIM) as the determiner. In this production the modifier is missing.

An example is:

(254) “in quella rossa” Marco; 020111

- AdvP that includes an Adverb (ADV). (Twenty-six productions)

In these productions there are not determiners or modifiers.

(255) is an example:

(255) “più in su” Marco; 020027

- DP that includes a common plural noun (NCPL). (Eighteen productions)

In these productions we can identify:

Twelve productions with zero determiners or modifiers.

An example is:

(256) “sta in piedi” Rosa; 021130

Five productions with a definite article (DET) as determiner.

In particular, we identified:

(I) Four productions with zero modifiers (see example 257):

(257) “nelle orecchie del lupo” Marco; 020426

(II) One production with an adjective (ADJ) as postnominal modifier (see example 258):

(258) “...nella (s)telle filanti” Marco; 020027

One production with a demonstrative (DIM) as the determiner. In this production the modifiers are missing.

An example is:

(259) “...in questi sportelli tu dici” Camilla; 030409

- DP that includes a common plural noun in the diminutive form (NCPL-DIM). (One production)

In this production there is a definite article (DET) as determiner and there are not modifiers.

An example is:

(260) “...mi metti nel lettino tutte quelle palline?” Marco; 020014

- DP that includes a common singular noun (NCS). (Two hundred and fifty-four productions in total)

In these productions we can identify:

One hundred and fifty-seven productions with zero determiners.

In particular, we identified:

- (I) One hundred and fifty-one productions with zero modifiers (see example 261):

(261) “sono in cucina...” Rosa; 030323

- (II) One production with an adjective (ADJ) as modifier (see example 262):

(262) “in che mano è?” Raffaello; 020613

- (III) Five productions with a possessive (POSS) as postnominal modifier (see example 263):

(263) “va in camera mia” Raffaello; 020513

Ninety-two productions with a definite article (DET) as determiner. In particular, there are:

- (I) Eighty-eight productions with zero modifiers (see example 264):

(264) “nel bagno” Raffaello; 021120

- (II) One production with an adjective (ADJ) as modifier (see example 265):

(265) “nell’acqua bollente” Marco; 020329

- (III) Three productions with a possessive (POSS) as modifier (see example 266):

(266) “lasciamelo qui nella mia borsa” Elisa; 020106

One production with a demonstrative (DIM) as the determiner. In this production the modifier is missing.

An example is:

(267) “in casa petta (:questa)?” Rosa; 020726

Four productions with an indefinite article (IN) as determiner. In particular, there are:

(I) Three productions with zero modifiers (see example 268):

(268) “io vivrò in un castello” Marco; 020426

(II) One production with an adjective (ADJ) as postnominal modifier (see example 269):

(269) “in un posto verde” Camilla; 021117

- DP that includes a common singular noun in the increasing form (NCS-ACC).
(One production)

In this production there is a definite article (DET) as determiner and the modifier is missing.

An example is:

(270) “era qui nel fornellone” Elisa; 020120

- DP that includes a common singular noun in the diminutive form (NCS-DIM).
(Seven productions)

In these productions there is a definite article (DET) as determiner.

In particular, we identified:

- (I) Six productions in which there are not modifiers (see example 271):

(271) “nel vasino” Marco; 020524

- (II) One production in which there is a possessive (POSS) as modifier (see example 272):

(272) “metti nel mio lettino” Marco; 020413

- DP that includes a common singular noun as a the term of endearment (NCS-VEZZ). (Two productions)

In these productions we can identify:

One production with a definite article (DET) as determiner. In this production there is an adjective (ADJ) as postnominal modifier.

An example is:

(273) “nel secchietto verde...” Marco; 020111

One production with an indefinite article (IN) as determiner and without a modifier.

An example is:

(274) “in una casetta, che c’aveva tre letti in cinque...” Camilla; 030409

- DP that includes a proper singular noun (NPRS). (Three productions)

In these productions there are not determiners or modifiers.

An example is:

(275) “che vendig@wp in Egitto” Marco; 020315

- DP that includes a numeral (NUM). (One production)
In this production there is not a determiner or a modifier.

An example is:

(276) “in una casetta, che c’aveva tre letti in cinque...” Camilla; 030409

- DP that includes a possessive (POSS). (One production)
In this production there is a definite article (DET) as determiner and the modifier is missing.

An example is:

(277) “(e)n (:nel) mia (:mio)”? Rosa; 020429

- DP that includes a pronoun (PRO). (One production)
In this production there is not a determiner or a modifier.

An example is:

(278) “in questi, ...” Camilla; 030409

5.1.1.5 Functional preposition PER

The sixth preposition considered is PER. In this section I listed the different types of phrases selected by this functional preposition.

- DP that includes a pronominal adjective (ADJ). (Two productions)

In these productions there is not a determiner or a modifier.

An example is:

(279) “e questi quii sono pe’ cattivi” Camilla; 030409

- AdvP that includes an Adverb (ADV). (Six productions)

In these productions there are not determiners or modifiers.

An example is:

(280) “per davvero?” Raffaello; 020513

- DP that includes a common plural noun (NCPL). (Four productions)

In these productions there is a definite article (DET) as determiner and there are not modifiers.

An example is:

(281) “questo per i bambini e per le mamme” Camilla; 030100

- DP that includes a common plural noun in the diminutive form (NCPL-DIM). (One production)

In this production there is not a determiner or a modifier.

An example is:

(282) “ecintoo pe’ 0w animaini” Rosa; 021112

- DP that includes a common singular noun (NCS). (Thirty-two productions in total)

In these productions we can identify:

Twenty-nine productions with zero determiners.

In particular, we identified:

(I) Twenty-eight productions with zero modifiers (see example 283):

(283) “per terra” Marco; 010901

(II) One production with an adjective (ADJ) as modifier (see example 284):

(284) “che cosa fare per che cosa fare...” Camilla; 030409

Three productions with a definite article (DET) as determiner. In these productions the modifiers are missing.

An example is:

(285) “per la mamma?” Marco; 020302

- DP that includes a common singular noun in the diminutive form (NCS-DIM). (One production)

In this production there is a demonstrative (DIM) as the determiner and there is not a modifier.

An example is:

(286) “per questa bambolina” Camilla; 030409

- DP that includes a proper singular noun (NPRS). (Three productions)

In these productions the determiner and the modifier are missing.

An example is:

(287) “medicina per Topo(lino)” Marco; 020000

- DP that includes a pronoun (PRO). (Eleven productions)

In these productions the determiner and the modifier are missing.

An example is:

(288) “per me” Marco; 020524

- In thirty-eight productions the functional preposition PER is used as a complementizer and it is followed by a verb (V).

An example is:

(289) “per tirare il cavallo” Raffaello; 021114

5.1.1.6 Functional preposition SU

The seventh preposition considered is SU. In this section I listed the different types of phrases selected by this functional preposition.

- DP that includes a pronominal adjective (ADJ). (One production)

In this production there is a definite article (DET) as determiner and the modifier is missing.

An example is:

(290) “io so andare anche sul blu” Camilla; 021117

Forty-four productions with a definite article (DET) as determiner.

In particular, we identified:

(I) Forty-one productions with zero modifiers (see example 295):

(295) “sul pollice, si mette” Camilla; 030409

(II) Two productions with an adjective (ADJ) as postnominal modifier (see example 296):

(296) “su a@ seggiola marrone” Rosa; 021130

(III) One production with a possessive (POSS) as modifier (see example 297):

(297) “...mi ha fatto salire sul suo cavallo” Camilla; 030409

Two productions with an indefinite article (IN) as determiner. In these productions there is not a modifier.

An example is:

(298) “messi su una gabbia...” Raffaello; 021120

- DP that includes a common singular noun in the increasing form (NCS-ACC). (One production)

In this production there is a definite article (DET) as determiner and there is not a modifier.

An example is:

(299) “eh e andare su / su / su la scalona” Marco; 020510

- DP that includes a common singular noun in the diminutive form (NCS-DIM). (Ten productions)

In these productions we can identify:

Two productions with zero determiner. In these productions the modifiers are missing.

An example is:

(300) “comx stai (.) su lettino, chesto morbido” Camilla; 030100

Eight productions with a definite article (DET) as determiner. In these productions there are not modifiers.

An example is:

(301) “tiro sul lettino” Marco; 020014

5.1.1.7 Functional preposition DA

The third preposition considered is DA. In this section I listed the different types of phrases selected by this functional preposition.

- DP that includes a pronominal adjective (ADJ). (Nineteen productions)

In these productions there are not determiners or modifiers.

In (302) there is an example:

(302) “da solo” Rosa; 030024

- AdvP that includes an Adverb (ADV). (Eight productions)

In these productions there are not determiners or modifiers.

In (303) there is an example:

(303) “(.) ndato via da qui” Camilla; 020206

- DP that includes a common plural noun (NCPL). (Eleven productions)

In these productions we can identify:

Seven productions with zero determiners.

In particular, we identified:

- (I) Four productions with zero modifiers (see example 304):

(304) “(.) da bambini” Camilla; 030409

- (II) Three productions with an adjective (ADJ) as modifier (see example 305):

(305) “(.) nata da tanti giorni” Camilla; 030409

Four productions with a definite article (DET) as determiner. In these productions the modifiers are missing.

An example is:

(306) “...va dai bambini” Rosa; 030024

- DP that includes a common singular noun (NCS). (Thirty-five productions)

In these productions we can identify:

Nineteen productions with zero determiners.

In particular, we identified:

(I) Seventeen productions with zero modifiers (see example 307):

(307) “vado da papà?” Marco; 020329

(II) Two productions with an adjective (ADJ) as modifier (see example 308):

(308) “da nessuna parte” Camilla; 030409

Fifteen productions with a definite article (DET) as determiner.

In particular, we identified:

(I) Twelve productions with zero modifiers (see example 309):

(309) “dalla nonna” Elisa; 011104

(II) Two productions with an adjective (ADJ) as modifier (see example 310):

(310) “giriamolo dall'altra parte” Camilla; 020904

(III) One production with a possessive (POSS) as modifier (see example 311):

(311) “vieni qua dalla tua mamma...” Camilla; 021117

One production with an indefinite article (IN) as determiner. In this production there is not a modifier.

An example is:

(312) “...tutto mangiucchiato da daummm leone” Camilla; 030409

- DP that includes a common singular noun as a term of endearment (NCS-VEZZ).
(One production)

In this production there is not a determiner or a modifier.

An example is:

(313) “da cavoletto” Marco; 020302

- DP that includes a proper singular noun (NPRS). (Five productions)

In these productions we can identify:

Three productions with zero determiners. In these productions the modifiers are missing.

An example is:

(314) “da Anna” Raffaello; 020513

Two productions with a definite article (DET) as determiner. In these productions there is an apposition (APP) as modifier.

An example is:

(315) “dalla zia Rosetta” Gregorio; 020029

- DP that includes a pronoun (PRO). (Four productions)

In these productions there are not determiners or modifiers.

An example is:

(316) “e da me” Camilla; 021117

- In forty-seven productions the functional preposition DA is used as a complementizer and it is followed by a verb (V).

An example is:

(317) “da mangiare” Raffaello; 020700

5.1.1.8 Functional preposition TRA

The eighth preposition considered is TRA. In this section I listed the different types of phrases selected by this functional preposition.

- DP that includes a pronoun (PRO). (One production)

In this production there is an indefinite article (IN) as determiner and there is not a modifier.

An example is:

(318) “tra un po’ cominceranno a prenderlo i bambini...” Camilla; 030100

5.1.2 DP Phrases selected by lexical prepositions

In this section I considered all the lexical prepositions that are present in children’s productions during the three years analysed. In this section, in particular, I focused on the analysis of the phrases selected by lexical prepositions. These prepositions were studied accordingly to the order presented in chapter 3: SENZA, SOTTO, DENTRO, SOPRA, CONTRO.

In this analysis I did not consider the children's age when the phrases were selected by lexical prepositions for the first time in children's productions.

5.1.2.1 Lexical preposition SENZA

The first preposition considered is SENZA. In this section I listed the different types of phrases selected by this lexical preposition.

- DP that includes a common plural noun (NCPL). (One production)

In this production there is not a determiner or a modifier.

An example is:

(319) "...poi senza guanti" Camilla; 020406

- DP that includes a common singular noun (NCS). (Eight productions)

In these productions there are not determiners or modifiers.

An example is:

(320) "tieni senza zucchero" Camilla; 030409

- DP that includes a common singular noun in the diminutive form (NCS-DIM).

(Two productions)

In these productions there are not determiners or modifiers.

An example is:

(321) "senza (mere)ndino vado a casa" Rosa; 021014

- DP that includes a pronoun (PRO). (One production)

In this production there is not a determiner or a modifier.

An example is:

(322) “xxx andare senza quetto (:questo) Elisa; 020106

- In one production the lexical preposition SENZA is used as a complementizer and it is followed by a verb (V).

An example is:

(323) “...esto senza mangiare” Raffaello; 020613

From these data it is possible to observe that, in the DP phrases selected by the lexical preposition SENZA, nouns are not connected to determiners.

5.1.2.2 Lexical preposition SOTTO

The second preposition considered is SOTTO. In this section I listed the different types of phrases selected by this lexical preposition.

- DP that includes a common plural noun (NCPL). (One production)
In this production there is a definite article (DET) as determiner and there is not a modifier.

An example is:

(324) “dormire, sotto le coperte” Marco; 020111

- DP that includes a common singular noun (NCS). (Seven productions)

In these productions we can identify:

One production with zero determiner. In this production there is not a modifier.

An example is:

(325) “xxx sotto cusino (:cuscino) Marco; 020426

Six productions with a definite article (DET) as determiner. In these productions there are not modifiers.

An example is:

(326) “forse sotto il letto” Elisa; 020123

5.1.2.3 Lexical preposition DENTRO

The third preposition considered is DENTRO. In this section I listed the different types of phrases selected by this lexical preposition.

- AdvP that includes an Adverb (ADV). (One production)
In this production there is not a determiner or a modifier.
An example is:

(327) “dentro li...” Camilla; 030409

- DP that includes a common singular noun (NCS). (Six productions)
In these productions we can identify:

One production with zero determiner. In this production the modifier is missing.

An example is:

(328) “...acconto dento 0w orecchio” Raffaello; 020700

Five productions with a definite article (DET) as determiner. In these productions, modifiers are missing.

An example is:

(329) “qua, dento la casa” Rosa; 030323

- DP that includes a common singular noun in the diminutive form (NCS-DIM). (One production)

In this production there is a definite article (DET) as determiner and the modifier is missing.

An example is:

(330) “detro (:dentro) il lettino” Marco; 020014

- DP that includes a pronoun (PRO). (One production)

In this production there is not a determiner or a modifier.

An example is:

(331) “dento (:dentro) detta (:questa)” Rosa; 020114

5.1.2.4 Lexical preposition SOPRA

The fourth preposition considered is SOPRA. In this section I listed the different types of phrases selected by this lexical preposition.

- DP that includes a common singular noun (NCS). (Three productions)

In these productions we can identify:

One production with zero determiner. In this production there is not a modifier.

An example is:

(332) “xxx sopra (s)ch(i)ena” Marco; 020302

One production with a demonstrative (DIM) as the determiner. In this production there is not a modifier.

An example is:

(333) “sedo (:siedo) sopra questa tata@wp” Marco; 020014

One production with an indefinite article (IN) as determiner. In this production there is not a modifier.

An example is:

(334) “sopra una collina (.) abbaiando (.) fanno...” Raffaello; 020800

5.1.2.5 Lexical preposition CONTRO

The fifth preposition considered is CONTRO. In this section I listed the different types of phrases selected by this lexical preposition.

- DP that includes a common singular noun (NCS). (One production)

In this production there is not a determiner or a modifier.

An example is:

(335) “conto (:contro) 0w latte” Raffaello; 020314

It is clear that there are no modifiers in the DP phrases selected by the lexical prepositions analysed.

5.1.3 DP Phrases selected by combinations of prepositions – Prepositions with double structure

In this section I considered phrases selected by these combinations of prepositions. In particular, I analysed the combinations of prepositions in the order presented in chapter 3: DI SOPRA DI, SENZA DI, SOTTO A, DENTRO IN, DENTRO A.

In this analysis I did not consider the children's age when the phrases were selected by these combinations of prepositions for the first time in children's productions.

5.1.3.1 Combination of prepositions DI SOPRA DI

The first combination of prepositions considered is DI SOPRA DI. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a common singular noun (NCS). (One production)

In this production there is not a determiner or a modifier.

An example is:

(336) “qui di sopra di tavola” Diana; 020017

5.1.3.2 Combination of prepositions SENZA DI

The second combination of prepositions considered is SENZA DI. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a pronoun (PRO). (One production)

In this production there is not a determiner or a modifier.

An example is:

(337) “...zenza (:senza) di me” Marco; 020211

5.1.3.3 Combination of prepositions SOTTO A

The third combination of prepositions considered is SOTTO A. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a common singular noun (NCS). (One production)

In this production there is a definite article (DET) as determiner and there is not a modifier.

An example is:

(338) “vado sotta (:sotto) al treto@wp” Marco; 020302

5.1.3.4 Combination of prepositions DENTRO IN

The fourth combination of prepositions considered is DENTRO IN. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a common singular noun (NCS). (One production)

In this production there is a definite article (DET) as determiner and there is not a modifier.

An example is:

(339) “dentro li, dentro nel baule” Camilla; 030409

- DP that includes a common singular noun in the diminutive form (NCS-DIM).
(One production)

In this production there is a definite article (DET) as determiner and the modifier is missing.

An example is:

(340) “xxx no dentro nel lettino” Marco; 020315

5.1.3.5 Combination of prepositions DENTRO A

The fifth combination of prepositions considered is DENTRO A. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a common singular noun (NCS). (Five productions)
In these productions we can identify:

One production without determiners or modifiers.

An example is:

(341) “dentro a casa?” Rosa; 030323

Four productions with a definite article (DET) as determiner. In these productions the modifiers are missing.

An example is:

(342) “dentro allo scivolo” Marco; 020510

The combinations of prepositions composed by lexical prepositions with double structure⁶⁴ select DP phrases in which there are not modifiers.

⁶⁴ See chapter 3.

Moreover, if we observe the data collected in section 5.1.2 and 5.1.3, it is evident that lexical prepositions with double structure, in both their structures (with and without the functional prepositions), do not select DP phrases in which there are modifiers.

5.1.4 DP Phrases selected by combinations of prepositions – “Blocks”

In this section I considered the phrases selected by the combinations of prepositions defined as “blocks” in section 3.6. In particular, I analysed the combinations of prepositions in the order presented in chapter 3: VICINO TRA, VICINO A, IN FONDO A, ATTORNO A, ACCANTO A, FINO A.

In this analysis I did not consider the children’s age when the phrases were selected by these combinations of prepositions for the first time in children’s productions.

5.1.4.1 Combination of prepositions VICINO TRA

The first combination of prepositions considered is VICINO TRA. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a common singular noun (NCS). (One production)

In this production there is not a determiner or a modifier.

An example is:

(343) “è vicino tra sedia” Marco; 020027

5.1.4.2 Combination of prepositions VICINO A

The second combination of prepositions considered is VICINO A. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a common singular noun (NCS). (Four productions)

In these productions we can identify:

Three productions with zero determiners.

In particular, we identified:

- (I) Two productions with zero modifiers (see example 344).

(344) “vicino a volo (:aereo) quello là” Rosa; 030129

- (II) One production with an adjective (ADJ) as postnominal modifier (see example 345):

(345) “mettelo...visino a@p chiamo (:camion) què.” Rosa; 030129

One production with a definite article (DET) as determiner. In this production the modifier is missing.

An example is:

(346) “tutti a pezzettini qui vicino alla banana” Elisa; 020120

5.1.4.3 Combination of prepositions IN FONDO A

The third combination of prepositions considered is IN FONDO A. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a common singular noun (NCS). (One production)

In this production there is a demonstrative (DIM) as the determiner and there is an adjective (ADJ) as postnominal modifier.

An example is:

(347) “sì (.) son là, n fondo a quella campana (.) viola” Camilla; 020406

5.1.4.4 Combination of prepositions ATTORNO A

The fourth combination of prepositions considered is ATTORNO A. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a pronoun (PRO). (One production)

In this production there is not a determiner or a modifier.

An example is:

(348) “mettiam tutte le macchie (:macchine) attorno a lei!” Marco; 020426

5.1.4.5 Combination of prepositions ACCANTO A

The fifth combination of prepositions considered is ACCANTO A. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a common singular noun (NCS). (One production)

In this production there is a definite article as determiner (DET), and the modifier is missing.

An example is:

(349) “...accanto al cimena” Camilla; 021117

- DP that includes a pronoun (PRO). (One production)

In this production there is not a determiner or a modifier.

An example is:

(350) “mette accanto a te eh...” Rosa; 021112

5.1.4.6 Combination of prepositions FINO A

The sixth combination of prepositions considered is FINO A. In this section I listed the different types of phrases selected by this combination of prepositions.

- DP that includes a common singular noun (NCS). (One production)

In this production there is a definite article as determiner (DET), and the modifier is missing.

An example is:

(351) “...ti arriva fino alla gamba” Camilla; 030409

5.2 DP selected by prepositions

In section 5.1 I analysed different phrases selected by prepositions pronounced by children.

In this section, instead, I will only analyse the DPs selected by prepositions. In particular, I analysed the distribution of different types of DPs without considering the modifiers.

It is interesting in fact to observe the connection between the type of preposition pronounced by the children (and the semantic-syntactic values connected with this preposition) and the type of DP selected by the preposition. The expression “type of DP” refers to the absence or to the presence of determiners (DET, DIM, IN).

Precisely, I only focused on DPs in which there was a lexicalized noun (NCS, NCPL, NPRS, NPRPL and modified nouns, too).

I divided the analysis in four parts:

- In section 5.2.1 I analysed DPs selected by functional prepositions
- In section 5.2.2 I analysed DPs selected by lexical prepositions
- In section 5.2.3 I analysed DPs selected by combinations of prepositions (Prepositions with double structure)
- In section 5.2.4 I analysed DPs selected by combinations of prepositions (“Blocks”)

In each section the prepositions (or combinations of prepositions) were analysed accordingly to the order reported in chapter 3.

For each preposition (or combination of prepositions) I created two histograms⁶⁵.

In the first histogram are reported two information for each type of noun pronounced in the DP. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

In the second histogram, instead, nouns are considered as a unique group and I analysed the semantic-syntactic values connected with each preposition (or combination of preposition). In particular, in this histogram are reported two information for each semantic-syntactic value. The first one refers to the number of productions in which nouns in the DPs (selected by the preposition) are not connected to a determiner; while the second one refers to the number of productions in which nouns in the DPs (selected by the preposition) are connected to a determiner. If the first or the second information are missing in the histogram, it means the number of the productions associated to them is zero (0).

⁶⁵ In the thesis I reported only the histograms with a significant number of productions. I did not report the other histograms, but I only wrote the data collected.

5.2.1 DP selected by functional prepositions

In this section I considered all the functional prepositions present in children's productions. In particular, I focused on the DPs selected by prepositions. The functional prepositions were analysed in the order presented in chapter 3: A, CON, DI, IN, PER, SU, DA, TRA.

In this analysis I did not consider the children's age when the DPs were selected by functional prepositions for the first time in children's productions.

5.2.1.1 Functional preposition A

The first preposition considered is A.

In Figure 74 are reported two information for each type of noun pronounced in the DP selected by the functional preposition A. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

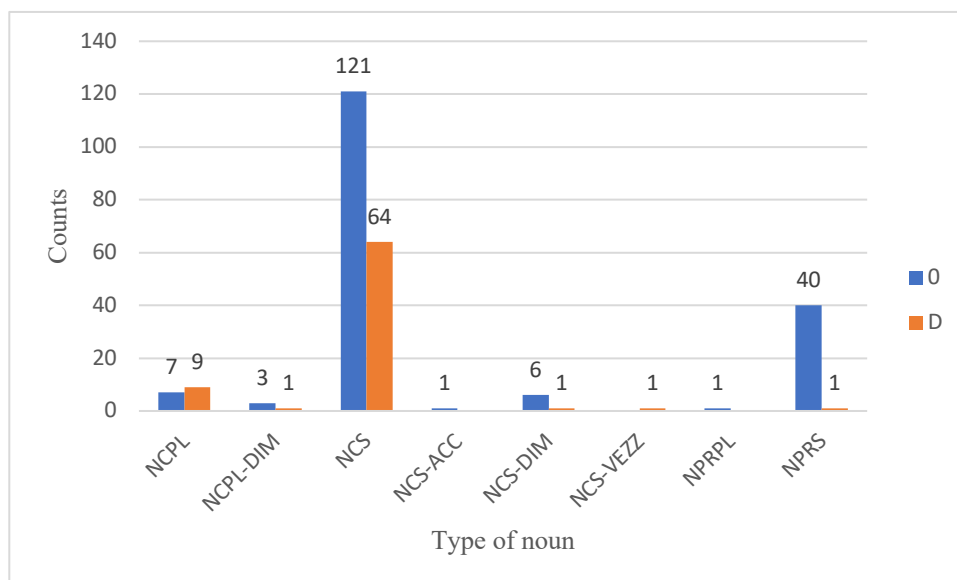


Figure 74: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition A.

For different types of nouns, I identified the following data:

- Common plural nouns (NCPL): In seven productions nouns are not connected to a determiner (0). In nine productions nouns are instead connected to a determiner (D).
- Common plural nouns in the diminutive form (NCPL-DIM): In three productions nouns are not connected to a determiner (0). In one production nouns are connected to a determiner (D).
- Common singular nouns (NCS): In one hundred and twenty-one productions nouns are not connected to a determiner (0). In sixty-four productions nouns are connected to a determiner (D).
- Common singular nouns in the increasing form (NCS-ACC): In one production nouns are not connected to a determiner (0).
- Common singular nouns in the diminutive form (NCS-DIM): In six productions nouns are not connected to a determiner (0). In one production nouns are connected to a determiner (D).
- Common singular nouns as terms of endearment (NCS-VEZZ): In one production nouns are connected to a determiner (D).
- Proper plural nouns (NPRPL): In one production nouns are not connected to a determiner (0)
- Singular common nouns (NPRS): In forty productions nouns are not connected to a determiner (0). In one production nouns are connected to a determiner (D).

In Figure 75 are reported two information for each semantic-syntactic value connected with the functional preposition A. The first one refers to the number of productions in which nouns⁶⁶ are not connected to a determiner; while the second one refers instead to the number of productions in which nouns⁶⁷ are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

⁶⁶ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition A.

⁶⁷ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition A.

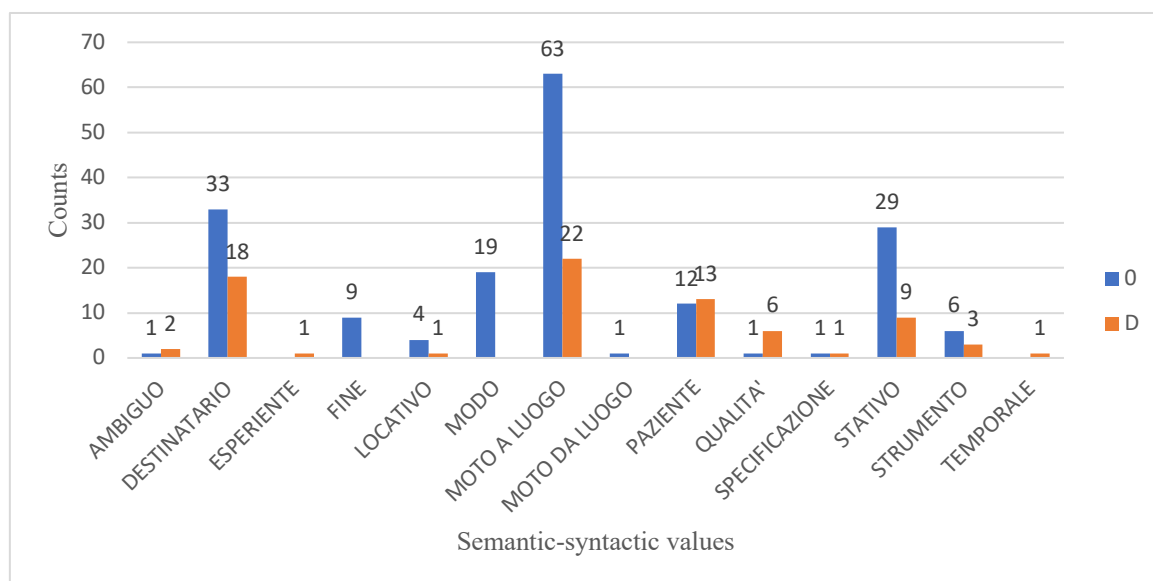


Figure 75: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition A when this preposition is connected to different semantic-syntactic values.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition A when this preposition was connected to different semantic-syntactic values:

- DESTINATARIO: In thirty-three productions nouns are not connected to a determiner (0). In eighteen productions nouns are connected to a determiner (D).
- ESPERIENTE: In one production nouns are connected to a determiner (D).
- FINE: In nine productions nouns are not connected to a determiner (0).
- LOCATIVO: In four productions nouns are not connected to a determiner (0). In one production nouns are connected to a determiner (D).
- MODO: In nineteen productions nouns are not connected to a determiner (0).
- MOTO A LUOGO: In sixty-three productions nouns are not connected to a determiner (0). In twenty-two productions nouns are connected to a determiner (D).
- MOTO DA LUOGO: In one production nouns are not connected to a determiner (0).
- PAZIENTE: In twelve productions nouns are not connected to a determiner (0). In thirteen productions nouns are connected to a determiner (D).

- QUALITA': In one production nouns are not connected to a determiner (0). In six productions nouns are connected to a determiner (D).
- SPECIFICAZIONE: In one production nouns are not connected to a determiner (0). In one production nouns are connected to a determiner (D).
- STATIVO: In twenty-nine productions nouns are not connected to a determiner (0). In nine productions nouns are connected to a determiner (D).
- STRUMENTO: In six productions nouns are not connected to a determiner (0). In three productions nouns are connected to a determiner (D).
- TEMPORALE: In one production nouns are connected to a determiner (D).
- AMBIGUO: In one production nouns are not connected to a determiner (0). In two productions nouns are connected to a determiner (D).

It can be observed that, when the functional preposition A is connected to spatial semantic-syntactic values: LOCATIVO, STATIVO, MOTO A LUOGO, MOTO DA LUOGO, the number of nouns that are not connected to a determiner is bigger than the number of nouns connected to a determiner. The same trend can be also observed when the functional preposition A is connected to the semantic-syntactic values DESTINATARIO and STRUMENTO. When the functional preposition A is instead connected to the semantic-syntactic values FINE and MODO, nouns are not connected to a determiner.

5.2.1.2 Functional preposition CON

The second preposition considered is CON.

In Figure 76 are reported two information for each type of noun pronounced in the DP selected by the functional preposition CON. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

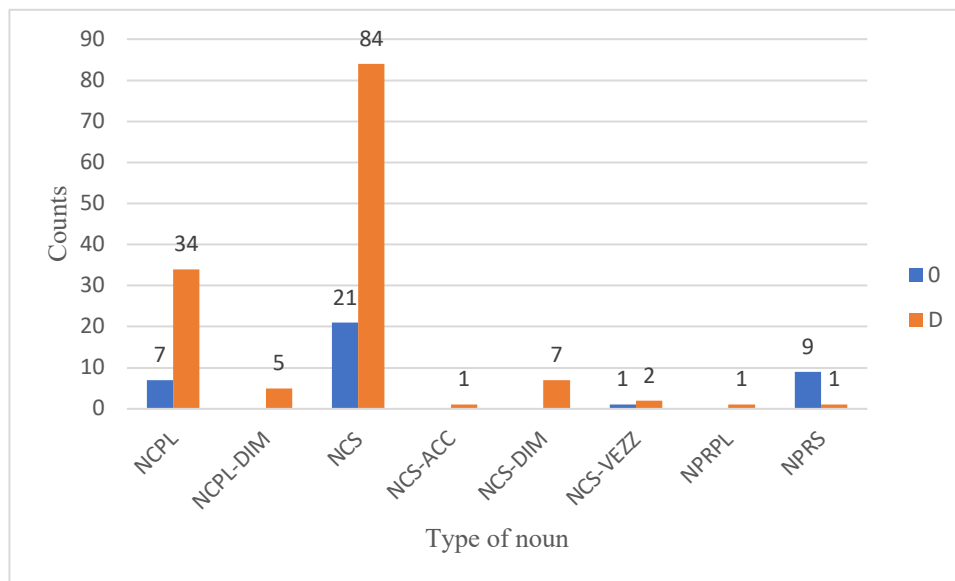


Figure 76: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition CON.

For different types of nouns, I identified the following data:

- Common plural nouns (NCPL): In seven productions nouns are not connected to a determiner (0). In thirty-four productions nouns are connected to a determiner (D).
- Common plural nouns in the diminutive form (NCPL-DIM): In five productions nouns are connected to a determiner (D).
- Common singular nouns (NCS): In twenty-one productions nouns are not connected to a determiner (0). In eighty-four productions nouns are connected to a determiner (D).
- Common singular nouns in the increasing form (NCS-ACC): In one production nouns are connected to a determiner (D).
- Common singular nouns in the diminutive form (NCS-DIM): In seven productions nouns are connected to a determiner (D).
- Common singular nouns as terms of endearment (NCS-VEZZ): In one production nouns are not connected to a determiner (0). In two productions nouns are connected to a determiner (D).
- Proper plural nouns (NPRPL): In one production nouns are connected to a determiner (D).

- Singular common nouns (NPRS): In nine productions nouns are not connected to a determiner (0). In one production nouns are connected to a determiner (D).

In Figure 77 are reported two information for each semantic-syntactic value connected with the functional preposition CON. The first one refers to the number of productions in which nouns⁶⁸ are not connected to a determiner; while the second one refers instead to the number of productions in which nouns⁶⁹ are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

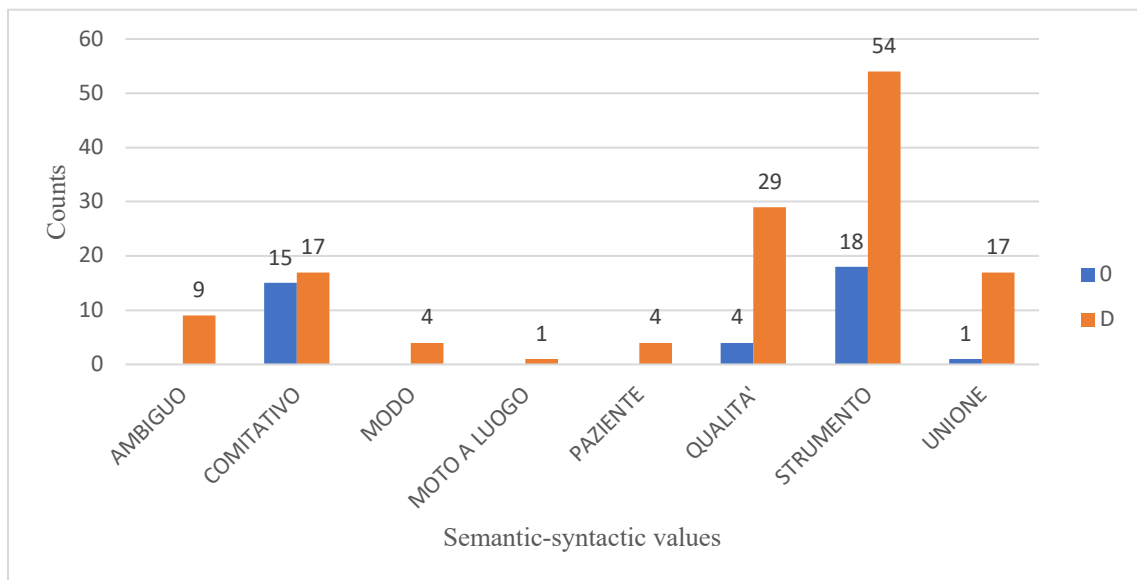


Figure 77: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition CON when this preposition is connected to different semantic-syntactic values.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition CON when this preposition was connected to different semantic-syntactic values:

- COMITATIVO: In fifteen productions nouns are not connected to a determiner (0). In seventeen productions nouns are connected to a determiner (D).

⁶⁸ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition CON.

⁶⁹ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition CON.

- MODO: In four productions nouns are connected to a determiner (D).
- MOTO A LUOGO: In one production nouns are connected to a determiner (D).
- PAZIENTE: In four productions nouns are connected to a determiner (D).
- QUALITA': In four productions nouns are not connected to a determiner (0). In twenty-nine productions nouns are connected to a determiner (D).
- STRUMENTO: In eighteen productions nouns are not connected to a determiner (0). In fifty-four productions nouns are connected to a determiner (D).
- UNIONE: In one production nouns are not connected to a determiner (0). In seventeen productions nouns are connected to a determiner (D).
- AMBIGUO: In nine productions nouns are connected to a determiner (D).

It can be observed that, for each semantic-syntactic value considered, the number of nouns connected to a determiner is bigger than the number of nouns that are not connected to a determiner. For example, this trend can be observed when the functional preposition CON is connected to the semantic-syntactic values QUALITA', STRUMENTO and UNIONE.

5.2.1.3 Functional preposition DI

The third preposition considered is DI.

In Figure 78 are reported two information for each type of noun pronounced in the DP selected by the functional preposition DI. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

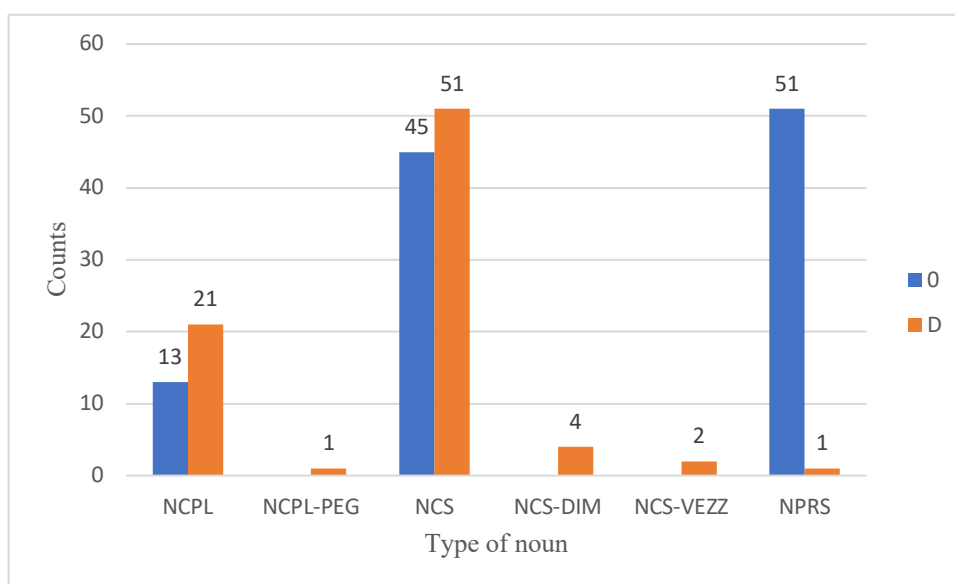


Figure 78: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition DI.

For different types of nouns, I identified the following data:

- Common plural nouns (NCPL): In thirteen productions nouns are not connected to a determiner (0). In twenty-one productions nouns are connected to a determiner (D).
- Common plural nouns in the pejorative form (NCPL-PEG): In one production nouns are connected to a determiner (D).
- Common singular nouns (NCS): In forty-five productions nouns are not connected to a determiner (0). In fifty-one productions nouns are connected to a determiner (D).
- Common singular nouns in the diminutive form (NCS-DIM): In four productions nouns are connected to a determiner (D).
- Common singular nouns as terms of endearment (NCS-VEZZ): In two productions nouns are connected to a determiner (D).
- Singular common nouns (NPRS): In fifty-one productions nouns are not connected to a determiner (0). In one production nouns are connected to a determiner (D).

In Figure 79 are reported two information for each semantic-syntactic value connected with the functional preposition DI. The first one refers to the number of productions in which nouns⁷⁰ are not connected to a determiner; while the second one refers instead to the number of productions in which nouns⁷¹ are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

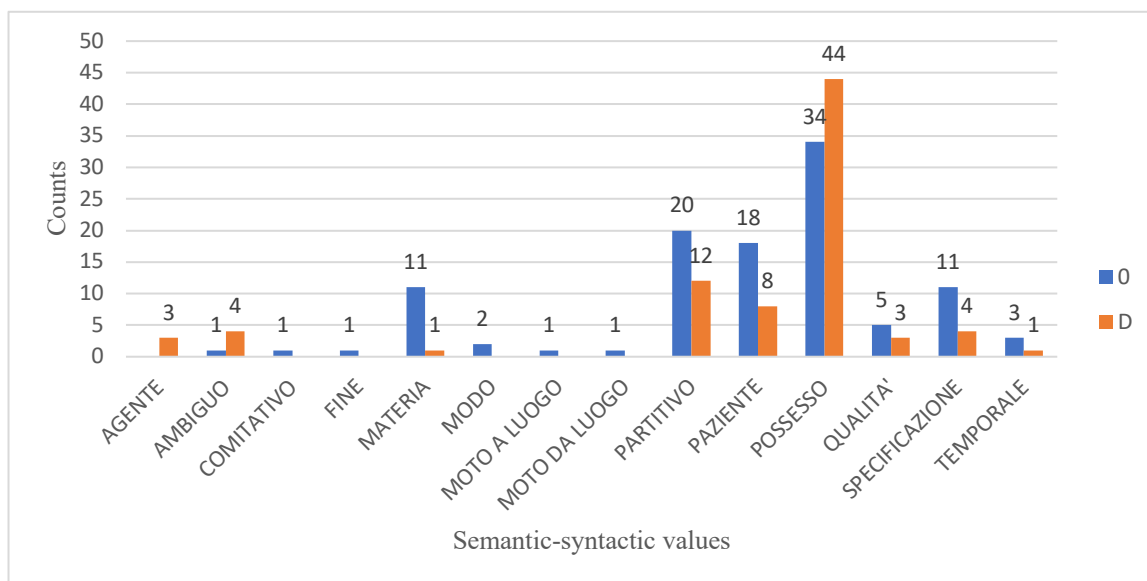


Figure 79: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition DI when this preposition is connected to different semantic-syntactic values.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition DI when this preposition was connected to different semantic-syntactic values:

- AGENTE: In three productions nouns are connected to a determiner (D).
- COMITATIVO: In one production nouns are not connected to a determiner (0).
- FINE: In one production nouns are not connected to a determiner (0).

⁷⁰ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition DI.

⁷¹ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition DI.

- MATERIA: In eleven productions nouns are not connected to a determiner (0). In one production nouns are connected to a determiner (D).
- MODO: In two productions nouns are not connected to a determiner (0).
- MOTO A LUOGO: In one production nouns are not connected to a determiner (0).
- MOTO DA LUOGO: In one production nouns are not connected to a determiner (0).
- PARTITIVO: In twenty productions nouns are not connected to a determiner (0). In twelve productions nouns are connected to a determiner (D).
- PAZIENTE: In eighteen productions nouns are not connected to a determiner (0). In eight productions nouns are connected to a determiner (D).
- POSSESSO: In thirty-four productions nouns are not connected to a determiner (0). In forty-four productions nouns are connected to a determiner (D).
- QUALITA': In five productions nouns are not connected to a determiner (0). In three productions nouns are connected to a determiner (D).
- SPECIFICAZIONE: In eleven productions nouns are not connected to a determiner (0). In four productions nouns are connected to a determiner (D).
- TEMPORALE: In three productions nouns are not connected to a determiner (0). In one production nouns are connected to a determiner (D).
- AMBIGUO: In one production nouns are not connected to a determiner (0). In four productions nouns are connected to a determiner (D).

It can be observed that there is a substantial co-presence of both nouns that are connected to a determiner and nouns that are not connected to a determiner.

More precisely, Figure 79 shows that, when the functional preposition DI is connected to the semantic-syntactic values AGENTE and POSSESSO, the number of nouns connected to a determiner is bigger than the number of nouns that are not connected to a determiner. When the functional preposition DI is connected to the semantic-syntactic values MATERIA, PARTITIVO, PAZIENTE, QUALITA', SPECIFICAZIONE, TEMPORALE, the number of nouns connected to a determiner is lower than the number of nouns that are not connected to a determiner.

5.2.1.4 Functional preposition IN

The fourth preposition considered is IN.

In Figure 80 are reported two information for each type of noun pronounced in the DP selected by the functional preposition IN. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

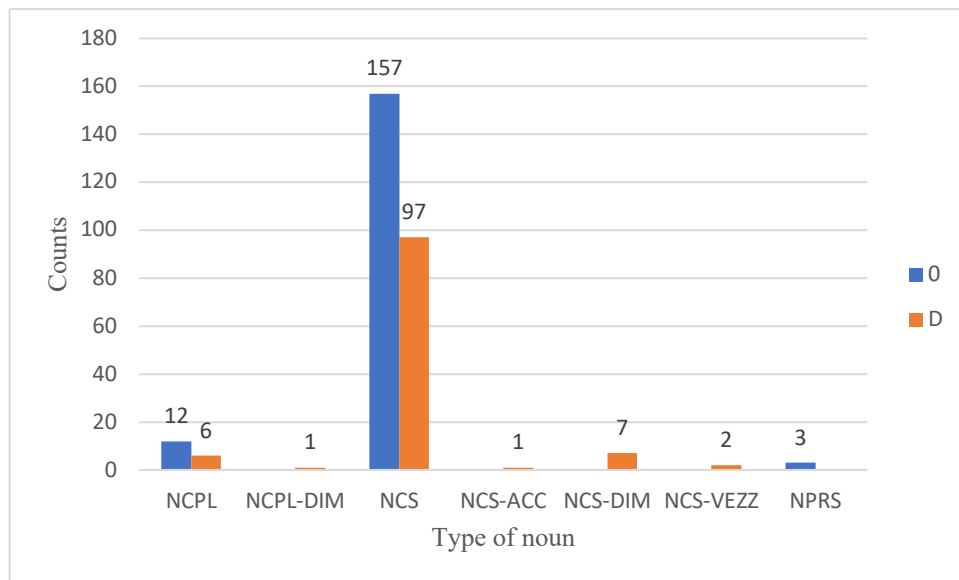


Figure 80: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition IN.

For different types of nouns, I identified the following data:

- Common plural nouns (NCPL): In twelve productions nouns are not connected to a determiner (0). In six productions nouns are connected to a determiner (D).
- Common plural nouns in the diminutive form (NCPL-DIM): In one production nouns are connected to a determiner (D).
- Common singular nouns (NCS): In one hundred and fifty-seven productions nouns are not connected to a determiner (0). In ninety-seven productions nouns are connected to a determiner (D).

- Common singular nouns in the increasing form (NCS-ACC): In one production nouns are connected to a determiner (D).
- Common singular nouns in the diminutive form (NCS-DIM): In seven productions nouns are connected to a determiner (D).
- Common singular nouns as terms of endearment (NCS-VEZZ): In two productions nouns are connected to a determiner (D).
- Singular common nouns (NPRS): In three productions nouns are not connected to a determiner (0).

In Figure 81 are reported two information for each semantic-syntactic value connected with the functional preposition IN. The first one refers to the number of productions in which nouns⁷² are not connected to a determiner; while the second one refers instead to the number of productions in which nouns⁷³ are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

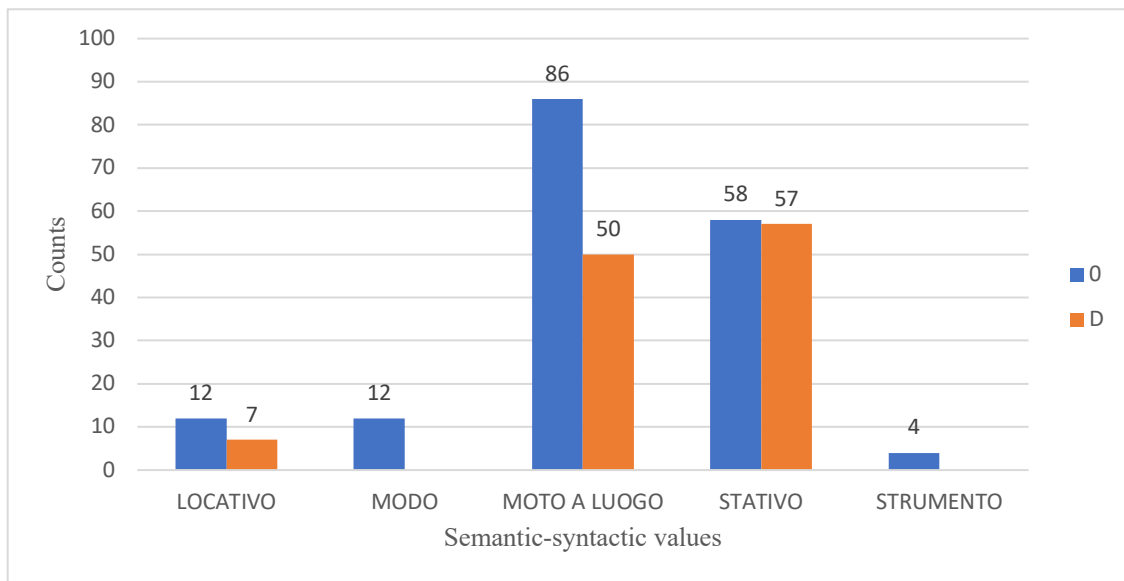


Figure 81: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition IN when this preposition is connected to different semantic-syntactic values.

⁷² In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition IN.

⁷³ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition IN.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition IN when this preposition was connected to different semantic-syntactic values:

- LOCATIVO: In twelve productions nouns are not connected to a determiner (0). In seven productions nouns are connected to a determiner (D).
- MODO: In twelve productions nouns are not connected to a determiner (0).
- MOTO A LUOGO: In eighty-six productions nouns are not connected to a determiner (0). In fifty productions nouns are connected to a determiner (D).
- STATIVO: In fifty-eight production nouns are not connected to a determiner (0). In fifty-seven productions nouns are connected to a determiner (D).
- STRUMENTO: In four productions nouns are not connected to a determiner (0).

It can be observed that, for each semantic-syntactic value, the number of nouns connected to a determiner is lower than the number of nouns that are not connected to a determiner. For example, this trend can be observed when the functional preposition IN is connected to the spatial semantic-syntactic value MOTO A LUOGO.

5.2.1.5 Functional preposition PER

The fifth preposition considered is PER.

In Figure 82 are reported two information for each type of noun pronounced in the DP selected by the functional preposition PER. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

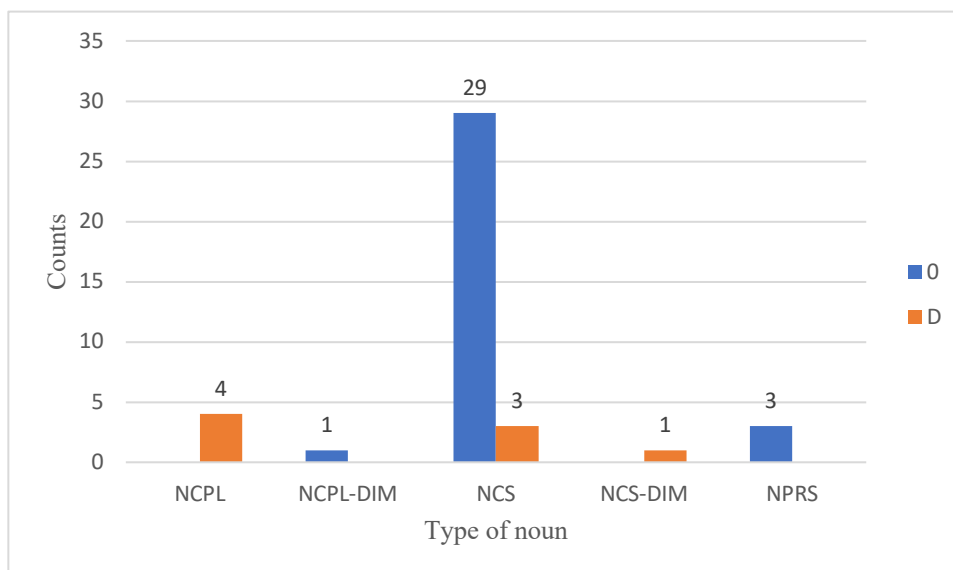


Figure 82: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition PER.

For different types of nouns, I identified the following data:

- Common plural nouns (NCPL): In four productions nouns are connected to a determiner (D).
- Common plural nouns in the diminutive form (NCPL-DIM): In one production nouns are not connected to a determiner (0).
- Common singular nouns (NCS): In twenty-nine productions nouns are not connected to a determiner (0). In three productions nouns are connected to a determiner (D).
- Common singular nouns in the diminutive form (NCS-DIM): In one production nouns are connected to a determiner (D).
- Singular common nouns (NPRS): In three productions nouns are not connected to a determiner (0).

In Figure 83 are reported two information for each semantic-syntactic value connected with the functional preposition PER. The first one refers to the number of productions in which nouns⁷⁴ are not connected to a determiner; while the second one

⁷⁴ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition PER.

instead refers to the number of productions in which nouns⁷⁵ are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

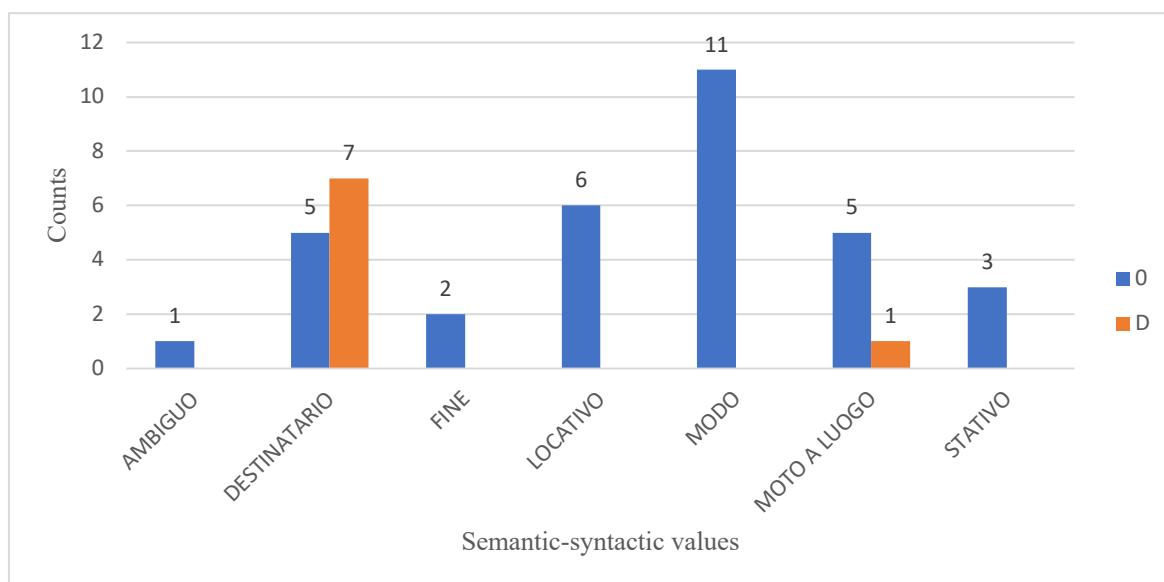


Figure 83: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition PER when this preposition is connected to different semantic-syntactic values.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition PER when this preposition was connected to different semantic-syntactic values:

- DESTINATARIO: In five productions nouns are not connected to a determiner (0). In seven productions nouns are connected to a determiner (D).
- FINE: In two productions nouns are not connected to a determiner (0).
- LOCATIVO: In six productions nouns are not connected to a determiner (0).
- MODO: In eleven productions nouns are not connected to a determiner (0).
- MOTO A LUOGO: In five productions nouns are not connected to a determiner (0). In one production nouns are connected to a determiner (D).
- STATIVO: In three productions nouns are not connected to a determiner (0).

⁷⁵ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition PER.

- AMBIGUO: In one production nouns are not connected to a determiner (0).

It can be observed that, for each semantic-syntactic value connected with the functional preposition PER, the number of nouns that are not connected to a determiner is bigger than the number of nouns connected to a determiner. The only exception is the semantic-syntactic value DESTINATARIO. In this case, in fact, the number of nouns not connected to a determiner is lower than the number of nouns connected to a determiner.

5.2.1.6 Functional preposition SU

The sixth preposition considered is SU.

In Figure 84 are reported two information for each type of noun pronounced in the DP selected by the functional preposition SU. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

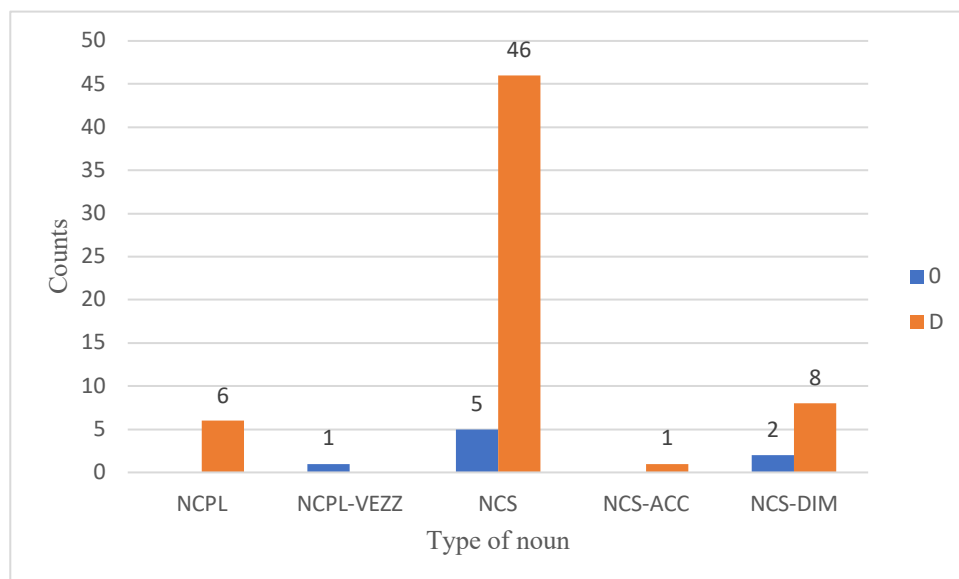


Figure 84: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition SU.

For different types of nouns, I identified the following data:

- Common plural nouns (NCPL): In six productions nouns are connected to a determiner (D).
- Common plural nouns as terms of endearment (NCPL-VEZZ): In one production nouns are not connected to a determiner (0).
- Common singular nouns (NCS): In five productions nouns are not connected to a determiner (0). In forty-six productions nouns are connected to a determiner (D).
- Common singular nouns in the increasing form (NCS-ACC): In one production nouns are connected to a determiner (D).
- Common singular nouns in the diminutive form (NCS-DIM): In two productions nouns are not connected to a determiner (0). In eight productions nouns are connected to a determiner (D).

In Figure 85 are reported two information for each semantic-syntactic value connected with the functional preposition SU. The first one refers to the number of productions in which nouns⁷⁶ are not connected to a determiner; while the second one instead refers to the number of productions in which nouns⁷⁷ are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

⁷⁶ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition SU.

⁷⁷ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition SU.

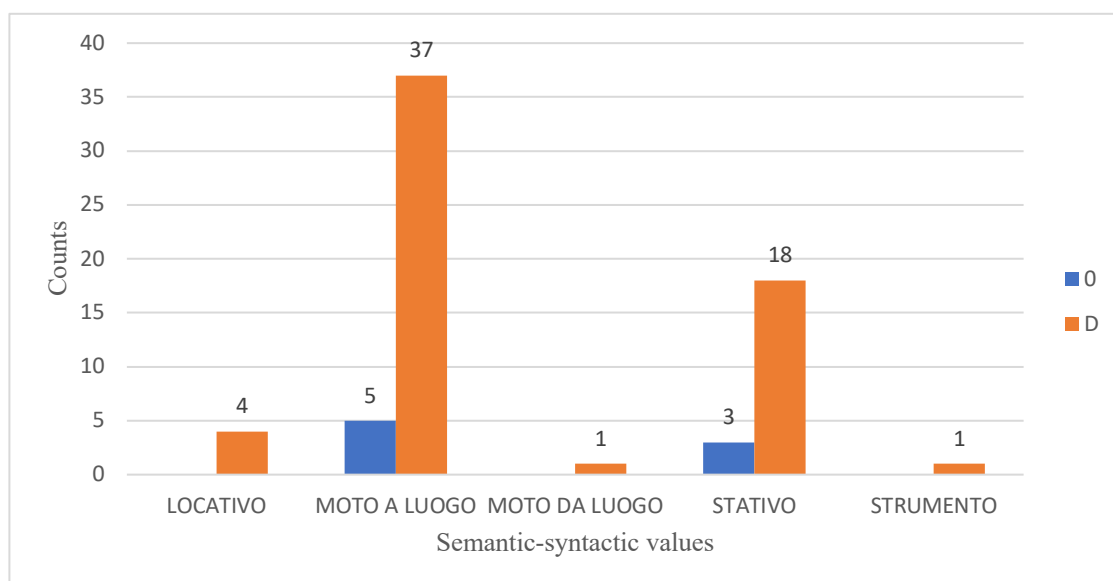


Figure 85: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition SU when this preposition is connected to different semantic-syntactic values.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition SU when this preposition was connected to different semantic-syntactic values:

- LOCATIVO: In four productions nouns are connected to a determiner (D).
- MOTO A LUOGO: In five productions nouns are not connected to a determiner (0). In thirty-seven productions nouns are connected to a determiner (D).
- MOTO DA LUOGO: In one production nouns are connected to a determiner (D).
- STATIVO: In three productions nouns are not connected to a determiner (0). In eighteen productions nouns are connected to a determiner (D).
- STRUMENTO: In one production nouns are connected to a determiner (D).

It can be observed that, for each semantic-syntactic value connected with the functional preposition SU, the number of nouns connected to a determiner is considerably higher than the number of nouns not connected to a determiner.

5.2.1.7 Functional preposition DA

The seventh preposition considered is DA.

In Figure 86 are reported two information for each type of noun pronounced in the DP selected by the functional preposition DA. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

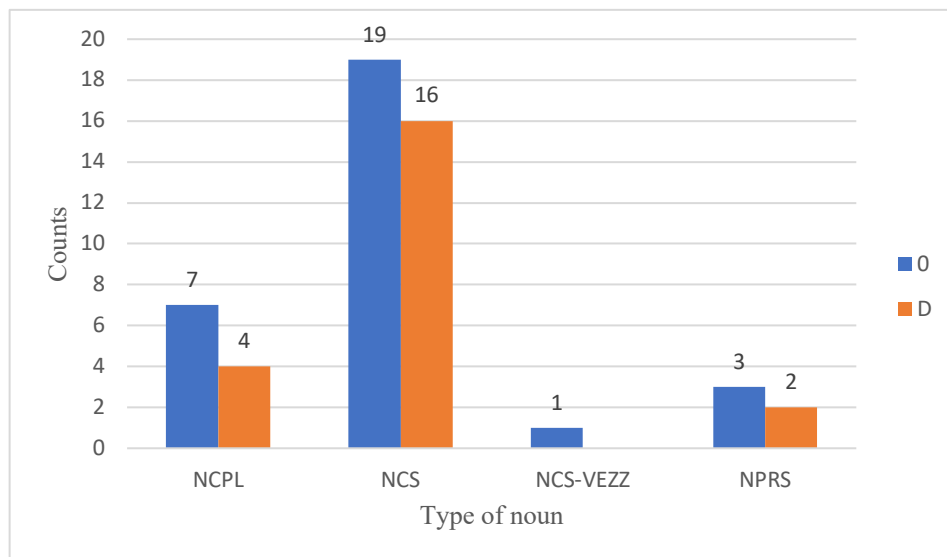


Figure 86: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition DA.

For different types of nouns, I identified the following data:

- Common plural nouns (NCPL): In seven productions nouns are not connected to a determiner (0). In four productions nouns are connected to a determiner (D).
- Common singular nouns (NCS): In nineteen productions nouns are not connected to a determiner (0). In sixteen productions nouns are connected to a determiner (D).
- Common singular nouns as term of endearment (NCS-VEZZ): In one production nouns are not connected to a determiner (0).

- Singular common nouns (NPRS): In three productions nouns are not connected to a determiner (0). In two productions nouns are connected to a determiner (D).

In Figure 87 are reported two information for each semantic-syntactic value connected with the functional preposition DA. The first one refers to the number of productions in which nouns⁷⁸ are not connected to a determiner; while the second one instead refers to the number of productions in which nouns⁷⁹ are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

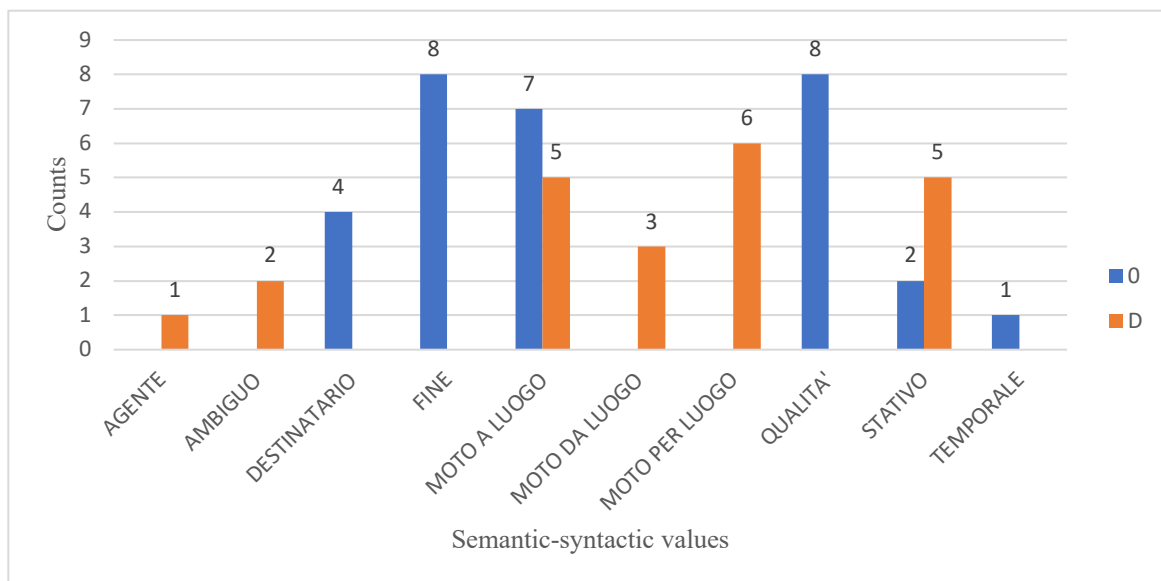


Figure 87: Number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition DA when this preposition is connected to different semantic-syntactic values.

⁷⁸ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition DA.

⁷⁹ In this case we considered the whole group of nouns that are present in the DPs selected by the functional preposition DA.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by the functional preposition DA when this preposition was connected to different semantic-syntactic values:

- AGENTE: In one production nouns are connected to a determiner (D).
- DESTINATARIO: In four productions nouns are not connected to a determiner (0).
- FINE: In eight productions nouns are not connected to a determiner (0).
- MOTO A LUOGO: In seven productions nouns are not connected to a determiner (0). In five productions nouns are connected to a determiner (D).
- MOTO DA LUOGO: In three productions nouns are connected to a determiner (D).
- MOTO PER LUOGO: In six productions nouns are connected to a determiner (D).
- QUALITA': In eight production nouns are not connected to a determiner (0). STATIVO: In two productions nouns are not connected to a determiner (0). In five productions nouns are connected to a determiner (D).
- TEMPORALE: In one production nouns are not connected to a determiner (0).
- AMBIGUO: In two productions nouns are connected to a determiner (D).

It can be observed that, when the functional preposition DA is connected to the semantic-syntactic values DESTINATARIO, FINE, QUALITA', TEMPORALE, nouns are not connected to a determiner. When the functional preposition DA is connected to the semantic-syntactic values AGENTE, MOTO DA LUOGO and MOTO PER LUOGO, nouns are connected to a determiner. When the functional preposition DA is connected to the semantic-syntactic value MOTO A LUOGO, the number of nouns that are not connected to a determiner is bigger than the number of nouns that are connected to a determiner. When the functional preposition DA is connected to the semantic-syntactic value STATIVO, the number of nouns that are not connected to a determiner is lower than the number of nouns that are connected to a determiner.

5.2.1.8 Functional preposition TRA

The eighth preposition considered is TRA.

In data collected, this functional preposition did not select DPs in which there were lexicalized nouns. For this reason, I could not analyse the preposition TRA as I did for the other prepositions studied in section 5.2.

5.2.2 DP selected by lexical prepositions

In this section I considered all the lexical prepositions present in children's productions. In particular, I focused on the DPs selected by prepositions. The lexical prepositions were analysed in the order presented in chapter 3: SENZA, SOTTO, DENTRO, SOPRA, CONTRO.

In this analysis I did not consider the children's age when the DPs were selected by lexical prepositions for the first time in children's productions.

5.2.2.1 Lexical preposition SENZA

The first preposition considered is SENZA.

In Figure 88 are reported two information for each type of noun pronounced in the DP selected by the lexical preposition SENZA. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

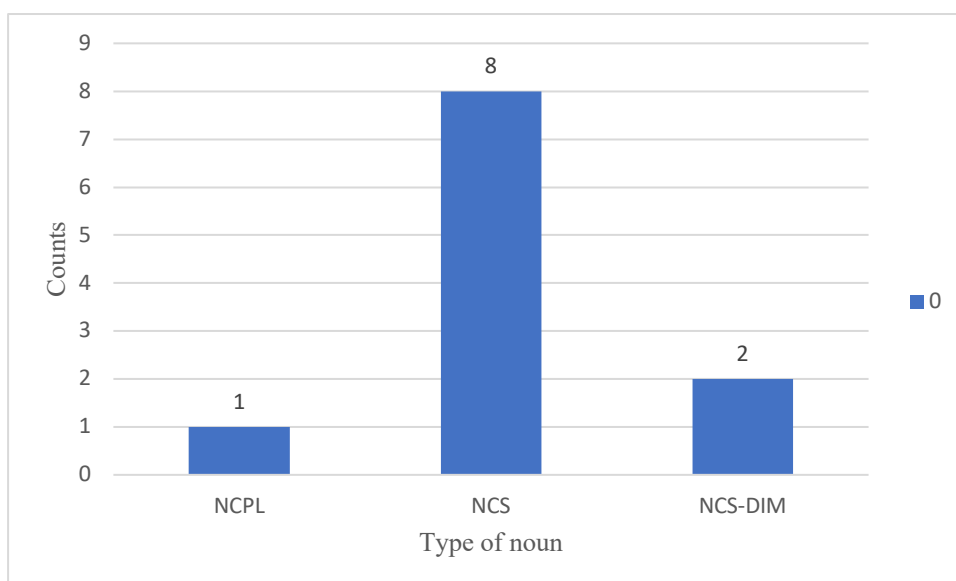


Figure 88: Number of nouns connected and not connected to a determiner in the DPs selected by the lexical preposition SENZA.

For different types of nouns, I identified the following data:

- Common plural nouns (NCPL): In one production nouns are not connected to a determiner (0).
- Common singular nouns (NCS): In eight productions nouns are not connected to a determiner (0).
- Common singular nouns as term of endearment (NCS-DIM): In two productions nouns are not connected to a determiner (0).

In Figure 89 are reported two information for each semantic-syntactic value connected with the lexical preposition SENZA. The first one refers to the number of productions in which nouns⁸⁰ are not connected to a determiner; while the second one instead refers to the number of productions in which nouns⁸¹ are connected to a

⁸⁰ In this case we considered the whole group of nouns that are present in the DPs selected by the lexical preposition SENZA.

⁸¹ In this case we considered the whole group of nouns that are present in the DPs selected by the lexical preposition SENZA.

determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

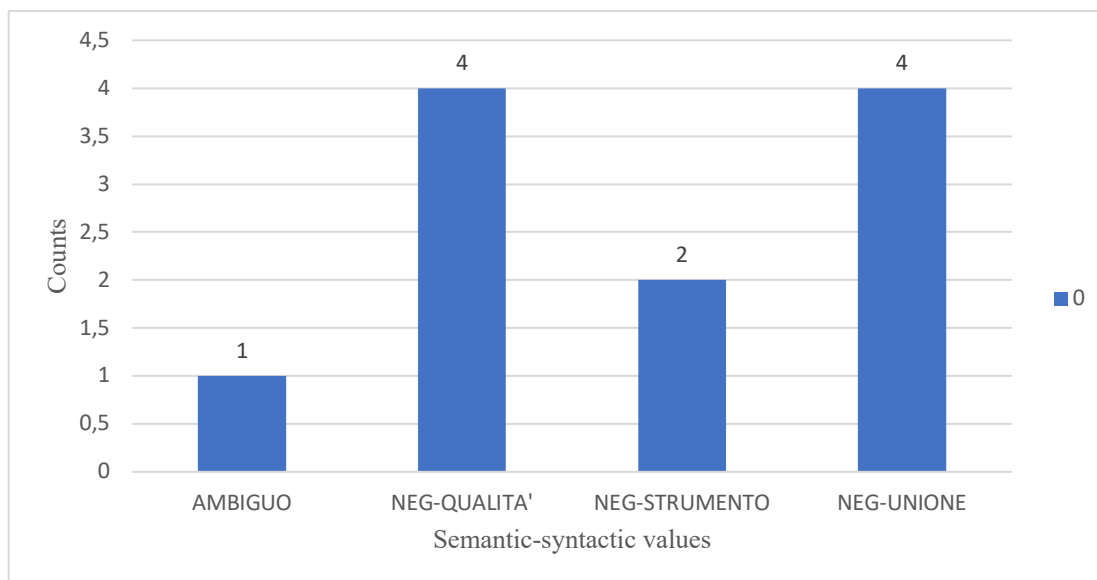


Figure 89: Number of nouns connected and not connected to a determiner in the DPs selected by the lexical preposition SENZA when this preposition is connected to different semantic-syntactic values.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by the lexical preposition SENZA when this preposition was connected to different semantic-syntactic values:

- NEG-QUALITA': In four productions nouns are not connected to a determiner (0).
- NEG-STRUMENTO: In two productions nouns are not connected to a determiner (0).
- NEG-UNIONE: In four productions nouns are not connected to a determiner (0).
- AMBIGUO: In one production nouns are not connected to a determiner (0).

It can be observed that, when the lexical preposition SENZA is connected to the semantic-syntactic values shown in Figure 89, nouns are not connected to a determiner.

5.2.2.2 Lexical preposition SOTTO

The second preposition considered is SOTTO.

In Figure 90 are reported two information for each type of noun pronounced in the DP selected by the lexical preposition SOTTO. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

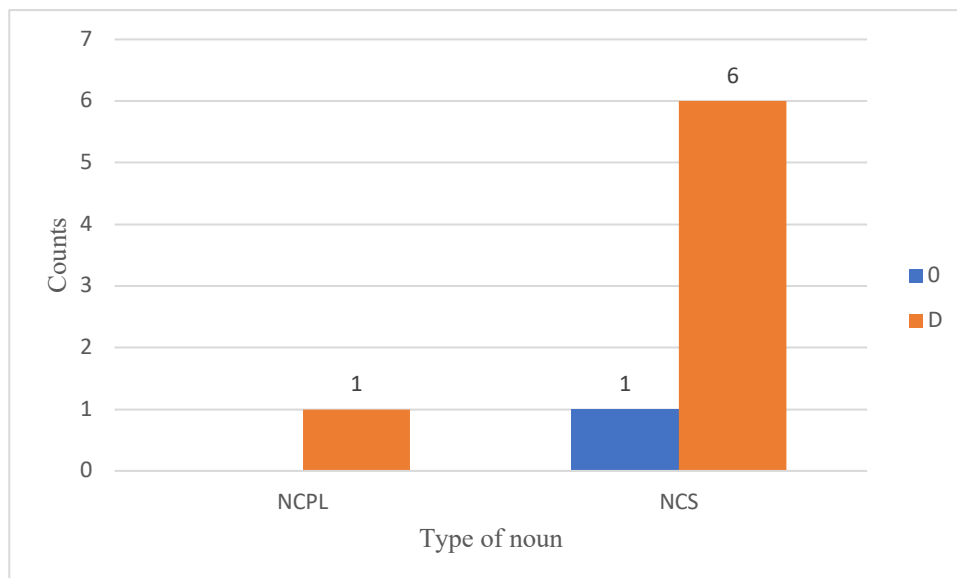


Figure 90: Number of nouns connected and not connected to a determiner in the DPs selected by the lexical preposition SENZA.

For different types of nouns, I identified the following data:

- Common plural nouns (NCPL): In one production nouns are connected to a determiner (D).
- Common singular nouns (NCS): In one production nouns are not connected to a determiner (0). In six productions nouns are connected to a determiner (D).

In Figure 91 are reported two information for each semantic-syntactic value connected with the lexical preposition SOTTO. The first one refers to the number of productions in which nouns⁸² are not connected to a determiner; while the second one instead refers to the number of productions in which nouns⁸³ are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

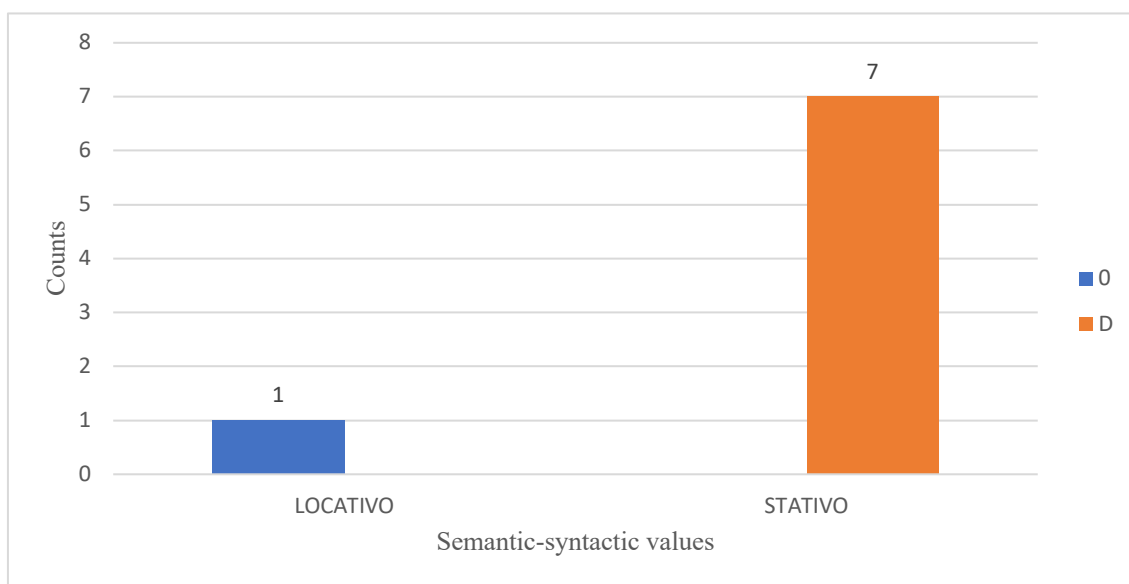


Figure 91: Number of nouns connected and not connected to a determiner in the DPs selected by the lexical preposition SOTTO when this preposition is connected to different semantic-syntactic values.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by the lexical preposition SOTTO when this preposition was connected to different semantic-syntactic values:

- LOCATIVO: In one production nouns are not connected to a determiner (0).
- STATIVO: In seven productions nouns are connected to a determiner (D).

⁸² In this case we considered the whole group of nouns that are present in the DPs selected by the lexical preposition SOTTO.

⁸³ In this case we considered the whole group of nouns that are present in the DPs selected by the lexical preposition SOTTO.

It can be observed that, when DPs are selected by the lexical preposition SOTTO, nouns are almost all connected to a determiner.

5.2.2.3 Lexical preposition DENTRO

The third preposition considered is DENTRO.

In Figure 92 are reported two information for each type of noun pronounced in the DP selected by the lexical preposition DENTRO. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

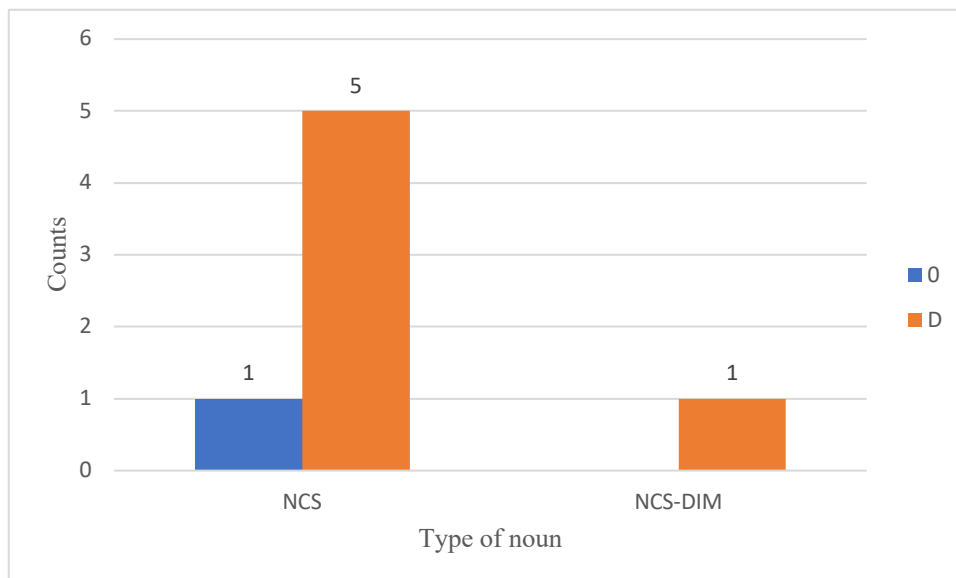


Figure 92: Number of nouns connected and not connected to a determiner in the DPs selected by the lexical preposition DENTRO.

For different types of nouns, I identified the following data:

- Common singular nouns (NCS): In one production nouns are not connected to a determiner (0). In five productions nouns are connected to a determiner (D).
- Common singular nouns in the diminutive form (NCS-DIM): In one production nouns are connected to a determiner (D).

In Figure 93 are reported two information for each semantic-syntactic value connected with the lexical preposition DENTRO. The first one refers to the number of productions in which nouns⁸⁴ are not connected to a determiner; while the second one instead refers to the number of productions in which nouns⁸⁵ are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

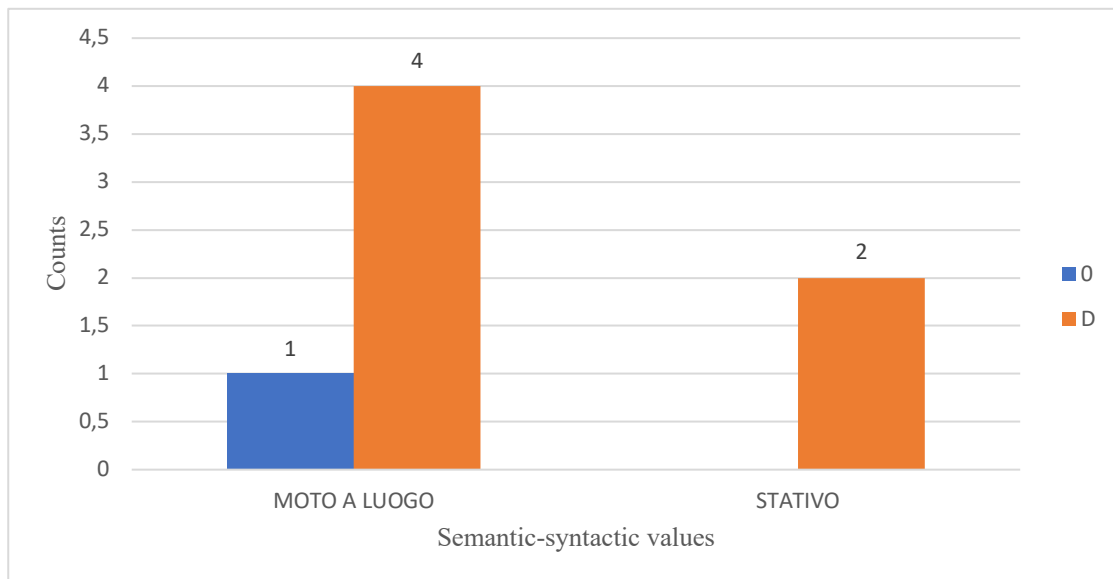


Figure 93: Number of nouns connected and not connected to a determiner in the DPs selected by the lexical preposition DENTRO when this preposition is connected to different semantic-syntactic values.

⁸⁴ In this case we considered the whole group of nouns that are present in the DPs selected by the lexical preposition DENTRO.

⁸⁵ In this case we considered the whole group of nouns that are present in the DPs selected by the lexical preposition DENTRO.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by the lexical preposition DENTRO when this preposition was connected to different semantic-syntactic values:

- MOTO A LUOGO: In one production nouns are not connected to a determiner (0). In four productions nouns are connected to a determiner (D).
- STATIVO: In two productions nouns are connected to a determiner (D).

It can be observed that, when DPs are selected by the lexical preposition DENTRO, nouns are almost all connected to a determiner. In fact, only in one production⁸⁶ there is a noun that is not connected to a determiner.

5.2.2.4 Lexical preposition SOPRA

The fourth preposition considered is SOPRA.

If we consider the different types of nouns pronounced in the DPs in children's productions, it is possible to identify the number of productions in which each type of noun is not connected to a determiner and the number of productions in which the same type of noun is connected to a determiner. For the lexical preposition SOPRA, in particular, we found: (I) One production with a common singular noun (NCS) not connected to a determiner (0); (II) Two productions with a common singular noun (NCS) connected to a determiner (D).

A different analysis can be done if we focus on the semantic-syntactic values connected with the lexical preposition SOPRA. In this case, we have identified the number of productions in which nouns⁸⁷ in the DPs selected by this preposition are connected to a determiner and the number of productions in which nouns⁸⁸ in the DPs are

⁸⁶ In the production considered, the lexical preposition DENTRO is connected to the semantic-syntactic value MOTO A LUOGO.

⁸⁷ In this case we considered the whole group of nouns that are present in the DPs selected by the lexical preposition SOPRA.

⁸⁸ In this case we considered the whole group of nouns that are present in the DPs selected by the lexical preposition SOPRA.

not connected to a determiner. For the semantic-syntactic values connected with the lexical preposition SOPRA, in particular, we found the following data:

- LOCATIVO: In one production nouns are not connected to a determiner (0).
- MOTO A LUOGO: In one production nouns are connected to a determiner (D).
- STATIVO: In one production nouns are connected to a determiner (D).

It can be observed that both structures of nouns (with or without determiners) appear to be used in the DPs selected by the lexical preposition SOPRA.

5.2.2.5 Lexical preposition CONTRO

The fifth preposition considered is CONTRO.

If we consider the different types of nouns pronounced in the DPs in children's productions, it is possible to identify the number of productions in which each type of noun is not connected to a determiner and the number of productions in which the same type of noun is connected to a determiner. For the lexical preposition CONTRO, in particular, we found only one production with a common singular noun (NCS) not connected to a determiner (0).

A different analysis can be done if we focus on the semantic-syntactic values connected with the lexical preposition CONTRO. In this case we have identified the number of productions in which nouns⁸⁹ in the DPs selected by this preposition are connected to a determiner and the number of productions in which nouns⁹⁰ in the DPs are not connected to a determiner. For the lexical preposition CONTRO, in particular, we found only one production where a noun is not connected to a determiner (0). The preposition CONTRO that selects the DP in which is placed this noun is connected to the value MOTO A LUOGO.

⁸⁹ In this case we considered the whole group of nouns that are present in the DPs selected by the lexical preposition CONTRO.

⁹⁰ In this case we considered the whole group of nouns that are present in the DPs selected by the lexical preposition CONTRO.

5.2.3 DP selected by combinations of prepositions - Prepositions with double structure

In this section I considered all the combinations of prepositions present in children's productions. In particular, I focused on the DPs selected by combinations of prepositions. The combinations of prepositions were analysed in the order presented in chapter 3: DI SOPRA DI, SENZA DI, SOTTO A, DENTRO IN, DENTRO A.

In this analysis I did not consider the children's age when the DPs were selected by combinations of prepositions for the first time in children's productions.

5.2.3.1 Combination of preposition DI SOPRA DI

The first combination of preposition considered is DI SOPRA DI.

If we consider the different types of nouns pronounced in the DPs in children's productions, it is possible to identify the number of productions in which each type of noun is not connected to a determiner and the number of productions in which the same type of noun is connected to a determiner. For the combination of prepositions DI SOPRA DI, in particular, we found only one production with a common singular noun (NCS) not connected to a determiner (0).

A different analysis can be done if we focus on the semantic-syntactic values connected with the combination of prepositions DI SOPRA DI. In this case we have identified the number of productions in which nouns⁹¹ in the DPs selected by this preposition are connected to a determiner and the number of productions in which nouns⁹² in the DPs are not connected to a determiner. For the combination of prepositions DI SOPRA DI, in particular, we found only one production where a noun is not connected to a determiner (0). The combination of prepositions DI SOPRA DI that selects the DP in which is placed this noun is connected to the value MOTO A LUOGO.

⁹¹ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions DI SOPRA DI.

⁹² In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions DI SOPRA DI.

5.2.3.2 Combination of preposition SENZA DI

The second combination of prepositions considered is SENZA DI.

In the analysed data, this combination of prepositions did not select DPs in which there were lexicalized nouns. For this reason, I could not analyse the combination SENZA DI as I did for the other prepositions (or combinations of prepositions) reported in this section.

5.2.3.3 Combination of preposition SOTTO A

The third combination of prepositions considered is SOTTO A.

If we consider the different types of nouns pronounced in the DPs in children's productions, it is possible to identify the number of productions in which each type of noun is not connected to a determiner and the number of productions in which the same type of noun is connected to a determiner. For the combination of prepositions SOTTO A, in particular, we found only one production with a common singular noun (NCS) connected to a determiner (D).

A different analysis can be done if we focus on the semantic-syntactic values connected with the combination of prepositions SOTTO A. In this case we have identified the number of productions in which nouns⁹³ in the DPs selected by this preposition are connected to a determiner and the number of productions in which nouns⁹⁴ in the DPs are not connected to a determiner. For the combination of prepositions SOTTO A, in particular, we found only one production where a noun is connected to a determiner (D). The combination of prepositions SOTTO A that selects the DP in which is placed this noun is connected to the value MOTO A LUOGO.

⁹³ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions SOTTO A.

⁹⁴ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions SOTTO A.

5.2.3.4 Combination of preposition DENTRO IN

The fourth combination of prepositions considered is DENTRO IN.

If we consider the different types of nouns pronounced in the DPs in children's productions, it is possible to identify the number of productions in which each type of noun is not connected to a determiner and the number of productions in which the same type of noun is connected to a determiner. For the combination of prepositions DENTRO IN, in particular, we found: (I) One production with a common singular noun (NCS) connected to a determiner (D); (II) One production with a common singular noun in the diminutive form (NCS-DIM) connected to a determiner (D).

A different analysis can be done if we focus on the semantic-syntactic values connected with the combination of prepositions DENTRO IN. In this case we have identified the number of productions in which nouns⁹⁵ in the DPs selected by this preposition are connected to a determiner and the number of productions in which nouns⁹⁶ in the DPs are not connected to a determiner. For the semantic-syntactic values connected with the combination of prepositions DENTRO IN, in particular, we found the following data:

- MOTO A LUOGO: In one production nouns are connected to a determiner (D).
- STATIVO: In one production nouns are connected to a determiner (D).

5.2.3.5 Combination of preposition DENTRO A

The fifth combination of prepositions considered is DENTRO A.

In Figure 94 are reported two information for each type of noun pronounced in the DP selected by DENTRO A. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a

⁹⁵ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions DENTRO IN.

⁹⁶ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions DENTRO IN.

determiner. If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

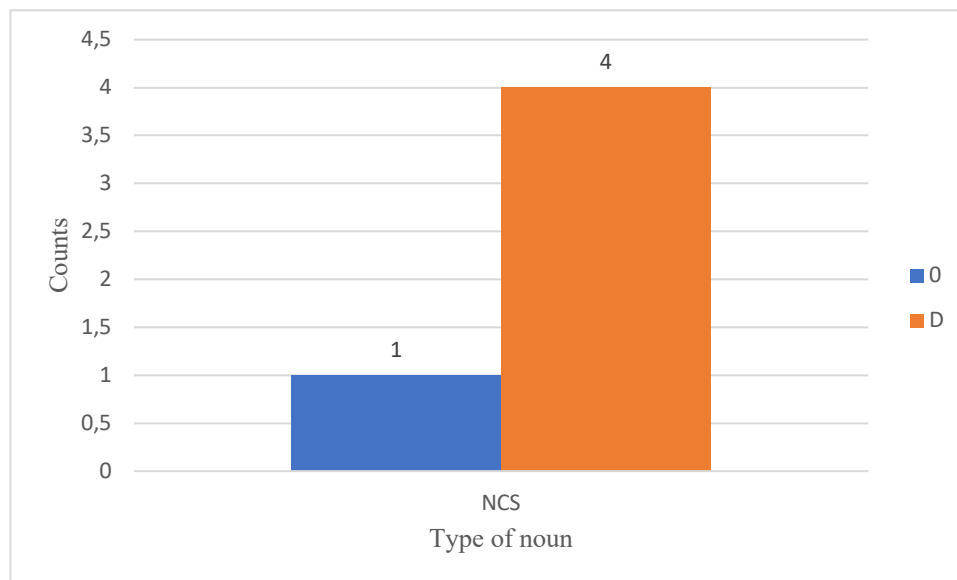


Figure 94: Number of nouns connected and not connected to a determiner in the DPs selected by the combination of prepositions DENTRO A.

For different types of nouns, I identified the following data:

- Common singular nouns (NCS): In one production nouns are not connected to a determiner (0). In four productions nouns are connected to a determiner (D).

In Figure 95 are reported two information for each semantic-syntactic value connected with DENTRO A. The first one refers to the number of productions in which nouns⁹⁷ are not connected to a determiner; while the second one refers to the number of productions in which nouns⁹⁸ are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

⁹⁷ In this case we considered the whole group of nouns that are present in the DPs introduced by the combination of prepositions DENTRO A.

⁹⁸ In this case we considered the whole group of nouns that are present in the DPs introduced by the combination of prepositions DENTRO A.

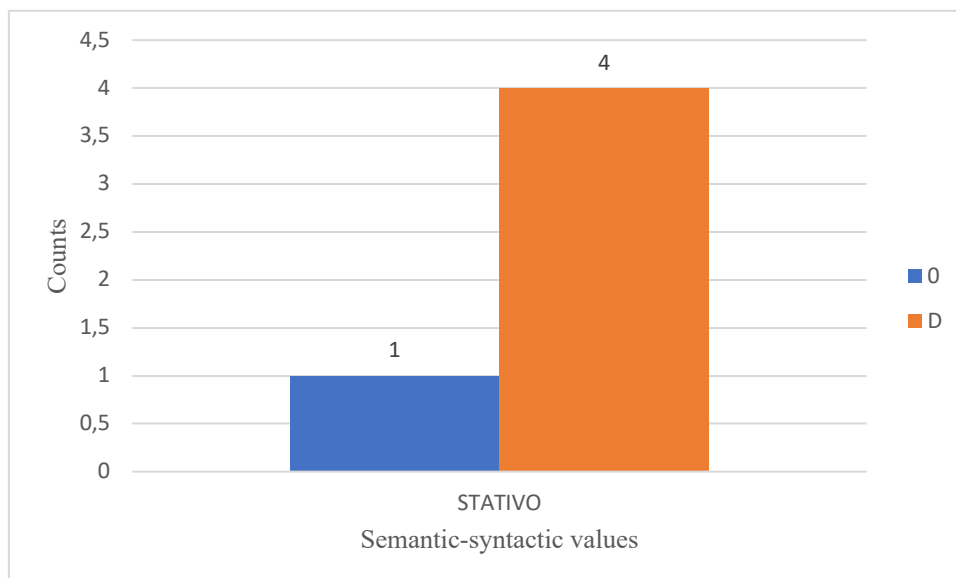


Figure 95: Number of nouns connected and not connected to a determiner in the DPs selected by the combination of prepositions DENTRO A when this preposition is connected to different semantic-syntactic values.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by DENTRO A when this combination of prepositions was connected to different semantic-syntactic values:

- STATIVO: In one production nouns are not connected to a determiner (0). In four productions nouns are connected to a determiner (D).

It can be observed that, in DPs selected by the combination of prepositions DENTRO A, nouns are almost exclusively connected to a determiner.

5.2.4 DP selected by combinations of prepositions – “Blocks”

In this section I considered all these combinations of prepositions present in children’s productions. In particular, I focused on the DPs selected by combinations of prepositions. The combinations of prepositions were analysed in the order presented in chapter 3: VICINO TRA, VICINO A, IN FONDO A, ATTORNO A, ACCANTO A, FINO A.

In this analysis I did not consider the children's age when the DPs were selected by these combinations of prepositions for the first time in children's productions.

5.2.4.1 Combination of preposition VICINO TRA

The first combination of prepositions considered is VICINO TRA.

If we consider the different types of nouns pronounced in the DPs in children's productions, it is possible to identify the number of productions in which each type of noun is not connected to a determiner and the number of productions in which the same type of noun is connected to a determiner. For the combination of prepositions VICINO TRA, in particular, we found only one production with a common singular noun (NCS) not connected to a determiner (0).

A different analysis can be done if we focus on the semantic-syntactic values connected with the combination of prepositions VICINO TRA. In this case we have identified the number of productions in which nouns⁹⁹ in the DPs selected by this preposition are connected to a determiner and the number of productions in which nouns¹⁰⁰ in the DPs are not connected to a determiner. For the combination of prepositions VICINO TRA, in particular, we found only one production where a noun is not connected to a determiner (0). The combination of prepositions VICINO TRA that selects the DP in which is placed this noun is connected to the value STATIVO.

5.2.4.2 Combination of preposition VICINO A

The second combination of prepositions considered is VICINO A.

In Figure 96 are reported two information for each type of noun pronounced in the DP selected by VICINO A. The first one refers to the number of productions in which the type of noun considered is not connected to a determiner; while the second one refers to the number of productions in which the same type of noun is connected to a determiner.

⁹⁹ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions VICINO TRA.

¹⁰⁰ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions VICINO TRA.

If the first or the second information are missing in the histogram, it means the number of productions associated to them is zero (0).

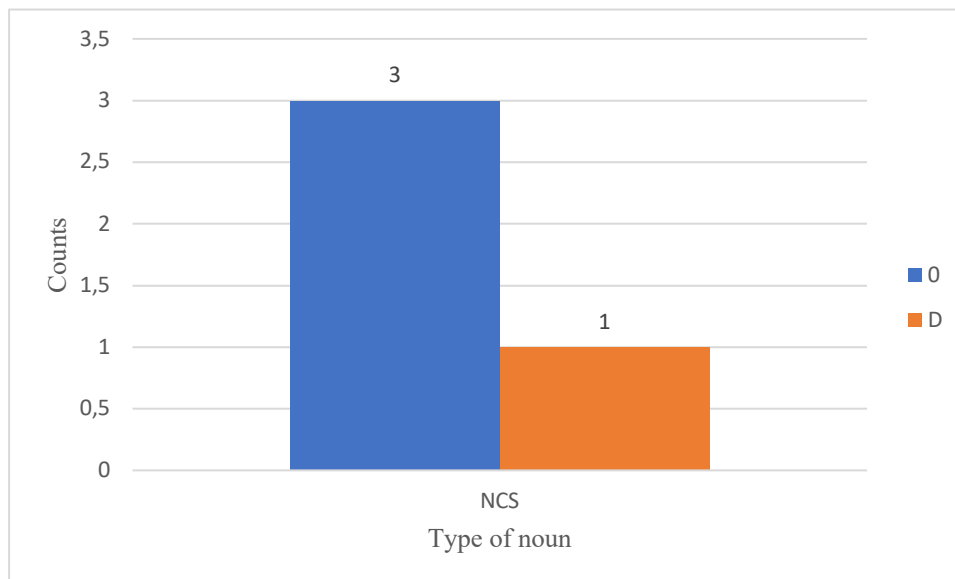


Figure 96: Number of nouns connected and not connected to a determiner in the DPs selected by the combination of prepositions VICINO A.

For different types of nouns, I identified the following data:

- Common singular nouns (NCS): In three productions nouns are not connected to a determiner (O). In one production nouns are connected to a determiner (D).

In Figure 97 are reported two information for each semantic-syntactic value connected with VICINO A. The first one refers to the number of productions in which nouns¹⁰¹ are not connected to a determiner; while the second one instead refers to the number of productions in which nouns¹⁰² are connected to a determiner. If the first or the second information are missing, it means the number of productions associated to them is zero (0).

¹⁰¹ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions VICINO A.

¹⁰² In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions VICINO A.

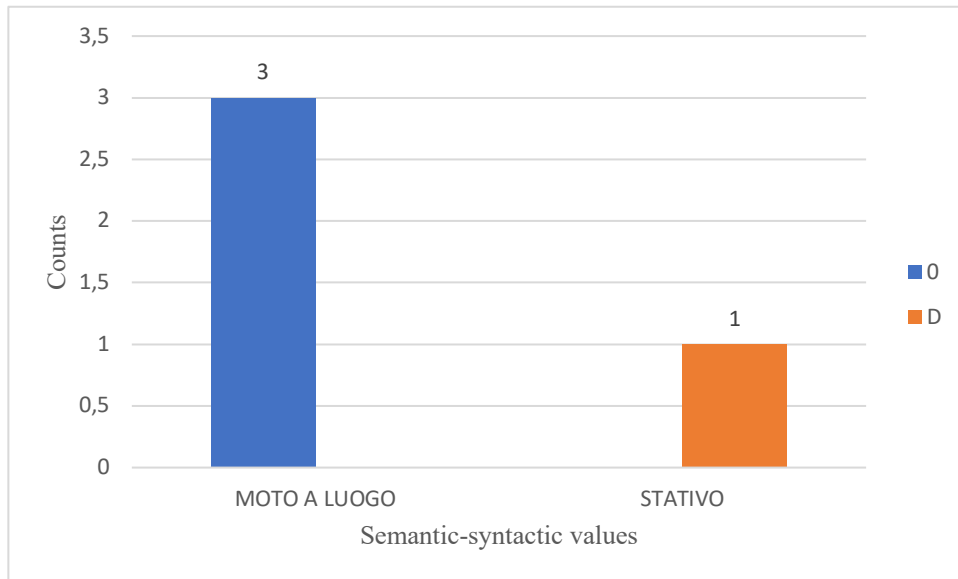


Figure 97: Number of nouns connected and not connected to a determiner in the DPs selected by the combination of prepositions VICINO A when this preposition is connected to different semantic-syntactic values.

In the following I summarized the number of nouns connected and not connected to a determiner in the DPs selected by VICINO A when this combination of prepositions was connected to different semantic-syntactic values:

- MOTO A LUOGO: In three productions nouns are not connected to a determiner (0).
- STATIVO: In one production nouns are connected to a determiner (D).

It can be observed that, when the combination of prepositions VICINO A is connected to the semantic-syntactic value MOTO A LUOGO, nouns in DPs are not connected to a determiner. When the combination of prepositions VICINO A is instead connected to the semantic-syntactic value STATIVO, nouns in DPs are connected to a determiner.

5.2.4.3 Combination of preposition IN FONDO A

The third combination of prepositions considered is IN FONDO A.

If we consider the different types of nouns pronounced in the DPs in children's productions, it is possible to identify the number of productions in which each type of noun is not connected to a determiner and the number of productions in which the same type of noun is connected to a determiner. For the combination of prepositions IN FONDO A, in particular, we found only one production with a common singular noun (NCS) connected to a determiner (D).

A different analysis can be done if we focus on the semantic-syntactic values connected with the combination of prepositions IN FONDO A. In this case we have identified the number of productions in which nouns¹⁰³ in the DPs selected by this preposition are connected to a determiner and the number of productions in which nouns¹⁰⁴ in the DPs are not connected to a determiner. For the combination of prepositions IN FONDO A, in particular, we found only one production where a noun is connected to a determiner (D). The combination of prepositions IN FONDO A that selects the DP in which is placed this noun is connected to the value STATIVO.

5.2.4.4 Combination of preposition ATTORNO A

The fourth combination of prepositions considered is ATTORNO A.

In the analysed data, this combination of preposition did not select DPs in which there were lexicalized nouns. For this reason, I could not analyse the combination of prepositions ATTORNO A as I did for the other prepositions (or combinations of prepositions) in this section.

¹⁰³ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions IN FONDO A.

¹⁰⁴ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions IN FONDO A.

5.2.4.5 Combination of preposition ACCANTO A

The fifth combination of prepositions considered is ACCANTO A.

If we consider the different types of nouns pronounced in the DPs in children's productions, it is possible to identify the number of productions in which each type of noun is not connected to a determiner and the number of productions in which the same type of noun is connected to a determiner. For the combination of prepositions ACCANTO A, in particular, we found only one production with a common singular noun (NCS) connected to a determiner (D).

A different analysis can be done if we focus on the semantic-syntactic values connected with the combination of prepositions ACCANTO A. In this case we have identified the number of productions in which nouns¹⁰⁵ in the DPs selected by this preposition are connected to a determiner and the number of productions in which nouns¹⁰⁶ in the DPs are not connected to a determiner. For the combination of prepositions ACCANTO A, in particular, we found only one production where a noun is connected to a determiner (D). The combination of prepositions ACCANTO A that selects the DP in which is placed this noun is connected to the value STATIVO.

5.2.4.6 Combination of preposition FINO A

The sixth combination of prepositions considered is FINO A.

If we consider the different types of nouns pronounced in the DPs in children's productions, it is possible to identify the number of productions in which each type of noun is not connected to a determiner and the number of productions in which the same type of noun is connected to a determiner. For the combination of prepositions FINO A, in particular, we found only one production with a common singular noun (NCS) connected to a determiner (D).

A different analysis can be done if we focus on the semantic-syntactic values connected with the combination of prepositions FINO A. In this case we have identified

¹⁰⁵ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions ACCANTO A.

¹⁰⁶ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions ACCANTO A.

the number of productions in which nouns¹⁰⁷ in the DPs selected by this preposition are connected to a determiner and the number of productions in which nouns¹⁰⁸ in the DPs are not connected to a determiner. For the combination of prepositions FINO A, in particular, we found only one production where a noun is connected to a determiner (D). The combination of prepositions FINO A that selects the DP in which is placed this noun is connected to the value MOTO A LUOGO.

5.4 Summary

In this chapter I tried to answer the fourth research question introduced in chapter I:

(Q4) Does each preposition select a specific structure?

In my analysis I identified and analysed the structures selected by prepositions (e.g. DPs, AdvPs, verbs). I also considered the presence of determiners and modifiers in these structures. Moreover, in the second part of the chapter, I studied the DPs introduced by prepositions and, more precisely, the DPs in which there were lexicalized nouns (and not pronouns, for example).

I identified not only the different structures allowed by each functional and lexical preposition, but also the connection between structures allowed by a preposition and the semantic-syntactic values connected with the preposition itself.

In my analysis I always considered nouns as a category, therefore I did not consider the specific nouns that children pronounced. More precisely, in the first part of the chapter I described all the structures selected by prepositions and I organized nouns in the DPs for typology (e.g. NCS, NCPL, etc.). In the second part of the chapter, instead, I considered the connection between the structure selected by the preposition and the value connected with the preposition itself and I considered all the nouns as a unique

¹⁰⁷ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions FINO A.

¹⁰⁸ In this case we considered the whole group of nouns that are present in the DPs selected by the combination of prepositions FINO A.

group. More precisely, in the second part of the chapter I studied if the presence (or the absence) of a determiner in the DPs selected by a preposition was connected to the semantic-syntactic value associated to the preposition itself.

CONCLUSIONS

In this section I want to summarize the findings reported in the previous chapters of my thesis, according to the research questions that guided my work (reported in chapter I).

More precisely, I tried to answer the following questions:

(Q1) Do children acquire before functional or lexical prepositions?

(Q2) Is there a specific order of appearance of prepositions in the group composed of functional prepositions and in the group composed of lexical prepositions?

(Q3) Which semantic-syntactic values are connected to the functional and to the lexical prepositions?

(Q4) Does each preposition select a specific structure?

In order to address these questions, I analysed the spontaneous speech of seven children: Elisa, Gregorio, Marco, Diana, Raffaello, Rosa and Camilla. These children were recorded in different gaming sessions and their productions were collected in the CHILDES database by three scholars: Tonelli, Calambrone and Antelmi.

For each child, I read all the files in which his/her productions were collected, and I identified:

- (I) Productions in which there was a functional or a lexical preposition
- (II) Productions in which there was no preposition, but it should have been there
- (III) Productions in which there was a combination of prepositions

I copied these productions in an Excel document. In the cells of this document I organized and analysed the elements that were present in the productions. I labelled prepositions as “functional” or “lexical” and I also identified the type of element selected by each preposition (*e.g.* DP, advP, verb). If prepositions selected a DP, I highlighted the presence of determiners and modifiers. Finally, for each preposition I wrote the semantic-syntactic value connected with it. Each functional or lexical preposition is connected to

one or more semantic-syntactic values. The semantic-syntactic value defines a sort of “meaning” of the preposition itself in the production in which it is pronounced.

When I completed the analysis of the productions in the Excel document, I created, always in Excel, different pivot tables that allowed me to organize the data and combine them.

In this way, I obtained all the results that I presented in the previous chapters; and I tried to answer my research questions.

In particular, I tried to answer the first (Q1) and the second question (Q2) in the third chapter, the third question (Q3) in the fourth chapter and the fourth question (Q4) in the fifth chapter of the work.

First of all, let us consider the first research question (Q1).

In the data collected I identified a period in which prepositions were not overtly lexicalized by the children. More precisely, when children were 1;05 years old, the number of prepositions was rather low compared to the number of zeros¹⁰⁹.

Later, when children grow up, the number of zeros decreases and different prepositions (mainly the functional ones) start to appear.

Therefore, it is clear that Italian children produce (and we could also say “acquire”) functional prepositions before the lexical ones. The first functional preposition is pronounced when children were 1;07 years old. The first lexical preposition, instead, is pronounced when they were 1;09 years old. During the first year, in fact, children pronounced only one lexical preposition: SENZA. The lexical prepositions start to increase during the second year.

During the second year there is also the appearance of combinations of functional and lexical prepositions. In particular, I identified two types of combinations: (I) Combinations defined as “blocks”, because their structure is correct only if it had both the lexical and the functional part; (II) Combinations composed by a double structure lexical preposition and a PP with a functional preposition. It is important to remember that lexical prepositions that have a double structure allow for two types of complements: (a) a DP; (b) a PP with a functional preposition.

In the first chapter I reported a summary of some works previously done by other scholars on prepositions. I showed the differences that is possible to find in the use of

¹⁰⁹ We refer to missing prepositions.

prepositions in different languages. Littlefield (2005), for example, analyses prepositions in English. She demonstrates that prepositions can be divided in two categories that are acquired in different moments by the children. More precisely, lexical prepositions are produced before functional prepositions in children's spontaneous speech. She observed also that it is doubtful whether this order can be generalizable to morphologically rich languages, as Italian. Italian, in fact, differently from other languages, shows the production of some functional morphology in the early stages (Caselli, Casadio & Bates, 1999). I decided to analyse children's productions in order to identify which type of preposition was pronounced as first by the children in the gaming sessions recorded. In this way I was able to confirm that Littlefield's idea about the acquisition order of different types¹¹⁰ of prepositions in morphologically rich languages was verified: in Italian, functional prepositions are produced (we can also say "acquired") before the lexical ones.

Alexaki, Kambaranos & Terzi (2009) studied the acquisition and development of Ps in Greek focusing, in particular, on locative Ps. They identified three different ways to express location: (a) via a Complex P structure that consists of a lexical element (denoting location) followed by *se* or *apo* (that are functional elements); (b) via *se* or *apo* alone; (c) via an adverbial. The low number of complex Ps in children's productions did not allow them to confirm that *se* and *apo* were acquired before alone if compared with functional prepositions placed in complex Ps (option (a) or (b)). Nevertheless, the scholars speculated that at least *apo* was used earlier alone thanks to several instances of *apo* with a DP object around 2;05 years old¹¹¹. If this hypothesis was confirmed, in this feature Greek is similar to Italian. In both languages in fact functional prepositions are produced before the combinations of prepositions composed of a lexical and a functional part.

The second aspect I focused on (Q2) is the specific order of appearance of each functional and lexical preposition. In the work described in section 1.4.1.2 the scholars¹¹² referred to the order of appearance of prepositions in English (in fact, the preposition *at* became part of the children's grammar after the prepositions *to* or *in*).

¹¹⁰ I refer to functional and lexical prepositions.

¹¹¹ This in addition to the absence of the omission of this type of *apo* in children's data.

¹¹² (Ursini & Akagi, 2013)

In Greek, instead, as explained in section 1.4.2, not only the preposition *se* seems to be acquired after the preposition *apo* (the latter is omitted in less contexts), but the scholars¹¹³ also speculated that at least *apo* was used earlier alone if compared with functional prepositions placed in complex Ps.

I analysed children's productions in order to identify the order of appearance of each functional and lexical preposition in Italian.

In particular, for the functional prepositions I identified the following order of appearance:

- A, CON, DI (01;07;07)
- IN (01;08;17)
- PER (01;09;01)
- SU (01;09;15)
- DA (01;09;24)
- TRA (03;00;00)

For the lexical prepositions I identified the following order of appearance:

- SENZA (01;09;15)
- SOTTO (02;00;00)
- DENTRO, SOPRA (02;00;14)
- CONTRO (02;03;14)

I also identified a specific order of appearance for the combinations of prepositions. I could observe that combinations of prepositions composed of lexical and functional prepositions are produced by the children only after they produced alone the functional part of these combinations. The only exception is the combination of prepositions VICINO TRA, because TRA is produced for the first time when children were 3;00. However, this combination is a particular case explained in section 3.6.

¹¹³ (Alexaki, Kambaranos & Terzi, 2009)

For the combinations of prepositions defined as “blocks” I found the following order:

- VICINO TRA (02;00;27)
- VICINO A (02;01;20)
- IN FONDO A (02;04;06)
- ATTORNO A (02;04;26)
- ACCANTO A (02;11;12)
- FINO A (03;04;09)

Finally, for the combinations composed by a double structure lexical preposition and a PP with a functional preposition, I found the following order:

- DI SOPRA DI (02;00;17)
- SENZA DI (02;02;11)
- SOTTO A (02;03;02)
- DENTRO IN (02;03;15)
- DENTRO A (02;05;10)

The third research question (Q3) refers to the semantic-syntactic values connected with each: (I) Functional preposition; (II) Lexical preposition; (III) Combination of functional and lexical prepositions.

In the fourth chapter I identified the semantic-syntactic values connected with prepositions or combinations of prepositions. More precisely, I listed the values connected with each preposition or combination of prepositions in each of the years considered.

Moreover, I identified the semantic-syntactic values that were connected with prepositions more than others¹¹⁴.

¹¹⁴ I obtained these results through the analysis of the numbers of all the semantic-syntactic values connected with prepositions in each year considered.

For the first year I found the following values:

- The spatial values (LOCATIVO, STATIVO, MOTO A LUOGO);
- COMPLEMENTATORE;
- POSSESSO;
- DESTINATARIO.

For the second year I found the following values:

- The spatial values (LOCATIVO, STATIVO, MOTO A LUOGO, MOTO DA LUOGO, MOTO PER LUOGO);
- COMPLEMENTATORE;
- POSSESSO;
- DESTINATARIO;
- STRUMENTO.

For the third year I found the following values:

- The spatial values (LOCATIVO, STATIVO, MOTO A LUOGO, MOTO DA LUOGO);
- COMPLEMENTATORE;
- POSSESSO;
- DESTINATARIO.

The analysis of the semantic-syntactic values was interesting because I observed that semantic-syntactic values connected with each preposition follow a specific order of appearance. In other words, I observed that the semantic-syntactic values connected with each preposition follow an “implicational scale” in their appearance.

As explained in chapter I (more precisely, in section 1.5) the expression “implicational scale” refers to the order of appearance of semantic-syntactic values connected with each preposition. In according to this order, the value X is connected with a preposition before the value Y, but it is connected with the same preposition only after

the value Z. In this case, the appearance of the value X depends on the moment in which, in children's productions, appears the value that occurs as first (in this case, Z).

For example, the semantic-syntactic values connected with the functional preposition A are:

- LOCATIVO (01;07;07)
- SPECIFICAZIONE (01;08;17)
- PAZIENTE (01;08;22)
- DESTINATARIO (01;09;11)
- COMPLEMENTATORE, MOTO A LUOGO (01;09;24)
- QUALITA' (01;10;04)
- ESPERIENZE, MODO (02;00;02)
- STATIVO, TEMPORALE (02;00;27)
- FINE (02;00;29)
- STRUMENTO (02;02;11)
- MOTO DA LUOGO (02;05;13)
- AGENTE, SECONDO TERMINE DI PARAGONE (02;09;04)
- POSSESSO (02;11;12)

Through the observation of the semantic-syntactic values connected with the functional preposition A, it is possible to observe, for example, that the spatial value MOTO DA LUOGO is connected with the preposition A several months after the spatial value MOTO A LUOGO. We can therefore conclude that the semantic-syntactic value MOTO DA LUOGO can be connected with the functional preposition A only later than the semantic-syntactic value MOTO A LUOGO. In chapter I we described the internal structure of spatial prepositions proposed by Cinque. In particular, the scholar showed that in recent literature is generally assumed a specific hierarchical structure for stative and directional prepositions where stative prepositions are embedded under directional prepositions: [_{DirP} P [_{StatP} P]]. Considering the functional preposition A, we can propose that the preposition connected to the value MOTO A LUOGO may be inserted in Cinque's structure in a specific place: it could be embedded under the projection of the same preposition connected to the value MOTO DA LUOGO. In this way, it would be

justified the acquisition order of the two spatial semantic-syntactic values considered. The value MOTO A LUOGO must be connected to the functional preposition A before the value MOTO DA LUOGO.

The fourth research question (Q4) refers to the structures selected by prepositions. I identified and analysed the elements selected by prepositions (DPs, AdvPs, verbs). In particular, in the second part of the fifth chapter, I focused on the DPs and, more precisely, on the DPs in which there were lexicalized nouns (and not pronouns, for example).

Moreover, I tried to identify the connection between the structures selected by a preposition and the semantic-syntactic values connected with the preposition itself.

My analysis shows that, in some cases, prepositions select a DP that needs the presence of a determiner, while in other cases prepositions select a DP in which is not accepted the presence of a determiner. For example, if we consider the functional preposition A, I showed that, when this functional preposition is connected to spatial semantic-syntactic values¹¹⁵, the number of nouns that are not connected to a determiner is bigger than the number of nouns connected to a determiner. The same trend can also be observed when the preposition A is connected to the semantic-syntactic values DESTINATARIO and STRUMENTO. If we consider instead the connection of the preposition A with the semantic-syntactic values FINE and MODO, this preposition only selects nouns that are not connected to a determiner. In this study I considered nouns as a unique group, and I did not identify which were the lexicalized nouns pronounced by the children connected or not to a determiner. To complete this analysis in the future it is necessary to identify, among the nouns pronounced by the children, the specific terms that can or cannot be connected to a determiner.

The aim of this work was to better understand the usage of prepositions in Italian. The analysis of such young children's productions was an interesting subject and gave me the possibility to examine a topic I was interested to study deeply: the language acquisition.

¹¹⁵ I refer to the values: LOCATIVO, STATIVO, MOTO A LUOGO, MOTO DA LUOGO.

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