Telegraphic Speech: Should we or shouldn't we? A summary of available research

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For decades, the field of speech language pathology has wrestled with the question of whether or not to use telegraphic speech with young children who have language impairments. It has become a hot topic amongst speech language pathologists here at The Hanen Centre® and has led to many interesting discussions. It is timely, then, that we take a closer look at the issue of telegraphic speech and not only examine the research, but the views of some of the experts in our field to answer the question, 'Should we advocate for the use of telegraphic speech in our clinical work with young children and their families?'

The following is a summary of the information we have reviewed on telegraphic speech – information that may help you make your own clinical decisions regarding this controversial topic.

What is telegraphic speech and how will you know if you are using it?

On the surface, this may appear to be a straightforward question. However, as I began to pay closer attention to the language models I use during interacttions with my own one year old daughter, I wasn't so sure. I noticed that I occasionally use incomplete sentences (e.g., when Matty was in the kitchen looking for her father and said 'Daddy?', I responded by pointing to the basement door and saying '…*in the basement*'). Does this count as telegraphic speech? I also became aware that, for a very short period of time when Matty was just beginning to produce single words, I used some nouns and verbs in isolation, typically - but not always - interspersed with longer utterances (e.g., when Matty raised her arms to be picked up, I said '*Up!*'). Was I using telegraphic speech and not realizing it?

According to Fey (2008), these types of adult utterances are not regarded as telegraphic. Not every adult utterance must be a complete sentence to be considered grammatical. Sentence fragments are often appropriate. Fey believes that even isolated nouns, adjectives and verbs can be regarded as grammatical in certain contexts with children at a very early stage in development. Adult utterances are regarded as telegraphic when they are simplified by removing obligatory grammatical markers and bound morphemes to the point of being ungrammatical (*Ibid*, 2008). For example, while Matty was looking for her father, if I had responded by saying '*Where Daddy?*', '*Daddy basement*', or '*Daddy in basement*' these responses would be considered telegraphic. Fey provides a simple way to determine if an utterance constitutes telegraphic speech; ask yourself '*would I ever say this to another adult?*'. Would you say, "*Eating*" (in response to 'what are you doing?') or "*In the cupboard*" in response to "Where is the cereal?". If so, the utterance in question is likely an acceptable grammatically complete form.

How does grammatical speech help children learn language?

With my interest in this topic piqued, I found myself eavesdropping on parents as they spoke to their children in the park (e.g., "*It's time to go home*") and in the grocery store (e.g., "*Put the cookies down!*") during all kinds of simple, everyday interactions. While my observations were by no means scientific, I quickly came to the conclusion that most caregivers do *not* use telegraphic speech with their young children. Like me, they use sentence fragments, the kind which Fey (2008) has identified as characteristic of those used in adult conversations. While parents appear to *simplify* the language that they use with their children, they do not typically violate grammatical structure. Studies on caregiver input to children support these observations. Of particular importance, then, is the literature that argues that well-formed grammatical language models have been proven to help typically developing children learn language. Why is this? What specific information do these language models contain that would make language learning easier? The answer is: **well-formed grammatical models provide important syntactic, morphologic and prosodic cues** (Bedore & Leonard, 1995).

The importance of syntactic, morphologic and prosodic cues

Bedore and Leonard (1995) propose that the syntactic, morphologic and prosodic cues found in complete grammatical language models help children decode linguistic boundaries as well as identify grammatical classes of words and possible meaning of words. For example, in the utterance "You're **eat**ing… the **cook**ie", there are certain prosodic cues such as pausing, intonation contours, weak-strong syllable patterns and word positioning that can assist a child in identifying which words are most important and what the possible meaning of those words is (*Ibid*, 1995). In this example, the word 'cookie' naturally stands out because it is significantly lengthened due to its position at the end of the sentence. Weak-strong syllable patterns can also highlight important

words for children. For example, the word "eating" stands out primarily because it follows the weakly stressed word, "you're." That is, the stressed syllable "eat" in the word 'eating' is highlighted simply because it is next to an unstressed syllable.

The *way* that adults speak to children creates certain prosodic patterns that can also offer information to make language learning easier. For example, when parents speak to their children, they often use a slower rate of speech with more pausing. Because pausing typically takes place at important linguistic boundaries, children can then use this information to help them decode language by identifying key words in an utterance. As a result, it would be easier for a child to understand utterances that include natural pauses such as "Your **shoes** (natural pause)… are **hiding** (natural pause). **They're hiding** (natural pause) ….*under the* **table** (natural pause)" versus utterances with minimal pauses such as "*If I look under the table, will I find your shoes?*". Similarly, researchers have suggested that because parents tend to use a higher pitch with more fluctuations when they speak to young children, these patterns not only help children decode language but serve to hold their attention and give them important information about affect – i.e. the feeling or emotion of their communicative partner (Bedore & Leonard, 1995).

However, it is not only prosodic patterns that help children crack the language code. Typically-developing children have been shown to use syntactic and morphological cues to identify grammatical classes of words (Fey, Long & Finestack, 2003). More specifically, they use these features to help them decipher whether or not a word is a noun or a verb. For example, it is easier for a child to determine that a word is a noun when it is associated with the article 'the' as in the grammatically complete phrase "*You're eating the cookie*" versus the telegraphic model "*Eat cookie*". Overall, it seems that typically developing children use a combination of prosodic patterns and grammatical cues found in adult language models to help them learn language. The logical question then becomes: if parents of typically

developing children use complete grammatical language – language that contains cues that help children crack the language code - why would we use telegraphic speech as part of our intervention for young children with language impairments? Given that telegraphic input strips speech of these important cues, wouldn't it then seem to deprive children of language learning opportunities?

What does the research say about telegraphic speech?

Historically, many treatment programs have included telegraphic speech as part of their intervention for young children with language impairments. These programs are typically recommended for children in the pre-linguistic, one-word and two-word stages of language development (Van Kleeck, Schwarz, Fey, Kaiser, Miller & Weitzman, 2010). The rationale for using telegraphic speech is to "eliminate potentially distracting elements" (Fey, Long & Finestack, 2003, p. 10), thereby making it easier for the child to understand and/or imitate. Unfortunately there are very few studies on this topic, particularly studies that have directly compared the effect of adult input using telegraphic speech versus grammatical input as part of a *language intervention* protocol on the language development of children with language impairments. Of the studies that do include clinical populations, many contain methodological shortcomings and are considered "weak by modern research standards" (Van Kleeck *et al.*, 2010).

What does the research say? Overall, in a review of the studies that have yielded statistically significant findings, those that examined children's language comprehension have typically favoured the use of grammatical models over shorter telegraphic input (Van Kleeck *et al.*, 2010). In these studies, children with typical language development who were asked to either point to pictures or follow commands performed more reliably when they were provided with grammatically well-formed language models. This would support the idea that typically developing children do use specific cues found in

grammatical input to decode and understand language.

Studies that have looked at the *intervention effects* of telegraphic versus grammatical input have typically found no differences between the two forms (Fraser, 1972; Jones, 1978; Loeb & Armstrong, 2001). However, one small study of 10 children, aged 5 – 13, with cognitive delays reported that the children who received telegraphic input (e.g., *ball on table*) *imitated* these target models more consistently than did children who heard grammatically well-formed models (e.g., *the ball is on the table*) (Willer, 1974). While the outcomes of this study seem to demonstrate the strongest support for the use of telegraphic input on children's *production* skills, the study's small sample size and weak validity do not provide unequivocal evidence for the use of telegraphic models in our clinical practice.

What do the experts say?

Given the limited research on this topic and the methodological weaknesses of this research (Van Kleeck et al., 2010), we naturally turn to the experts in our field to get their views on this debate. Our executive director, Elaine Weitzman, was asked to serve on a panel of experts at the 2007 ASHA Convention in Boston on this very topic. The panel, which included Anne van Kleeck, Marc Fey, Ann Kaiser and Jon Miller, subsequently collaborated on the above-mentioned article on telegraphic speech (Van Kleeck et al, 2010).

Even amongst these experts there is disagreement on whether or not to use telegraphic input with children with language impairments. Anne Kaiser, Professor of Special Education, Susan Gray Chair in Education and Human Development at Vanderbilt University, acknowledges the controversy surrounding the use of telegraphic speech, but argues that there are instances in which its use is appropriate and effective in early language intervention (Van Kleeck *et al.*, 2010). More specifically, she supports the use of telegraphic input to teach expressive vocabulary and two-word semantic relationships within

enhanced milieu teaching (EMT), which is a naturalistic early language intervention. Telegraphic speech is used in EMT for children who use single words or are beginning to transition to two-word combinations. It is used by a clinician to provide simple two-word models of early semantic-syntactic relations (e.g., agent + action "*Mommy go*") and to expand on a child's single word utterance (e.g., if a child says '*ball*', the clinician may expand by saying '*roll ball*') (*Ibid*, in press). It is also used as a means of prompting for imitation (e.g., a clinician may say '*Tell me what you want. Blow bubbles or play puzzle?*'). While Kaiser advocates for the use of telegraphic input for this specific population of language learners, she does not recommend using it all the time.

On the other hand, Marc Fey, a professor in the Department of Hearing and Speech at the University of Kansas Medical Center, argues against the use of telegraphic speech and even suggests that it could be detrimental to a child's language learning because it is based on language that is ungrammatical (Van Kleeck *et al.*, 2010). He states that most children with language impairment have significant difficulty learning to use appropriate syntax, particularly the production of grammatical morphemes (e.g., function words such as 'is', 'the', '-ing', etc.). Therefore, the use of telegraphic speech makes it harder for children to learn these morphemes because it strips these very markers from the language models that the children hear (Fey, 2008). He also argues that, because children use prosodic, morphologic and syntactic cues in well-formed grammatical models to decode language, telegraphic speech makes the task of language learning more difficult. Lastly, he states that when children's receptive language skills are greater than their production abilities – as in the case of children with specific language impairment – short telegraphic models may be inappropriate and may even degrade their receptive language development.

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What is Hanen's view on telegraphic speech?

For the purposes of this article, we will address telegraphic speech within the context of the *It Takes Two to Talk* Program. As you are probably aware, the use of telegraphic speech is not explicitly addressed in the *It Takes Two to Talk* parent guidebook (Pepper & Weitzman, 2004). Throughout the guidebook and the *It Takes Two to Talk* Program, it is consistently recommended that parents use "simple, clear language" (Pepper & Weitzman, 2004, p.40) during interactions with their children. However, the definition of this kind of language use may be inconsistent. While most of the speech balloons in the guidebook's illustrations show parents using grammatical input, some examples of telegraphic speech do exist (Van Kleeck *et al.*, 2010). Similarly, there are some examples of telegraphic speech in the parent videos for the *It Takes Two to Talk* Program. Given the convincing arguments presented above that advocate avoiding the use of telegraphic input, as well as the possible clinical advantages of using more grammatically complete language, **Hanen's recommendation is to consistently teach parents to use simplified, but well-formed, grammatical models.**

The 4Ss - *Say Less and Stress, Go Slow and Show*

How do we teach parents to use these language models within the existing *It Takes Two to Talk* strategies? The strategy that is most versatile in addressing the importance of simplified, grammatical input is *Highlight your Language – the 4Ss*. In session 4 of the *It Takes Two to Talk* program, parents learn that it is not only *what* they say that helps their child learn language, but *how* they say it (Pepper & Weitzman, 2004). They learn to use the 4Ss - "*Say Less and Stress, Go Slow and Show, Repeat, Repeat, Repeat*". The following is a breakdown of how the 4S's strategy can incorporate the expert's recommendations and help parents add prosodic and gram-

matical cues to their language models to faciletate their children's language learning:

Say Less

"Use short, simple sentences when you talk to your child" (e.g., *"The tea is very hot"*) (Pepper & Weitzman, 2004, p.93). Parents can be encouraged to say less by using simplified but grammatically complete language models. In so doing, they include the obligatory grammatical markers and bound morphemes that may provide their children with important cues to help them learn language. For example, children may detect that the word 'tea' is an important noun in the phrase "The tea is very hot", simply because it follows the article 'the'.

Stress:

"Make important words stand out" (e.g., *"The **tea...** is very **hot!**"*) (Pepper & Weitzman, 2004, p.93). Parents can be encouraged to use animation in their voice or even say the key words a little louder to make it easier for their children to understand and learn. By doing this, parents are applying the prosodic cues mentioned earlier, such as increased pitch, expanded intonational contours and weak-strong syllable patterns that may help their children detect important words in utterances. When parents use these prosodic patterns, they may also be able to hold their children's attention a little longer and possibly convey information about affect (i.e., the feeling or emotion of their communicative partner) (Bedore & Leonard, 1995).

Go Slow

"Slow down your speech when you talk.....pause slightly between your words" (e.g., *"The **tea....** is very **hot!**"*) (Pepper & Weitzman, 2004, p.94). Parents learn to reduce their rate of speech in a *natural* manner, primarily by pausing, to make it easier for their children to understand. In so doing, they are adding more prosodic cues to assist in their children's language learning. Natural pausing typically takes place at important linguistic boundaries and helps to highlight key words in utterances. So in the example *"The **tea** (natural pause)... is very **hot**"* (natural pause), pauses help the words *'tea'* and *'hot'* stand out, making the utterance easier for a child to understand.

Show

Use visual helpers so your child can see what you are talking about (e.g., a parent very quickly touches a tea cup when saying *"The **tea...** is very **hot!**"*). Parents learn to show, point, add actions, gestures, signs, facial expressions or even pictures to their language models to build their children's comprehension. By adding visual helpers to their simplified grammatical language models, they are facilitating both their children's receptive and expressive language skills.

Repeat, Repeat, Repeat!

"Repeat new words often and in different situations" (Pepper & Weitzman, 2004, p.96) (e.g., *"The **tea...** is very **hot!**"*. *It's too... **hot!** My tea is...**hot!**"*) This strategy includes the use of focused stimulation (Fey, Cleave, Long & Hughes, 1993). By repeating words often and in a natural manner, parents help their children understand, remember and eventually use words when they are ready.

Overall, encouraging parents to use each of the 4S's in combination helps to ensure that they include many of the prosodic and gram-

matical cues that may assist their children in language learning.

Hanen resources

While future revisions of the *It Takes Two to Talk* parent guidebook and program resources will more consistently reflect grammatically complete language models, some of these changes have already begun to occur. For example, in the revised Making Hanen Happen Leaders Guide (2007) and program slides DVD (2007), the strategy 'expand' is now defined as "imitate what your child says and add a few words to make his message more complete" (Conklin, Pepper, Weitzman & McDade, 2007, p.316). An illustration of this strategy on the new program slides DVD shows a child pointing to a faucet in the bathtub and saying '*on*', and the mother responding '*On...Turn the water on!*"

Such examples have begun to be updated to demonstrate simplified language models and expansions within the context of well-formed grammatical input.

In summary . . .

After a review of the research and some expert opinions, it seems that the issue of using tele-

graphic speech is not cut and dry. While much of the existing research is limited and methodologically weak, there appear to be many compelling arguments in favour of clinician's teaching parents to use simplified, but grammatically complete language models. Future revisions of the *It Takes Two to Talk* Program resources will directly reflect this philosophy. Of course, this also means that we, as clinicians, should use the same kind of simplified, grammatical speech in our own clinical work with children!

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