Why we should be impressed by first language acquisition

Do you remember learning to...

tie your shoes?

ride a bicycle?

read?

talk?
Resistance to correction:
Child: Want other one spoon, Daddy.
Father: You mean, you want THE OTHER SPOON.
Child: Yes, I want other one spoon, please, Daddy.
Father: Can you say "the other spoon"?
Child: Other ... one ... spoon.
Father: Say ... "other".
Child: Other.
Father: "Spoon".
Child: Spoon.
Father: "Other ... Spoon".
Child: Other ... spoon. Now give me other one spoon?
Nature vs nurture: the great debate

What they know by age 4: Jill de Villiers experiments (at 6:32 in “Acquiring Human Language”)

  Competence vs Performance AND Production vs Perception

Mistakes: windows into minds

  Morphology – overgeneralization

Progress backwards:

  walk / walked  go / went
  open / opened  throw / threw
  want / wanted  hold / held

Children, at first:

  walk  go
  open  throw
  want  hold
Children, a bit later:

- walked
- opened
- wanted

Children, later still:

- goed
- throwed
- holded

Also:  
eded 
maked 
finded 
hitted 
falled 
doed 
speaked 
breaked 
goed 
runned 

And:  
foots 
tooths 
childs 
mans 
mouses 
peoples
Negative evidence?

Again, resistant to correction:

CHILD: My teacher held the baby rabbits and we patted them.

ADULT: Did you say your teacher held the baby rabbits.

CHILD: Yes.

ADULT: What did you say she did?

CHILD: She held the baby rabbits and we patted them.

ADULT: Did you say she held them tightly?

CHILD: No, she held them loosely.
Syntax – What do you think what's in here? (50:40)

Human Language

Mistakes they never make (49.54 – 50:40 in “Acquiring Human Language”)

I painted the barn red => I saw the barn red
What did you eat your eggs and?
I baked Mary a cake => I baked two hours a cake

Something is innate = Universal Grammar
Evidence for Universal Grammar

• Children's errors & linguistic creativity
• Stages of acquisition are universal
e.g., deaf children babble, same milestones)
• Language universals; no “primitive” languages
• Creolization  (e.g. Nicaraguan Sign Language)
  children are incapable of learning non-UG-driven pidgin,
  so they impose extra grammar on it
The Critical Period

before the age of 7 - perfect command;
between the ages of 8 and 15 - progressively less perfect command;
at a greater age - no advantage for relative youth.

Genie - isolated until 13 ½

Mike paint.
Applesauce buy store.
Neal come happy; Neal not come sad.
Genie have Momma have baby grow up.
I like elephant eat peanut.
Isabelle - isolated until 6 ½

Why does the paste come out if one upsets the jar?
Do you go to Miss Mason's school at the university?

Ducklings: ability to identify and follow the mother
Kittens: ability to perceive visual images
Sparrows: ability to learn the father's songs
Stages of language learning

**Production** side: acquisition of lexical and syntactic knowledge.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Typical age</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Babbling</td>
<td>0;6 - 0;8</td>
<td>repetitive CV patterns</td>
</tr>
<tr>
<td>One-word</td>
<td>0;9 - 1;6</td>
<td>Single open-class words or word stems</td>
</tr>
<tr>
<td>Two-word</td>
<td>1;6 - 2;0</td>
<td>&quot;mini-sentences&quot; with simple semantic relations</td>
</tr>
<tr>
<td>Early multiword</td>
<td>2;0 - 2;6</td>
<td>&quot;telegraphic&quot; sentence structures of <em>lexical</em> rather than <em>functional</em> or <em>grammatical</em> morphemes</td>
</tr>
<tr>
<td>Later multiword</td>
<td>2;6 on</td>
<td><em>Grammatical</em> or <em>functional</em> structures emerge</td>
</tr>
</tbody>
</table>

It is safe to say that except for constructions that are rare, predominantly used in written language, or mentally taxing even to an adult (like *The horse that the elephant tickled kissed the pig*), all parts of all languages are acquired before the child turns four.

The one-word (holophrastic) stage

At about 10 months, first recognizable words appear (mostly in naming):

Meanings too narrow or too broad:

- **bottle** - only plastic bottles
- **teddy** - only one particular bear
- **dog** used for lambs, cats, and cows as well as dogs
- **kick** used for pushing and for wing-flapping as well as for kicking.

Perception vs. production (yet again):

- Adult: This is your fis? Child: No, my fis. (Rejects repeated imitations.)
- Adult: Oh, that is your fish. Child: Yes, my fis.
Early combinations tend to have the correct word order:

<table>
<thead>
<tr>
<th>All dry.</th>
<th>All messy.</th>
<th>All wet.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I sit.</td>
<td>I shut.</td>
<td>No bed.</td>
</tr>
<tr>
<td>No pee.</td>
<td>See baby.</td>
<td>See pretty.</td>
</tr>
<tr>
<td>Other pocket.</td>
<td>Boot off.</td>
<td>Siren by.</td>
</tr>
<tr>
<td>Our car.</td>
<td>Papa away.</td>
<td>Dry pants.</td>
</tr>
</tbody>
</table>
At about 1.5, children in all languages produce **two-unit sentences**.

<table>
<thead>
<tr>
<th>Language</th>
<th>Phrase</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>German</strong></td>
<td><strong>buch da</strong></td>
<td>&quot;book there&quot;</td>
</tr>
<tr>
<td></td>
<td><strong>bitte apfel</strong></td>
<td>&quot;please apple&quot;</td>
</tr>
<tr>
<td></td>
<td><strong>wo ball?</strong></td>
<td>&quot;where ball?&quot;</td>
</tr>
<tr>
<td><strong>Russian</strong></td>
<td><strong>baba kreslo</strong></td>
<td>&quot;grandma armchair&quot;</td>
</tr>
<tr>
<td></td>
<td><strong>daj chasy</strong></td>
<td>&quot;give watch&quot;</td>
</tr>
<tr>
<td></td>
<td><strong>vady net</strong></td>
<td>&quot;water no&quot;=no water</td>
</tr>
<tr>
<td><strong>Finnish</strong></td>
<td><strong>ei susi</strong></td>
<td>&quot;not wolf&quot;</td>
</tr>
<tr>
<td></td>
<td><strong>torni iso</strong></td>
<td>&quot;tower big&quot;</td>
</tr>
<tr>
<td></td>
<td><strong>missd pallo?</strong></td>
<td>&quot;where ball?&quot;</td>
</tr>
<tr>
<td><strong>Samoan</strong></td>
<td><strong>fia moe</strong></td>
<td>&quot;want eat&quot;</td>
</tr>
<tr>
<td></td>
<td><strong>mai pepe</strong></td>
<td>&quot;give doll&quot;</td>
</tr>
<tr>
<td></td>
<td><strong>tapale 'oe</strong></td>
<td>&quot;hit you&quot;</td>
</tr>
</tbody>
</table>
### Telegraphic speech: Omitting “grammatical” words:

<table>
<thead>
<tr>
<th>Original</th>
<th>Repeated</th>
<th>(child)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can see a cow</td>
<td>See cow</td>
<td>Eve, 25 months</td>
</tr>
<tr>
<td>The doggy will bite</td>
<td>Doggy bite</td>
<td>Adam, 28 months</td>
</tr>
<tr>
<td>Where does Daddy go?</td>
<td>Daddy go?</td>
<td>Daniel, 23 months</td>
</tr>
<tr>
<td>Where is the car going?</td>
<td>Car going?</td>
<td>Jem, 21 months</td>
</tr>
</tbody>
</table>
More adult structure is chopped down to its essential elements:

<table>
<thead>
<tr>
<th>AGENT</th>
<th>VERB</th>
<th>RECIPIENT</th>
<th>OBJECT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>gave</td>
<td>John</td>
<td>lunch</td>
<td>in the kitchen</td>
</tr>
<tr>
<td>Mommy</td>
<td>fix</td>
<td>pumpkin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baby</td>
<td>cry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baby</td>
<td></td>
<td>table</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Give</td>
<td>doggie</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Put</td>
<td>light</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Put</td>
<td></td>
<td></td>
<td>floor</td>
</tr>
<tr>
<td>Tractor</td>
<td>go</td>
<td></td>
<td></td>
<td>floor</td>
</tr>
<tr>
<td>I</td>
<td>ride</td>
<td>horsie</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Give</td>
<td>doggie</td>
<td>paper</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Put</td>
<td>truck</td>
<td>window</td>
<td></td>
</tr>
<tr>
<td>Adam</td>
<td>put</td>
<td>it</td>
<td>box</td>
<td></td>
</tr>
</tbody>
</table>
Grammatical elements and corresponding structures

At about the age of 2, children start using grammatical elements

- finite auxiliaries (is, was)
- verbal tense and agreement affixes (-ed, -s)
- nominative pronouns (I, she)
- complementizers (that, where)
- determiners (the, a).

Telegraphic patterns alternate with adult or adult-like forms:

- **She's gone.** Domenico, 24 months
- **Her gone school.**
- **I having this.** Olivia, 27 months
- **I'm having 'nana.** (banana)
- **I'm having this little one.** Betty, 30 months
- **Me'll have that.**
- **Mummy haven't finished yet, has she?** Olivia, 36 months

As grammar becomes more complex, the elements of the sentence develop internal complexity.

- **Big doggie**
- **Give doggie paper**
- **Give big doggie paper**
Children learn categories of morphemes in a **consistent order**:

**Possible influences** on the relative ease of learning:

- **contribution to overall meaning** (past tense vs. third person)
- **frequency of irregularity** (past tense verb vs. plural noun)
- **variation in pronunciation** (cf. allomorphy of plural, past tense)
- **identifiability of a morpheme** (contracted vs. uncontracted)
- **complexity of meaning** (past tense vs. 3\(^{rd}\)p. + singular + present)