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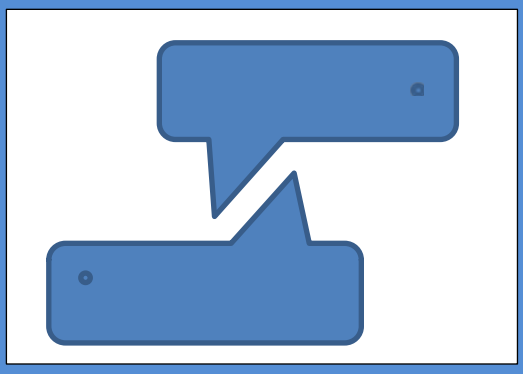

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Editorial

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Verb emergence in Spanish and Italian children during the second year of age

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Abstract

One of the most striking observations of verbs first produced by young children is the variety of forms that appear to emerge both within and across languages. Aside from debates about reasons for these differences, other studies focus on what this implies for the nature of earliest verb forms and the circumstances in which they appear. The hypothesis of the present study is that at least one of the verb's arguments is connected to the verb in the lexicon and by looking at early enough data, the aim is to examine whether children's first verbs corroborate this. Using earliest available data corresponding to one-word utterances, this paper examines first-emerging verbs from two languages, Spanish and Italian, in order to determine which arguments and under what conditions verbs first emerge. This study expands to Italian and corroborates for Spanish a preliminary analysis that was conducted for early Spanish (Ryan 2009; 2012) by examining three additional Romance first language, longitudinal datasets from the Child Language Data Exchange System (CHILDES). The former Spanish study serves as the methodological baseline for this new analysis. The findings of this study suggest a common trajectory for early verb development in Spanish and Italian, beginning with an earlier stage for theme or stative predicates, followed by a later phase for agentive predicates, these characterized by the overuse of the imperative with no expressed argument. It is argued that syntactic behavior indeed exists at the one word stage and that this has implications for the theory of syntax, and in particular, articulation of the vP shell, as well as the interaction between morphology and syntax. Finally, the study also emphasizes the importance of looking beyond the number of constituents produced by a child and examining other such early variables as verb class or morphology.

Keywords Spanish- and Italian-speaking children, Verbs, Syntactic structure, Morphology

1. Introduction

Less than a quarter of a century ago, first language acquisition research in the area of word-learning by infants focused almost exclusively on the acquisition of nouns. This should not be too surprising since nouns have traditionally been reported to make up the largest percentage of first words to emerge in earliest speech samples of many languages (Goldin-Meadow, et al, 1976; Gentner, 1982; Jackson-Maldonado et al, 1993; Caselli et al., 1995). However, the reality of observations such as those that have been made of early Asian languages such as Chinese, which exhibits a remarkably

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similar representation of both verbs and nouns in early speech (Tardiff, 1996), as well as the simple fact that verbs do eventually emerge in all child languages have both contributed over the past two decades to the exponential growth in interest in the acquisition of verbs. Such studies have focused on both comprehension and production, and consequently, together have led to the ability to conjecture more about the nature of the early verb system as well as the process a child might undergo in learning verbs, one that is certainly very different from that of learning nouns.

1.1. Previous work on early verbs

1.1.1. Early verb structure

When it comes to the proposed syntactic architecture of the adult verb phrase, much of the literature focuses on what researchers refer to as the vP shell (Larson, 1988), a proposed split-projection at the VP level consisting of an outer light verb (or "little v") that c-commands an inner full verb phrase (VP). Since Larson, the notion of the vP shell has been applied in the literature to provide possible explanations for a wide range of verbal or verb-related grammatical structures in adult language, including double object pronouns (Larson, 1988), passive, unaccusative, and ergative constructions (Radford, 2004), denominal and deadjectival verbs (Hale and Keyser, 1993 and 2002), and event structure, including the notion of inner aspect (Travis, 2000 and 2007), or causative, process, and resultative constructions (Folli & Harley, 2005; Ramchand, 2008), to name but a few. The trend for these most recent studies has been to relegate to the syntax semantic information such as that associated with transitivity or theta roles that traditionally would have been attributed to the lexicon.

Unfortunately, despite the large body of work on the widely accepted idea of a split VP in adult language, studies are virtually nonexistent in terms of the child's acquisition of the vP shell. Instead, when it comes to children's syntax, research has concerned itself primarily with development at the TP or CP level (Radford, 1990; Aldridge, 1989; Hyams, 1986 and 1996; and Rizzi, 2000). Part of the problem of studying the developing VP system is that it seems to happen so quickly. Radford (1990) suggests that both TP and CP systems seem to appear late, but relatively soon (only four months) after the appearance of multiword utterances. Instead of focusing on the developing nature of the vP shell in child language, longitudinal studies on early VP level syntax have primarily centered around its simplified structural appearance or its status as the locus of meaning or theta role assignment. Inquiries into the developing verbal system pay more attention to early stages that are characterized as pre-categorial or lexical-thematic argument structure, wherein the earliest clauses resemble the adult Small Clause (Radford, 1990). Other studies look at the primacy of aspect acquisition before tense. For whatever reason, the cross-linguistic analysis of the emergence and nature of the vP shell as a phenomenon in early language remains to be studied.

1.1.2. Early verb production

Perhaps the most common observation researchers have made of the developing verb system in young children is the difference in appearance

between the verb forms produced by a child and those of an adult, from the perspectives of both verbal morphology as well as word order. Studies in the maturational camp of UG, which by its very nature focuses on a less-than-full adult system that with input over time progresses toward the target adult structure, argue that children do not immediately possess adult syntax and that only over time do they develop this full system (Radford, 1990; Aldridge, 1989; and Potts and Roeper, 2006). Borer & Wexler (1987) point out that it is quite common for other biological systems, like memory and sexual behavior, to go through a maturation process before they can be utilized to their full potential by living beings, so why would language, another biological system, necessarily be any different. The following section discusses the range of morphological verb forms that have been proposed in the research for developing child languages, namely, bare verbs, root infinitives, imperatives, participles, and gerunds.

1.1.2.1. 'Bare' Verbs

Drawing on empirical evidence from early English, Radford (1990) suggested that the verb forms a child initially uses can be explained in terms of only lexical-semantic categories (or rather, those that exist in the VP) and a lack of functional categories which include CP, TP, and DP. Radford proceeds to cite much evidence in the early speech of children learning English where they might at first lack both CP and TP layers, potentially functioning solely in the VP realm. He goes on to say that children at this first stage typically have highly reduced clauses that are similar to what have been referred to in adult grammar as small clauses or SCs.

(1) I consider [that this candidate would be unsuitable for the post.] Ordinary clause
(2) I consider [**this candidate unsuitable for the post**.] **Small clause**

Children first produce clauses very much like the adult type in Example (2), only usually (but not always) without determiners. For example, Radford (1990) cites the following SC in (3) from a real child:

(3) English: 'Wayne in bedroom.'

Radford asserts that this reduced version of a clause in the form of an SC does not ever reach the level of TP or CP in either adult or child language. First of all, the verb is usually uninflected, and secondly, as in (5) there appears to be no movement in the case of questions. Other indicators that Radford cites for the lack of a TP in early child language are the following absent items: 1) infinitival *to*; 2) modals; 3) finite verb inflections; 4) *do*-support; 5) copula *be*; 6) progressive *be*; and 7) perfective *have*. Radford, along with the evidence for the lack of a TP layer in children's speech, also claims the lack of the CP layer as well.

1.1.2.2. Root Infinitives

Other studies on early verb forms, namely by continuity theorists, who unlike their maturationalist opponents like Radford, propose that some early verb structures indeed do suggest the early existence of an adult system.

These studies have focused on a phenomenon in some languages called root infinitives (RIs) (Rizzi, 1994). Root infinitives are much like the bare verb forms in small clauses as proposed by Radford for English, in the sense that they too are uninflected forms. In fact, this led Wexler (1994) to classify bare verb forms as infinitives themselves. However, as Hoekstra and Hyams (1998) point out, a major difference between the two forms is that the English bare form has no infinitival morphology and hence does not imply a modal meaning. RIs on the other hand, tend to have a modal interpretation, known as the Modal Reference Effect (MRE) and tend to happen with eventive (as opposed to stative) verbs, known as the Eventivity Constraint (EC). For ease of explanation, early languages that manifest root infinitives have been referred to in this study as RI languages. (4) and (5) are examples of root infinitives (from Hoekstra &Hyams, 1998) in Dutch and German are:

(4)	Dutch:	*Papa*	*schoenen*	*wassen.*
		Daddy	shoes	wash-INF
(5)	German:	*Auch Teddy*	*fenster*	*gucken*
		Also Teddy	window	look-INF

Another important observation of root infinitives in languages that manifest them, and which also distinguishes them from the bare verbs of English small clauses, is that unlike early English bare verbs which according to Radford exist by themselves until modal verbs are the first finite forms to appear in the child's repertoire, RIs have been found to exist alongside finite forms, suggesting that these have a grammatical function to themselves that is separate from the use of finite forms.

1.1.2.3. Imperatives as the Analog to Root Infinitives

An important observation of the root infinitive phenomenon which is of direct importance to the rationale of this study is that they do not appear to occur in null-subject languages, including Romance. Instead, Salustri & Hyams (2008) propose that an analog in the form of the imperative mood is the form that is exhibited for null-subject languages. In presenting what they conceive as the Imperative Analog Hypothesis (IAH), Salustri & Hyams provide evidence from non-RI early languages that the imperative is indeed used in analogous modal contexts where root infinitives have been attested to occur in RI languages. (6) and (7) are examples of early imperatives in Italian and Catalan (from Salustri & Hyams, 2008):

(6)	Italian:	*Mettilo!*
		put-IMP it-ACC-CL
(7)	Catalan:	*Ajuda'm*
		help-IMP me-ACC-CL

The production of both root infinitives and imperatives by children has been attributed in the continuity research as some kind of underspecification (Hyams, 1986) in which full syntax is there but for one reason or another the child opts to underspecify a category or constituent, resulting in a surface form that is different from the adult target.

1.1.2.4. Bare Participles

Another overproduced form (as compared to an adult's target) found in some children are stand-alone participles. These have been observed by Volterra (1976) for Italian as in (8) below and Ferdinand (1996) for French.

(8) Italian: *Utaa* (= *seduta* "sitting")
sit-PST.PTC

1.1.2.5. 3rd Person Singular Present Tense Default for Spanish and Catalan

One alternative to the imperative analog analysis of Salustri & Hyams for early Spanish and Catalan is Grinstead's (1998) 3rd Person Singular Present Tense Default Form Hypothesis. This hypothesis suggests that the form which has been found to be overused is not the imperative as Salustri & Hyams suggest but rather a "bare" or default form in the 3rd person singular present tense which in Spanish and Catalan happen to be homophonous with the singular imperative in those languages. Examples of this interpretation appear in (9) and (10).

(9) Spanish: *Sí* *quiere.*
Yes want-PRS.3SG

(10) Catalan: *No* *vol.*
Not want-PRS.3SG

Others who found similar "bare" forms alongside root infinitives were Ferdinand (1996) for French and Varlokosta, et al (1998) for Greek. Grinstead suggests that the 3rd person default form is an alternative for the infinitive in Southern Romance languages. In later work, Salustri & Hyams (2008) pointed out a problem with Grinstead's general interpretation of the early form as a bare form, and not an imperative, for the very reason that in some Southern Romance languages like Italian, not all imperatives are in fact homophonous with 3rd person singular forms. For example, only in the first conjugation does Italian have 3rd person singular forms which are homophonous with the singular imperative. More will be said about Grinstead's 3rd Person Singular Present Tense Default Hypothesis in the "Discussion and Conclusions" section as it is relevant to this study.

1.1.2.6. Other Pre-verbal "Relational" Words

Yet another related line of research in terms of early verb meaning pertains to the use by young children of forms that are not derived from verbs but are used in ways in which verbs are used by adults. Tomasello (1992) first signaled such use in early English such as prepositions that are used in ways similar to verbs of movement. Gentner (2006) suggests that the early use of prepositions should not be surprising in that both prepositions and verbs share a similar relational function among different components of the sentence. (11) is an example from Tomasello (1992).

(11) English: *Hat off*

Although the aforementioned studies of early production have made great strides in classifying the variety of possible early verb forms, what none of these studies appears to have done is examine how these various forms (bare, infinitives, imperatives, participles, etc.) may appear in relation to each other over time, that is, how they emerge. For example, Salustri & Hyams (2008) discuss early co-occurrence of tensed and non-tensed forms but never talk about which of these may appear first. The reason why this may be so, as the Spanish data from Ryan (2009; 2012) will suggest, is that the data reviewed did not start early enough to capture the child's earliest manifestations. Another area that had not been investigated was how these early manifestations might relate to each other in terms of the early development of both argument structure and syntactic structure of the verb phrase by children over time.

Ryan (2009; 2012) has investigated the emergence of verbs in the "Irene" Spanish Database (CHILDES), the analysis of which suggested a multi-stage process in the acquisition of argument structure and the verb phrase. General findings included the later appearance of verbs than nouns and when verbs did appear at 1;1.28 (during the one-word stage), the first to do so were intransitives, that is, of a single argument, and these were strictly the unaccusative verbs *ir* 'to go' and *venir* 'to come.' All unaccusative tokens were always tensed in the third person singular preterit tense, a pattern which continued until around 1;6.0 when these verbs began to appear in a variety of tenses and persons. By 1;5.01 the Spanish child began to expand her repertoire of unaccusatives beyond *ir* and *venir* when she produced *caer* 'to fall' and interestingly, the anticausative *acabar* 'to end.' At this same time, Irene began to produce unergative verbs (i.e., intransitives with an agent argument), such as *abrir* 'to open', *mirar* 'look,' and *oir* 'to hear, and these were found exclusively in the imperative mood. Transitive verbs would not appear in the data until 1;7.05, and these initially were also in the imperative. Also important to note was the initial preference for post-verbal placement of overt arguments by both verb types once utterances of two and three words start to emerge. Figure 1 illustrates the sequence of emergence of verb type in Ryan (2012).

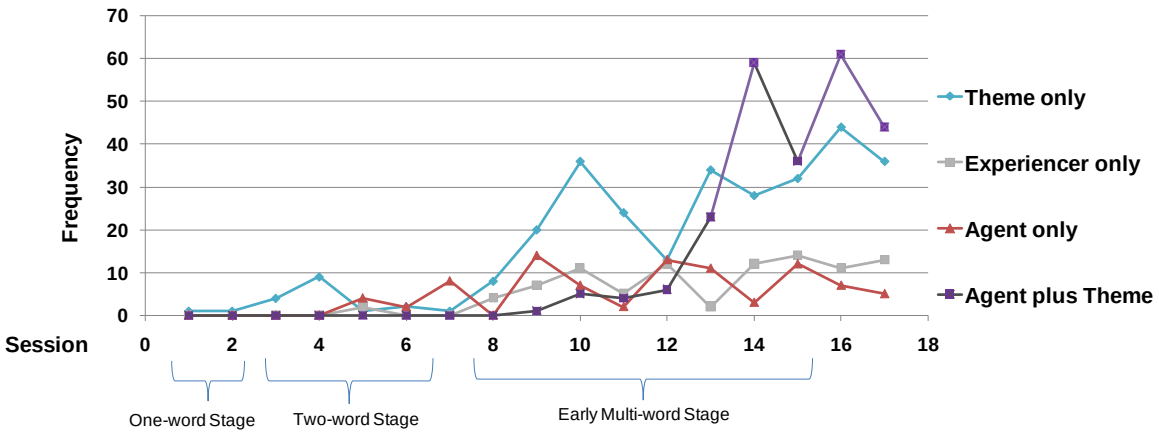

Fig. 1: Emergence of early verb types in Spanish

According to the data in Figure 1, the Spanish data suggest two alternate early trajectories for developing Spanish: 1) one that is identical to adult production when it comes to expressing verbs with Themes, that is, a tensed verb with overt expression of the Theme argument; and 2) the other that is very different from adult production when it comes to expressing verbs with Agents, that is, use of the imperative with no expressed argument, instead of the expected tensed verb. What was proposed from the data at the time was that a child learning Spanish has no problem producing tensed forms of Theme verbs in her earliest of utterances as an adult would. However, when it comes to any verb that requires an Agent, the child exclusively opts for the imperative, and at first with no expressed Agent.

Ryan further suggested that the child appeared to perceive agentivity in the adult's input to occupy a node higher in the tree and since she has no structure to accommodate this, namely the specifier position where the Agent would reside, to compensate for this lack she moves the verb further from T to C, namely in ForceP, as suggested for the locus of the imperative by Rizzi. Moreover, the idea that the imperative could serve as an early substitute for agentive constructions in children appears to align with the suggestion by researchers that the imperative structure itself may operate in adults as an impoverished structure, a defective clause without a TP in the sense that the imperative tends to operate without tense and person differentiation (Zanuttini, 1991; Platzack & Rosengren, 1998; Rupp, 1999). Some proposals have attempted to locate at least some portion of imperatives to reside in the TP (Jensen, 2004). However, since Rizzi's (1997) introduction of ForceP, the CP has gone unattested as locus for the imperative. It is this interpretation that is adopted by Zagona (2002) in her explanation for the architecture of Spanish imperatives and pursued here in terms of the Spanish data. The early overproduction of the imperative mood with covert subjects by Spanish monolingual children during the early stages of verb acquisition may serve as a syntactic innovation to express agentivity before the child has acquired the corresponding adult structure of tensed forms with expressed Agent subjects (Ryan, 2009)

2. Methodology

As an expansion of the original analysis for Spanish (Ryan, 2009, 2012), the methodology employed for the original study has been painstakingly applied to the selection and analysis of the databases of the three new children of the present study. As such, the study is longitudinal in design and compares the emergence and progressive use (hence, production) of various verb-argument configurations in the developing language of four healthy monolingual children, two learning Spanish and the other two, Italian. Where possible, child transcripts have been reviewed as early as the age of 0;11 months for each child and, depending on when the child produces his/her first verb, for an additional twelve months beyond that time or whenever the transcript for a given child ended (whichever came first).[2]

[2] This age-range begins well before what the research suggests is the approximate time of a healthy child's first noticeable vocabulary spurt (typically around the age of 1:6 or so), and

2.1. Research questions

The following research questions have been formulated to guide the proposed study:

1. What do the four first language datasets of this study reveal about the emergence of the following argument-specific verb types with regard to structure of the verb phrase: 1) single-argument configurations with T(heme), including unaccusatives, and ergatives in their anticausative form; 2) single-argument configurations with either E(xperiencer) or A(gent) as the only argument; and 3) transitives with either E or A? Taken together, what might the emergence of these different constructions imply for a particular path of acquisition for the internal structure of the VP, namely the vP shell, and argument structure?

2. To what extent does the morphological form of the verb in the four child language datasets of this study correlate with verb and argument type produced and how might this change over time? What might these correlations suggest about the early role of verbal morphology in the developing structure of the verb phrase?

The four data sets that have been selected from CHILDES (Child Language Data Exchange System) (MacWhinney, 2000), are, for Spanish: 1) "Irene" (Llinàs-Grau, 2000); and 2) "Emilio" (Vila, 1990) databases, coded in this study as SP(1) and SP(2), respectively; and for Italian: 1) "Francesco" (Volterra, 1976); and 2) "Marco" (Tonelli, 2005) databases, coded in this study as IT(1) and IT(2), respectively. The inventory of verb-argument configurations include two single argument (intransitive) configurations, namely: 1) Theme-only configurations such as anticausative structures of ergative predicates (e.g., *caer* 'fall', *abrir* 'open') as well as unaccusatives (e.g., *ir* 'go', *venir* 'come'); and 2) Agent-only configurations such as unergatives as *dormir* 'sleep'. Two- or more argument (transitive or ditransitive) configurations never appeared in the early data so they are not part of this analysis.

3. Findings

3.1. Italian and Spanish Data in Terms of Emerging Verb Type

Figure 2 compares the sequence of verb types as they emerged for the first time in the data for the four children (two Spanish and two Italian) of this study.[3]

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continuing through the two- and multi-word stage (typically between the ages of 1;6 and 3;6, depending on the individual child).

[3] So that a focus can be made on verb type as opposed to morphological form (the latter is reserved for the following section of this paper), for reasons of illustration, all verbs in Figure 2 are shown in the infinitive form.

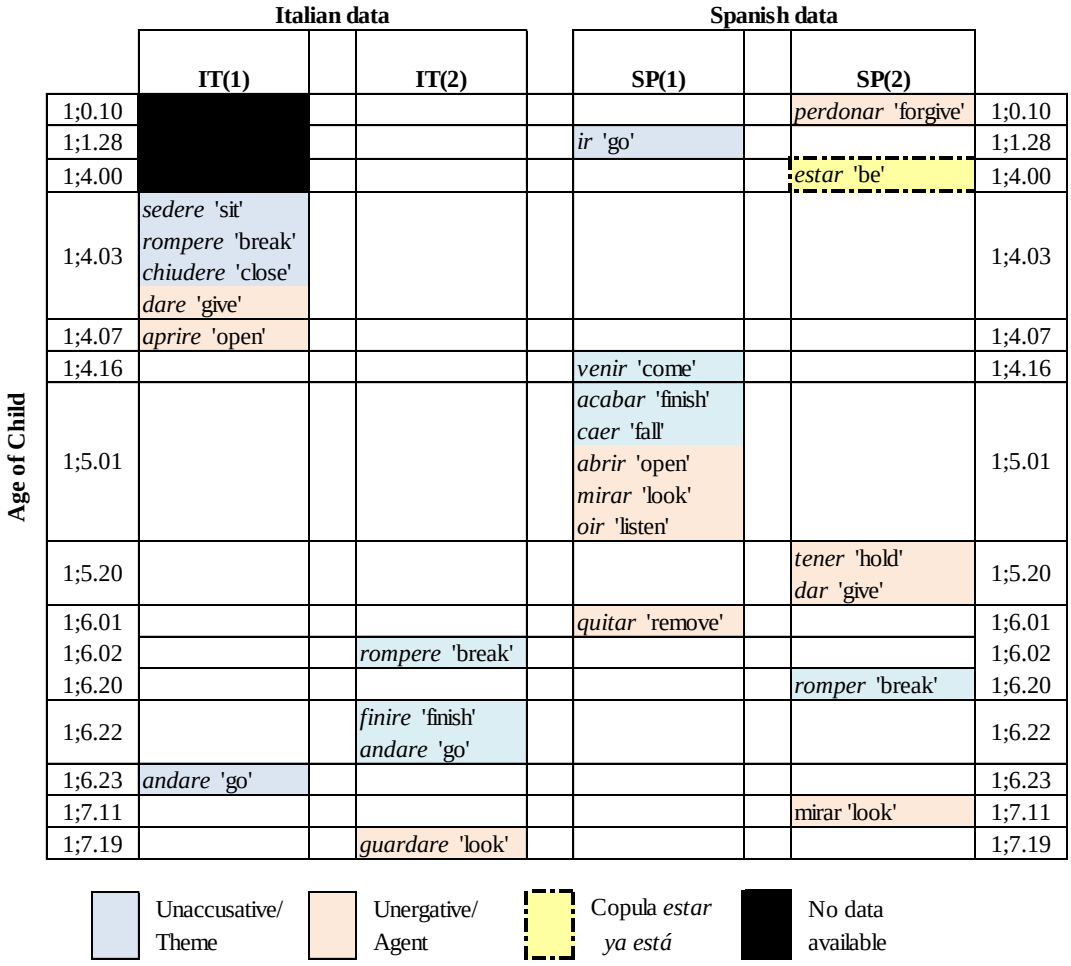

Fig 2: Comparison of Spanish and Italian data in terms of emerging verb type

Perhaps the most striking observation of the data in Figure 2 is the variability in timing of the appearance of the earliest verbs in the children studied. Two of the children start producing verbs well before the age of 1;2.00, while another not until 1;6.02. For one of these children IT(1), no data is available before 1;4.03 (indicated by the blackened area in Figure 2), however, given the number and variety of verbs appearing at this stage, it is quite possible that verbs appeared before this time period as well.

Despite this variability in timing, noticeable similarities are observed in terms of the types of intransitive verbs which are observed to first appear. Three of the four children, both the Italian children IT(1) and IT(2), and one Spanish child (SP(1), demonstrate remarkable similarity in their trajectories. For all three children, their first verbs are either predominantly, if not exclusively, unaccusative (indicated by blue shading in Figure 2 to facilitate illustration). A closer look at unaccusative type, in two of the three children who produced this as a first type, IT(1) and IT(2), reveals that there is no initial preference for either the canonical (e.g., 'go' or 'sit') or pseudo-unaccusative, i.e., anticausative (e.g., 'break', 'close', or 'finish') variety, both appearing at the same time. Only in one child (SP1) did canonical

unaccusatives appear first. Soon after the initial appearance of unaccusatives, all three children following this similar path then began to produce unergatives (indicated by pink shading in Figure 2 to contrast the blue ones corresponding to unaccusatives).

Unlike the other three children of this study, SP(2) at first appears to be an anomaly among the rest because, unlike the others, he appears to first produce (at 1;0.10) not the expected unaccusative, but an unergative, namely, *perdonar* 'to forgive.' In fact, even the subsequent verb he produces (at 1;4.00) is neither unaccusative or unergative, but rather a very specific use of the copular verb *estar* 'to be', in the expression *ya está*, roughly meaning 'that's it' to indicate that something is finished. Not until 1;5.20 does SP(2) produce his two new verbs, again unergative, with *tener* 'hold' and *dar* 'give'. Not until 1;6.20 does SP(2) produce his first unaccusative in the anticausative use of *romper* 'break'. An explanation for why this child might have followed a different trajectory in terms of the order of verb type produced as compared to the other children of this study is reserved for the "Discussion and Conclusions" section of this paper.

3.2. Early Morphology of Italian and Spanish Unaccusatives Compared

As was noted in Figure 2 of the previous section, unaccusative verbs are the first intransitive verb type to appear in three of the four children of this study. Morphology is an especially important variable to study in child's speech, especially at the one-word stage of language acquisition. This section will analyze the emergence and distribution of the morphology corresponding to all unaccusatives produced by the children of this study. A comprehensive review of the data shows an overwhelming similarity by all four children of the study to use either the past participle or a third-person past tensed form for theme-oriented verb types (unaccusatives and anticausatives). More specifically, both Italian children, IT(1) and IT(2), as well as the second Spanish child's SP(2) first form of choice for unaccusatives was unanimously, the bare past participle. Unlike the other children three children, SP(1) never demonstrated an initial phase of past participle usage, but rather started producing all unaccusatives exclusively in the third-person singular preterit (past tense) form.

A closer look at the Italian data reveals that beyond initial use of the bare past participle, the past tense of choice exclusively chosen for unaccusatives is the third-person singular *passato prossimo* (loosely-translated as the "recent past" tense) which is roughly equivalent (more so in form than in meaning) to the present perfect tense in English. Initially, at 1;4;03, IT(1) produces the bare participial form *uto* (12) and after only two weeks (at 1;04;27) he starts producing the full *passato prossimo* form with both auxiliary and past participle for another verb, *rompere* 'to break,' as seen in (13). The second Italian child IT(2) doesn't produce his first unaccusative verb until 1;06;22, but he too, like IT(1), does so at first with the bare participial form[4], as seen in (14).

[4] The author suggests that the use of the past participle found in the Italian children at the earlier stages of the data may in fact be truncated versions of the full, third-person singular *passato prossimo* form. In Italian, the third-person singular present tense form

(12) *(sed)uto*
sit.down-PST.PTCP 'seated' IT(1)--1;04.03
(13) *èoto*
be-PRS.PRF.3SG break-PST.PTCP 'It broke' IT(1)--1;04;27
(14) *fi(ni)to*
finish-PST.PTCP 'finished' IT(2)--1;06.22

A closer look at the Spanish data reveals that, although SP(2) was observed in the previous section to be an anomaly in terms of the order of verb type acquired, when it comes to verb morphology, this same child appears to follow a similar pattern to both Italian children of the study, in the sense that his first unaccusative verb, once it is finally produced, is a bare participial form, as seen in (15). On the other hand, in terms of morphology, it is SP(1) who appears to be the anomaly as compared to the other three children. From her earliest transcripts, SP(1) starts producing very recognizably third-person singular preterit forms, although some of these appear to be regularized lexical innovations for forms that are irregular in the adult target. For example, (16) shows that at 1;2;05, SP(1) produced the form *vo*, a past tense innovation (as opposed to the irregular adult target *se fue*) that applies the standard third-person singular preterit tense morphology *–ó*, to the regular present tense form *va*. Shortly thereafter, by 1;5;01, the same child expands her verbal repertoire further to include past-tensed anticausative forms of ergative verbs, as in (17) *abó* (*acabó* = target adult form) 'it finished,' or in (18) *tayó* (target adult form = *cayó*) 'It fell.'

(15) *roto*
break-PST.PTCP 'broken' SP(2)--1;06.20
(16) *vo*
go-PST.3SG 'It went SP(1)--1:02;05
(17) *abó*
end-PST.3SG 'It ended' SP(1)--1;05;01
(18) *tayó* *toro*
Fall-PST.3SG bull-OBJ.UNACC 'Bull fell' SP(1)--1;09;10

3.3. Early Morphology of Italian and Spanish Unergatives Compared

Unlike Italian and Spanish unaccusatives, which, as seen in the preceding section, almost exclusively manifested themselves in the data initially in either participial or third-person singular past tense form, unergatives in all four children followed quite a different morphological trajectory from the outset of their production. In the data of all four children studied, at least initially, unergatives never appeared in either participial or tensed form, but rather appeared exclusively in the form of the singular imperative.

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of the copula *essere* 'to be' is a phonologically insubstantial form (i.e., *è*) and so it would not be surprising that this portion of the tense combination be suppressed, particularly at the one-word stage of acquisition. As the data also shows, when the auxiliary does finally begin to appear it is always this third person singular form of *essere*, or *è*.

In terms of the Italian data, (19), (20), and (21) all show that IT(1) never deviates from use of the imperative form. Likewise, IT(2) follows the very same pattern, as seen in (22) and (23).

(19)	*dà*		
	give-IMP	'Give!'	IT(1)--1;04.03
(20)	*e apri*		
	and open-IMP	'Well, open (up)!'	IT(1)--1;04.27
(21)	*(v)edi*		
	look-IMP	'Look!'	IT(1)--1;06.23
(22)	*guarda*		
	look-IMP	'Look!'	IT(2)--1;07.19
(23)	*leg(g)i*		
	read-IMP	'Read'	IT(2)--1;09.01

In terms of the Spanish data, SP(1) begins to use such verbs as abe (target adult form = *abre*) 'Open!' and *¡Mía!* (target adult form = *¡Mira!*) 'Look!' as seen in (24). Eventually, even as imperatives follow an overall downward trend over time, use of the imperative for unergatives is still preferred over both tensed and nonfinite forms for this verb type. Also, when unergatives do finally appear in tensed form they only occur with certain verbs such as *volo*, 'I fly' or *llora* '(she) cries' and they certainly never appear in the past or preterit tense as do her unaccusatives. SP(2) also prefers the strict use of the singular imperative for his unergatives, as illustrated in (25).

(24)	*¡Mí(r)a!*		
	look-IMP	'Look!'	SP(1)--1;05.01
(25)	*Ten*		
	have-IMP	'Hold (it)'	SP(2)--1;05.20

4. Conclusion

One of the goals of this study was to expand upon a preliminary analysis of verb development in one Spanish child (Ryan, 2009 & 2012) to a larger analysis of the same development in three additional children (a second Spanish child and two Italian children). This was done in order to test the corroborability of the results of the original Spanish data as well as to control for any difference that the target language or adult input might have on the developing language of the children learning these languages. Contrary to what one expects, the data of this study suggests that both Spanish (Sp) and Italian (It) exhibit strikingly similar paths of acquisition by children when it comes to verbs, particularly in terms of morphology. As a first stage unaccusatives were found to appear before unergatives in both languages, and in a past tensed verb form, either non-finite (in the past participle) or finite (in the preterit (Sp) or *passato prossimo* (It) form.

The initial predominance of theme-type verbs at the one- and two-word stages, included both canonical unaccusatives, such as 'go' *ir* (Sp)/*andare* (It) or 'come' *venir* (Sp) and non-canonical unaccusatives, or anticausatives, such as 'fall' *caer* (Sp)/*cadere* (It) or 'break' *rompere* (It). It was only later, as a second stage when unergative verbs were found to emerge in the data,

such as 'look' *mirar* (Sp)/*vedere* (It) or 'open' *aprire* (It). Also, unlike unaccusatives which were tensed, unergatives were found to appear exclusively at first in the singular imperative form. In other words, for both languages studied, despite the input, agentivity appears to come as a later stage and is marked morphologically, even before the child is able to manipulate the perfect tenses.

In terms of the specific morphology of the forms produced by the children of this study, all four children chose a past tense verb form (in Spanish, the past participle or preterit, and in Italian, either the past participle or the *passato prossimo*) for unaccusative verbs (e.g., (Sp) *tayó (cayó)* 'it fell'; (It) *eoto (è rotto)* 'it broke'). All children of the study were found to exclusively use the singular imperative with unergative verbs (e.g., (Sp) *¡Mira!* 'Look!'; (It) *Apri!* 'Open!').

One possible explanation for this early distinction in behavior between unaccusatives and unergatives may be from the inherent structural differences between these two types of verbs in X-bar structure (Chomsky, 1995). Although both children are exposed to different input, basic binary structural relations (X-Bar) within UG hold as both children begin to "build" their trees, hence, both children capitalize at first on the head-complement relation, making unaccusatives easier to produce in both languages, initially without a complement (X^0 or X'). As this head-complement relation is reinforced, unaccusatives can now appear with complements, primarily in post-verbal position (X'). Unergatives begin to appear only in the imperative before any overt agent is expressed, suggesting the CP may be present before the specifier appears within VP (X').

If the conclusions of this study are correct, despite a comparable lack of transparency in adult language input[5], monolingual children learning Spanish may demonstrate an equal sensitivity to split intransitivity as do those learning Italian, as evidenced by the correlations between verbal morphology and intransitive verb type. As noted, similar correlations were also found to obtain in the Italian data, confirming the split intransitive distinction to lie within the domain of Universal Grammar, with language specific characteristics to be sorted out with later development and with additional input from the target language.

4.1. An Explanation for Why the Second Spanish Child of this Study SP(2) May Seem to Have Followed a Different Trajectory

As illustrated in the previous section, the second Spanish child SP(2) differed from the other three children of this study in that he did not exhibit, like the others, earlier production of unaccusatives before unergatives. To quite the contrary, his first verb to appear was *perdonar* 'to forgive,' an unergative; this was followed by a moderate period of exclusive use of the expression *ya*

[5] It is suggested here that Spanish children may be exposed to less transparent adult input in terms of split intransitivity than are Italian children since adult Italian makes multiple distinctions in this area where adult Spanish does not. Such indicators in Italian include the use of two different perfect auxiliaries for unaccusatives and unergatives, or the appearance of the clitic *ne* for unaccusatives and never for unergatives (Burzio, 1986). Since Spanish makes no such distinctions, one might argue that a Spanish child would not be able to make this distinction either, however, the data of this study prove otherwise.

está or 'that's it,' after which unergatives started to appear. It is curious that SP(2)'s usage of *perdonar* is restricted to a single occasion and never used again throughout his transcripts. When SP(2)'s initial usage is compared to the first verbs produced by the other children of the study, we find that the other children's first forms, all of which were unaccusative, were highly productive and recurred throughout a sustained period of time, whereas SP(2)'s first verb was a one-time occurrence.

One explanation for this anomaly might be that SP(2) in this one instance may have been merely repeating a recurring form that was often used by his caregivers. If this is the case, his next period of over-usage of the copular expression ya está might in fact be more indicative of his actual initial verb usage and supports the hypothesis of this study in that SP(2), although he does not at first use unaccusatives, he does not use unergatives either. It is important to reiterate here as well, that despite the fact SP(2) does not produce unaccusatives earlier, expected correlations of morphology as found for the other children of this study do apply in his case as well.

4.2. Emergence of Theme-type Verbs before Agent-type Verbs

The hypothesis that theme-type verbs emerge before agent-type verbs, finds empirical support in previous work on early verb production, namely, case studies by Volterra (1976) for Italian and Tomasello (1992) for English. Focusing on two children's emergent usage of the past participle in Italian, Volterra (1976) concluded that both children of her study produced type A participles, i.e., expressive of a state (e.g., *Luisa è uscita* 'Luisa has gone out') almost a year before they could produced type B participles, i.e., expressive of accomplishments (e.g., *Luisa ha dormito* 'Luisa has slept'). This familiar dichotomy for intransitive verbs that Volterra refers to is of course what would later be referred to as the Unaccusative Hypothesis (Perlmutter, 1978) with subsequent observations for Italian (Burzio, 1986).

Similar observations in terms of timing of the emergence of verb types were made by Tomasello (1992) who observed the inventory of verb use by his daughter in terms of cognitive structure and social-pragmatic learning contexts. Tomasello found that around the age of 1;3 the earliest appearing "verbs" were those that were related to movement or change (e.g., 'stuck' and 'gone') long before those of intentional action. Because his focus had more to do with underlying cognitive structure, Tomasello doesn't express these verb types in terms of unaccusativity, unergativity, or transitivity, but suffice it to say that the early verbs he cites as those of movement or change are unaccusative while those of activity are typically agentive.

As to an explanation for why the child would produce theme verbs before agent verbs this study draws upon the pioneering work by Piaget (1970) in the area of cognitive development. Piaget suggested that the earlier sensory motor stage of psychological development, estimated between 12 and 24 months of age, is a period when a child interprets the outside world as nothing more than an extension of herself. According to Piaget, at this stage a child is unable to consider anyone else's needs, wants or interests, and is therefore considered 'ego centric'. It is also during this stage when the child acquires knowledge about objects and the ways that they can be manipulated. Through the acquisition of information about self and the

world, and the people in it, an infant begins to understand how one thing can cause or affect another, and begins to develop simple ideas about time and space. Unaccusatives by their very nature have everything to do with movement and a complete lack of intentional action or agentivity. This would explain why both Spanish and Italian children of this study were observed to utilize past tensed anticausative variants of the ergative verbs 'break,' 'end,' and 'close' before their transitive counterparts.

4.3. The 3rd Person Singular Present Tense Default Hypothesis and how it relates to this work

The analysis of both "Francesco" and "Tonelli" Italian databases shows exclusive use of the imperative where sequences such as *e apri* (Well, open (it)!) produced at the age of 1;4.27 by an Italian child are without question in the imperative form and not the 3rd person singular (whose corresponding form would instead be *apre*). The preceding intensifier *e* in *e apri* is a commonly used marker in Italian, specifically by children, to precede imperatives and never tensed forms, as in the sense of English "Well" or "Come on," not only making it impossible for the form to be interpreted as a tensed form, but making it no less than obligatory for it to be construed as an imperative.

It is important to add here that these preliminary findings by the author do not suggest that Grinstead's observations are incorrect but rather the reason why Grinstead's data may appear more like 3rd person singular default forms (as opposed to an imperative) is that they may be characteristic of a later stage of acquisition. The data Grinstead (1998) observed for the three Spanish children of his study did not begin until the age of 1;6.0 and the Catalan children from a previously conducted study not until 1;4.0. As will be seen further ahead, Ryan (2009; 2012) observed Spanish data starting at 11 months old, the child's first verb being produced at 1;1.28. By the age of 1;6.0, this same child started producing present tense forms as well while the overuse of the imperative that was observed earlier was well on the decline. This would explain why Grinstead would have found some imperatives in his data along with many more of what he considered default forms. In other words, the window of observation for early verb acquisition must begin much earlier if we are to capture the nature of early emergence as well as the rapid change in verb use by the child. Figure 3 compares the youngest ages of Spanish children examined in Ryan's and Grinstead's studies during the second year of age.

								Grinstead (1998)						
	Ryan (2009; 2012)													
Age of child	**0;11**	**1;0**	**1;1**	**1;2**	**1;3**	**1;4**	**1;5**	**1;6**	**1;7**	**1;8**	**1;9**	**1;10**	**1;11**	**2;0**

Fig. 3: Comparison between the youngest ages of Spanish children studied in Ryan (2009; 2012) and Grinstead (1998)

5. Discussion

The author suggests that the one-word stage of child language production is a period that all too often has been understudied by researchers examining the syntax of early verbs. Some might allege that syntax cannot possibly exist before the two-word stage on the grounds that it takes more than one word for Merge to take place. Others might say that the quality and consistency of such early utterances are too unreliable and therefore pose too many methodological problems, this being a possible reason for the challenge of finding public longitudinal datasets that start early enough (before 1;4;0), these including such powerful resources as CHILDES. No matter the reason for such little work that has been devoted to verbs at the one word stage, what is certain is that competence always proves to outpace performance and by failing to investigate we run the risk of overlooking patterns of certain other linguistic variables that might emerge during this time and end before or extend well beyond this initial period. Other early verb studies, such as Pierce (1992), have typically excluded the variety of forms produced by the child, opting only to analyze tensed forms, suggesting that the canonical word order of simple, declarative sentences should not be considered alongside certain other constructions such as imperatives or *wh*-questions where word order has been affected by movement operations, supposedly rendering these unanalyzable syntactically. However, by not considering these various forms produced by the child, especially with regard to the type of verb, certain patterns, other than word order, have been overlooked, especially with regard to acquisition of agentivity, an important element within the verb phrase.

The expansive nature of this study is just the first step of a larger study in progress whose goal is to determine the emergence of agentivity in child language and its potential correlation with verb morphology, as a child makes the transition between one-, two-, and early multi-word stages of language production. Similar analyses are planned which will utilize other early longitudinal datasets that include: 1) other so-called imperative analog languages (Salustri & Hyams, 2008) besides Spanish and Italian, such as Portuguese, Catalan, etc., to see how they compare to the findings of this study; 2) so-called root infinitive languages (Hoekstra & Hyams, 1998), such as French, Dutch, German, etc., to determine: a) how findings for these languages compare to those found for imperative analog languages in terms of agentivity, and b) any implications this has for the notion of early

coexistence of tensed and non-tensed forms; and 3) so-called bare form/small clause languages (Radford, 1990), such as English, to see how findings compare to those found for imperative analog and root infinitive languages.

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