

The Acquisition of Prosodic Focus-Identification: The Role of Variation in Focus-Marking

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1. Introduction

A key discourse function that mediates between communicative context and sentence prosody in a regular — and to a large extent grammaticalized — manner is focus. The acquisition of the comprehension of prosodic focus-marking has typically been described as a protracted developmental process (esp. compared to production) (see Hornby 1971, Cruttenden 1985, Wells et al. 2004), despite children's well-known early sensitivity to prosody.

The picture, however, is far from uniform. A careful scrutiny of the literature reveals that children's performance in comprehension experiments exhibits substantial variation depending on the task and method being used. Some recent studies suggest that if the experimental task is sufficiently simple, the ability to accurately identify focus based on its prosodic marking is in place already at an early age (Speer & Ito 2009, Höhle et al. 2009, Sekerina & Trueswell 2012, Szendrői et al. 2018). Another possible source of the variance in research outcomes may be cross-linguistic variation in the system of focus-marking across the languages that have been studied. While this factor has been explicitly addressed in the investigation of focus production (for a recent overview, see Chen 2018), it has, for the most part, been neglected in the study of focus comprehension.

The goal of the present study is to explore whether and how the development of the comprehension of prosodic focus-marking may be affected by the variation found in the marking of focus across different languages. We investigate focus-identification in Hungarian, a language that not only has prosodic focus-marking, but mandatorily uses syntactic focus-marking as well. In pursuit of comparability, the experiment this paper reports on employed a task that was recently applied by Szendrői et al. (2018) in a study of English, German, and French pre-school children. Our hypothesis was that the systematic syntactic marking of focus in Hungarian diminishes the disambiguating role of prosodic marking for the child. Therefore we expected that in sentences in which syntactic focus-marking fails to

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unambiguously identify the focus, the comprehension of prosodic focus-marking will be delayed in comparison to the languages investigated in Szendrői et al., in which syntactic focus-marking is at best only an option.

The paper is organized as follows. Section 2 surveys some prominent experimental treatments of the acquisition of prosodic focus-marking (PFM) from both production and comprehension perspectives, with emphasis on the latter. This brief review brings into focus findings that have prompted the conclusion that the adult-like comprehension of PFM may be the result of a considerably prolonged acquisition process, as well as experimental results that appear to challenge this generalization. Section 3 raises the question to what extent cross-linguistic differences in the grammar of focus-marking may have contributed to the variance seen in previous results, and it provides some background on the system of focus-marking in Hungarian, the language our study concentrates on. The rest of this section presents the experiment and discusses its results. Section 4 concludes with a summary.

2. Background

It is beyond reasonable doubt that children learn to produce utterances that conform to the prosodic patterns licensed by their language at a very young age, usually earlier than they have mastered a significant part of the syntax of their language (Lieberman 1967, Menyuk 1969, Bloom 1970, Brown 1973). Relatedly, children have the competence to perceive prosodic information like pitch, lexical stress and prosodic phrasing from the first months of life on (Sansavini et al. 1997, Schmitz et al. 2006, Höhle et al. 2009, Wellmann et al. 2012, Gervain & Werker 2013).

In line with this, in the few (predominantly, Germanic and Romance) languages in which prosodic focus-marking has been experimentally tested in child language, it appears that it is produced in an adult-like fashion in many respects at an early age (Hornby 1971, Wieman 1976, Schmitz et al. 2006, Sauermann et al. 2011, Yang & Chen 2014).

These findings from production may be set in contrast to a range of findings from the comprehension of the prosodic marking of information structure. Hornby's (1971) and Cruttenden's (1985) picture selection tasks, which were used to test six- to ten-year-old English-speaking children, showed that even ten-year-olds cannot exploit accent patterns to identify contrastive information or the topic-comment structure of a sentence. Cutler and Swinney (1987) failed to find an adult-like advantage for detecting an accented word in a sentence (compared to its unaccented occurrence) in English-speaking children under the age of six years. Wells et al. (2004) tested English-speaking five- and thirteen-year-old children. While in a production task involving corrective focus five-year-olds accentuated the focused constituents in the majority of their utterances (with no difference from children of thirteen years of age), they did not perform above chance level in this task in a corresponding receptive task (with clear improvement by the age of thirteen), which required the identification of the

referent of an accented constituent by pointing to a picture. Investigating the comprehension of prosodic focus-marking in Mandarin, Chen et al. (2019) found that three- to five-year-olds corrected subject-focus sentences in a congruent manner significantly less systematically than did adults. Finally, children up to school age have been reported to perform poorly on sentences containing a prosodic focus that is associated with a focus particle like ‘only’ or ‘also’ (Gualmini et al. 2003, Hüttner et al. 2004, Bergsma 2006, Costa & Szendrői 2006, Zhou et al. 2012).

The picture emerging from this body of research is one in which the production of adult-like focus prosody precedes its adult-like comprehension – the inverse of the more familiar pattern. Although a comprehension/production asymmetry of this kind may be unexpected, it is certainly not unparalleled (e.g. Chien & Wexler 1990). Possible explanations include treating comprehension delays as experimental artifacts or task effects, as results of cognitive limitations or pragmatic limitations, as being due to opposite directions of optimization in an Optimality Theoretic framework of grammar, as well as various combinations of these (see esp. Hendriks & Koster 2010).

In relation to focus-prosody specifically, it has been argued convincingly that at least some of the suggested cases of a comprehension delay are spurious. For instance, Berger and Höhle (2012) demonstrate that, using a method that makes the information associated with the focus particles ‘only’ and ‘also’ highly relevant for completing the task (unlike in some earlier experiments), German-learning three- and four-year-olds perform remarkably well with sentences containing them. A general issue arising in judgment tasks that are often used to gauge children’s comprehension of focus-marking is that it is not clear whether children judge stimulus sentences based on the pragmatic meaning contributed by focus-marking, or they judge them based only on their semantic meaning, or whether there may be differences between children in terms of which of these they take to be their actual task (Gualmini et al. 2001, Papafragou & Musolino 2003).

Online experiments, esp. those employing eye-tracking, which do not require any explicit judgment are free from this potential problem. Indeed, in a eye-tracking experiment using the visual-world paradigm Zhou et al. (2012) found adult-like patterns in Mandarin children’s comprehension of sentences with ‘only’, while they found non-adult-like patterns when using an explicit judgment task. Other eye-tracking experiments employing an implicit task have delivered similar results. In their study, Höhle et al. (2009) show that three- to four-year-old German-speaking children make use of accentuation to identify the focus in sentences containing the focus particle ‘also’. Sekerina and Trueswell (2012) found evidence that Russian-speaking five- to six-year-old children can make use of accentuation to assign an adult-like contrastive interpretation to noun phrases within which either the adjective or the noun was prosodically prominent.

Returning to offline judgment tasks, stimulus sentences that contain focus operators like ‘only’ or ‘also’ are especially prone to the methodological challenge mentioned above. This is because in such sentences the judgment

requires children not only to identify focus based on its prosodic marking, but also to associate this focus with the focus operator (which may be at a distance from the focus), and to compute the extra semantic meaning components that come with it (such as the exhaustivity contributed by ‘only’). Therefore, as pointed out by Szendrői et al. (2018), children’s judgment profile cannot directly reveal their competence in identifying the focus and process its basic meaning, but rather, it reflects their ability to do that *and* to perform further (syntactic and semantic operations).

For these reasons Szendrői et al. (2018) employed a task in which no extra semantic operations are triggered and no explicit judgment needs to be given. Instead, the task – a resourceful adaptation of the task developed by Hornby (1971) and Chen (1998) – was to correct false critical sentences; felicitous corrections required the accurate identification of focus in the stimulus. It was found that English, German and French children perform on this task in an adult-like manner already at age three, with no effect of age across the age groups of three-, four-, five- and six-year-olds. The authors take these results to support a Full Competence view of prosodic focus-marking, according to which the association between prosodic prominence and focus is in place already at the earliest ages.

As this brief review makes it apparent, the results and conclusions of previous empirical work on the acquisition of prosodic focus-marking are highly varied. One key source of this variation is to be found in the diversity of the methods that have been employed. A further, much less appreciated, source is the fact that some of the different empirical studies have investigated different languages. While cross-linguistic variation in the system of focus-marking has been explicitly addressed as an important factor in the investigation of the production of focus (see Chen 2018 for an overview), it has not been systematically studied in the domain of focus comprehension (for two notable exceptions, see Szendrői et al. 2018, and Chen et al. 2019). The present experimental study contributes to addressing this paucity.

3. Current study

3.1. Research question

In attending to the issue of whether and how the development of the comprehension of prosodic focus-marking may be affected by the variation found in the grammatical marking of focus across different languages, the specific research question we formulate is whether and how the presence of systematic syntactic focus-marking (SFM) in a language affects the trajectory of the acquisition of prosodic focus-marking (PFM) in comprehension. We address this

question by studying the acquisition of PFM in Hungarian, a language in which syntactic focus-marking is practically mandatory.¹

Hungarian, like Germanic and Romance, is a stress-focus language. The most frequent word order is S(subject)-V(erb)-O(bject). In SVO sentences the pre-verbal subject is interpreted by default as a topic, and VO constitutes the comment. The nuclear pitch accent (NPA) falls by default on the leftmost element of the comment (É. Kiss 1987, 2002, Kenesei & Vogel 1989).² Focus (not only corrective focus, but also ordinary answer-focus) is marked by word order mandatorily: the focused phrase must be fronted to a position that is left-adjacent to the verb. It is very common for verbs to have a verbal particle.³ The position of the verbal particle is a syntactic cue that distinguishes a pre-verbal topic (1a) from a preverbal focus (1b). In the absence of a verbal particle an SV... sentence is potentially ambiguous between several information structural interpretations. It may be a 'neutral', broad focus sentence, which is generally considered the default information structure. Also by default, the pre-verbal (definite, external argument) subject is interpreted in Hungarian as a topic, and the rest as the comment (2a). In this case the NPA falls on the verb (the verb being the leftmost element of the comment). Alternatively, it may be a narrow focus sentence with focus on the verb (2b). In this case too the NPA is associated with the verb (*qua* narrow focus). Finally, it may be a narrow focus sentence with focus on the subject, in which case the NPA is found on the subject (2c).⁴

- (1) a. ... TOPIC [**PRT** VERB ...]_{COMMENT}
 b. ... [**FOCUS** VERB PRT ...]_{COMMENT}
- (2) a. S_{TOPIC} [V ...]_{COMMENT} (broad focus)
 b. S_{TOPIC} [**V** ...]_{COMMENT} (verb focus)
 c. [**S**_{FOCUS} V ...]_{COMMENT} (subject focus)

¹ As mentioned in the previous section, Chen et al.'s (2019) study revealed a non-adult like performance of Mandarin children between ages three and five in the comprehension of PFM in subject-focus sentences. The authors comment that this may be related to the fact that the use of prosodic focus marking is quite restricted in Mandarin. Indeed, even adults corrected subject-focus sentences congruently only 38% of the time. A highly relevant property of Mandarin that may explain children's performance is that it is a tone-language, imposing on phonetic indicators of focus such as pitch an especially high functional load. Having said that, the empirical generalization regarding the acquisition of PFM is controversial: children participating in a study very similar to Chen et al.'s (namely, Chen 1998) corrected the subject-focus congruently roughly 65% of the time.

² In the examples in this paper, the element bearing the NPA is marked in boldface.

³ Verbal particles form part of a larger class of elements called Verbal Modifiers (VM) (É. Kiss 2002). The appearance of VMs that are not verbal particles (including a.o. resultative secondary predicates, terminative locative phrases, and various kinds of internal arguments) is also very frequent. The distribution of verbal particles described in the main text is characteristic of VMs more generally.

⁴ Note that unless the (definite, external argument) subject functions as a narrow focus, it cannot be interpreted as part of the comment in a pre-verbal position.

As term focus is mandatorily marked by word order in Hungarian, speakers relatively rarely need to rely exclusively on prosodic cues for focus identification; a scenario like (2) is a case in point. We hypothesized that the systematic surface syntactic marking of focus also diminishes the disambiguating role of prosodic marking for the child acquiring PFM. Therefore we expected the comprehension of PFM to be delayed in comparison to Germanic and Romance languages, which the majority of prior work has concentrated on, and in which SFM is at best only an option.⁵

3.2. Method

3.2.1. Material and procedure

To make a comparison feasible, we used the same task as the one in Szendrői et al. (2018), with some adjustments. In this sentence–picture verification task participants were required to accept any true assertions and to correct any false assertions made by a puppet about a display. Critical sentences (containing a focused constituent which is so marked only by prosody) were invariably false of the presented image, and the dependent variable being measured was the congruency of the corrections in relation to the information structural properties of the critical sentences.

Szendrői et al. (2018) used SVO sentences with either the subject or the object marked as the prosodic focus. Due to the mandatory fronting of the focused phrase to an immediately pre-verbal position, subject-focus and object-focus sentences have distinct word orders in Hungarian: in subject-focus sentences the subject sits to the immediate left of the verb, in the case of object-focus the same position is occupied by the object. For this reason, instead of using transitive verbs with a subject and an object, placed in a subject-focus and an object-focus condition, we employed SV sentences, with prosodic focus either on the subject (S) or on the verb (V). Prosodic focus on S involves non-default placement of the NPA (i.e., stress shift), and incurs a narrow subject focus interpretation (this information structure is represented in (2c) above). Prosodic focus on V licenses either a narrow verb focus reading (2b), or (since the comment of an SV sentence contains no further material) a broad (VP) focus reading (2a) – these two are in principle indistinguishable from each other in the case of SV sentences.⁶ In this way, we created sentences with an invariable SV word order, which were disambiguated for their focus (S-focus vs. V-focus) only by prosodic prominence relations. S-focus and V-focus stimuli are exemplified in (3a) and (3b), respectively.

⁵ One aspect of Szendrői et al.'s (2018) study is related to this prediction. Subject-focus in French is known to be preferably marked by a cleft construction rather than by mere stress-shift (Lambrecht 1994). It may be expected along the lines of the main text reasoning that as a result, French children acquire adult-like PFM in the case of subject-focus later than in English. In their study, Szendrői et al. failed to find such an effect.

⁶ Similarly, via focus projection (Selkirk 1984), prosodic focus on the object in Szendrői et al.'s (2018) SVO stimulus sentences also licenses a broad (VP) focus reading.

- (3) a. A **MAJMOCSKA** trombitál. S-focus condition
 the monkey plays.on.a.trumpet
 ‘THE MONKEY is playing on a trumpet.’
- b. A majmocska **TROMBITÁL.** V-focus condition
 the monkey plays.on.a.trumpet
 ‘The monkey IS PLAYING ON A TRUMPET.’

Simultaneously with stimulus sentences, the participant was presented with a picture depicting three images side by side. In order to make our visual stimuli as similar as possible to Szendrői et al.’s (2018), which consisted of three pairs of an animal and an object, we created pictures that had the same overall structure: each of three images contained an animal and an object such that the animal was engaged in some activity involving that object (see Figure 1). A noun corresponding to this object appeared as an incorporated nominal stem in a denominal verb in all our critical and control items (e.g., the verb *trombitál* ‘play the trumpet’ in (3a,b) is derived from the noun *trombita* ‘trumpet’).

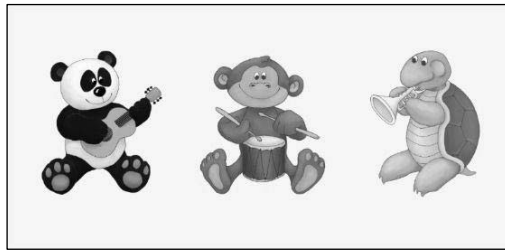


Figure 1. Picture presented with critical sentence (3a)/(3b)

Depending on whether the subject or the verb was interpreted as the focus of the sentence, participants were expected to correct the stimulus assertion in two different ways: either by correcting the subject or by correcting the verb. That is, in the case of example (3) and Figure 1, they were supposed to respond as “No, because THE TURTLE is playing on the trumpet” (subject correction) or as “No, because the monkey IS PLAYING ON THE DRUMS” (verb correction). The type of focus (S-focus vs. V-focus) was a between-subject factor: half of the participants in each age group received only S-focus sentences, and the other half received only V-focus sentences as critical items.

Control items involved the same type of sentences as the critical items (either with subject focus or with verb focus), except that control sentences were true in view of the accompanying picture, and were expected to elicit acceptance rather than correction by the participant. In addition to critical and control items, the experiment also contained fillers, half of which involved a true sentence and the other half involved a false sentence.

Each experimental session consisted of 14 trials: after a short warm-up session, participants judged 4 critical, 4 control and 4 filler sentence–picture pairs presented in two counterbalanced pseudo-randomized orders.

Pictures were presented on a screen of laptop, whereas sentences were played from a speaker placed inside a hedgehog puppet. We used this setting for two reasons. Firstly, it is a well-known fact that children are more reluctant to correct an adult experimenter than a puppet. Secondly, in experimentation on the comprehension of prosodic marking it is of great importance to keep the audio stimuli constant, as prosodic focus marking may involve a lot of hidden variation in a range of phonetic parameters that may affect focus identification in a variety of ways.

3.2.2. Participants

Monolingual Hungarian-speaking children in four different age groups were randomly selected as participants from public kindergartens and primary schools. Based on their overall accuracy in the completion of the filler trials, we included the data of 14 four-year-olds (mean age: 4;5, SD = 4.02), 22 five-year-olds (mean age: 5;5, SD = 3.11), 22 six-year-olds (mean age: 6;4, SD = 3.43), and 22 seven-year-olds (mean age: 7;7, SD = 4.20) in the analyses. We also tested 20 adult native speakers as controls.

3.2.3. Specific predictions

As discussed in section 3.1 above, we anticipated that in Hungarian the comprehension of mere prosodic focus marking would be delayed in comparison to the languages investigated by Szendrői et al. (2018), in which syntactic focus-marking is only an option. We expected this relative delay in acquisition to be revealed in two ways. Firstly, we predicted an age effect (P1): namely, that the rate of Hungarian children's focus-congruent responses would increase with age, unlike in Szendrői et al. (2018). Secondly, we predicted a language effect (P2): the proportion of congruent responses to non-default narrow focus sentences (i.e., S-focus sentences) were expected to be lower in the case of Hungarian children than in the case of English, German and French children, at least in the youngest age group we investigated (i.e. four-year-olds).

3.3. Results

Figure 2 displays the distribution of correction types across age groups.

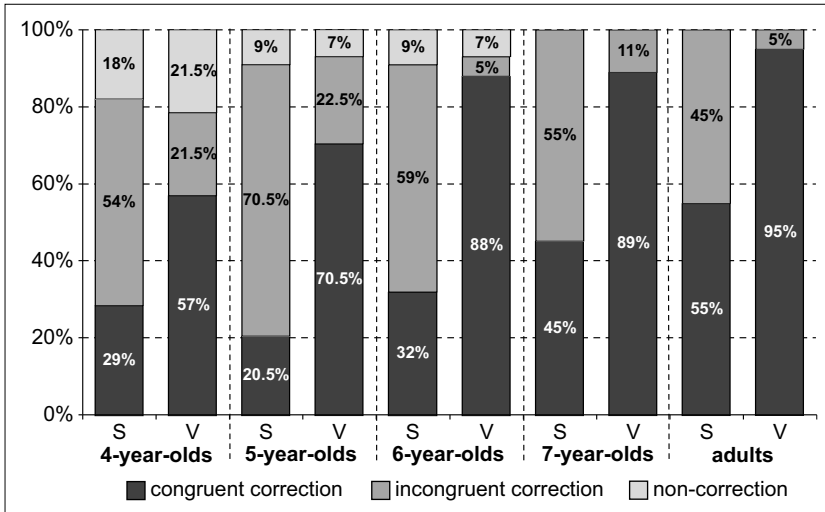


Figure 2. Proportion of correction types in the five age groups

Responses were encoded for statistical analysis as binary data based on whether they were congruent or non-congruent (the latter including incongruent corrections, as well as occasional non-corrective responses). Binomial generalized mixed-effect models were run in R (R Core Team 2019) using the package lme4 (Bates et al. 2015), with the (non-)congruence of the response as the dependent variable, FOCUS TYPE (subject-focus versus verb-focus) and AGE GROUP (four-, five-, six-, and seven-year-olds, and adults) as fixed effects, and PARTICIPANT and ITEM as random effects (intercept).

The analysis showed that both FOCUS TYPE and AGE GROUP affected the ratio of congruent responses significantly, and without a significant interaction. As far as FOCUS TYPE is concerned, we found that V-focus sentences elicited more congruent corrections than S-focus sentences ($\chi^2(1) = 15.28, p < 0.001$), without an interaction with age. The significant effect of AGE GROUP manifested itself in that the number of focus-congruent responses increased with age in both FOCUS TYPE conditions ($\chi^2(4) = 24.23, p < 0.001$). Post hoc tests revealed that it was only the performance of seven-year-olds that did not differ significantly from that of adults ($Z = 0.43, p = 0.664$). Among the groups of children, only the response patterns of four- and five-year-olds did not diverge ($Z = -0.14, p = 0.889$), in the case of any other pairwise comparisons, we found a significant difference.

3.4. Discussion

In this study we investigated children's focus-identification in Hungarian, a language that uses mandatory syntactic focus-marking in addition to prosodic focus-marking. Based on the hypothesis that the systematic syntactic marking of focus in Hungarian diminishes the disambiguating role of prosodic marking for the child, we expected that in sentences in which focus is only disambiguated by

prosody, adult-like comprehension of prosodic focus-marking will be delayed in comparison to the languages investigated in Szendrői et al. (2018).

One way in which we expected this delay to reveal itself is through the effect of age (P1). As reviewed in Section 2, Szendrői et al. (2018) found, using the same task, that English, German and French children perform an adult-like manner already at age three, with no effect of age across the age groups of three-, four-, five- and six-year-olds. By contrast, we found that age had a significant effect in Hungarian. Six-year-olds performed better than both four- and five-year-olds, and seven-year-olds performed better than all the younger age groups. It was only seven-year-olds whose performance was already adult-like. Our prediction of an age effect (P1) is thus strikingly fulfilled.

Another way in which a relative delay was expected to be discovered was a difference between the rate of congruent responses in the subject-focus condition in Hungarian and the rate of congruent responses in the same condition in English, German and French, at least in the youngest age group we investigated (i.e. four-year-olds) (P2). We expected a marked difference to emerge specifically in the subject-focus group, because in the other group (i.e., in verb-focus condition in Hungarian, and in the object-focus condition in English, German and French) the focused element was one that functions in the respective languages as the focus *by default*. As we did not make any assumptions regarding a potential cross-linguistic difference in the appeal of falling back on this default, no predictions were made with respect to cross-linguistic differences in the outcomes of the verb-focus and object-focus conditions, respectively.

The prediction (P2) that the rate of congruent responses in the subject-focus condition should be lower in Hungarian than in English, German and French, at least in four-year-olds, is apparently borne out by the data. In fact, the rate of congruent subject-corrections is about half of the corresponding rates in English, German and French not only at age four, but also at ages five and six (Figure 3). Even though this comparison is based on a crude contrast between means, due to the size of the difference found, it is nevertheless strongly suggestive.

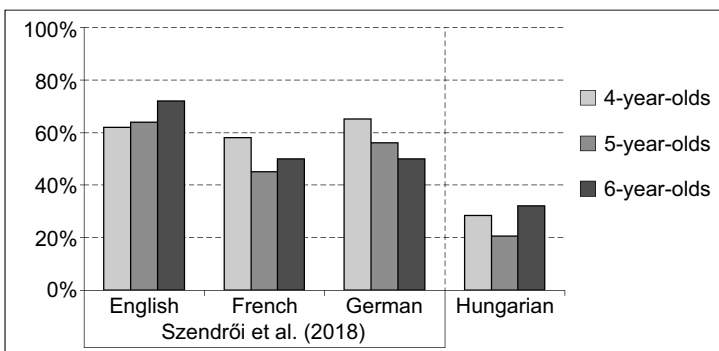


Figure 3. Ratio of congruent S-focus corrections in the two studies⁷

⁷ This figure was created based on Figure 2 of Szendrői et al. (2018: 234).

The fact that Hungarian children do not exhibit adult-like levels of comprehension of prosodic focus-marking at pre-school ages, while their English, German and French peers do, taken together with the fact that in Hungarian the rate of congruent subject-corrections at ages four to six is about half of the corresponding rates in English, German and French, reveals that, as predicted, the acquisition of the comprehension of prosodic focus-marking is delayed in Hungarian as compared to the other three languages.

Since the task in Szendrői's (2018) experiment and ours was the same, the uncovered differences cannot be easily ascribed to task effects; the tasks employed in the two experiments are unlikely to have placed different constraints on the manifestation of identical underlying knowledge. Instead, the relative delay in the comprehension of prosodic focus-marking we have found in Hungarian can be readily explained as an effect of the prevalence of syntactic focus-marking in the language. As presented in Section 3.1, term focus is mandatorily marked by placement in an immediately pre-verbal position in Hungarian. The presence of this systematic surface syntactic marking of focus diminishes the functional load of prosodic marking in children's focus comprehension. This, in turn, causes Hungarian pre-school children to make use of prosodic focus-marking less reliably in comparison to children acquiring Germanic and Romance languages, in which prosody functions as a principal marker of focus for purposes of focus-identification, while syntactic focus-marking is at most an option.

The conclusion that the presence of systematic syntactic focus-marking has a robust procrastinating effect on the development of the comprehension of prosodic focus-marking suggests that children may not universally have Full Competence in the comprehension of prosodic focus-marking at early pre-school ages (*pace* Szendrői et al. 2018).

A final result to be discussed here is the effect of FOCUS TYPE we have found: the proportion of congruent responses in the V-focus condition was consistently higher across all age groups than in the S-focus condition. This consistent asymmetry may have a number of sources. First, the general information structural default is a broad focus interpretation, and further, as reviewed in Section 3.1, in Hungarian a pre-verbal definite subject is assigned a topic interpretation. In other words, the default information structure of our SV target sentences is S=topic, V=focus (in this default, the verb, comprising on its own the entire VP, functions as a broad focus). This default may have contributed to a strong bias in favour of 'V=focus' across all the responses, reflected in the S-focus condition as a bias against 'S=focus' interpretations.⁸

⁸ An analogous asymmetry is observable in Szendrői et al.'s (2018) results, in which the proportion of congruent responses was consistently higher in the object-focus condition than in the subject-focus condition. As the authors point out, one possible reason behind this asymmetry is that in SVO sentences in the languages they examined the object bears the default nuclear pitch accent as a default. Another potential factor biasing in favour of inserting the subject in the responses as a topic is the animacy of subjects, as opposed to the non-animacy of objects. *Mutatis mutandis*, this potential effect is also relevant to the current experiment.

4. Conclusion

This study investigated children's focus-identification in Hungarian, a language that uses mandatory syntactic focus-marking in addition to prosodic focus-marking. In order to obtain results that can be used for a rough-and-ready comparison to results from other languages, our experiment employed a task that was recently applied by Szendrői et al. (2018) in a study of English, German, and French pre-school children. Based on the hypothesis that the systematic syntactic marking of focus in Hungarian diminishes the disambiguating role of prosodic marking for the child, we expected that in sentences in which focus is only disambiguated by prosody, adult-like comprehension of prosodic focus-marking will be delayed in comparison to the languages investigated in Szendrői et al. (2018). This prediction was borne out by our data: at age four Hungarian children give congruent responses to sentences containing non-default narrow (subject) focus roughly half as often as their English, German and French peers, who already exhibit adult-like performance at this age. By contrast, Hungarian children reach the adult-like level only at age seven.

This paper makes a strong case that, similarly to the acquisition of the *production* of prosodic focus-marking (Chen 2018), the developmental trajectory of the *comprehension* of prosodic focus-marking is also robustly affected by the cross-linguistic variation found in the marking of focus. Specifically, our results show that this includes the prevalence of alternative, non-intonational (in Hungarian: syntactic) means of focus-encoding in a given language. In this regard, the present findings can be viewed as the inverse of Chen et al.'s (2019), which may point to the relevance for the acquisition process of any alternative, systematic non-intonational (in Mandarin: lexical tonal) functions of those phonetic features that the language uses to mark focus.

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