Fillers across languages and language abilities

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Peters has made an excellent case for the importance of 'filler' syllables during the early stages of children's language development. In this commentary, I discuss some of the implications of filler-syllable use for related areas of child language research. The comments are based on observations made during collaborative cross-linguistic studies of both normally developing children and children with language disorders acquiring Italian (Leonard, Bortolini, Caselli, McGregor & Sabbadini, 1992; Bortolini & Leonard, 1996; Bortolini, Caselli & Leonard, 1997; Leonard & Bortolini, 1998), Hebrew (Dromi, Leonard & Shteiman, 1993; Leonard & Dromi, 1994; Dromi, Leonard, Adam & Zadunaisky-Ehrlich, 1999; Leonard, Dromi, Adam & Zadunaisky-Ehrlich, 2000), and Swedish (Hansson, Nettelbladt & Leonard, 2000).

Expanding the list of filler candidates

Most discussions in the literature have emphasized filler syllables located in sentence positions ordinarily occupied by function words. However, filler syllables need not be restricted to freestanding forms; they might occur in positions typically associated with bound morphemes. Consider the case of 'minimal words' discussed by Demuth (1996), among others. According to Demuth, some children's early words must be composed of a binary foot. This requirement is met when the word contains two syllables (as in baby) or two moras (one syllable with a long vowel or a final consonant). Sometimes children rely more heavily on the two-syllable solution, even when the adult target is monosyllabic. In such instances, words such as baby and cookie are produced in a manner that resembles adult usage, but words such as *juice* and drink might be produced as [duda] and [dina], respectively. Such productions can be treated as strictly phonologically based. However, the picture is less clear for languages in which bare stems occur less frequently than in English, and whose inflections are usually syllabic. For example, in Swedish, [bola] might be taken to be bollar 'balls' given the syllabic nature of the plural inflection. More likely would be the interpretation that [bina] is the infinitive springa 'to run' or the present tense springer 'runs' given the syllabic infinitive and present tense inflections in Swedish and the fact that a bare stem such as *spring* is used only as an imperative. Thus, filler syllables

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motivated by the same factor – the requirement that words be composed of a binary foot – might be treated as strictly phonological in one language and as protomorphological in another.

This possible overinterpretation seems even more likely when the language prohibits bare stems, as in Italian. A child's use of [gada] might be glossed as *guarda*, the third person singular form of 'look'. If it is noted that the child uses [gada] in contexts requiring first person singular and third person plural as well as third person singular, it might be assumed that *-a* merely has protomorphological status, serving as a default form for the child until the present tense inflection paradigm is learned. However, in truth, *-a* might not be a default inflection but an obligatory syllable for a minimal word.

A clearer case of a filler syllable with protomorphological status might be seen in the reduced prefixes that are sometimes seen in Hebrew child language. For example, the syllable [(i) in [(igalesh)] might be a stand-in prefix until the child learns the distinction between present *mitgalesh* 'he slides' and past *hitgalesh* 'he slid.'

The notion of filler might be applicable to higher levels of bound morpheme development. For example, along with learning verb inflectional distinctions for person and number, Italian-speaking children must learn how these inflections vary according to the verb's conjugation. The Italian third person plural inflection requires a strong-weak-weak syllable sequence for many words (as in *portano* 'they carry' and *aprono* 'they open'). The middle syllable is relatively brief and less salient than the final weak syllable. A filler syllable in this middle position could obliterate the conjugation distinction between verbs requiring *-ano* as the third plural inflection and those requiring *-ono*. An example might be [*apano*] for *aprono*. It might be the case that even after the person and number distinction of the inflections are worked out by the child, filler syllables continue to be used until conjugation details are learned.

Fillers and syntactic structure

As noted by Peters, protomorphological fillers may not yet have the status of distinct morphemes such as articles, copula forms, and prepositions. However, their mere presence seems to have implications for our assumptions about the children's syntactic structure. Some time ago, Pinker (1984) raised an important learnability problem. If children go through a period during which they have no function words, how do they avoid developing peculiar dead-end syntactic rules that generate utterances such as *Carol going London*? Pinker proposed that children order the constituents that are known, without a final commitment as to how the constituents are attached it the phrase structure tree. This is handled by assigning a node, whose mother is not known (due to the missing function word), to an ancestor node. The node can be removed from temporary custody when and if the child discovers the

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evidence that there should be a node intervening between the node in question and the ancestor node. In the above example, VP might have temporary custody of the NP *London* until the function of *to* is discovered, at which point it is assigned permanent custody to the intervening PP. It is doubtful that in such cases an empty, intervening node exists, waiting to be filled in when the relevant function word class is learned. This is because in some languages (e.g. those with case-marking affixes on nouns instead of prepositions), evidence for an intervening node is never discovered and the temporary custody arrangement becomes permanent. Thus, the structure in (1a) seems more likely. This suggests that the appearance of a filler syllable in a function word slot might represent the first overt evidence of a restructuring of the syntax, as in (1b).



If this interpretation is correct, filler syllables represent more than prosodic phenomena and morphemes-in-waiting. They might signal an expansion of syntactic structure.

Fillers and theories of language development and specific language impairment

To the extent that fillers represent morphemes in the process of being acquired, they can play an important role in evaluating current theories of both normal language development and specific language impairment (SLI). According to the optional infinitive hypothesis of Wexler (1994, 1998), young children acquiring languages such as English go through a stage during which tense and agreement are treated as optional. When children select the tense and agreement option, the correct morphemes are used (e.g. The boy jumped; The mouse is eating). However, when tense and agreement are not expressed, the children select a nonfinite form. Thus, in an utterance such as Mommy run fast, it is assumed that run is an infinitive. Because auxiliary and copula forms function primarily to express tense and agreement, no auxiliary or copula form appears when the nonfinite option is selected. The same is true for nonfinite complement clauses in adult usage. Examples are the clauses her swimming and her angry in We saw her swimming and I've seen her angry. The problem, of course, is that children sometimes select the nonfinite option in matrix clauses, which is prohibited in the adult grammar. Thus, alternations such as Chris watching TV and Chris is watching TV occur until tense and agreement become obligatory.

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Children with SLI have difficulties with grammatical morphology that are well documented (see Bishop, 1997; Leonard, 1998 for recent reviews). Among the most problematic morphemes for these children are function words and inflections pertaining to tense and agreement. Rice, Wexler, and their colleagues (Rice, Wexler & Cleave, 1995; Rice & Wexler, 1996; Rice, Wexler & Hershberger, 1998) have proposed that these children languish in the optional tense and agreement stage for a protracted period. For example, even when these children reach a level of mean utterance length at which normally developing children no longer treat tense and agreement forms as optional, children with SLI will continue to show optionality. Note that in both the case of normal language development and the case of specific language impairment, matrix clauses interpreted to be nonfinite should not contain filler syllables in slots usually reserved for finite auxiliary be and copula forms. For example, if children are found using bare verb stems in contexts such as Yesterday Tim work and Mom always read, it might be assumed that work and read are optional infinitives. Therefore, nonfinite options such as Mitch driving and Gus tall should also be expected, not utterances with filler syllables as in *Mitch* [a] driving and Gus [a] tall. If the latter occurred, there would be reason to doubt that nonfinite forms were actually intended by the child. It would seem, then, that the presence or absence of filler syllables in these contexts could constitute valuable evidence in the evaluation of this type of account.

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