The Acquisition of Morphosyntax

The term morphosyntax refers to the interaction between the inflectional and syntactic properties of languages. One of the clearest examples of this interaction is the difference between languages like English that require the use of independent pronouns to mark subjects and objects in sentences and languages like Spanish that use agreement inflections on verbs to mark subjects.

One of the main differences between languages is the degree to which they use syntactic properties such as word order to distinguish subjects and objects or inflectional features such as agreement to mark subjects and objects. Analytic languages like English rely upon syntactic features, while synthetic languages like K’iche’ rely upon inflectional features.

One additional difference between languages is the degree to which languages mark the syntactic relation on nouns by case markers or on the verb by agreement markers. There are three main types of case and agreement systems.

Nominative/accusative systems use nominative markers for subjects and accusative markers for objects. Nominative/accusative marking is found in Indo-European, Uto-Aztecan, Quechuan and Japanese. English pronouns have nominative, accusative and genitive forms.

```
<table>
<thead>
<tr>
<th>Person</th>
<th>Nominative</th>
<th>Accusative</th>
<th>Genitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>I</td>
<td>me</td>
<td>my</td>
</tr>
<tr>
<td>Second</td>
<td>you</td>
<td>you</td>
<td>your</td>
</tr>
<tr>
<td>Third</td>
<td>he/she/it</td>
<td>him/her/it</td>
<td>his/her/its</td>
</tr>
</tbody>
</table>
```

Ergative/absolutive systems use ergative markers for the subjects of transitive verbs and absolutive markers for the subjects of intransitive verbs and the objects of transitive verbs. Ergative/absolutive marking is found in Mayan, Eskimo, Basque, Georgian, some Australian languages, Hindi and some Polynesian languages. Linguists use A (agent) for subjects of transitive verbs, P (patient) for objects of transitive verbs, and S (subject) for subjects of intransitive verbs. Note how ergative/absolutive systems differ from nominative/accusative systems in marking the three types of arguments.

```
<table>
<thead>
<tr>
<th>nominative/accusative argument</th>
<th>ergative/absolutive</th>
</tr>
</thead>
<tbody>
<tr>
<td>nominative</td>
<td>A</td>
</tr>
<tr>
<td>nominative</td>
<td>S</td>
</tr>
<tr>
<td>accusative</td>
<td>P</td>
</tr>
</tbody>
</table>
```

Ergative agreement in K’iche’ Maya

```
k-at-inw-il-o  k-at-b’in-ik
incompletive-abs2-see-indicative_{TV} incompletive-abs2-walk-indicative_{IV}
‘I see you.’ ‘You are walking.’
```
Agent/patient systems use **agent** markers for the subjects of transitive verbs and the active subjects of intransitive verbs such as *run* and *eat*. They use **patient** markers for the objects of transitive verbs and the inactive subjects of intransitive verbs such as *sleep* and *fall*. Agent/patient marking is found in Siouan, Caddoan and Iroquoian languages. I schematize agent/patient marking as shown below.

<table>
<thead>
<tr>
<th>argument</th>
<th>agent/patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>agent</td>
</tr>
<tr>
<td>S&lt;sub&gt;agentive&lt;/sub&gt;</td>
<td>agent</td>
</tr>
<tr>
<td>S&lt;sub&gt;nonagentive&lt;/sub&gt;</td>
<td>patient</td>
</tr>
<tr>
<td>P</td>
<td>patient</td>
</tr>
</tbody>
</table>

Agent/patient languages can distinguish between the intentional and unintentional action of the subject. Thus, the agent form is used for someone who falls intentionally, and the patient form is used for someone who falls unintentionally.

There is one final complication to consider. Many ergative languages **extend** ergative marking to the subjects of intransitive verbs in special contexts. Depending on the frequency of these contexts, these ergative languages can take on the appearance of nominative/accusative languages. The following table shows the contexts in which four Mayan languages extend ergative marking (Pye, Pfeiler and Mateo Pedro 2013).

<table>
<thead>
<tr>
<th>Context</th>
<th>K’iche’</th>
<th>Mam</th>
<th>Q’anjob’al</th>
<th>Yucatec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal Adverb</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
</tr>
<tr>
<td>Manner Adverb</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
</tr>
<tr>
<td>Desiderative</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
</tr>
<tr>
<td>Progressive</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
</tr>
<tr>
<td>Incompletive</td>
<td></td>
<td></td>
<td></td>
<td>extended</td>
</tr>
</tbody>
</table>

All of these features have implications for the study of language acquisition. Children must learn:

1. Does the language use syntax or inflection to mark verb arguments?
2. Does the language mark case on the arguments or agreement on the verb?
3. Do the A and S arguments have the same marking? → nominative/accusative
4. Do the P and S arguments have the same marking? → ergative/absolutive
5. Is ergative marking extended? → extended ergative
6. Does S marking distinguish the subject’s intentions? → agent/patient

References


What is a pronoun?

One of the main differences between analytic and synthetic languages is evident in the status of pronouns. English has a set of independent pronouns that can be used in place of noun phrases. The English pronouns are marked for nominative, accusative and genitive case. One difference between the nominative and accusative pronouns is seen in response to questions.

Who wants ice cream?
Me. *I

Linguists use the isolation test as evidence that the accusative pronouns in English are strong forms and the nominative pronouns are weak forms.

The independent pronouns in English act as free morphemes, that is as words. Many languages have clitic pronouns that ‘lean’ on other words for phonological reasons. French has clitic pronouns that attach to the beginning of their host.

Jean t’aime. Suzanne les voit.
John you-like Suzanne them-sees
‘John likes you.’ ‘Suzanne sees them.’

Languages like K’iche’ have pronominal agreement. The agreement markers on K’iche’ verbs take the place of independent pronouns.

k-in-war-ik
incomplete-abs1-sleep-indicative,iv
‘I sleep.’

Languages with pronominal agreement often restrict the use of ‘pronouns’ to topic or focus positions that are outside the main clause. A topic establishes the main theme of the discourse, whereas a focus marks contrast with another entity. The independent pronouns in Spanish are used to establish the topic of the conversation. English translations of Spanish obscure the discourse function of Spanish pronouns.

Yo hablo español.
‘I speak Spanish.’ (= ‘As for me, I speak Spanish.’)

The conclusion is that languages do not use ‘pronouns’ in the same ways. The English category of independent pronoun is not universal (Siewierska 2004). Pronominal elements in languages have a range of uses

<table>
<thead>
<tr>
<th>Topic</th>
<th>Focus</th>
<th>Strong pronoun</th>
<th>Weak pronoun</th>
<th>Pronominal clitic</th>
<th>Pronominal agreement</th>
</tr>
</thead>
</table>

These uses reflect the full range of morphosyntax. We do not know how children acquire these different pronominal forms.

References

Generativist Approaches

Generativist researchers have offered many accounts for why children acquiring English often produce incomplete sentences, e.g.,

Charlie (2;6)
\textit{ah, ___ fell down.}
\textit{___ need one toy now deda.}
\textit{yeah, ___ need help.}

Linguists began investigating the differences between languages with obligatory subjects like English, and languages with optional subjects like Italian in the 80s. Researchers then tried to account for the differences between subject use by children and adults. These approaches are divided between competence and performance accounts.

\textbf{Parameter Setting (Hyams 1986)}

In 1981 Chomsky proposed a model of language that distinguished between principles and parameters. Principles, such as X-bar theory, are universals that apply to all languages. The parameters specify the set of options that define the range of variation between languages. Each parameter determines language specific values for a wide range of linguistic features. Children acquire a specific language by setting the values of the parameters that govern language variation.

One example of a parameter that received early attention was the pro-drop parameter. Hyams (1986) applied the pro-drop parameter to the acquisition of English. Hyams proposed linking this parameter to the form of agreement specified for each language. Languages with \textit{‘rich’} agreement systems like Italian and Spanish identify the agreement feature with the null pronominal element PRO. PRO is found in English infinitival constructions, e.g., Clyde asked Sandy PRO to paint his garage. PRO functions as a pronoun to indicate the subject of the infinitive, but it only occurs in non-finite contexts, c.f., *Clyde asked Sandy if PRO painted his garage.

\begin{center}
\begin{tikzpicture}
    \node (IP) {IP}
    \node (AgrS) [below left of=IP] {AgrS = PRO}
    \node (VP) [below right of=IP] {VP}
    \node (DP) [below left of=VP] {DP}
    \node (V) [right of=DP] {V'}
    \node (VDP) [right of=V] {V DP}
    \node (need) [below of=VDP] {need help}

    \draw[->] (IP) -- (AgrS);
    \draw[->] (IP) -- (VP);
    \draw[->] (AgrS) -- (DP);
    \draw[->] (AgrS) -- (V);
    \draw[->] (V) -- (VDP);
    \draw[->] (VDP) -- (need);
\end{tikzpicture}
\end{center}

By linking PRO to the agreement feature, Hyams predicts:
\begin{itemize}
    \item[i.] the optional use of subject pronouns (since PRO provides the reference for null subjects)
    \item[ii.] the presence of \textit{‘rich’} agreement (allows \textit{‘recovery’} of the deleted subject reference)
    \item[iii.] the absence of auxiliary verbs (auxiliaries create a finite contexts incompatible with PRO)
    \item[iv.] post-verbal subjects (the agreement features may move to the verb at either the level of syntax or phonology. Syntactic movement allows the agreement features to license a post-verbal subject. Phonological movement licenses pre-verbal subjects.)
    \item[v.] no expletive subjects (e.g., ‘It’s cold’; PRO replaces expletive pronouns)
\end{itemize}
Hyams proposed that all children begin with the pro-drop setting for this parameter. Children learning English would then optionally omit subject pronouns, not use auxiliary verbs, use post-verbal subjects, and not use expletive pronouns. She predicted that once children notice the use of expletive subjects in English they would ‘reset’ the parameter to the non-pro-drop position.

**Assessment**

Hyams provides the first detailed parameter-setting model for language acquisition. She chose examples from different children to illustrate her theory rather than systematically analyzing data from a single child. Thus, we cannot assess the observational adequacy of her model.

Hyams’ model has several logical flaws:

i. English-speaking children do not produce the ‘rich’ agreement inflections that license null subjects.
ii. English-speaking children do not produce auxiliary verbs with finite verb complements, e.g., *He can goes.
iii. She does not explain why it takes so long for children to notice expletive subjects (Davis 1989)
   
   It’s time for bed!
   Once upon a time, there were three bears ....

The model is not supported by empirical evidence

i. Ingham (JCL 1992) reports that one child (Sophie) used subjects in 90% of her sentences at 2;4, but didn’t use expletive pronouns until 2;9 or auxiliaries until 2;7-2;8.
ii. other children have some auxiliaries during the pro-drop period.
iii. children omit verbs and objects as well as subjects.
iv. children omit first and second persons more frequently than third person arguments (Clancy 1993).
v. children omit subjects of transitive verbs more frequently than subjects of intransitive verbs (Allen & Schroeder 2003; Clancy 2003).
vi. there are large differences in the rate of subject (and object) omission across languages.

<table>
<thead>
<tr>
<th>Language</th>
<th>Subject omission</th>
<th>Object omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (P. Bloom 1989)</td>
<td>55%</td>
<td>9%</td>
</tr>
<tr>
<td>Chinese (Wang et al. 1992)</td>
<td>56%</td>
<td>23%</td>
</tr>
<tr>
<td>Korean (Kim 2000)</td>
<td>77%</td>
<td>51%</td>
</tr>
<tr>
<td>K’iche’ (Pye 1992)</td>
<td>92%</td>
<td>67%</td>
</tr>
</tbody>
</table>


The parameter-setting procedure raises several concerns

i. Children should apply the **Subset Principle** to avoid learnability problems (Wexler & Manzini 1987). Children begin with the most restrictive setting of a parameter and relax this setting when they find positive evidence. This principle applies to the pro-drop parameter in different ways.
a. focusing on expletive subjects, pro-drop languages are a subset of non-pro-drop languages
b. focusing on optional subjects, non-pro-drop languages are a subset of pro-drop languages

ii. Different parameters may interact and create a learnability problem (Davis 1989), e.g.,

Parameter 1: Wh-movement. Languages like English and Hausa have overt wh-movement. Languages like Basque and Japanese do not.
Parameter 2: Bounding. Languages like English restrict the movement of wh-phrases. Languages like Italian are less restrictive.

Do children set the movement parameter before the bounding parameter or vice versa?

if Move P < Bounding P requires negative evidence for English bounding restrictions
if Bounding P < Move P children lack evidence for bounding without movement

Other Wh-parameters also exist:
Multiple Wh-Parameter:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>English</th>
<th>French</th>
<th>Bulgarian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single wh</td>
<td>LF</td>
<td>LF/syntax</td>
<td>syntax</td>
</tr>
<tr>
<td>Multiple wh</td>
<td>LF</td>
<td>LF/syntax</td>
<td>syntax</td>
</tr>
</tbody>
</table>

Rudin’s classification (1988: 448):

<table>
<thead>
<tr>
<th>Language</th>
<th>Single wh</th>
<th>Multiple wh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>LF</td>
<td>LF/syntax</td>
</tr>
<tr>
<td>English</td>
<td>LF</td>
<td>LF/syntax</td>
</tr>
<tr>
<td>Russian</td>
<td>LF</td>
<td>LF/syntax</td>
</tr>
<tr>
<td>Bulgarian</td>
<td>LF</td>
<td>LF/syntax</td>
</tr>
</tbody>
</table>

**Topic-Drop (Hyams 1992)**

Children may begin with a topic-drop language like Chinese rather than a pro-drop language like Italian, e.g.,

___ kanjian ta le. (Huang 1984)
see he
‘He saw him.’

Problems:

1. The hypothesis is not supported by the crosslinguistic differences in the rate of subject and object omission noted earlier.
2. The hypothesis does not account for postverbal subject drop found in children acquiring German (Hamann 1992).

Christoph (3;4.5) Elisa (3;1.12)

Das muß ___ zusammenbauen Ganz viele hab ___ hier
that must/1 ___ put_together very many have/1 ___ here
‘I must put that together.’ ‘I have quite a lot here.’
Percentages of different types of null subjects for children acquiring German (Hamann 2002)

<table>
<thead>
<tr>
<th>Child</th>
<th>preverbal</th>
<th>postverbal</th>
<th>yes-no question</th>
<th>subordinate clause</th>
<th>Wh question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elisa</td>
<td>58%</td>
<td>17%</td>
<td>17.5%</td>
<td>5.3%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Christoph</td>
<td>82.9%</td>
<td>11.4%</td>
<td>5.7%</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Root Infinitives**

Wexler (1994, 1996, 1998) accounts for the lack of tense and agreement inflections by assuming children lack the ability to ‘check’ inflectional features for subjects. Wexler assumes that subject noun phrases move to Spec IP to check their features against the head of the inflectional phrase.

(1) Inflectional structure for English

```
AgrSP
  Spec
  DP_{Subj}
AgrS'
  AgrS
  TP
    Spec
    t_{Subj}
    T'
    Tense
    VP
      t_{Subj}
      V'
      V
      DP_{Obj}
```

The subject checks its ‘D-feature’ in both Tense and AgrS by moving to the Specifier position in these phrases. The verb’s features may be checked by moving the verb to the head of the corresponding functional projections (Tense and AgrS). Wexler (1998) assumes that initially children can only check the subject’s D-feature once. Since the D-feature must be checked twice in English, this limitation prevents children from producing a finite form of the verb. Schütze and Wexler (1996) split English inflection into two features—tense and agreement, which can surface independently:

<table>
<thead>
<tr>
<th>Features</th>
<th>Example</th>
<th>Prediction</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+ tense] [+ agreement]</td>
<td>she goes</td>
<td>Nom subject; null subject prohibited</td>
</tr>
<tr>
<td>[+ tense]</td>
<td>her go, her goed</td>
<td>Acc subject, null subject prohibited</td>
</tr>
<tr>
<td>[+ agreement]</td>
<td>goes, she go</td>
<td>Nom subject, null subject possible</td>
</tr>
<tr>
<td>[ ] should not occur</td>
<td>her go, go</td>
<td>Acc subject, null subject possible</td>
</tr>
</tbody>
</table>

Wexler (1998) augments this framework with the stipulation that the use of null subjects with finite verbs is a result of topic drop, e.g.,

Adam (3;6) Tickles me.
Predictions from the Root Infinitive Hypothesis:

1. Children will optionally use infinitive verb forms as a default in simple sentences
2. Children will optionally omit auxiliary and copular verbs that only carry tense features
3. Children will inflect auxiliary verbs in moved positions, e.g. yes-no questions, negation
4. Children will use non-nominative subject pronouns with root infinitives
5. Children learning languages with overt verb movement will only inflect moved verbs

E.g., French (Pierce 1992)

<table>
<thead>
<tr>
<th>[ + finite ]</th>
<th>[- finite]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patsy est pas là-bas</td>
<td>pas manger la poupee</td>
</tr>
<tr>
<td>Patsy is not down there</td>
<td>not eat the doll</td>
</tr>
</tbody>
</table>

Children’s data

<table>
<thead>
<tr>
<th>+ finite</th>
<th>- finite</th>
</tr>
</thead>
<tbody>
<tr>
<td>pasVerb</td>
<td>11 77</td>
</tr>
<tr>
<td>Verb pas</td>
<td>185 2</td>
</tr>
</tbody>
</table>

6. Children acquiring languages with ‘rich’ inflection (Spanish, Italian) will not use root infinitives since they only need to check the subject’s D-features once.

Advantages:

1. The theory makes specific predictions about the interaction of morphology and syntax
2. It predicts a link between subject use, case and agreement
3. It makes predictions for languages with ‘rich’ inflection and verb movement

Problems:

1. The theory does not define ‘infinitive’
   Many languages lack an ‘infinitive’ and use deverbal nouns:
   K‘iche’ x-Ø-u-chap (u)-b’iin-eem
   ‘compl-3Abs-3Erg-begin (3Erg)-travel-nominal
   ‘He/she began (his/her)-traveling.’

2. The theory does not define ‘rich’ inflection
   Danish has distinct present tense, past tense and infinitive verb forms:
   infinitive køb-e ‘to buy’
   imperative køb
   present tense køb-er
   past tense køb-de

   Danish also does not permit subject drop:
   ??? har ikke købt bogen
   has not bought the book

   Despite these features, children acquiring Danish only begin using infinitives AFTER their finite verb morphology becomes productive (Plunkett & Strømqvist 1990).
3. English-speaking children use *don’t* with third person subjects (Sano 1999), e.g., he *don’t* use your eyes (Nina 2;1.29) 

4. The theory does not account for morpheme acquisition orders

5. The theory does not account for the other missing elements in children’s sentences, e.g., verbs

6. The theory does not account for the gradual increase in morpheme use (Brown 1973).

7. The theory categorizes languages as either null subject or non-null subject languages and does not account for cross-linguistic differences in null subjects and objects.

References


Pine, Julian M., Caroline F. Rowland, Elena V. M. Lieven, and Anna L. Theakston. ms. Testing the Agreement/Tense Omission Model: Why the data on children’s use of non-nominative subjects count against the ATOM.


**Constructionist Approaches**

Ambridge and Lieven present a constructionist account for the absence of subjects and tense inflection in children’s language. They begin by assuming that children rote-learn a number of whole utterances as frozen phrases (p. 134), e.g. ‘I’m eating it.’

The constructionist assumption does not predict that children will omit parts of adult utterances, it does not predict which parts children will omit, and it does not predict that children will systematically omit specific parts of adult utterances. Obviously, the basic assumption of the constructionist approach has to be modified (complicated!).

This is why Ambridge and Lieven present the MOSAIC model of omission (p. 152). The MOSAIC model does not assume that children learn whole utterances. Instead it assumes that children start with the ends of utterances and gradually add more words as they get better at processing utterances. This hypothesis is based on the **recency effect** that people are better at repeating what they hear last.

Take the example sentence *Can he play?* MOSAIC assumes that children will produce the sentence as:

1. play?
2. he play?
3. Can he play?

Ambridge and Lieven suggest that many child utterances in English derive from compound finites:

<table>
<thead>
<tr>
<th>Compound finite utterance</th>
<th>Child utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(What) can/will/does he play?</td>
<td>He play</td>
</tr>
<tr>
<td>I saw him playing</td>
<td>Him playing</td>
</tr>
<tr>
<td>Peut-il jouer? (Can he play?)</td>
<td>Il jouer [French]</td>
</tr>
<tr>
<td>Wil hij spelen? (Can he play?)</td>
<td>Hij spelen [Dutch]</td>
</tr>
</tbody>
</table>

**Advantages**

1. Constructionist approaches highlight the connections between the language that children hear and the utterances children produce. Generativists do not analyze the structure of the input language, and therefore underestimate what children are learning from the input.

Ambridge and Lieven present several studies that investigate the frequency of tense marking in the input and its correlation with children’s use of tense marking.

Freudenthal et al. (2007) report a correlation between the proportion of utterance-final non-finite verbs in the input language and the frequency of non-finite verbs in the children’s language.
Freudenthal et al. (2010) found a lexical effect in that individual verbs differ in their frequency of use in compound finite constructions. The children’s inflection of individual verbs correlates with the frequency that the verbs are inflected in the adult language. The lexical effect accounts for the different rates of inflection found on event verbs (e.g. play, climb, make and tell) and state verbs (e.g. want, need, like, be and have).

Wilson (2003) found that children begin with constructions based on particular lexical items (c.f. Maratsos & Chalkley). They then extract more general units by generalizing across lexically specific constructions.

Wilson tracked the use of copula be, auxiliary be and third person present tense -s in five children between the ages of 1;6 and 3;5.

He claims that the constructions children create with noun phrase subjects will be different from the constructions they create with pronominal subjects.

Fig 2. Copula marking with third person closed-class and lexical NP subjects by time.

Problems

1. Constructionist approaches, like generativist approaches, ignore the contexts of use for each construction. One example is the expression of ‘present’ tense in English. More specifically, ‘present’ tense forms do not express actions that occur at the time of speech. Compare the use of event and state verbs in ‘present’ tense constructions.

<table>
<thead>
<tr>
<th>Context</th>
<th>Event verbs</th>
<th>State verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic</td>
<td>A cow eats grass.</td>
<td>Grass needs water.</td>
</tr>
<tr>
<td>Habitual</td>
<td>Walter always walks to school.</td>
<td>Mary always has a sandwich.</td>
</tr>
<tr>
<td>Present</td>
<td>The dog is barking.</td>
<td>George wants an apple.</td>
</tr>
</tbody>
</table>

2. Constructionist approaches, like generativist approaches, do not predict children’s verb forms in polysynthetic languages. English, Dutch and German are Germanic languages in which verbs have a single suffix. French, Spanish and Italian are Romance languages in which verbs have a single suffix. Constructionist approaches do not predict which part of a verb complex children will produce.

Mam (Mayan)

```
ma 0-kub’ n-xeyb’a-’n-a
recent abs3-down erg1-comb-dependent-enclitic
‘I combed it.’
```
Mohawk (Iroquoian) [Mithun 1989: 304]

wa’-hi-ken-’
past-1.singular.agent/masculine.singular.patient-see-punctual
‘I saw him.’

Navajo (Athabaskan) [Courtney and Saville-Troike 2002: 624]

shi - á‡do’ - shá - da - ’í - ð - tsóód
obj1-also-for-pl-obj3-subj3-cl-impf.stem:feed
‘They were feeding it to me, too.’

Quechua [Courtney and Saville-Troike 2002: 624]

mikhu - chi - sha - wa - rqa - n - ku - pis
eat-caus-prog-1obj-past-3subj-pl-add
‘They were feeding it to me, too.’

3. Constructionist approaches do not explain how children transition from a collection of constructions to the adult grammar. Constructionists do not explain the creation of grammatical categories such as ‘verb’, ‘subject’ and ‘third person’.

References


Mayan Morphosyntax

Mayan languages use **ergative** markers for the subjects of transitive verbs and **absolutive** markers for the subjects of intransitive verbs and the objects of transitive verbs.

Intransitive verb with **absolutive** subject markers in Mam, Q’anjob’al and Yucatec

<table>
<thead>
<tr>
<th>Mam (England 1983:166)</th>
<th>Q’anjob’al</th>
<th>Yucatec (Bricker et al.1998: 330)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ma <strong>chin</strong> b’eeet-a</td>
<td>max-in b’ey-i</td>
<td>h b’in-ih-0</td>
</tr>
<tr>
<td>REC <strong>abs1</strong> walk-ENC</td>
<td>COM-<strong>abs1</strong> walk-IV</td>
<td>COM go-IV-<strong>abs3</strong></td>
</tr>
<tr>
<td>‘I walked.’</td>
<td>‘I walked.’</td>
<td>‘S/he went.’</td>
</tr>
</tbody>
</table>

Mam, Q’anjob’al and Yucatec **extend** ergative marking to the subjects of intransitive verbs in special contexts.
Intransitive verb with **ergative** subject markers in Mam, Q’anjob’al and Yucatec

Mam (England 1983: 259) | Q’anjob’al | Yucatec
---|---|---
 n-chi ooq’ t-poon ky-txuu’ | lanan ha-way-i. táan a wen-el.
 prog- abs6 cry  **erg3**-arrive  erg6-mother  | **prog erg2**-sleep-IV  **prog erg2** sleep-nom

‘They were crying when their mother arrived.’ ‘You are sleeping.’ ‘S/he went.’


The Yucatec aspect-mood markers include táan ‘progressive’ (ongoing, be...ing), ts’o’ok ‘terminative’ (conclude, result), táant ...-e’ ‘immediate past’, ho’op’ ‘inceptive’ (begin), k’áah ‘inceptive’ (begin), yan ‘obligative’ (must, have to) , táak ‘desiderative’ (want), k’ab’éet ‘necessitive’ (need, have to), he’ ...-e’ ‘assurative (future)’ (surely, indeed), and bíin ‘predictive, indefinite future’. Yucatec verbs with the incompletive aspectual prefix k- also have extended ergativity.

The extended ergative contexts in Mam are defined by the absence of overt aspect marking commonly found in adverbial clauses and the complements to some verbs. England (1983: 264) states that ‘These contexts include one type of embedded clause, purpose or result clauses, clauses which follow focused adverbials, and clauses which follow a few other specific adverbials. In addition, certain verbs in relative clauses require dependent person marking [=extended ergativity CP et al.], but only in a rather restricted semantic context.

**Contexts of extended ergativity in Mam, Q’anjob’al and Yucatec**

<table>
<thead>
<tr>
<th>Context</th>
<th>Mam</th>
<th>Q’anjob’al</th>
<th>Yucatec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal Adverb</td>
<td><strong>extended</strong></td>
<td>extended</td>
<td>extended</td>
</tr>
<tr>
<td>Manner Adverb</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
</tr>
<tr>
<td>Desiderative</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
</tr>
<tr>
<td>Progressive</td>
<td>extended</td>
<td>extended</td>
<td>extended</td>
</tr>
<tr>
<td>Incompletive</td>
<td><strong>extended</strong></td>
<td>extended</td>
<td>extended</td>
</tr>
</tbody>
</table>

The root infinitive hypothesis predicts that Mayan children who produce root infinitives would extend ergative markers to the subjects of intransitive verbs.
**Adult speech**

The frequency of ergative marker use in the adults’ speech shows that children acquiring Yucatec hear ergative markers on intransitive 4 to 10 times more frequently than the children acquiring Mam and Q’anjob’al. The frequency analysis predicts that children acquiring Yucatec will acquire ergative marking on intransitive verbs earlier and more accurately than children acquiring Mam and Q’anjob’al.

**Table 7. Number (percentage) of intransitive contexts in Mam, Q’anjob’al and Yucatec**

<table>
<thead>
<tr>
<th>Language</th>
<th>Speaker</th>
<th>Imperative</th>
<th>Absolutive</th>
<th>Ergative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mam</td>
<td>mother</td>
<td>168 (66%)</td>
<td>64 (25%)</td>
<td>21 (8%)</td>
</tr>
<tr>
<td>Q’anjob’al</td>
<td>father</td>
<td>27 (16%)</td>
<td>140 (81%)</td>
<td>6 (3%)</td>
</tr>
<tr>
<td>Yucatec</td>
<td>mother</td>
<td>5 (13%)</td>
<td>14 (37%)</td>
<td>14 (37%)</td>
</tr>
</tbody>
</table>

**The Children’s Intransitive Utterances**

The children produced utterances in contexts that closely followed the adult production. The Yucatec children produced 3-10 times as many utterances in contexts of extended ergativity as the Mam and Q’anjob’al children. The Yucatec children were more practiced at producing intransitive verbs in extended ergative contexts than the Mam and Q’anjob’al children.

**Number (percent) of verb tokens produced in intransitive contexts in Mam**

<table>
<thead>
<tr>
<th>Children</th>
<th>Age</th>
<th>Imperative</th>
<th>Absolutive</th>
<th>Ergative</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEN</td>
<td>2;0-2;1</td>
<td>91 (38%)</td>
<td>132 (56%)</td>
<td>14 (6%)</td>
</tr>
<tr>
<td>CRU</td>
<td>2;5.2</td>
<td>2 (3%)</td>
<td>67 (93%)</td>
<td>3 (4%)</td>
</tr>
<tr>
<td>JOS</td>
<td>2;6.14</td>
<td>5 (6%)</td>
<td>73 (84%)</td>
<td>9 (10%)</td>
</tr>
<tr>
<td>Mother (WEN)</td>
<td>168 (66%)</td>
<td>64 (25%)</td>
<td>21 (8%)</td>
<td></td>
</tr>
</tbody>
</table>

**Number (percent) of verb tokens produced in intransitive contexts in Q’anjob’al**

<table>
<thead>
<tr>
<th>Children</th>
<th>Age</th>
<th>Imperative</th>
<th>Absolutive</th>
<th>Ergative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xhuw</td>
<td>2;0-2;1</td>
<td>211 (32%)</td>
<td>416 (64%)</td>
<td>23 (4%)</td>
</tr>
<tr>
<td>Xhim</td>
<td>2;5.2</td>
<td>93 (16%)</td>
<td>492 (83%)</td>
<td>7 (1%)</td>
</tr>
<tr>
<td>Tum</td>
<td>2;6.14</td>
<td>65 (11%)</td>
<td>498 (85%)</td>
<td>21 (4%)</td>
</tr>
<tr>
<td>Father (Xhuw)</td>
<td>27 (16%)</td>
<td>140 (81%)</td>
<td>6 (3%)</td>
<td></td>
</tr>
</tbody>
</table>

**Number (percent) of verb tokens produced in intransitive contexts in Yucatec**

<table>
<thead>
<tr>
<th>Children</th>
<th>Age</th>
<th>Imperative</th>
<th>Completive</th>
<th>Incompletive</th>
<th>Subjunctive</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAN</td>
<td>2;0</td>
<td>4 (10%)</td>
<td>8 (20%)</td>
<td>4 (10%)</td>
<td></td>
</tr>
<tr>
<td>ARM</td>
<td>2;0</td>
<td>26 (42%)</td>
<td>12 (19%)</td>
<td>19 (31%)</td>
<td>5 (8%)</td>
</tr>
<tr>
<td>DAV</td>
<td>2;0</td>
<td>12 (27%)</td>
<td>14 (31%)</td>
<td>14 (31%)</td>
<td>5 (11%)</td>
</tr>
</tbody>
</table>
The Children’s Production of Ergative Markers on Intransitive Verbs

Mam

a. WEN (2;0.2)

\[
\begin{align*}
\text{wiin.} & = \text{i t-xi’} \text{ w-ii-n-a} \\
\text{so ERG3-go ERG1-carry-DEP-ENC} & \text{‘So that I go carry it.’}
\end{align*}
\]

b. WEN (2;0.25)

\[
\begin{align*}
\text{taaxh jHunt kuun.} & = *i \text{ t-ajs junt q-u’n.} \\
\text{so ERG3-return one ERG4-by} & \text{‘So that another returns by us.’}
\end{align*}
\]

Q’anjob’al

a. XHUW (2;4)

\[
\begin{align*}
\text{la low hin.} & = \text{lan *hin-lo-w-*i} \\
\text{PROG ERG1-eat-AP-IV} & \text{‘I am eating.’}
\end{align*}
\]

b. XHIM (2;9)

\[
\begin{align*}
\text{lan hamulnajil tom.} & = \text{lan ha-mulnaj-lil dom} \\
\text{PROG ERG2-work-ABST Dominga} & \text{‘Dominga you are working.’}
\end{align*}
\]

Yucatec

a. ARM (2;0.15)

\[
\begin{align*}
\text{ok peek’} & = *\text{táan *uy-ok-*ol peek’} \\
\text{PROG ERG3-enter-NOM dog} & \text{‘The dog is coming in.’}
\end{align*}
\]

b. ARM (2;0.12)

\[
\begin{align*}
\text{k’ek’en hanah.} & = \text{k’ek’en *táan *u han-al(h)} \\
\text{pig PROG ERG3 eat-NOM} & \text{‘The pig is eating.’}
\end{align*}
\]
‘This is the pig which is eating.’

Number of tokens (percent of obligatory contexts) of extended ergative marking in Mam, Q’anjob’al and Yucatec

<table>
<thead>
<tr>
<th>Age</th>
<th>Language</th>
<th>Speaker</th>
<th>tokens</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td>Mam</td>
<td>WEN</td>
<td>19</td>
<td>49%</td>
</tr>
<tr>
<td></td>
<td>Q’anjob’al</td>
<td>XHUW</td>
<td>24</td>
<td>89%</td>
</tr>
<tr>
<td></td>
<td>Yucatec</td>
<td>ARM</td>
<td>1</td>
<td>8%</td>
</tr>
<tr>
<td>2;6</td>
<td>Mam</td>
<td>JOS</td>
<td>24</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>Q’anjob’al</td>
<td>XHIM</td>
<td>2</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Yucatec</td>
<td>ARM</td>
<td>4</td>
<td>80%</td>
</tr>
<tr>
<td>3;0</td>
<td>Mam</td>
<td>CRU</td>
<td>16</td>
<td>84%</td>
</tr>
<tr>
<td></td>
<td>Q’anjob’al</td>
<td>TUM</td>
<td>16</td>
<td>84%</td>
</tr>
<tr>
<td></td>
<td>Yucatec</td>
<td>ARM</td>
<td>4</td>
<td>80%</td>
</tr>
<tr>
<td>Adult</td>
<td>Mam</td>
<td>mother WEN</td>
<td>21</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Q’anjob’al</td>
<td>father XHUW</td>
<td>3</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Yucatec</td>
<td>mother SAN</td>
<td>160</td>
<td>96%</td>
</tr>
</tbody>
</table>

The comparative data indicate that the contexts rather than the frequency of ergative extension influence the children’s production of extended ergative marking in each language. If the adult frequency of extended ergative marking influenced the children’s use of extended ergativity we would expect lower rates of extended ergative marking by children acquiring Mam and Q’anjob’al. The children acquiring Q’anjob’al use extended ergative marking as frequently as the children acquiring Yucatec.

Finally, we can compare the Mam, Q’anjob’al and Yucatec children’s production of ergative markers on intransitive verbs in contexts of extended ergativity with K’iche’, Tzeltal and Tzotzil children’s production of ergative markers in languages without extended ergativity. There is no indication that children acquiring languages with extended ergativity are disadvantaged by the marked nature of this ergative system. In fact, the differences between the individual languages are more marked than the difference based on whether or not the language has extended ergativity.

These data are best characterized by the different language profiles. Although K’iche’, Tzeltal and Tzotzil lack extended ergativity, there are noticeable differences between the Tzotzil children and the K’iche’ and Tzeltal children in their frequency of ergative production on transitive verbs. Although Mam, Q’anjob’al and Yucatec have an extended ergative system in common, there are noticeable differences between the languages in the children’s use of ergative markers in extended ergative contexts. We conclude that abstract linguistic features such as ergative and absolutive are less important to children than their language-specific realization.
References


