

Spontaneous productions of deverbal nominals in Spanish¹

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Introduction

Since 1997 we have been researching the acquisition of instrumentals, initially, compounds, then *dor-* derived nominals and finally, a comparison of both forms. Spanish-speaking children of ages between 2 and 8 were asked to produce the researched forms as names for non-existent instruments under varied experimental circumstances. Throughout 2004 a case study was carried out to record spontaneous productions of both verb-noun compounds and *-dor* instrumentals by three children of 2, 3 and 7 years of age. This paper presents the data-gathering procedures, the analysis of the results obtained in this case study and the interpretation of these spontaneous productions in the light of the results discussed in previous investigations.

1. The case study

From March 2004 to May 2005, one of the researchers kept a record of instances of deverbal compounds and *-dor* nominals produced spontaneously by her three children while they were playing. The lapse of time during which the recording stage took place corresponded to the following age-spans of each of the children:

Augusto: 2;1 - 3;3

Santiago: 3;9-4;11

Ignacio: 7;3 - 8;6

1.1. Data-collection

Whenever any of the children produced one of the forms studied in the presence of their mother, while playing or when addressing adults in their conversations, those productions were transcribed and the following information was recorded: a) the child's name; b) age at the moment of production (including months); c) the chosen form - compound or derived noun- and d) the meaning attributed to that form or the object it referred to. No audio recordings were kept because of the spontaneity of the speech acts.

Although in previous experiments² the focus was mainly placed on instrumentals, in this case study a record was also kept of those agentive nominals coined by the

¹ The present paper presents part of the data collected for the Research Project "Adquisición de nominales en el castellano como lengua materna" (J011) subsidized by the Secretaría de Investigación de la Universidad Nacional del Comahue.

² For details, see Zinkgraf (2004) "Compuestos y derivados instrumentales: un estudio de adquisición de la lengua materna" presented at the 1as Jornadas de Jóvenes Investigadores, Bahía Blanca, Argentina.

children and formed through the processes of compounding and *-dor* derivation. To indicate these special coinages an asterisk will be used hereafter.

1.2. Spontaneous Productions database

The following table summarises each child's productions, starting with the youngest. The instances have been classified into *-dor* derived and VN compound forms, and within each of these categories, according to whether they were correct or incorrect (the criterion to decide whether a term was correct/incorrect will be defined in the following section). "Other forms" includes those terms that do not correspond to any of the previous groups, and which somehow resemble productions gathered in the previous experiments.

	<i>-dor</i> Derived Nouns		V+N compounds		Other Forms
	Correct	Incorrect	Correct	Incorrect	
Augusto	La limpiadora = la barredora (2;9) La ventiladora = la barredora (2;9) El cortador = cuchillo (2;10) Tu cortador de uñas = alicate(3;2)			El colga-ropas = el tendedero (3; 3)	Un para juntar las hojas = un rastrillo (2;3)
Santiago	El pelador (3;9) El pelador de zanahorias (3;9) Un servidor de comidas (4;2) Un amasador = palo de amasar (4;3)	Un soplador ³ (3;9) Una cama navegora (3;9) = un barco Una torta navegora (3;11)	Un atrapa-camiones (4;0) Un desarma-todo (=el hermano) (4;6) El mata-bichos (4;8) Un presta-nada (=el hermano) (4;6)	Mi colga-ropa (4;0)	
Ignacio	Un auto salpicador (7;4) Un auto detector de cualquier cosa (7;4) Un tomador de agua de caballos (7;5) El amasador (8;1)	El planador de masa = palo de amasar (8;7)	Mi lleva-muñecos portátil (7;3) Un desarma-naves (8;1) El guarda-llave (8;4) Un tira-cañitas (8;5) La tira-papeles (8;6)		Un cubre de agua (7;6) El cubre total del auto (7;9) El cubre azul (8;0)

Table I. Spontaneous productions per child

³ Name given to the seed of the dandelion, which can be blown for the seeds to spread

2. Analysis of spontaneous productions of instrumentals

From the analysis of the table above, the following facts can be derived: firstly, each of the children produced between 5 and 12 nominals during the period assessed, resorting both to derived nouns and compounds, and sometimes even incorrect forms. Secondly, the three participants typically formed most of these coinages from a base verb belonging to the 1st Spanish conjugation (-ar), except for Ignacio's three instances of *cubre (a cover). Thirdly, it is note worthy that within each of the ages represented by these subjects, derived nouns and compounds were deployed in different proportions and with different degrees of correctness. Thus, Table II presents similar total percentages for derivation and compounding, while it becomes evident that only the eldest children make a more significant use of the latter process, and to the same degree.

	Derived nouns in -dor		V+N Compounds		Others
	Correct	Incorrect	Correct	Incorrect	
Augusto	4	0	0	1	1
Santiago	4	3	4	1	
Ignacio	4	1	5	0	3
Subtotal	12 (37,2%)	4 (12,4%)	9 (27%)	2(6,2%)	
Total (31)	15 (46,5%)		12 (37,2%)		4 (12,4%)

Tabla II: Distribution and percentages of spontaneous productions

A more detailed analysis of the proportions in which each child deployed the forms in questions reveals certain characteristic aspects probably related to their ages.

The majority of Augusto's productions are mainly correct derived nouns. In all instances he resorts to derived forms which already exist in adults' language used to name other objects for which he ignores the word. However, in the case of the street-sweeper (*barredora*), he makes use of derived nouns like *limpiadora* and *ventiladora*, which in a way show he is aware of the need for derivation, although he does not know the exact word used to designate that object. The alternatives he deploys indicate a certain degree of proximity in meaning to the desired word. Augusto also makes use of a V+N compound (**el colga- ropas*) which turns out to be incorrect due to the selection of a base verb whose root vowel suffers morpho-phonological changes, from *colgar* to *cuelga*. He also produces the form **un para juntar las hojas* (**a for-to-collect-leaves*) to refer to a rake. This construction resembles those reported by Powers (1998) in Hamburger (1980), where a to-infinitive phrase is preceded by a determiner. The presence of the determiner is considered evidence to support the belief that these

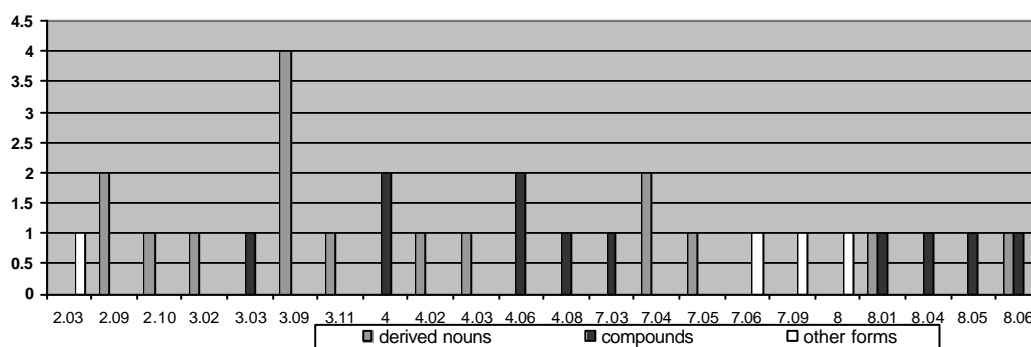
phrases are, in fact, true nouns, which explains why this and other cases have been included in this database.

Santiago's productions present equal numbers of compounds and derived nouns. It also becomes evident that there is a significant increase in the incorrect forms both for compounding (only one instance) and derivation (three instances), whereas this child does not resort to "other forms". It should be noted that Santiago is the subject who has produced the most nominals and who has coined two agentive compounds to refer to his brother (*un desarma-todo* – a ransacker, *un presta-nada* – *a nothing-lender). These instances clearly show his creative use of compounding to designate a person. His productions also include two repetitions of a *-dor* instrumental which is awkwardly formed with *-or* and which appears modifying a noun: *torta navegora* (sailing cake) and *cama navegora* (sailing bed).

The nominals produced by Ignacio indicate the same number of instances for each of the processes studied. Within the derived nouns, there is only one incorrect coinage (**el planador de masa*, rolling pin), where the child either innovates or makes a mistake in the choice of a causative base verb *aplanar*⁴. Ignacio also resorts to "other forms", producing three tokens of the same type: **un cubre* (a cover). This subject makes correct use of derivation, while on two occasions the derived forms are deployed as modifiers of a noun (*un auto detector* – a detecting car, *un auto salpicador* – a splashing car), as did his younger brother.

2.2. Productions throughout time

The following is a diachronic representation of these children's productions indicating number of studied forms produced at a certain age.



Graph 1: Distribution of nominals and other forms per subject's age

Through the analysis of the graph it becomes evident that the appearance of the first derived noun does not take place until six months after Augusto's earliest production of

⁴ We shall not delve into the issue of the corresponding causative verb for flatten (*hacer plano*)

an incorrect empty category nominal phrase at 2; 3. This first instance of the processes studied turns out to be incorrect.

The graph also reveals a clustering of productions corresponding to one same process, whether derivation or compounding, regardless of child and occurring at different moments in time. This is the case of productions between ages 2; 09 and 3;02, 3;09 and 3;11 mainly *-dor* instrumentals; and from 4;6 to 4; 8 and from 8;01 to 8;06 for compounding.

This clustering, if analysed per child, might be interpreted as a strategy to possible reinforce the use of one of these forms only to be able to move on to the other process. Thus, Augusto resorts to derivation in four cases (twice at 2;8, then at 2;10 and 3;02); Santiago makes use of derivation at 3;9 when he produces four instances and at 3;11 before he switches to compounding, after which he reverts to derivation twice again. He later attempts compounding for agentives twice.

Ignacio's productions indicate the same clustering of a nominal form for a period of around three months until he becomes 8. It seems striking that, immediately after, this boy coins a majority of compounds, and even once both a compound and a derived form simultaneously.

This longitudinal, though incomplete, perspective of the spontaneous data obtained allows us to confirm some of the characteristics of the stages we postulate children go through in the production of these forms (Alvarez *et. al*, 2006) and on the basis of which we can hypothesise about their acquisition.

3. Stages of acquisition of deverbal instrumental nominals

The spontaneous data presented above offer further evidence for the different stages of production children go through when acquiring V+N compounds and *-dor* instrumentals, supporting the data obtained experimentally and presented in Álvarez *et al*. 1999 a) y b); 2001 a) y b); Álvarez and Zinkgräf 2004 y Zinkgräf, Rodríguez and Tarsia 2005.

Originally two stages were postulated, but in the light of Augusto's earliest productions in combination with the failure to obtain data experimentally from children as young as 3;0-3;6, a new and earlier stage could be put forward, Stage 0.

What follows is a characterisation of the different stages in terms of the productions encountered in our data both experimental and spontaneous

Stage 0. In this initial stage very few productions of nominals can be found. Instead, instances similar to those that appear in Powers (1998) in which children add a determiner to a phrase whether prepositional (**un para peinarnos*) or verbal (**un abre*)

are typical in this phase. These data, which resemble Augusto's production recorded at 2;3 (**un para juntar las hojas*), were obtained in the research project "Adquisición de Compuestos en el español" (J004, 1996-1998) in children of 3;0-3;6. The information gathered through this investigation offers sufficient evidence to suggest that these phrases can be considered predecessors of the instrumentals studied. To support this claim, take the development of Augusto's productions: he initially uses a phrase of the type described above to designate an instrument; only at 3 does he resort to one of the studied instrumentals, i.e. derived nouns in *-dor*. These early target productions are lexicalized forms in the adult language and Augusto seems to use them as semantic extensions, deploying already known words to designate new objects. This strategy has been found to be widely used by children of the same age in our previous studies.

Stage 1. It runs from 3;6 approximately until 4;6 and is characterised by a great productivity of these nominal forms to designate non-existent instruments, while competing with lexical and syntactic resources (other forms). At this stage compounding is significantly lower than derivation in our experimental data, but the important use of compounds made by Santiago at this age runs counter to those findings. Based on evidence obtained in previous studies where 48% of derived forms were produced⁵ (Álvarez *et.al*, 2001) we have included the age-span 4;0- 4;6 in this stage. Spontaneous productions, particularly Santiago's, which correspond to this age group, seem to lend support to the preference for both types of processes (note that Santiago is the one to have coined the most nominals).

Stage 2. It lasts from around 5;0 to 8;0. It clearly presents an important increase in the morphological processes, although derivation continues to be preferred over compounding, as in the adult language. In the experimental data, the production of V+N compounds indicates a significant rise at this stage, which is confirmed in the database of spontaneous productions by Ignacio's growing use of compounds at around 8.

Typically at this age some errors related to the thematic and radical vowels of base verbs are found. Particularly those problems triggered by verbs whose radical vowel present phonological modifications might seem to persist independently of the acquisition process of the nominals studied. Results from a previous study presented in

⁵ This study focused in the sole production of derived forms for non-existing instruments from transitive and unaccusative base verbs in children this age.

Alvarez et al. (2001b)⁶ lend proof to these claims. In fact, in this experiment it was found that once a child selects one of these processes, say derivation, he will add *-dor* to any base, not necessarily the root which is the correct form. These findings contradicted our original hypothesis which claimed that children would favour the formation of derived nouns in the case of base verbs which suffered phonological changes in the production of compounds to avoid the difficulties this might imply. Thus, the difficulties children face phonologically challenging base verbs do not result in the choice of the alternative process, through which these obstacles would be ignored, but instead trigger the production of incorrect forms of the chosen process. This tendency, which generates a considerable number of incorrect forms, continues until age 8:0, although the closer children get to 7;6-8;0, the fewer the incorrect forms. Evidence of this is the reduced number of errors recorded in participants this age. This might lead us to postulate that towards 8 children seem to master the phonological rules of insertion of vocabulary items of verbal conjugations involved in the formation of both derived nouns and compounds. Based on Clark (1993), we suggest that from this age on the production of the instrumentals studied begins to resemble that of adults.

Conclusion

As a conclusion, and based on these errors and the spontaneous productions presented in this paper, it could be hypothesised that, freed from the compulsory need to use base verbs of 2nd or 3rd conjugation imposed in the experimental conditions, or even of 1st conjugation with a radical vowel which suffers alterations, children appear to choose to form nominals from base verbs of 1st conjugation, simplifying the production process and avoiding the possible drawbacks that other verbs might present.

The difficulties that children in our experiments experience to determine the morpho-phonological form of the base verb from which a compound or a derived noun should be formed are the same ones Seidler (1988) describe in children learning French. These data, in addition to those obtained in our studies, might allow us to suppose that in romance languages the difficulties observed in the production of the nominals investigated might not lie in the incorrect knowledge of the corresponding morphological rule, but rather in the incomplete knowledge of the verbal forms available in the language, and the variations of these in verbs belonging to the three Spanish conjugations.

⁶ The experiment was carried out with 32 children of 5;0-5;6 and 6;0-6;6 and its objective was to evaluate the isolated production of derived forms for base verbs which suffer alterations in the root vowel for the formation of these instrumentals.

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