

Verb Acquisition in English and Other Languages

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Abstract

Massive researches and experiments are attempting to explore the exact process of verb acquisition of child learners at an early age (1 to 3 years old). Therefore, the “syntactic bootstrapping method” is introduced and explicated in this paper, trying to illuminate whether children used syntax to learn verbs in English. Apart from English, other languages with totally different grammatical structures are also being discussed as well: regarding massive ellipsis of noun arguments (NPs) in Mandarin, researches and experiments on the acquisition of verbs in Mandarin ought to be carried out more in the near future. The purpose of this article is to give a brief introduction of word acquisition, especially verb acquisition with linguistic syntactic information; moreover, some practical hints of verb acquisition are also presented within the paper.

Keywords

Verb Acquisition, Language, Cognitive Linguistics, English, Syntax

1. Introduction

Over the last 30 years, a large amount of experiments and researches are being conducted to explore the process of vocabulary acquisition. Lots of researchers have found out, when a young child is growing from one to one and a half years old, he would averagely learn 60,000 words.

Apart from word learning, verb acquisition is an important part of vocabulary learning. While the toddlers acquire novel words by observing the events taking place in the real world, it is easier for them to capture the specular object which is referred to as the predicate in the sentence speech. For example, if the toddlers were told: “Daddy brings the ball to the dog” and show the actual scene, they

could presumably understand the event like “daddy goes to the dog” or “daddy takes the ball under his arm” or “daddy walks”.

Until Naigles (1990) asserted the “syntactic bootstrapping” hypothesis, the hypothesis that the child could base on “transitive-causative” and “intransitive-not causative” syntactic grammar to recognize novel verbs in the bootstrapping experiments. However, this theory did not mention some particular verbs in English. In addition, Lidz and Gleitman (2003) averred that on the foundation of syntactic bootstrapping effects, two contrasting views should be discussed: the “universalist” view and the “emergentist view”. The former one supports the idea that when young children acquire verb meaning, they use the syntactic and semantic grammar rules which already exist in their minds; at the same time, the other holds the opinion that young children learn and establish their lexical grammar through their observing and learning.

What above is discussed and researched, is all about English language, in some other languages like Japanese, Kannada or Chinese, things will be different. Here takes Mandarin Chinese as for instance: due to the pervasive ellipsis of noun phrase (NPs) arguments in Mandarin’s expression, it is argued whether Mandarin Chinese learners also have acquired the transitive-intransitive contrasting verb expression like English maternal speakers.

2. Introduction of Word Acquisition

The acquisition of word vocabulary is the first for an infant gets to know the real world contingencies.

For instance, dad holds a football under his arm and talks to his child: “This is a football”. The whole concept of football is the aim that speaker wants to utter, but maybe only the colour “black and white”, the shape “round” or the performance “daddy holds the ball” is understood. It is always important and difficult to capture the exact meaning during the word speech. Then the second difficulty of word leaning appears: how to distinguish each word correctly in a complete sentence. As for some languages, a word composes several morphemes: in the German language, “Berufsausbildungssystem (educational system for career training)” is a grammatical correct word. For some words, it can be used not only as noun, but also in the form of verb (“yield” in the verb form “give in transitive, give up in intransitive”, while “production, income of investment” in the noun form).

For the infants and toddlers, it is extraordinary important for them to match the phonological mapping with the word concept. Although many words have only one or two morphemes, it is still hard for word learners to distinguish them: for the homonyms, each meaning of word is not related and must be remembered separately (e.g. river bank vs. savings bank). This process relies on the infant’s arbitrary bias on each word, and it has been suggested that infants have less precise, gestalt representations of words and only develop phonological representations as their lexicons grow (Snedeker, 2008).

3. Introduction of Verb Acquisition

As to verb acquisition, it has not only those problems which may be encountered by the word acquisition, more problems would come out with the acquisition of verb learning. Both learning processes could have the “stimulus-free” problem (Lidz, 2003): one can talk of the object or word concept, while the object is not presented by the conversation environment, e.g. Father talks to the child: “Let’s go to the zoo” while speakers are at home; grandmother asks “Anyone who wants to eat Turkey tonight” etc. Besides, learning verb meaning from merely observing the real language circumstance is apparently not enough. The observation of real language environment is usually arbitrary and everyone has his own preference of his/her expression. More important, if the learner had correctly acquired a novel verb, he/she should be able to put the verb into the correct sentence structure, which leads to the next section: syntactic bootstrapping of verb learning.

4. Syntactic Bootstrapping Method

When child learners acquire word meaning, he/she usually has to face with the extralinguistic environment: several speeches/scenes would occur simultaneously while a word is being heard. To ensure the acquiring process less misleading or more informative, they could hear a same word several times in many different speeches, to exclude incorrect meanings. It should be specially mentioned that verb varies itself in different tense or different subject numbers. Here is an abstract of Naigles (1990) about verb meaning:

[“] Studies in lexical semantics (e.g. Fillmore, 1968; Talmy, 1975, 1980; Jackendoff, 1985; Levin, 1985) have suggested that many semantic components (e.g. causation, direction or location of action, manner of action etc.) contribute to the meaning of a verb. Some of these components are marked in the surface structure, but others are incorporated, or conflated into the actual verb. [”] (Cf. Naigles, 1990: p. 358)

From the abstract above can be concluded that verb learning is actually more difficult than noun learning, because verb has various forms in different situations and it refers to abstract mental feeling or a moving events with many other actions take place at the same time (extralinguistic environment). Despite of those difficulties of verb leaning, Landau & Gleitman (1985) and Gleitman et al. (1987) have suggested that children are able to take advantage of syntactic grammar to exclude the incorrect meanings of a specific verb. To prove their synopsis, they conducted an experiment which is called “syntactic bootstrapping”. In this experiment, young children of 2 to 3 years old were asked to watch two screens showing different actions, one is causative with transitive sentence frame; while the other is non-causative with intransitive frame. At the same time, they heard a tape recorder speaking one sentence every time, indicating an action of one screen. In the same time, a hidden observer were also recording each child’s eye fixation on the screen. Linguists and Psychologists predicted, young

children would base on the “transitive-causative” “intransitive-non-causative” syntactic and semantic grammar to conjecture the correct sentence. It turned out that children in deed looked at the matching screen longer than the non-matching screen, i.e. when a transitive sentence was hearing, they would pay more attention to the causative action; when intransitive speech was playing, their eyes would fix longer at the non-causative action. The sentences they used are as bel-
lowed: for transitive, NP (noun phrase) V (verb) NP; intransitive, NP and NP V. In both sentences, a novel verb “gorp” was used: “Look, the duck is gorp-
ping the bunny” and “Look, duck and bunny are gorp-
ping”.

Remaining Questions and Discussions about Syntactic Bootstrapping Hypothesis

Therefore, the syntactic bootstrapping method is based on the presupposes that children are aware of the syntactic mapping in English language: causative meaning matches with transitive sentence frame, non-causative with intransitive, whereas several questions are not clearly answered through this experiment: when a child was hearing “NP1 an NP2 V” sentence during the experiment, did they really know NP1 and NP2 are both subjects in this sentence? In English grammar, not all transitive verbs refer to causative meanings, and not all intransitive verbs indicate non-causative meanings either. If those verbs are encountered, how could children deal with them? As for the first question, the experiment conducted by Hirsch et al. (1988) may have an answer for it: the sentence they used the pattern “NP V P NP (Big bird flexes with Cookie Monster)”, but the result was the same as the syntactic bootstrapping. For the latter question, it is more complicated.

- (1) Adam burns the candle.
- (2) Adam eats the fish.

In both sentences above, the sentence structures are identical: NP V NP. But in the former sentence, it describes that Adam cause the candle to burn (direct causative), i.e. Adam in sentence (1) acts as the Agent. On the contrary, Adam in sentence (2) does not mean that he is causing the fish to eat. In this situation, Adam is the subject of “unergative transitive” (Perlmutter, 1978; Levin, 1985). In this case, subject is no longer the causation to let object perform the action; subject is here acting directly on the object and object is the patient. In the video tape of syntactic bootstrapping experiment, the sentence “The duck is gorp-
ping the bunny” can be understood as “the duck is causing the bunny to gorp”, but it is also semantic correct if the sentence is understood as “the duck holds the bunny still, while the bunny gorps”. Considering the causative-unergative sentences, further researches and experiments need to be done to clarify the ambiguity. The same problem exists for the intransitive:

- (3) Adam eats.
- (4) The candle burns.

In the sentence (4), the subject does not take the action for its own record: ac-

tually, it is the patient in semantic meaning but take the place of subject in syntactic grammar. In the former sentence, semantically speaking it expressed the same meaning as sentence (2), while the object is unnecessary to exist in this situation.

In addition, all verbs used in the experiments express the action of a movement; in the English language, many verbs stand for abstract feelings: consider, worry, want, think etc. Under some circumstances, both transitive and intransitive frames share the same or similar meanings: “I am for your opinion.” Or “I support your opinion.” For those verbs, it is not only hard to explain the exact meaning, but also difficult to use them in correct syntactic sentence structure.

5. Two Contrasting Views on the Verb Acquisition: “Universal” View vs. “Emergentist” View

According to current document, it is validated that young children can make conjectures about verb meaning based on the syntactic structure which verbs are located. On the basis of this well documented experiment, linguists and psychologists have two contrasting views about how verbs are acquired: some of them believe that syntax sentence structure is the foundation and guidance to acquisition of verb meaning, by taking advantage of this natural ability, toddlers and young children learn the meaning of verbs; on the contrary, others support the theory that children learn verb meanings through the learning process, i.e., “argument structure patterns emerge from generalizations made from significant item-based learning” (Cf. Lidz, 2003: p. 152). As for the former suppose, the process of verb acquisition is not persuasive enough to validate the complete syntactic sentence structure, while in the extralinguistic environment it usually has many misleading factors during the conversations and young children must have a syntactic sentence in their minds to aid them in verb acquisition; to the latter hypothesis, young children are able to acquire the correlations between argument structure with syntactic structure, as long as they are taught with a well-established verb categorization and generalization.

To some extent, both hypotheses have their rational explanations: the process of lexical learning in the real word environment is a complicated event, while many other factors also take part in (e.g. extralinguistic environment, age of the language learner, personal preference of using the verb argument structure, language Nivea of the speaker etc.). Besides, “transitive-causative” and “intransitive-non-causative” patterns are common forms in English syntactic grammar, some exceptions also exist, like “transitive-unergative” syntactic structure (Syntactic argument structure is transitive, but subject is causing object to act the event). Those ambiguities are already mostly discussed. When it comes to other languages with different syntactic structure, can they still be applied?

6. Verb Acquisition in Different Languages

“Transitive-causative”, “intransitive-non-causative” is common to be found in

English; however, is it the same in other language? Here will take two languages for examples: Kannada and Mandarin Chinese. The following sections are going to explore how situations of verb acquisition are going through these languages.

6.1. Kannada

In comparison to English, Kannada is a Dravidian language spoken by approximately 40 million people in southwestern India. Different from English, a causative morpheme acts as the symbol for causative meanings.

1) kurdure eer-utt-ade

horse rise-npst-3sn

“The horse rises.”

2) moSale kudure-yannu eer-utt-ade

alligator horse-acc rise-npst-3sn

“The alligator raises the horse.”

3) moSale kudure-yannu eer-is-utt-ade

alligator horse-acc rise-caus-npst-3sn

“The alligator raises the horse.”

4) kudure ett-utt-ade

horse lift-npst-3sn

“The horse lifts.”

5) moSale kudure-yannu ett-is-utt-ade

alligator horse-acc lift-caus-npst-3sn

“The alligator lifts the horse.”

6) moSale kudure-yannu ett-is-utt-ade

alligator horse-acc lift-caus-npst-3sn

“The alligator makes something lift the horse.”

*“The alligator lifts the horse.”

According to the first three sentences, the verb eeru (rise) can be both used transitively and intransitively, but when it comes to transitive syntax, the causative morpheme [is] must exist also. The verb ettu (lift), it is usually used in intransitive sentences, if it is marked with the causative morpheme in Kannada, ettu has a triadic meaning (three arguments) (Cf. Lidz et al., 2003: p. 156). With other words, the causative verbal affix [is] allows verbs to be applied more freely in sentences.

It is clear that causative meanings are always expressed with transitive sentence structure, but the opposite side cannot be deduced back: not all transitive sentences have causative meanings. For children who learn Kannada, it is easier for them to conjecture the verb meanings: as long as the causative verb morpheme exists, the causative meaning is expressed.

6.2. Mandarin Chinese

When it comes to Mandarin Chinese, situation is almost the opposite side of English: despite the fact that Chinese has quite different writing forms as Eng-

lish, Chinese children did not learn that much grammar in their childhood, comparing to those children who speak English as mother language. According to syntactic bootstrapping, a verb with transitive syntax structure indicates causative meaning (e.g. “cut” indicates “cause something into pieces”, “bring” means “cause someone or something to carry”); while an intransitive verb matches with non-causative meaning (“go” does not mean subject causes object to do the event “move”, in the opposite, subject “moves himself/himself” to the object). These two matches are importance guidance for young children to acquire novel verbs in their early age.

As for mandarin Chinese, the case of verb learning is even worse (Lee, & Naigles, 2008): large amounts of ellipses of NP (noun phrase) are pervasive and quite common in discourse context; moreover, it does not provide morphological clues (i.e. no nominal markers, verbal causative markers) to the transitive\intransitive syntax structure. For example, it is perfectly acceptable to say “dai4/bring or carry” without mentioning who is bringing or what is to be brought. In addition, the sentence frame of +NP (transitive verbs appeared with postverbal noun phrases, 0.83) is much more frequent to see than –NP (an absent postverbal noun phrase, 0.41).

6.3. Syntactic Bootstrapping on Mandarin

To determine whether children grown up with Mandarin Chinese also acquire the syntax sentence structure, Li & Thompson (1981) and Lee & Naigles (2008) conducted several experiments: they not only use transitive, but also intransitive verbs in causative and non-causative. For the transitive verbs: dai4 “bring”, na2 “take”, tui1 “push”, and fang4 “put”; four intransitive verbs: lai2 “come”, qu4 “go”, zhan4 “stand” and dao3 “fall”. Two sentence frames are used: NV and NVN.

Sentence frame	Intransitive verbs	Transitive verbs
NVN	Xiao3zhu1 <i>qu4</i> shi1zi/The pig <i>goes</i> the lion. Causal enactment: The pig pushes or carries the lion Non-causal enactment: The pig goes to the lion or the pig and lion go separately	Xiao3zhu1 na2 shi1zi/The pig <i>takes</i> the lion
		Xiao3gou3 <i>dai4</i> / The dog brings Causal enactment: The dog pushes or carries an introduced animal or box Non-causal enactment: The dog moves alone
NV	Xiao3gou3 <i>lai2</i> /The dog <i>comes</i>	

*Verbs are in italics.

It turns out that young Mandarin learners changed their enactment to fit the number of NP in different sentences, which means, the change in the number of NPs in the stimulus sentences led to changes of approximately 40% greater or

fewer causative enactments for intransitive and transitive verbs, respectively (Lee & Naigles, 2008). From this experiment can be concluded, with less exposure of –NP frame in Mandarin Chinese, they are less sensitive to the sentence like “The zebra goes the lion” as to English pre-schoolers. In this aspect, it may have proved the “emergentist view”. Due to the pervasive ellipsis of NPs, young children have fewer possibilities to explore the regularities of transitive/causative contrast. However, despite the dearth of this contrast, they still changed their verb interpretations when presented with +NP or –NP frames. This finding supports the “universalist view”. To summarize, children who learn Mandarin Chinese may have explored the clue of transitive/causative frame, but they are less sensitive to generalize it into a clue.

7. Some Practical Hints for Later Study

Language is commonly considered as a symbol system of one specific folk with specific culture. Thanks to modern technology, people have more opportunities to become acquainted with exotic culture than any other period in history. Hence to acquire or learn a foreign language effectively is being discussed and investigated more often. Furthermore, more and more parents have their children learn a second language (L2) as early as possible.

Therefore, it is advised to apply the theory of syntactic bootstrapping on the aspect language acquiring for child learners, as well as language learning for adult learners. Since different language has such a diverse syntactic and semantic structure to other languages, mastering the right syntax will raise the efficiency of language learning.

8. Conclusion

For a long time, authors, linguists and psychologists have been researching and conducting experiments about the domain of language acquisition. Generally speaking, language acquisition contains two parts, how is the lexicon acquired (input) and how is it expressed (input and output). In daily life, words are usually taught in the extralinguistic environment, which makes learning word meaning confusing and misleading. When it comes to verbs, more factors need to be taken into consideration: correlations between syntactic structure and semantic structure; variation of verbs when the sentence tense is changed, etc. Syntactic bootstrapping is a milestone that validates young children can use the transitive/causative syntactic knowledge to conjecture verb meaning. To complete this founding, further researches need to be conducted, e.g. whether the ability to distinguishing transitive/causative, intransitive/non-causative is innate or it is acquired by latter learning. It is always important to have contrasting or critical views on research area, through the discussion comes more precise results in the future.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- Fillmore, C. (1968). Lexical Entries for Verbs. *Foundations of Language*, 4, 373-379.
- Gleitman, L. R., Gleitman, H., Landau, B., & Wanner, E. (1987). Where Learning Begins: Initial Representations for Language Learning. In F. Newmeyer (Ed.), *The Cambridge Linguistic Survey* (Vol. 3). Cambridge: Cambridge University Press.
<https://doi.org/10.1017/CBO9780511621062.007>
- Hirsch, H. H. et al. (1988). Aminopeptidase yscII of Yeast. Isolation of Mutants and Their Biochemical and Genetic Analysis. *European Journal of Biochemistry*, 173, 589-598.
<https://doi.org/10.1111/j.1432-1033.1988.tb14040.x>
- Jackendoff, R. (1985). Multiple Subcategorization and the Theta-Criterion: The Case of Climb. *Natural Language and Linguistic Theory*, 3, 271-279.
- Landau, B., & Gleitman, L. (1985). *Language and Experience: Evidence from the Blind*. Cambridge, MA: Harvard University Press.
- Lee, J. N., & Naigles, L. R. (2008). Mandarin Learners Use Syntactic Bootstrapping in Verb Acquisition. *Cognition*, 106, 1028-1037.
<https://doi.org/10.1016/j.cognition.2007.04.004>
- Levin, B. (1985). Lexical Semantics in Review: An Introduction. In B. Levin (Ed.), *Lexical semantics in Review. Lexicon Project Working Papers, 1*. Cambridge, MA: MIT Center for Cognitive Science.
- Li, C., & Thompson, S. (1981). *Mandarin Chinese: A Functional Reference Grammar*. Berkeley, CA: University of California Press.
- Lidz, J. et al. (2003). Understanding How Input Matters: Verb Learning and the Footprint of Universal Grammar. *Cognition*, 87, 151-178.
[https://doi.org/10.1016/S0010-0277\(02\)00230-5](https://doi.org/10.1016/S0010-0277(02)00230-5)
- Naigles, L. (1990). Children Use Syntax to Learn Verb Meanings. *Journal of Child Language*, 17, 357-374. <https://doi.org/10.1017/S0305000900013817>
- Perlmutter, D. M. (1978). Impersonal Passives and the Unaccusative Hypothesis. *Papers from the Annual Meeting of the Berkeley Linguistic Society*, 4, 157-189.
<https://doi.org/10.3765/bls.v4i0.2198>
- Snedeker, J. (2008). *Word Learning*. Cambridge, MA: Harvard University.
https://www.academia.edu/12356608/Word_Learning
- Talmy, L. (1975). Semantics and Syntax of Motion. In J. Kimball, (Ed.), *Syntax and Semantics*, Vol. 4. New York: Academic Press.
- Talmy, L. (1980). Lexicalization Patterns: Semantic Structure in Lexical Forms. In T. Shopen et al. (Eds), *Language Typology and Syntactic Description*. New York: Cambridge University Press.