







# Child Language Acquisition

First and Second

## Child First Language Acquisition: Young Children Talking

- 3 months 
- 6 months 
- 9 months 
- 12 months 
- 18 months 
- 24 months 
- 36 months 

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## Child First Language Acquisition

- Babbling
- Words
- Sounds and Pronunciation
- Syntax
- Morphology

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## Is Language Behavior?

## Is Language Behavior?



- B.F. Skinner (1904-1990) claimed that language is just another form of behavior. It is a response to stimuli in the environment. And it is learned.
- Children's creativity with language is a problem for this theory.

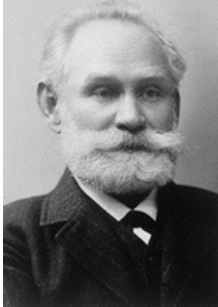
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## Is Language Behavior?

- Predictions of behaviorism for first language acquisition:
  - Children would make many errors.
  - Errors would differ from child to child.
  - The level of linguistic attainment would differ from child to child.

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## Behaviorist Learning I



- Ivan Pavlov (1849-1936) discovered Classical Conditioning:
- Learning is the involuntary association of stimulus and response.

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## Behaviorist Learning I

1. Neutral stimulus: Bell rings
  2. Unconditioned stimulus: Present food
  3. Unconditioned response: The dog salivates
- Conditioning: Repeat the bell ringing and food presentation several times.
  - After conditioning: The dog hears a bell and then the dog salivates.

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## Behaviorist Learning I

- Pavlov's Classic Conditioning: Learning is the association of stimulus and response.
  1. Neutral stimulus: Bell rings
  2. Unconditioned stimulus: Present food
  3. Unconditioned response: The dog salivates
- Conditioning: Repeat the bell ringing and food presentation several times.
- After conditioning: The dog hears a bell and then the dog salivates even when no food is presented.

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PAVLOV & HIS DOG WERE NEVER POPULAR AT DINNER PARTIES

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## Behaviorist Learning of Language?

- Adult utters "water" whenever the child sees water.
  - Unconditioned stimulus: "water"
  - Unconditioned response: the child . . . Drinks? Splashes? Spits?
- After conditioning:
  - Conditioned stimulus: the word "water"
  - Conditioned response: The child drinks.

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## Behaviorist Learning II

### ■ B.F. Skinner's Operant Conditioning:

– Learning in which a voluntary response is strengthened or weakened, depending on its positive or negative consequences

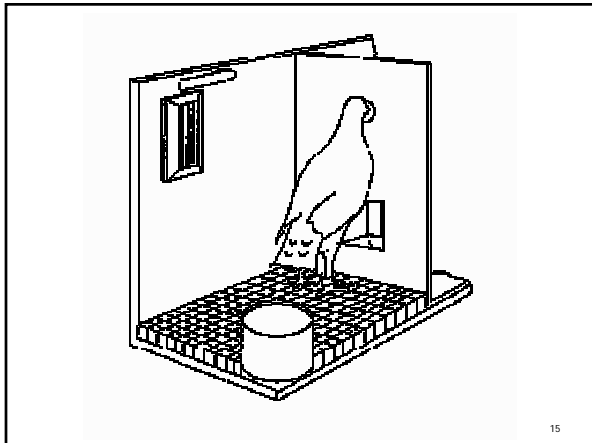
– Works with voluntary muscles only, in contrast to Pavlov's classical conditioning.

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## Behaviorist Learning II

1. A hungry pigeon is placed in a box.
2. When, by chance, the pigeon pecks a key in the box, it receives food.
  - The first time this happens the pigeon does not learn the connection between pecking and receiving food.
3. Eventually, the pigeon pecks the key continuously until its hunger is satisfied.
  - The pigeon demonstrates that it has learned the connection between stimulus and response.

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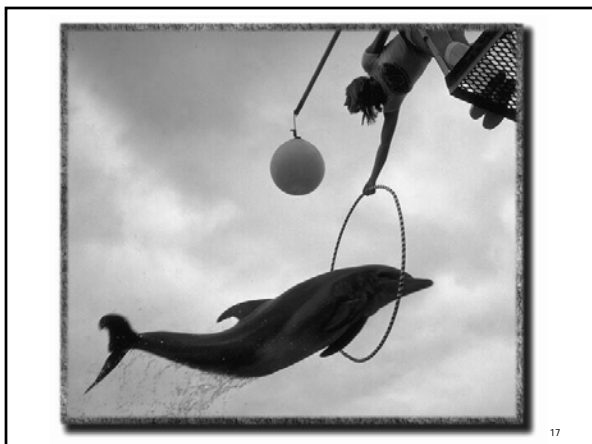


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## Behaviorist Learning II

- Shaping is the process of teaching a complex behavior by rewarding closer and closer approximations to the desired behavior.
1. Reinforce any behavior that is similar to the behavior you want.
  2. Reinforce only those behaviors that are close to the desired behavior.
  3. Reinforce only the desired response.

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## Behaviorist Learning of Language?

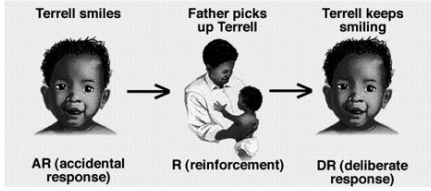
- Adults train the child to say "water" when it sees water.
1. Reinforce "wa", "wawa", etc.
  2. Reinforce "wada"
  3. Reinforce only "water"

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## Operant Conditioning

Papalia, Human Development, 7th Edition, Copyright © 1998, McGraw-Hill Companies, Inc. All Rights Reserved.

### Operant, or Instrumental Conditioning



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## Child First Language Acquisition

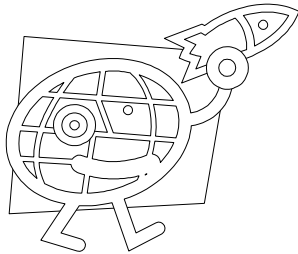
■ Children's creativity with language is a problem for behaviorist theories of language learning.

■ Jean Berko and the "wugs"

- The child's learning of English morphology.  
*Word, 14, 150-177, 1958.*

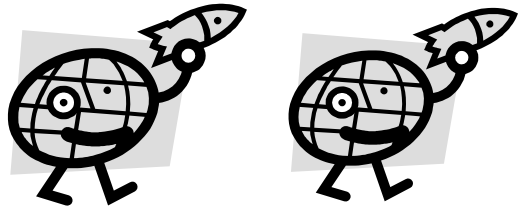
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This is a wug.



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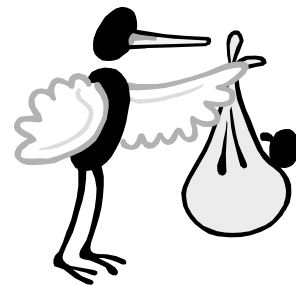
Now there are two of them.  
Two ...?



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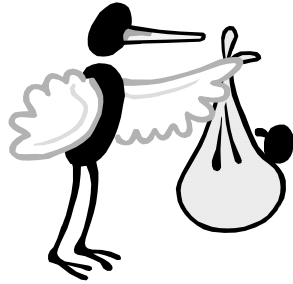
Two wugs

This is a bird who knows how to rick. It is ricking.



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What did it do yesterday?  
Yesterday it ....



25

Yesterday it ricked.

This is a frog who knows how to mot.  
He is motting right now.



27

What did he do yesterday?  
Yesterday he ....



28

Yesterday he motted.

This is a little wug. What would  
you call such a small wug?



30

A wuglet

This wug lives in a house. What would you call a house that a wug lives in?



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A wugwam

### What Can We Learn From The Wugs?

- The major finding of the wug test was that even very young children have already internalized systematic aspects of the linguistic system that enable them to produce plurals, past tenses, possessives, and other forms of words that they have never heard before. The test has been replicated many times, and it has proven very robust. It was the first experimental proof that young children have extracted generalizable rules from the language around them.

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### The First Longitudinal Study of Child Language Acquisition

- Roger Brown undertook a landmark study of the linguistic development of children. He focused on three children, whom he called Adam, Eve, and Sarah. In this monumental study, and on the basis of careful examination of these children's utterances, he established empirical generalizations for the way in which any language is acquired.
- A first language: The early stages. Cambridge, Mass., Harvard University Press, 1973.

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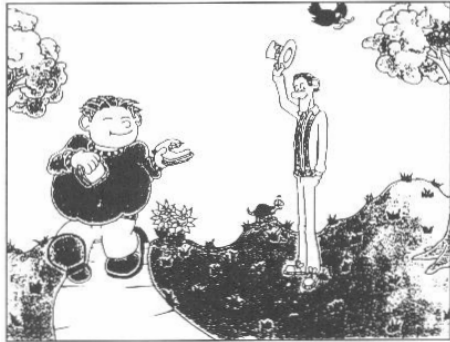
### The First Longitudinal Study of Child Language Acquisition

- Adam was studied by Brown from the age of 2 years and 3 months (2;3) for 15 months.
- Sarah was studied by Brown from the age of 2 years and 3 months (2;3) for 21 months.
- Eve was studied by Brown from the age of 1 year 6 months (1;6) for 15 months.

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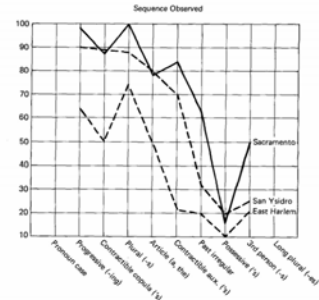


## The Bilingual Syntax Measure



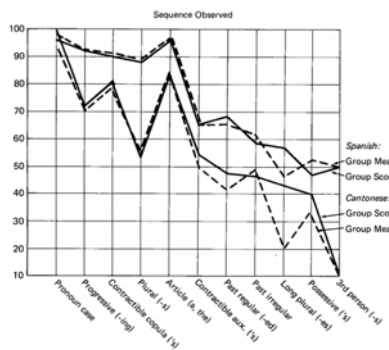
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## Spanish-Speaking Children in Three Different Cities



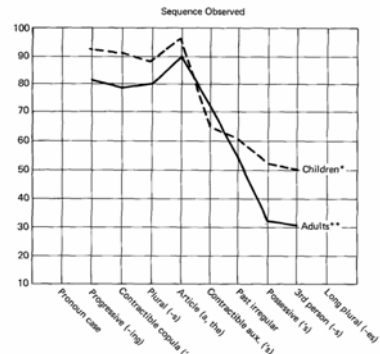
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## Spanish- and Cantonese-speaking Children



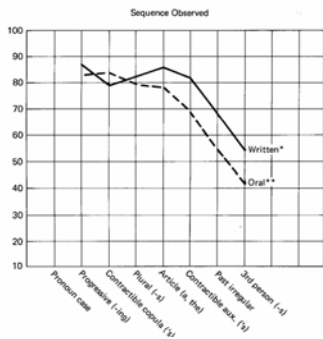
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## Adults and Children



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## In Speech and In Writing



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## A Natural Order for the Acquisition Morphemes in English as a L2?

PROGRESSIVE – *ing*  
 PLURAL – *s*  
 COPULA *is/are*

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### A Natural Order for the Acquisition Morphemes in English as a L2?

PROGRESSIVE – *ing*  
PLURAL – *s*  
COPULA *is/are*

|

AUXILIARY *is/are/have*

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### A Natural Order for the Acquisition Morphemes in English as a L2?

PROGRESSIVE – *ing*  
PLURAL – *s*  
COPULA *is/are*

|

AUXILIARY *is/are/have*

|

3<sup>rd</sup> PERSON SINGULAR – *s*  
POSSESSIVE – *s*

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