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**The ribbon sits on the candle's shin**  
**The Acquisition of Basic Locative Constructions in Upper Necaxa Totonac**

Vianey Varela and Ryan Klint  
University of Alberta

Upper Necaxa Totonac has a variety of strategies to express Basic Locative Constructions. Adults prefer a very specific construction, which compounds two strategies: a posture verb and a body part term incorporated to the stem. The verb informs the configuration of the *figure* whereas the body part term indicates the exact place in the *ground* where the figure is located (Klint 2004).

Due to the semantic and morphosyntactic complexity of these constructions we expect the acquisition to occur late. Data for this study come from the *Topological Relation Picture Series* task (BOWERMAN & PEDERSON 1992) elicited with 24 speakers aged 4 to 12.

Our results revealed that the preferred adult-like constructions are produced constantly until the age of 10. Before this stage, children seem to isolate the strategies and prefer less specific constructions. As children age, they slowly incorporate the different strategies until they master the target constructions.

## **1 Introduction**

Upper Necaxa Totonac (UNT) is a member of the Totonac-Tepehua family, a genetic group with no demonstrable ties to any other Mesoamerican language. This polysynthetic language is spoken in the Mexican central northern state of Puebla. Approximately 3,000 people speak UNT, most of them are bilingual as they also speak the dominant language Spanish. The situation of the language is critical since most of the UNT speakers are in their forties, although some children are still learning UNT as their first language (Beck 2004).

### **1.1 Basic Locative Constructions in Upper Necaxa Totonac**

In this paper we will consider a Basic Locative Construction (BLC) as the answer to the question *where is X?* This *X* corresponds to a *figure* located in a *ground*. If we have a picture like *Figure 1*, the *figure* will be the ribbon and the *ground* will be the candle. The corresponding question in English will be *where is the ribbon?* There could be different answers: *it is at the candle, it is tied to the candle, it is in the middle of the candle*, etc. The answers may vary according to the speaker preferences.



Figure 1

One of the many interesting characteristics of UNT is the way it expresses location. As this language does not have prepositions -e.g. the equivalent to *in, on, under, beside* in English- it uses at least three different strategies to encode location. These are the following: i) the locative nak=, ii) posture verbs, and iii) body part terms.

The locative clitic nak= is the closest device to a preposition, it is used primarily to introduce locative noun phrases. The meaning of nak= is vague, it could correspond to the full range of English spatial prepositions. It is frequently iterated and may be attached either to the noun itself, to a modifier of the noun, or to a phrase-initial deictic element (Beck 2004).

The second strategy to encode location is a series of posture verbs. UNT has four different posture verbs: wi:ʃ 'sit', ya:ʃ 'stand', ma:ʃ 'lie', and wakáʃ 'be high'. In their stative form, these verbs are commonly found in locative expressions corresponding to 'there are' or 'it is' type sentences in English. The generic choice, i.e. the one selected when no particular posture or position needs to be expressed is wi:ʃ 'sit' (Beck 2004). In the case of BLCs, the posture verbs inform not only about the existence of an object, but they also can inform about the configuration of a *figure*, i.e. 'sit', 'stand', 'lie', 'be high'.

The body part terms can appear as nouns in independent expressions or as prefixes incorporated to the verb. The full form (tʃa:n 'shin') consists of two morphemes: a base (tʃa:-) and an empty morpheme (-n or nʃ- if the base is not vowel-final). The base is the combining form that can be attached to the verb. When body parts are independent expressions, they have to be marked for possession. There have been identified 75 terms referring to human body parts and around a dozen more general expressions. The majority of body parts have one or more paronymic uses, e.g. lakán 'face' can also mean 'planar surface', akpún 'crown of head' has as extended meaning 'top of object', ʔe:n 'back' can also mean 'roof of a house' (Beck 2004). In the case of BLCs, the body part terms act as relational nouns to inform the specific part of the *ground* where the *figure* is located.

According to Klint (2004) the adult-like Basic Locative Constructions in UNT always consists of a posture verb, a body part term and optionally the locative prefix. Using again *Figure 1* to exemplify, we would ask *ja: wi:ʃ listún?* 'where is the ribbon?'; and we would have as answer the sentences in (1).

- (1a)      **wi:ʃ nak=ij-tʃá:-n**      béla  
             sit    LOC=3POS-shin-PTN    candle  
             'it sits at the shin of the candle'

- (1b)      **tʃa:-wí:ʃ**      béla  
          shin-sit      candle  
          ‘it sits at the shin of the candle’

In (1a) we can see the above-described three strategies that UNT uses to encode location. The posture verb informs about the configuration of the *figure*, in this case it is sitting. The locative prefix introduces the noun phrase, which informs about the location of the *figure*. The body part term in the same noun phrase informs the exact place of the *ground* where the *figure* is located, in this case it is located at the ‘shin’ of the ‘candle’. The sentence in (1b) contains essentially the same information as (1a) but in a more synthetic form. This time the body part term is incorporated to the verb stem as a prefix. Although individual preferences, adults prefer this last form where all the elements are compounded in only one verb phrase.

## 1.2      The Acquisition of Locative Constructions

It is possible to find some research about the acquisition of the strategies used by children to encode location. A classic study is the one made by Johnston & Slobin (1979); they worked with elicited data from children aged 2, 3, and 4, speakers of adpositional languages such as English, Italian, Turkish and Serbo-Croatian. The researchers proposed a series of linguistic factors responsible of time of acquisition: i) prepositional systems are more difficult than postpositional ones; ii) the lexical diversity delays the acquisition; iii) clear etymology facilitates the acquisition (e.g. *back* and *front*); iv) complex morphology delays acquisition; and v) homonymy supposes difficulty of acquisition. They found the use of the first adpositions in all children as early as 2 years old, as children aged their inventory of adpositions grew. They also found a consistent order of acquisition (in/on/under > beside > back/front in objects with clear features > between > back/front in object of non clear features). Another interesting result is that children speaking Turkish and Italian -languages with richer adpositional systems- acquire more notions in an earlier stage, in comparison to English and Serbo-Croatian children.

Another interesting study is the one made by Bowerman & Choi (1997); they studied the acquisition of English and Korean. The main point of this paper is to support the argument of the language-specificity, the usage-based approach and the typological bootstrapping. For this paper, we will mention only the results on the acquisition of Korean; results of English are essentially the same as the ones described above. Korean uses locative verbs that must distinguish meticulously between caused and spontaneous motion and encode two sets of path categories that often do not coincide. Elicited data from children aged 2 to 3;06 years old and adults revealed the use of specific locative verbs since the first productions. This means that children acquire first the language-specific terms, which are taken from the input. At the same time, the early acquisition of this strategy of locative verbs is related to typological

bootstrapping. One interesting detail is that children did not solve the task as adults did; children used fewer words and more generalizations than adults.

In the same line, Jensen de López (2004) studied the acquisition of Zapotec, a Mesoamerican language that uses body part terms as relational nouns to encode location. This researcher worked with a spontaneous longitudinal corpus of a child aged 1;03 to 2;09 years old. She found that the employment of a specific frame of reference with a specific locative body-part term depends on pragmatics, the canonical functionality of the object of designation, geometry, schematization, as well as on the social position of the particular speakers employing and extending the system. The interesting result is that the very first constructions with body part terms as locatives are complete predicates, i.e. a clitic, a body part term and a noun. The author found very few body parts in her corpus, thus she expects that the acquisition of this strategy occurs after the age of 2;09.

In sum, it is clear that children acquire strategies to encode location at an early stage. The acquisition of adpositions begins around the age of 2 years old; the acquisition of locative verbs takes place in between 2 and 3;06 years old; and body part terms are acquired after the age of 2;09 years old. We think that this order of acquisition could be due to the degree of complexity of the different strategies. Adpositions usually do not require any inflectional mark so we consider them as less complex. Verbs usually require inflectional marks, thus we expect children master them a little later. Finally the use of body part terms seems to depend on a variety of factors, thus we consider this strategy the most complex, therefore acquired later than the other two strategies.

### 1.3 Research question

The question we would like to answer here is *when do Upper Necaxa Totonac speakers acquire the adult-like Basic Locative Constructions?*

The hypothesis we have is that the acquisition of BLCs by UNT speakers is going to be late. We think this because the adult-like constructions in UNT combine at least two and optionally three strategies in the same sentence. The literature in the previous section describes the acquisition of one strategy at the time, being the adpositions the earliest and the body part terms the last ones. We think the explanation of this order of acquisition is the degree of complexity. In the case of UNT constructions the complexity seems to be bigger because of at least two factors: the use of a body part term and the accumulation of strategies in a single sentence.

## 2 Methodology

### 2.1 Participants

A total of 24 children ages 4 to 12 participated in this study. The children were grouped according to the school grade as follows: five children in Pre-school, ages 4 to 5; five children in Grade 1, ages 6 to 7; seven children in

Grade 3, ages 8 to 9; and seven children in Grade 5, ages 10 to 12. The interviews were made at the Kinder-garden and the Elementary school of the community.

## 2.2 Procedure

We used the *Topological Relation Picture Series (TRPS)* task (Bowerman & Pederson 1992) to elicit the BLCs. This task consists of 70 pictures displaying a static locative relation between two entities *figure* and *ground*. The consultants are asked *where is X?* As we mentioned before, the *X* corresponds to the *figure* of the picture. Below we can see some examples of the stimuli.



Examples of the *TRPS* stimuli

In each picture we can see two entities, usually the smallest one is the *figure* whereas the biggest is the *ground*. Thus the corresponding questions were ja: wi:ł tʃitʃi? ‘where is the dog?’; ja: wi:ł pelóta? ‘where is the ball?’; ja: wi:ł tʃiʃkú? ‘where is the man?’.

The entire elicitation session was conducted in UNT; an assistant (a native speaker) and a researcher (the authors) made the interview. All the interviews were videotaped and transcribed. There was a training session where the assistant explained the children how to respond to the questions. The pictures used in this training session do not belong to the main series of pictures, however they displayed the same kind of situation.

In order to obtain responses as much descriptive as possible there a gap information was created. The assistant was sitting with the child and they were both facing the researcher. The child was told that the researcher, who was asking where the *figures* of each picture were, was not able to see the pictures, thus the child has to make an effort to be as clear as possible for the researcher to know the exact place of the *figures* in the pictures.

## 3 Results

We obtained a good number of answers, however not all the children’s responses corresponded to BLCs. We excluded all the sentences that did not include at least one of the three UNT elements to encode location; i.e. all the sentences without the locative nak=, a posture verb and/or a body part term were not analyzed. We also excluded all the sentences that were not stative. This was made because we wanted to analyze exclusively the location strategies and

we thought that analyzing verb morphology of active constructions would be topic of a larger study.

After this exclusion process, we analyzed the rest of responses and we found four consistent groups of constructions. The classification of constructions consists of the following four groups. We will describe each group and give more examples in the next sections.

A)	Adpositional	nak=béla LOC=candle 'at the candle'	
B)	Relational noun	nak=if-tfá:-n LOC=3POS-shin-PTN 'at the shin of the candle'	béla candle
C)	Configurational verb	wí:ʃ sit LOC=3POS-shin-PTN 'it sits at the shin of the candle'	béla candle
D)	Paronymic configurational verb	tfá:-wí:ʃ shin-sit 'it sits at the shin of the candle'	béla candle

### 3.1 Constructions type A - Adpositional

These constructions consist of the locative clitic nak=. In the children's productions, this morpheme preceded a bare noun (2a), a possessed noun (2b), or a numeral classifier (2c). In general the production of this adposition was always correct, it always preceded a noun phrase. In any case there is not really a place for mistakes as the meaning of this particle is quite general; we mentioned before it only indicates location and could be equivalent to almost all the locative prepositions in English.

- (2a) nak=ʃká:n  
LOC=water  
'on the water'
- (2b) nak=if-tfík  
LOC=3POS-house  
'in its house'
- (2c) nak=aʔ-tín    paréd  
LOC=CLS-one    wall  
'on one wall'

### 3.2 Constructions type B - Relational noun

The criterion to include a construction in this group was the presence of a body part term. There was a little more variation in these answers regarding the number of elements. The most accurate response should include four elements: the adposition *nak=*, a possessive morpheme, a body part term and the partonymic morpheme (3a). It is important the inclusion of the adposition because this morpheme introduces a locative phrase; however the absence of *nak=* is not ungrammatical if we have enough context to know that the sentence is referring to location. For instance (3b) includes a body part term, which in the appropriate context -e.g. a picture showing a ball under a chair- can be considered as related to location. In contrast, the inclusion of a possessive morpheme is crucial. We mentioned before that possession is an inflectional category of body part terms, thus all these terms have to be possessed. The sentence in (3c) would be considered ungrammatical if produced by an adult. Examples like this one show us that even though children produce the body part terms as relational nouns, some times the inflectional morphology of the terms is not accurate. In other words, children acquire early the terms used to point out the exact part of the *ground* where the *figure* is located, but for some children it seems to take time to produce them always in the correct way.

(3a) *nak=if-pá:-n*  
LOC=3POS-belly-PTN  
'on its belly'

(3b) *if-tampí-n*  
3POS-base-PTN  
'its base'

(3c) *nak=?é:-n*  
LOC=back-PTN  
'on back'

### 3.3 Constructions type C - Configurational verb

Each construction in this group included one of the four UNT posture verbs. In general, the production of the verbs was quite accurate; the meaning of each verb was most of the time precise, indicating the configuration of the *figure*: 'sit', 'stand', 'lie', 'be high'. Regarding the morphosyntax, again there was not so much room for mistakes. As we mentioned before, we only include in our corpus stative sentences; these forms of configurational verbs are not inflected for tense, aspect or mood. Furthermore all the sentences refer to third person singular subjects -i.e. the *figures* of the pictures-, in UNT this corresponds to a zero morpheme. Hence, the stative verbs do not have expressed morphology, which should not represent complexity of production for the children.

We observed some variation related to the word order, some times children preferred to produce the verb in initial position -(4a) and (4b)- and other times they preferred the verb in final position -(4c) and (4d). UNT is a free word order language; although the adult preference is verb initial, any order results grammatical. Other interesting variation was the elements of the noun phrase accompanying the verb. The most accurate sentence of the configurational verb group should include a posture verb and a noun phrase of the type described in the *relational noun* group, i.e. adposition, possessive morpheme, body part term, and paronymic morpheme. This structure is what adults considered a BLC in UNT, where the three strategies that encode location are present in a single sentence: adposition, posture verb, and body part term. We can see an example of this in (4a). The noun phrases in other less adult-like sentences only include the adposition nak= followed by the noun corresponding to the *ground* (4b), (4c) and (4d). In this last examples only two of the strategies are used: the posture verb informing about the configuration of the *figure*, and the adposition nak= introducing the general *ground*.

(4a)      ya:ʃ        nak=if-pá:-n  
              stand      LOC=3POS-belly-PTN  
              ‘it stands on its belly’

(4b)      wakáʃ      nak=lásu  
              be.high    LOC=rope  
              ‘it’s high on the rope’

(4c)      nak=kuláʃ    wi:ʃ  
              LOC=cage    sit  
              ‘it sits in the cage’

(4d)      nak=ʃká:n    ma:ʃ  
              LOC=water    lie  
              ‘it lies on the water’

### 3.4      Constructions type D - Paronymic configurational verb

Finally the more adult-like constructions represent this group. These constructions include two of the UNT strategies to encode location: posture verb and body part term. These constructions, as the ones in the previous group consist of two phrases: a verb phrase including the posture verb with the body part term incorporated to the verb as a prefix; and a noun phrase. The verb phrase tells us through the body part the exact part of the *ground* where the *figure* is located, and through the verb the configuration of the *figure*. The noun phrase only tells us the general ground.

In this group all the sentences were, as adult prefer them, verb initial. We observed few variations in the noun phrase indicating the ground, other than that, sentences practically had the same structure. As we mentioned before, the

meaning of constructions type C and constructions type D is not different. The difference is related to the morphosyntactic disposition of the elements: analytic in the case of type C and synthetic in the case of type D. We consider constructions in this last group the most complex as all the components have to be ‘packed’ in a single word.

- (5a) aʔa-yá:ʔ kǐwǐ  
 ear-stand tree  
 ‘it stands on (the ear of) the tree’
- (5b) kiʔ-wakáʔ kutʃǐlu  
 lips-be.high knife  
 ‘it’s high on (the lips of) the knife’
- (5c) ʔeʔ-wí:ʔ aʔ-tín kǐwǐ  
 mouth-sit cls-one tree  
 ‘it sits on (the mouth of) the tree’
- (5d) laka-má:ʔ paréd  
 face-lie wall  
 ‘it lies on (the face of) the wall’

### 3.5 Age of acquisition of BLCs

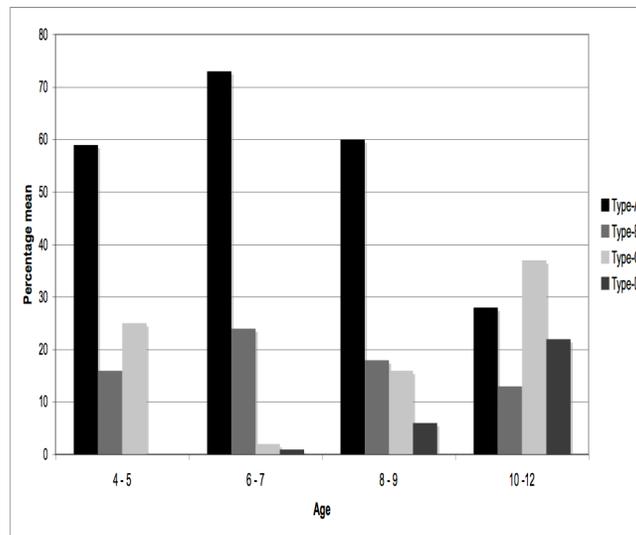
It is important to recall that UNT uses at least three different strategies to encode location: i) adposition, ii) posture verbs, and iii) body part terms. Adult-like constructions may include the three strategies in a single sentence. In the previous sections we have described the classification of children constructions encoding location. We have seen that children produce the adult-like BLCs, but also other structures with more general meaning and less morphosyntactic elements. A total of four different types of constructions were identified after analyzing all the sentences in our corpus: A) Adpositional, B) Relational noun, C) Configurational verb, and D) Paronymic configurational verb.

Constructions type-A consist of only one strategy: the adposition *nak=*. Constructions type-B, can include one or two strategies: a body part term, or an adposition plus a body part term. Constructions type-C can include two or three strategies distributed in two different phrases: a VP with a posture verb and a NP with the adposition *nak=*; or a VP with the posture verb, and a NP with the adposition *nak=* plus a body part term. Constructions type-D, the most adult-like ones, consist of two strategies in a single verb phrase: a body part term and a posture verb incorporated as a prefix.

The other important result, apart from the different types of children constructions is the age of acquisition of each of these. For a better presentation of the results of the 24 children, we condensed the results by the four groups of age, determined by the school grade: ages 4 to 5, Pre-school; ages 6 to 7, Grade

1; ages 8 to 9, Grade 3; and ages 10 to 12, Grade 5. As a result we will see four groups of age and four types of constructions.

We can see the general distribution of children constructions in *Graphic 1* below. The total frequency of constructions is given in percentage means. Each group of columns represents the 100% of the total locative sentences of all the children in each group. For instance the youngest group - ages 4 to 5-, produced a total of 206 locative sentences, which represents the 100%. From that total, 59% corresponds to constructions type-A, 16% to constructions type-B, and 25% to constructions type-C, no type-D constructions were produced at this stage. The same procedure was followed for the rest of the groups.



*Graphic 1*

In this *Graphic* we can see that the adposition strategy is the most frequent in the first three stages. Although adpositional constructions are not the most used in the last stage, this strategy was the second most frequent, thus children still show a strong preference for the use of adpositions. The body part term strategy is the second most frequent in the middle stages -ages 6 to 9, but not with the youngest and the oldest children. It is interesting the distribution of the posture verb strategy. It is the third most frequent in the middle stages, but the second most frequent in the first stage and the most frequent in the last stage. Finally constructions type-D, consisting of the combination of two strategies in a single phrase, shows no frequency in the first stage, very low in the second stage, a little bigger in the third stage and lastly important frequency in the fourth stage. We will expand the comments of these results in the next section.

#### 4 Discussion

We found a relation between the literature review we presented in the introductory section and the results shown in the previous section. To recall, we pointed out that children speaking different languages acquire diverse strategies to encode location at an early stage. The acquisition of adpositions occurs first in the development, around the age of 2; locative verbs are first used between 2 and 3;06 years old; and body part terms are acquired after the age of 2;09. As we mentioned, it could be that this order of acquisition is due to the degree of complexity of the different strategies. Adpositions usually do not require any inflectional mark so we consider them as less complex. Verbs usually require inflectional marks, thus we expect children master them a little later. Finally the body part terms used as relational nouns, apart from require inflectional marks, needs additionally the detection of metaphorical extensions, thus we consider this strategy the most complex, therefore acquired later than the other two strategies.

In *Graphic 1* we could see the general preference for the adposition *nak=*, especially in the first three stages. This strategy, according to the literature, was going to be first acquired. In the particular case of UNT this can be due to two reasons: first *nak=* does not need any extra morphology, as long as it is used to introduce a noun phrase, there is no error in its use; and second the semantics of *nak=* is quite general and it can be equivalent to all the spatial prepositions in English, thus children do not have to give a precise meaning of location if they use *nak=*. The UNT adposition has no complexity in the morphology nor in the semantics, therefore in this case our results go along with the expectations.

The locative verb strategy should be in second place of acquisition. In our results the sentences including a verb were grouped in the type-C constructions, i.e. configurational verbs. All the constructions here include a verb, but some of them include also a body part term and/or an adposition. To better explain the acquisition of the verb strategy, we separated the constructions with a verb and the adposition from the constructions with a verb plus a body part term. If we recall the posture verbs in their stative form, could be equivalent to 'there are' or 'it is' type sentences in English, thus to make sure children used them not as existential but as configurational verbs, at least the adposition *nak=* should be included in the constructions of type-C. We found that in the first stage 91% were verb plus adposition constructions and only 9% included a body part term, the proportion in the second stage was 83% vs. 17%, third stage was 72% vs. 28%, and fourth stage 71% vs. 29%. As we can see the use of the posture verb only, was always more frequent than the combination of verb plus body part term. Now then, if we go back to *Graphic 1* we can see that in the first stage the constructions type-C are the second most frequent, and as we just pointed out, most of them do not include a body part term. This means that the strategy acquired after the adpositions is the verb, in accordance again with the literature. If we see the next stages in the *Graphic* we observe that the use of verbs decrease in favour of the body part terms in stages two and three, which

means that children are working in the next most complex strategy. In the last stage the use of verbs increases again, but this time the constructions with verbs including body part terms increases considerably from a 9% in the first stage to a 29% in the last stage.

The last strategy to be examined is the use of body part terms as relational nouns, which corresponds to constructions type-B in our corpus. We see that in *Graphic 1* the first stage shows them as the third most frequent constructions, after the adpositional and the verb strategies. This order matches with the literature expectations, which leaves at the end the acquisition of relational nouns. In the second and third stages body part terms become the second most frequent strategy, which means that children are working soon in strategies other than adpositions and single verbs. In the last stage the relational noun strategy decreases in favour of the considerable increase of other strategies. This means that in the last stage the body part terms are less used as a single strategy and are now combined with other strategies appearing now as part of constructions type-C and type-D.

To finish this section we would like to comment about the acquisition of the adult-like Basic Locative Constructions. It is important to remember that BLCs in UNT include different kinds of information: the adposition introduces the *ground* in general, the posture verb indicates the specific configuration of the *figure*, and the body part term identifies the exact part of the *ground* where the *figure* is located. It is also worthy of note the fact that BLCs include more than one strategy in a single phrase. As a consequence of the above-mentioned BLCs characteristics, we expect them to be acquired late due to the precise information required and the complexity that the sum of strategies should represent. As we already know, these BLCs correspond to constructions type-C and type-D of our corpus. In a previous paragraph we already talked about the subgroups of the type-C constructions, the corresponding adult-like constructions are the ones including a verb plus a body part. We also observed that percentages of use increased as the age of children augmented. The percentages of use from the total locatives sentences are 2% for the first stage, 2% for the second stage, 4% for the third stage, and 11% for the last stage. These numbers show us that children produce consistently the adult-like constructions until the age of 10 to 12 years old. The same distribution is observed for constructions type-D, in the first stage there are not examples, the second stage shows 1% of frequency, the third stage 6% and the last stage 22%. This means that it is until the stage of 10 to 12 years old where children produce consistently the preferred adult BLCs, consisting of a single verb phrase with a posture verb plus a body part term incorporated to the stem.

In conclusion we observe that the acquisition of adult-like Basic Locative Constructions by Upper Necaxa Totonac children occurs late. This does not mean that children do not express locative relations at all. Our results show that at the beginning children prefer to use mostly one general strategy, then a second one more specific, and after that a third one even more specialized. At the same time we observed that children slowly integrated the strategies until they mastered the combination of them.

## References

- Beck, David (2004). *A Grammatical Sketch of Upper Necaxa Totonac*. Munich: LINCOM Europa.
- Bowerman, Melissa & Soonja Choi (1997). Shaping Meanings for Language: Universal and Language Specific in the Acquisition of Spatial Semantic Categories, in Melissa Bowerman & Stephen Levinson (eds.) *Language Acquisition and Conceptual Development*. Cambridge: CUP.
- \_\_\_\_\_ & Eric Pederson (1992). *TRPS* task. Language Cognition Group of the Max Planck Institute for Psycholinguistics. Nijmegen, The Netherlands.
- Jensen de López, Kristine (2004). Bcuua quiang – I stepped Head it! The Acquisition of Zapotec Body-Part Locatives in Barbara Pfeiler (ed.) *Colección Americana X*. Hannover: Verlag für Ethnologie.
- Johnston, Judith & Dan Slobin (1979). The Development of Locative Expressions in English, Italian, Serbo-Croatian and Turkish. *Journal of Child Language* 6.
- Klint, Ryan (2004). Basic Locative Constructions in Upper Necaxa Totonac. Paper presented at *WSCLA*, University of Victoria.

## Abbreviations

LOC=locative, 3=third person, POS=possessive, PTN=paronymic, CLS=classifier.

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Vianey Varela  
vvarela@ualberta.ca  
4-43 Assiniboia Hall  
Department of Linguistics  
University of Alberta  
T6G 2E7  
Edmonton, AB  
Canada