

**Which *It* Is It?:**

**The acquisition of referential and expletive *it***

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**ABSTRACT**

The purpose of this study was to determine the natural order of acquisition of the proform *it*, comparing deictic pronoun *it*, anaphoric pronoun *it*, and expletive *it*. Files from 4 children (Adam, Eve, Nina, Peter) ages 1;6 – 3;0 in the CHILDES database were coded for occurrences of NP *it* (*here it is*), and expletive *it* (*it's raining*). Occurrences of NP *it* were coded for whether they followed an overt discourse anaphor (anaphoric *it*) or not (deictic *it*). All children examined produce deictic and anaphoric pronoun *it* from the very first files, but do not produce expletive *it* until 2-7 months later. Following Inoue's (1991) lexical-semantic reanalysis account of the acquisition of expletive *there* after locative *there*, we propose that children acquire expletive *it* by reanalyzing referential pronoun *it* to include an expletive subtype. This reanalysis takes place when children realize that expletive *it* never co-occurs with any deictic/anaphoric referent.

## INTRODUCTION

Part of learning a language is learning its words. Some words, like concrete nouns, denote referents in the observable or tangible world. Children attend to objects from a young age (Spelke, 1988), and, after the naming explosion, they are quick to map novel labels onto concrete objects (Carey, 1978; Bates et al., 1994). In this, they may be guided by conceptual biases. For instance, Gentner's (1982) Natural Partitions Hypothesis claims that concrete and proper nouns are acquired before verbs because objects are conceptually simpler than events; the labels for objects (i.e. nouns) are therefore easier to learn. In other words, (certain) nouns have a particularly transparent semantic mapping to the perceptual-conceptual world.

However, in learning language, children must acquire not only referential lexical items, but also lexical items that have no referential properties, such as function words. In some cases, a particular phonological form may correspond to both a content and a function word. For example, *do* exists as both a main verb (*I will do the dishes*) and as an auxiliary verb (*Do you like beans?*). Such cases raise the following question for language acquisition: Do children acquire one lexical entry of a word before the other? If so, which meaning or syntactic category is acquired first? Does the first acquired lexical meaning of the word relate in any way to the acquisition of the second lexical meaning?

Like synonymy, lexical ambiguity poses a general problem for language learning, since it interferes with what would otherwise be a 1:1 mapping between words and meanings. To deal with the synonymy problem, researchers have suggested that children initially disallow synonyms. Clark's (1987) Principle of Contrast requires two words to contrast in meaning; Markman (1994) makes the even stronger claim that the meanings of different words must be mutually exclusive in the

initial stages of word learning. The fact that many words have multiple meanings or syntactic categories (a situation that includes, but is not limited to, homonymy) presents a potentially more serious problem: if a word can have more than one meaning, this introduces variability in the possible form-meaning mappings, which could impede lexical learning. Yet, children do learn the meanings of words. In the verb learning literature, it is assumed that children disallow ambiguity (Gleitman, 1990); otherwise, children would not be able to exploit a particular verb's appearance in multiple sentence frames to learn the meaning of the verb. That is, children should assume that *break* or *give* or *think* means roughly the same thing in all of its environments and occurrences, and should relax this requirement only after a basic meaning for the item has been stored in the lexicon.

Previous work on children's word learning strategies (including research on the problems of synonymy and ambiguity) has focused exclusively on the learning of content words (nouns, verbs, adjectives). In this paper, we focus on the special case of ambiguity that crosses the content-function word divide. In particular, we investigate the acquisition of expletives, specifically expletive vs. referential pronoun *it*. *It* presents a particularly interesting case of content vs. function word ambiguity: expletive *it* is a function word in the sense that it is an NP that cannot bear a theta role, and it is obligatorily null in many languages, such as Italian. Yet unlike the ambiguity between auxiliary and main verb *do*, expletive *it* has the same syntactic category as a referential NP, and it occupies the same syntactic position in the structure. Thus, while positional cues could help a learner distinguish main verb *do* from auxiliary *do* (since auxiliary *do* inverts with the subject in questions, while main verb *do* does not invert), positional information by itself will not distinguish expletive from pronoun *it*.

Expletive *it* is of special interest for lexical acquisition as it is required not only for such constructions as weather and time predicates (*It's raining; It's four o'clock*), but also for extraposition structures (*It is obvious that this research is important*), where it appears to 'refer' to a whole clause (cf. *That this research is important is obvious*). Furthermore, expletives likely play a role in children's acquisition of raising verbs (e.g. *seem*). Previous work has pointed to the importance of expletives in distinguishing raising verbs from non-raising verbs (Becker, 2005).

This paper is organized as follows: first we will give some background on the syntax of expletives in adult grammar. Then we will discuss the results of one study for children's acquisition of expletive vs. locative *there*. In light of these results, we will examine children's acquisition of expletive *it*, and we will show that *it* follows a different developmental trajectory from *there*. We will present an account of why expletive *it* follows the trajectory it does, and consider the ramifications of the data on extant literature. Finally, we will close with a discussion of several factors that complicate the acquisition of expletives, and suggest directions for further work in this area.

## BACKGROUND

### *The syntax of expletives*

There is a rich literature on the syntactic properties of expletives in adult grammar (among many others, see Milsark, 1974; Stowell, 1979; Chomsky, 1991). This literature has focused on the syntactic properties of expletives in general, as well as similarities and differences between *it* and *there*. Both expletives are non-referential and normally fill a subject argument position for a verb that does not

project a theta role to this position. Common types of expletive constructions include existential sentences containing *there*, like those in (1), and weather and time predicates containing *it*, like the sentences in (2).

- (1) a. There are two boys in the yard.  
       b. There is a boy in the yard.
- (2) a. It's raining.  
       b. It's 5 o'clock.

The traditional view of existential *there* constructions, advocated by Milsark (1974), holds that an existential sentence is formed by a transformational rule which moves the subject NP in a sentence like (3), to the right, and inserts *there* into the vacated subject position of the main clause.

- (3) Two boys are in the yard.

Thus, sentence (1a) would be derived from sentence (3).

Such an analysis not only explains similarities in meaning between the two sentences but also accounts for the fact that the verb in existential sentences agrees with the postverbal associate NP (this term from Chomsky, 1991) (in (1), *two boys*) rather than with the ostensibly singular expletive subject, *there*. In other words, when the associate is plural, the copula shows plural agreement, and when the associate is singular, the copula shows singular agreement.

Dresher and Hornstein (1979) posit that a similar transformational rule is responsible for extraposition constructions, as in sentence (4).

- (4) It is obvious that the boys are friends.

The extraposition rule moves a CP appearing in subject position to the right of the predicate and inserts *it* into subject position, such that (4) is transformationally derived from (5).

- (5) That the boys are friends is obvious.

However, McCloskey (1991) points out that extraposition cannot be the result of a transformational rule, and he notes that while expletive *there* and its associate appear to be linked so as to cause verbal agreement with the associate, expletive *it* and a following CP do not appear to be linked in this way. As evidence, he first shows that when two CPs that indicate contradictory or incompatible events precede the verb *be*, *be* shows plural agreement, as in (6).

- (6) That Sarah will finish her dissertation and that she will drop out of school are equally likely.

However, when these CPs are extraposed, only singular agreement is allowed, as in (7).

- (7) It is/\*are equally likely that Sarah will finish her dissertation and that she will drop out of school.

Thus, there is a crucial difference in agreement between constructions containing expletive *it* and those containing expletive *there*.

A very different account of the differences between *it* and *there* focuses on the lexical-syntactic characteristics of the expletives. One notable example of this is the idea that *it* and *there* differ in their phi (agreement)-features. Hazout (2004) argues that the only difference between the English expletives is a difference in subcategorization frames due to these phi-features. He observes that expletive *there* must co-occur with a postverbal NP, as in (8), while expletive *it* may appear with anything but a postverbal NP, as in (9).<sup>i</sup>

- (8) There \*is snowing/\*smells like snow/\*is all white outside/is a snowman in the yard.

- (9) It is snowing/smells like snow/is all white outside/\*is a snowman in the yard.

Hazout claims that this effect is due to the fact that expletive *there* is lexically underspecified with respect to number phi-features, and must therefore co-occur with an NP, since NPs have phi-features. The number feature of the NP can percolate up to check the number feature on the verb, giving rise to the agreement facts we have seen. Meanwhile, expletive *it* is fully lexically specified for 3<sup>rd</sup> singular phi-features, causing singular agreement to always be marked on the verb. An NP in the postcopular predicate would contribute an extra number feature that would not be checked, yielding ungrammaticality.

In short, while both expletives serve a similar syntactic purpose, they appear to have distinct lexical-syntactic characteristics.

#### *Acquisition of expletives*

While expletive constructions in adult grammar have enjoyed much attention, considerably less attention has been paid to the acquisition of expletives in language learners. One exception to this is Shafer and Roeper (2000), who performed a comprehensive study on the acquisition of locative (deictic) vs. expletive *there*. Examining the files of 9 children in the CHILDES database (MacWhinney & Snow, 1985), they found that deictic-locative pronoun *there*, illustrated in (10), was acquired first, followed by expletive *there*, as in (11).

- (10) that Mom nose right there (Eve 1;9)

- (11) there no squirrels (Eve 1;11)

However, anaphoric pronoun *there*, or locative *there* with an overt discourse anaphor, shown in (12), did not appear until after expletive *there* was acquired.

(12) I sticked it on these wood. Stays on there (Naomi 2;11)

Shafer and Roeper's data are presented in Table 1.

### TABLE 1 HERE

Shafer and Roeper explain this order of acquisition by saying that expletive *there* acts as a logical trigger for anaphoric *there*, such that the anaphor cannot be acquired until the expletive has been acquired. Their analysis hinges on two claims. First, a grammatical element with variable reference (i.e. anaphoric *there*) should be a subcase of a grammatical element with no reference (i.e. expletive *there*). Second, the local syntactic chain between an expletive and its associate (i.e. the chain between *there* and *a book* in the sentence *there is a book on the desk*) is syntactically simpler than the non-local (i.e. extra-clausal) relation between an anaphor and its discourse referent. Furthermore, Shafer and Roeper predict a similar process of acquisition for other discourse anaphors. Importantly, they predict that anaphoric *it* should not be acquired until after expletive *it* is acquired.

However, evidence from the syntactic literature leads us to believe that this prediction is incorrect. Since the expletives *it* and *there* have distinct syntactic properties, we predict that *it* and *there* should follow different developmental trajectories. Specifically, we follow Gentner's Natural Partitions Hypothesis in assuming that tangible objects will be easier to conceptualize, and therefore that their labels (viz. nouns) will be acquired earlier, as compared to non-referential words. Accordingly, we predict that all types of referential pronoun *it*, including the anaphor, should be acquired before expletive *it*.

### PROCEDURE

To test this prediction, we examined 28 files from 4 children in the CHILDES database: Adam and Eve (Brown, 1973), Nina (Suppes, 1974), and Peter (Bloom, 1970). The files included eight files each from Adam, Eve, and Nina, and four files from Peter. For the first three children, the first two available files for each child were coded, followed by two files each from (roughly) three months, six months, and nine months later. Because Peter's files contain twice as much data as the other children's files, his first single available file was coded, followed by one file each from three, six, and nine months later. The range of ages and MLUs of the children examined is given in Table 2.

### TABLE 2 HERE

The files were coded for occurrences of *it*. Two distinct types of *it* were identified, namely NP *it* and expletive *it*, as exemplified in (13-14)<sup>ii</sup>. Occurrences of *it* were further coded as to whether they appeared in subject or object position in the sentence.

(13) NP *it*: *here it is* (subject); *find it* (object)

(14) Expletive *it*: *it's fourteen o'clock* (subject); *I like it dark* (object)

The files were also examined for null uses of expletive subject *it*, in other words, obligatory uses of expletive *it* that were omitted. An occurrence was considered obligatory if the sentence included a weather or time predicate, which requires an expletive subject<sup>iii</sup>.

Utterances were omitted from the coding process if they included unintelligible words, or if the syntactic category of *it* was totally irretrievable from context. These discarded utterances constituted only 3.1% of the total number of utterances examined, including discarded (49), null (193), and overt (1336) uses.

As is clear in Figure 1, which conflates all occurrences over time for each child, NP *it* is by far the most common type of *it* used overall, and it occurs especially frequently in object position.

**FIGURE 1 HERE**

**RESULTS**

*Referential (deictic) vs. expletive IT*

Looking at the children's data over time, we found that referential pronoun *it* was used by all children beginning in the earliest files examined. In contrast, expletive *it* was not used until the 4<sup>th</sup> or 5<sup>th</sup> file examined for each child, 3-9 months later. Table 3 shows the percent of omissions versus productions of expletive *it* for each child over time. Importantly, null (omitted) expletive *it* appears in the files for Adam, Eve, and Nina before overt expletive *it* appears, indicating that the children do not have productive use of the expletive at this earlier stage. (The fact that we fail to see Peter omit expletive *it* before he produces it is likely an artifact of the smaller number of data points for him.)

**TABLE 3 HERE**

*Anaphoric vs. deictic IT*

In order to verify our prediction that anaphoric pronoun *it* is acquired earlier than expletive *it*, we coded each occurrence of NP *it* for whether it followed an overt discourse anaphor or not. For this first stage of coding, any use of *it* that referred to an object previously mentioned in the discourse was considered to be anaphoric. More precisely, a use was considered anaphoric if it occurred after any linguistic

reference to an object whatsoever, including references such as *it*, *that*, *this one*, *the red one*, etc.

Table 4 shows the total number of overt (referential) NP *it* uses per child in all files, total number of anaphoric uses of NP *it*, and the total percentage of anaphoric use (as well as the lowest and highest percentage use across individual files). This total percentage is very high, indicating that children have acquired the use of referential pronoun *it* as a discourse anaphor. Note that values for percent anaphoric usage for individual files very closely approximate the mean for all files.

**TABLE 4 HERE**

To show that children's use of anaphoric *it* is not only high in later files but also at earlier data points, in Table 5 we present their use of anaphoric *it* in the first file examined. Note that the lowest percent use in the range of individual files presented in Table 4 is not representative of the use in the EARLIEST file.

**TABLE 5 HERE**

However, with a definition of 'anaphoric' which includes discourse referents like *that*, *this one*, *the red one*, etc. (which are themselves deictic), it might be argued that the child is using *it* to pick out an object in the environment rather than to replace a linguistic object in the discourse. In order to address this argument, we coded NP *its* a second time with stricter criteria. This time, NP *it* was only considered to be anaphoric if it occurred as the immediate replacement for a full NP in the discourse. This method of coding, then, excludes from being anaphoric the NP *its* that occurred after referents like *that*, *this one*, *the red one*, etc., which do not contain a full concrete NP but rather contain a demonstrative or the pronoun *one*. This also excludes those *its* which occurred as the second (or later) reference to a previously mentioned NP in

the discourse. For example, under the present criteria, the first *it* in the exchange in (15) would be coded as ‘anaphoric’ while the second *it* would not be.

- (15) A: Do you see the ball?  
 B: *It*'s right here. (✓)  
 A: Give *it* to me. (×)

This set of coding criteria is likely to underestimate the linguistic ability of the child. However, this strict manner of coding was necessary in order to compare our results with those of Shafer and Roeper, who used similar criteria, and to illustrate beyond a shadow of a doubt that the children had acquired the use of anaphoric *it*. To further bolster the argument that the children in this study understood the grammatical function of *it* as an anaphor, we also tallied the total number of overt NP *its* which immediately replaced a full NP PRODUCED BY THE CHILD HERSELF. We considered this to be the most precise estimate of which NP *it* forms were truly anaphoric for the child speaker; if she both indicated an object linguistically and then replaced it with an anaphor, the mechanism of anaphoric replacement must already be mastered.

Table 6 gives the number (and percentage) of the total NP *its* that (a) immediately followed a full NP produced by any speaker in the discourse, and those that (b) immediately followed a full NP produced by the child herself. As before, the range of percentages seen across individual files is also given.

#### TABLE 6 HERE

As under the first coding criteria, values for the children's percent anaphoric usage for individual files cluster near the mean for all files. Moreover, the children produced anaphoric *it* at about the same percentage across time beginning with the earliest files: Table 7 gives the data from the first file examined for each child. Once again, the lowest percent usage for individual files, presented in Table 6, does not appear in the earliest files for the children.

**TABLE 7 HERE**

The percentages are indeed lower here than under the first coding run, which is to be expected under the stricter coding criteria. It is important to keep in mind that these lower means do not indicate partial obedience to any obligatory grammatical structure. Rather, they indicate that children have a variety of ways to refer to objects in the environment around them, only one of which is direct anaphoric replacement. This observation is supported by Wagner, Kako, Amick, Carrigan, and Liu (to appear), who note that given a handful of referential options, even deixis can be “a grammatically sanctioned phenomenon” for both adults and children.

Indeed, it is the non-obligatory nature of anaphors which make observing (and quantifying) their mastery most difficult. When a child (or an adult) wishes to refer to an object in the environment, she has a host of options at her disposal, including anaphors, demonstratives, lexical NPs, and deixis. Since all of these options are grammatical, and the choice among them is nearly always a personal or stylistic one, it is difficult to measure the use of discourse anaphors in a strict statistical way.

This being the case, in order to determine whether the percentages in Table 5 are within a range where it is reasonable to claim that the children are using *it* as a discourse anaphor, we examined adults’ production of anaphoric *it* as defined by the second criteria. We coded all adult occurrences of referential *it* in the last file examined for each child (i.e. adam21, eve20, nina33, and peter15) for whether each use occurred as the immediate anaphoric replacement for a full NP in the discourse, and for a full NP produced by the adult herself. Out of 540 total adult tokens of referential NP *it*, 146 (27%) were the immediate replacement to any full NP in the discourse, and 72 of these (13.3%) replaced a full NP produced by the same speaker. For comparison, the four children examined produce 1173 tokens of referential NP *it*,

with 374 (31.9%) of these being direct replacements to any full NP, and 182 of these (15.5%) being direct replacements to full NPs in their own speech. As such, it appears that children are using anaphoric *it* at adult-like frequencies OR GREATER from this very early age. Variation in anaphoric usage between files should not be attributed to any dearth of adultlike grammaticality, but rather to natural variations in speech given the referential options.

#### *Expletive vs. referential IT*

Table 8 shows the age at the first documented uses for deictic/anaphoric pronoun *it* and for expletive *it* for each child, as found in the files under consideration. Recall that even under the stricter coding criteria, anaphoric *it* was found alongside deictic *it* from the earliest available files.

#### **TABLE 8 HERE**

#### *How early does expletive IT appear?*

In order to find the earliest recorded occurrence of expletive *it* for each child, files in the CHILDES database were examined one at a time, beginning with those listed in Table 8 in which expletive *it* was first observed and working backwards. For all the children but Adam, at least one occurrence of expletive *it* was found in an earlier file. Table 9 lists the exact age of the children at the first documented use of expletive *it*, as found by this method, as well as the age of the children at the first documented use of deictic and anaphoric *it* (i.e., the age in the earliest files in the database). For the children examined, expletive *it* appears 2-7 months after deictic and anaphoric *it*.

#### **TABLE 9 HERE**

For comparison with Shafer and Roeper's (2000) study, the ages of the children (minus Nina, whose data were not used by Shafer and Roeper) at the first occurrences of deictic, expletive, and anaphoric *there* are presented in Table 10 (partially repeated from Table 1). These data come from Shafer and Roeper's (4).

#### TABLE 10 HERE

It is clear that while expletive *there* appears to be acquired before anaphoric *there*, the opposite pattern of acquisition is observed with *it*; anaphoric *it* is acquired before expletive *it*.

The data presented here strongly indicate that children are productively using anaphoric *it* from the earliest files available, which refutes the hypothesis made by Shafer and Roeper and supports the current hypothesis that referential items, whether anaphorically linked to a discourse element or not, should be acquired before expletive items.

### DISCUSSION

#### *The appearance of expletive IT*

How, then, can we account for the appearance of expletive *it* at all? We appeal to Inoue's (1991) analysis of children's acquisition of expletive *there* after locative *there*. Although Inoue does not distinguish deictic from anaphoric *there*, he posits that the acquisition of expletive *there* after locative *there* is a result of weakening the locative meaning of *there* in sentences like *There is a polar bear in the kitchen* and reanalyzing it as an expletive subject. This reanalysis takes place once the child realizes that two locative phrases may not co-occur in the same sentence, as illustrated in (16).

(16) \*A polar bear is in the kitchen in the bathroom.

Two locatives may only co-occur if they are hierarchically arranged, as in *A book is on the table in the kitchen*.

We follow Inoue in proposing that the emergence of expletive *it* is a result of lexical-semantic reanalysis dependent upon the child's understanding of *it* as a pronoun that is used with variable reference, both as a deictic term whose referent is retrievable from context, and as an anaphoric pronoun, whose referent is retrievable from the conversation, be that from the child's own speech or from that of the child's interlocutor. However, with the expletive, no referent can be found, since the expletive is non-referential. Because no referent ever appears in conjunction with the expletive in phrases like *it's cold* or *it's 5 o'clock*, the child is forced to reanalyze the lexeme *it* to include a subtype EXPLETIVE SUBJECT which is completely bleached of any referential meaning. This, in turn, will allow the child to entertain the option that a predicate may not project a theta role into its subject position, widening the child's grammatical options. As to what triggers this shift, we appeal to the difference, widely assumed, between 'input' and 'intake' (White, 1982), leaving for future work a more thorough answer to the question of exactly how that shift takes place.

It is therefore crucial for the acquisition of expletive *it* that the child first have acquired the homophonous semantically contentful pronoun.

#### *Alternative accounts*

The most plausible alternative account for the acquisition of expletive *it* after the referential pronoun is based on the relative frequencies of the different forms of *it* in the input. Such an argument would claim that tokens of anaphoric and deictic *it* are more frequent in the input than tokens of expletive *it*; thus, the child receives more

exposure to the former at a younger age and acquires them first<sup>iv</sup>. For example, Newport, Gleitman, and Gleitman (1977) have provided indications that for certain grammatical items, such as auxiliary verbs, caretaker input has some influence on the order of acquisition in child speech. We do not know at present whether or not this is true of expletives.

However, although frequency is always likely to have some influence, an explanation based purely on input frequency cannot be the whole story. While referential pronoun *it* may appear in the same syntactic frame as a full NP, expletive *it* fills a syntactic slot that cannot otherwise be filled. This means that in non-Null Subject languages, in the frames in which the expletive MAY occur, it in fact MUST occur. The upshot is that a child will hear expletive *it* proportionally more often than referential pronoun *it*, which can occur in the same syntactic slot as a full NP. In this way, frequency cannot be the sole guiding force in the acquisition of the expletive.

Another alternative account of the development of expletives comes from work by Hyams (1986). Hyams posits that the lack of expletives in early English is a result of the default setting of AG=PRO (the ‘pro-drop’ parameter), which licenses null subjects. She argues that the appearance of the expletives should coincide with a child using significantly more overt subjects in her speech. To test this hypothesis, we examined the file in which expletive *it* first appears for each child, and the file immediately preceding it. The first 50 completely intelligible utterances for each file (minus imperatives) were examined for overt subjects. If Hyams’s prediction is correct, there should be a large difference between the percent of overt subjects in the two files. However, the appearance of expletive *it* does not appear to correlate positively with a significant increase in overt subject usage, as indicated in Table 11. With the exception of Adam (whose overt subject usage at the appearance of

expletive *it* is still quite low, although it has nearly doubled), this prediction does not seem to be borne out.

### TABLE 11 HERE

Even if the appearance of expletive *it* had coincided with a drastic rise in overt subject use, we would still be left without a detailed account of how the child incorporates either a semantically void NP into her lexicon or a predicate which projects no subject theta role into her grammar. This exact account represents a strength of the current analysis.

### CONCLUSION

The research presented here contributes to our understanding of how different lexical items might be acquired, in particular in cases where an item is homophonous between being a content and a function word.

The data we presented have ramifications not only for a study of the relative order of acquisition among deictic, anaphoric, and expletive *it*, but also for Shafer and Roeper's original predictions and findings, and for adult syntactic accounts of expletives in English.

#### *Revisiting Shafer and Roeper (2000)*

Shafer and Roeper posit that the acquisition of expletive *there* before the corresponding anaphor “suggests some link between free variables (and assignment functions) and the absence of reference” (2000: 630) and predict a similar acquisition process for other discourse anaphors, including pronouns (*it, that*), temporals (*then*), and ellipsis (*so*). They close with the following:

The outstanding question is whether acquisition of expletive *there*, particularly the associate relation, triggers all discourse anaphors (*it/s/he, that, then*). Alternatively,

in each case, interpretation as a discourse anaphor is only possible once a completely non-referential, functional interpretation is acquired. In this case we predict a number of acquisition sequences that are not directly connected: the expletive *there* before the anaphoric *there*; pleonastic *it* before anaphoric *it*; complementizer *that* before anaphoric *that*, and temporal complementizer *then* before anaphoric *then*. If the pattern repeats itself, then our claims about abstract triggers are decisively supported. (2000: 631)

As we have seen, however, the pattern observed with *there* does NOT repeat itself with *it*. This is likely due to the previously noted syntactic differences between the expletives. The logical trigger hypothesis as such is not supported by the data.

With the logical trigger hypothesis failing to find support in the pattern of acquisition between anaphoric and expletive *it*, it might be wise to give consideration to other possible explanations for the pattern observed with expletive and anaphoric *there*. Namely, we propose that Inoue's (1991) reanalysis account for expletive *there* should be positively reconsidered in light of the data.

Shafer and Roeper mention, as an alternative to the logical trigger, the possibility that the acquisition of expletive *there* triggers ALL discourse anaphors. We tested this hypothesis by comparing the ages given by Shafer and Roeper for the first appearance of expletive *there* (from their (4)) with the ages of the children in the first files they used anaphoric *it* (i.e. the first files available). These data appear in Table 12 below. As is clear upon quick examination, Shafer and Roeper's secondary prediction about logical triggers is not borne out.

#### TABLE 12 HERE

Across the board, children use anaphoric *it* before acquiring expletive *there*. Thus, it cannot be the case that the acquisition of the structure which contains expletive *there* triggers all discourse anaphors. This casts further doubt on the logical trigger hypothesis.

*Implications for adult syntactic accounts*

Earlier, we contrasted the syntax of the English expletives *it* and *there* in adult grammar, including the facts that (a) *there* must appear with a postverbal NP, while *it* may appear with anything but an NP, and (b) in expletive constructions including *there*, the verb shows agreement with the associate, while no such agreement occurs in constructions with *it*.

The data from child acquisition, which show distinct trajectories of acquisition for each expletive, lend support to the syntactic observations about the differences in the expletives. Crucially, the acquisition data indicate several important patterns in the expletives' acquisition. Namely, the expletives are not acquired at the same time, nor do they appear to be acquired in a uniform sequence across all children examined. Instead, it seems that each expletive is acquired independently of the other (although both are acquired by the children examined within 4 months; see Table 13 below). Furthermore, when considered as homophonous elements in two tripartite groups of deictic, anaphoric, and expletive items, the sequence of acquisition within each group is not identical for *it* and *there*.

When two lexical elements have different subcategorization features, phi-features, and the like, we should not be surprised to see them manifest separate trajectories in first language acquisition. In this way, different patterns of acquisition for expletive *it* and expletive *there* are predicted by (and serve as evidence to support) claims made in the adult syntactic literature about differences between the expletives.

### COMPLICATING FACTORS FOR ACQUISITION

Several issues arise when we consider colloquial allowances surrounding the English expletives. For example, some colloquial uses (*Time for bed*) indicate that

expletive *it* is optional, even in non-Null Subject languages like English. Other colloquialisms (*There's some dogs outside*) do not appear to require number agreement between the copula and the associate NP. Finally, some set English phrases (*It's for you*) include occurrences of *it* which are ambiguous between referential and expletive uses. All of these allowances make the input for language learners more complicated to analyze.

*Might expletives be unnecessary?*

As noted above, in colloquial English, some phrases, such as the examples in (17), allow a bare predicate to appear without expletive *it*, which is usually required.

- (17) a. Time for bed.  
 b. Cold out there, huh?  
 c. Your turn.

Note that these colloquialisms are stripped not only of the expletive but also of the copula, and that the same phrase containing the copula but no expletive is ungrammatical.

- (18) a. \*Is time for bed.  
 b. \*Is cold out there, huh?  
 c. \*Is your turn.

For comparison, pro-drop languages like Italian show agreement on the verb but no overt expletive in these constructions:

- (19) a. *pro* piove  
       pro rain-3sg  
       ‘It is raining’  
 b. *pro* fa caldo

pro make-3sg hot

‘It’s hot’

The appearance of these phrases in colloquial English is likely to be a complicating factor in the acquisition of the expletive, and, possibly, also in the acquisition of the correct pro-drop parameter. While we will not pursue this issue in detail here, we will speculate that the lack of input like that in (18), i.e. with a copula but no expletive, is likely to be necessary for the child to conclude that the language is not pro-drop. However, the positive evidence in (17) is certain to make the child’s learning task more complicated.

*Implications for Hazout (2004)*

Recall that Hazout (2004) claims that the only difference between expletive constructions containing *there* and those containing *it* is that expletive *there* is underspecified for phi-features, while *it* is specified for 3<sup>rd</sup> singular.

Since *it* thus functions like all other NP subjects and does not require any new syntactic structures or feature movements to be implemented, we might expect constructions including expletive *it* to be acquired robustly by children before those containing expletive *there*. However, this prediction is not borne out in the data; some children acquire expletive *it* before expletive *there*, while others manifest the opposite order of acquisition, as seen in Table 13.

**TABLE 13 HERE**

One possible reason for this lies in the fact that in colloquial English, the following structure, containing a contractible copula with a plural postverbal NP, is grammatical.

(20) There’s some dogs outside.

Meanwhile, the fully expanded verb remains ungrammatical, as expected.

(21) \*There is some dogs outside.

As a preliminary hypothesis, it appears possible that the colloquial allowance in (20) is leading children towards an alternate analysis of *there*, in which its phi-features mimic those of *it*, since in (20), *there* appears to be fully specified as 3<sup>rd</sup> singular.

If children entertain the hypothesis that *there* has 3<sup>rd</sup> singular phi-features, a major structural and subcategorizational difference between the two expletives would be obliterated, and *there*, like *it*, would function like any other NP subject. In this case, it would be difficult to make a prediction as to whether expletive *it* or expletive *there* would be acquired first.

At the very least, it seems reasonable to posit that the colloquial contracted singular form *there's* – as with the null-expletive forms in (18) – is a further complicating factor in the task of learning the structure of existential sentences.

#### *Where to draw the line on referentiality*

The acquisition of expletive versus referential *it* is complicated by another issue: namely, where to draw the line between them. As discussed above, utterances from the data collected were discarded when it was impossible to determine to which syntactic category the *it* appearing there belonged. Some acceptable adult uses of *it* are similarly difficult to categorize, as they fall into a fuzzy area between referential and non-referential. Consider the utterance in (22), which is used by Peter (2;6.14).

(22) It's for you.

This utterance, used to encourage the interlocutor to answer the telephone, includes an *it* that is difficult to classify. One possibility is to assume that this *it* is a deictic (and thus referential) pronoun, either because the speaker hands the phone to the

interlocutor while uttering it, or else because both have heard the phone ring, thus leaving the referent obvious. (The referent, in this case, would be ‘the phone’ or perhaps ‘the phone call’.)

However, *It’s for you* has come to be a set phrase; even without the interlocutor having heard the phone ring, she is unlikely to respond with, *WHAT’S for me?* In this way, *It’s for you* comes to resemble *It’s your turn* in some way, engendering the possibility that the *it* used here is actually an expletive.

The issue at stake is one of learnability. It may in fact prove incorrect to analyze *it* as having two homophonous but independent forms, one referential, one non-referential. Instead, in light of such ambiguous structures as (22), it may be the case that *it* is a single lexical item which may be used in a spectrum of ways, with true referential uses (*it is heavy*) and true expletive uses (*it’s raining*) falling at the extremes. On such a spectrum, the most referential uses of *it* are semantically contentful, true expletive uses are semantically bleached, and falling in the middle would be uses of *it* that replace VPs (*I did it*), CPs (*It bothers me that John left*) and ambiguous cases (*It’s for you*). Future work might investigate whether a one-*it* or a two-*it* story better accounts for the data, and whether the CP *it* in extraposition structures, which may or may not ‘refer’ to a clause, has some effect for language learners on delineation among the uses or types of *it*.

### FURTHER DIRECTIONS

This study leaves several questions unanswered, including, most notably, what the picture for crosslinguistic expletive acquisition might be. Further research should explore whether the acquisition of referential and expletive pronouns in other

languages with two expletives, such as French (*il* and *y*), mirrors the acquisition picture we find occurring with English-acquiring children, or whether it differs, and if so, how. Similarly, we must explore what trajectory acquisition follows in languages like German, in which a single expletive (*es*) is used for what would be distinct constructions using *it* and *there* in English. It should be explored whether the expletive in such a language appears in constructions across the board, or comes in piecemeal, with some constructions appearing before others.

As indicated above, future work should also examine the role of conflicting colloquial adult input and should determine the extent to which such input may or may not temporarily derail children's correct analyses of the expletives.

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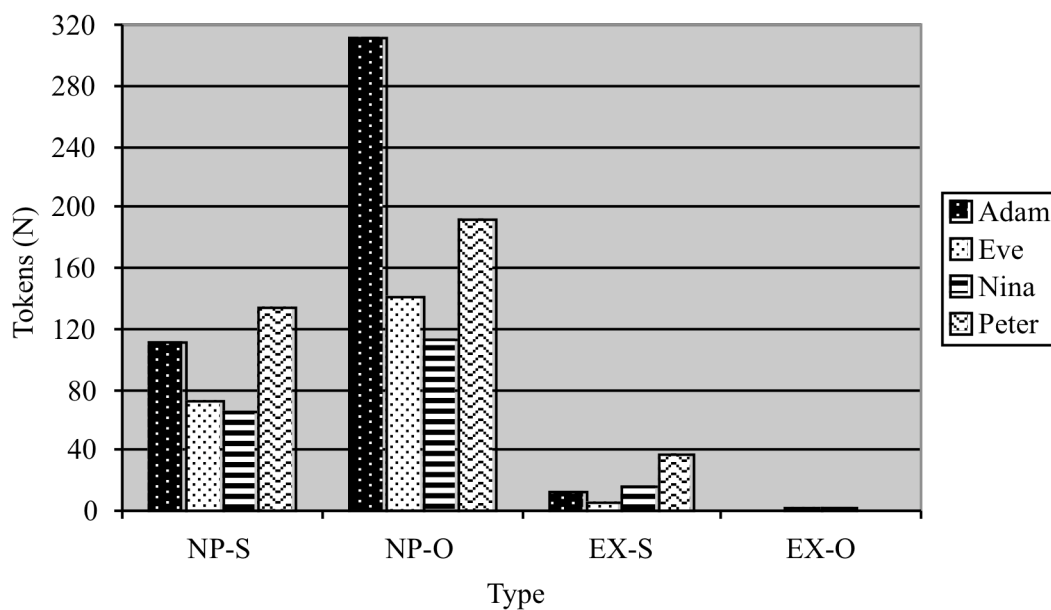
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**TABLE 1: First occurrences of deictic, expletive, and anaphoric *there***

Name	File Range	Deictic	Expletive	Anaphoric
May	0;11-0;11	-	-	-
June	1;3-1;9	1;6	-	-
Naomi	1;3-5;1	1;8	2;8	2;11
Eve	1;6-2;3	1;6	1;10	2;2
Peter	1;9-3;1	1;9	2;3	2;4
April	1;10-2;11	1;10	2;9	2;10
Mark	2;1-4;3	2;1	3;4	3;10
Adam	2;3-4;10	2;3	3;5	3;0
			2;10 AAE <i>it</i>	
Sarah	2;3-5;1	2;3	3;1	3;5

**TABLE 2: Children's ages and MLUs for first and last files examined**

Child	First Age	First MLU	Last Age	Last MLU
Adam	2;3	1.92	3;0	3.26
Eve	1;6	1.47	2;3	3.41
Nina	1;11	1.66	2;9	2.03
Peter	1;9	1.19	2;6	3.89

**FIGURE 1: Total uses of all types of *it* (files collapsed within children)**

Child	NP-S	NP-O	EX-S	EX-O
Adam	110	312	13	0
Eve	72	140	5	2
Nina	65	112	15	2
Peter	134	192	37	0

**TABLE 3: Productions and omissions of expletive *it* in obligatory contexts**

Child	File	Production % (N)	Omission % (N)
Adam	adam01	0 (0)	100 (4)
	adam02	*	*
	adam07	*	*
	adam08	100 (1)	0 (0)
	adam13	0 (0)	100 (3)
	adam14	10 (1)	90 (9)
	adam20	83.3 (10)	16.7 (2)
	adam21	100 (1)	0 (0)
Eve	eve01	*	*
	eve02	*	*
	eve06	*	*
	eve07	0 (0)	100 (4)
	eve13	60 (3)	40 (2)
	eve14	100 (2)	0 (0)
	eve19	*	*
	eve20	*	*
Nina	nina01	*	*
	nina02	*	*
	nina13	0 (0)	100 (4)
	nina14	100 (11)	0 (0)
	nina27	*	*
	nina28	*	*
	nina32	100 (1)	0 (0)
	nina33	100 (3)	0 (0)
Peter	peter01	*	*
	peter06	*	*
	peter10	*	*
	peter15	86 (37)	14 (6)

\* No obligatory contexts

**TABLE 4: Children's production of anaphoric *it*, first criteria**

Child	Overt NP <i>it</i> (N)	Total Anaphoric (N)	Percent Anaphoric (Range in files)
Adam	422	335	79.4 (62.0 – 90.0)
Eve	212	172	81.1 (44.4 – 93.3)
Nina	177	154	87.0 (72.7 – 94.4)
Peter	362	313	86.5 (78.8 – 91.7)

**TABLE 5: Children's production of anaphoric *it* (first file), first criteria**

Child	Overt NP <i>it</i> (N)	Total Anaphoric (N)	Percent Anaphoric
Adam	24	17	70.8
Eve	30	28	93.3
Nina	15	13	86.7
Peter	12	11	91.7

**TABLE 6: Children's production of anaphoric *it*, second criteria**

Child	After NP (N)	Percent of total (Range across files)	After own NP (N)	Percent of total (Range across files)
	(a)	(a)	(b)	(b)
Adam	115	27.3 (18.6 – 40.6)	82	19.4 (12.0 – 38.5)
Eve	69	32.5 (12.9 – 50.0)	25	11.8 (0.0 – 19.8)
Nina	70	39.5 (18.2 – 53.3)	18	10.2 (0.0 – 27.8)
Peter	120	33.1 (8.3 – 43.6)	54	14.9 (8.3 – 10.3)

**TABLE 7: Children's production of anaphoric *it* (first file), second criteria**

Child	After NP, N	Percent of total	After own NP, N	Percent of total
	(a)	(a)	(b)	(b)
Adam	8	33.3	8	33.3
Eve	6	20.0	3	10.0
Nina	8	53.3	4	26.7
Peter	1	8.3	1	8.3

**TABLE 8: Age of appearance for referential pronoun *it* and expletive *it***

Child	Deictic/Anaphoric	File	Expletive	File
Adam	2;3	adam01	2;6	adam08
Eve	1;6	eve01	1;12	eve13
Nina	1;11	nina01	2;2	nina14
Peter	1;9	peter01	2;6	peter15

**TABLE 9: Age at appearance of deictic/anaphoric *it* and expletive *it***

Child	Deictic/Anaphoric <i>it</i>	Expletive <i>it</i>
Adam	2;3	2;6
Eve	1;6	1;11
Nina	1;11	2;1
Peter	1;9	2;4

**TABLE 10: Age at appearance of deictic, expletive, and anaphoric *there***

Child	Deictic	Expletive	Anaphoric
Adam	2;3	3;5 2;10 AAE <i>it</i>	3;0
Eve	1;6	1;10	2;2
Nina	*	*	*
Peter	1;9	2;3	2;4

\* Unavailable from Shafer & Roeper (2000)

**TABLE 11: Overt subject use surrounding the appearance of expletive *it***

Child	Pre-expletive	At expletive
Adam	28%	56%
Eve	94%	94%
Nina	82%	84%
Peter	82%	80%

**TABLE 12: Age at use of anaphoric *it* and at first appearance of expletive *there***

Child	Anaphoric <i>it</i>	Expletive <i>there</i>
Adam	2;3	3;5 (2;10 AAE <i>it</i> )
Eve	1;6	1;10
Nina	1;11	*
Peter	1;9	2;3

\* Unavailable from Shafer & Roeper (2000)

**TABLE 13: Age at appearance of expletive *there* and expletive *it***

Child	<i>There</i>	<i>It</i>
Adam	3;5 (AAE <i>it</i> 2;10)	2;6
Eve	1;10	1;11
Nina	*	2;1
Peter	2;3	2;4

\* Unavailable from Shafer and Roeper (2000)

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<sup>i</sup> In this paper we are concerned only with the standard dialect of American English (SAE). We are aware that African American English (AAE) employs *it* in the existential construction (*It's a book on the table* (AAE) = *there is a book on the table* (SAE)), but we will abstract away from this dialect here.

<sup>ii</sup> Another form of *it* occurred, mainly in the (seemingly frozen, unanalyzed) form *do it*. It is possible to consider this form a type of VP *it*, such that *it* acts as a replacement for a main verb in the discourse (anaphoric), or as a deictic referent for an action (deictic). This VP form, however, is rare (91/1336 overt uses), and will not be further examined in this paper.

<sup>iii</sup> However, see the section on 'Complicating Factors for Acquisition' for further discussion on the (non-)obligatory nature of English expletives.

<sup>iv</sup> The frequency of expletive *it* is indeed lower than the frequency of referential *it* in caretakers' speech. For instance, in file *eve07*, a file in which relatively MANY uses of expletive *it* appear in caretakers' speech, there are still only 16 tokens of this element, as compared to 76 tokens of referential NP *it*.