

**"Communication about communication:  
Theory and research on early  
communication development in the last  
40 years".**

1. Biased potted history
2. Rethinking things
3. Some videos to reflect on.

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## ***Three Major Periods***

Diary Studies (1876 to 1926)

Large Sample Studies (1926 to 1957)

Longitudinal and Experimental Studies  
(1957 to Present)

## ***Recording Technology***

Paper and pencil

Audio

Video

Digital

## ***Analysis***



THE  
POPULAR SCIENCE  
MONTHLY.

**JUNE, 1876.**

**LINGUAL DEVELOPMENT IN BABYHOOD.**[\[1\]](#)

By H. TAINE.

THE following observations were made from day to day and taken down on the spot. The subject of them was a little girl, whose mental development took the ordinary course, being neither precocious nor the reverse.



Charles Darwin aged 43, with his eldest child, William.

A biographical sketch of an infant. *Mind* 2  
(July): 285-294

# MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.



## I.—A BIOGRAPHICAL SKETCH OF AN INFANT.

M. Taine's very interesting account of the mental development of an infant, translated in the last number of MIND (p. 252), has led me to look over a diary which I kept thirty-seven years ago with respect to one of my own infants. I had excellent opportunities for close observation, and wrote down at once whatever was observed. My chief object was expression, and my notes were used in my book on this subject; but as I attended to some other points, my observations may possibly possess some little interest in comparison with those by M. Taine, and with others which hereafter no doubt will be made.



1  
Ginther Stern

geb. 12. 7. 02. 106. Uhr Vormittags,  
wog 8 1/2 Pfund, war vermutlich um etwas  
eine Woche übertragen. Seine körperliche  
Beschaffenheit war für einen Säugling  
ungewöhnlich ausgeprägt, so daß er  
äußerlich nicht den Eindruck eines eben  
Geborenen machte.

Am ersten Tage wurden keine Beobach-  
tungen angestellt.

13. 7.

Am zweiten Tage reagierte er bereits auf  
Schall. Es fiel auf, daß das Kind mehr-  
mals mit Schreien einsetzte, wenn in  
seiner Nähe starke Geräusche stattfanden  
(Zuschau von Helde, lautes Gehen, Stuhl-  
krachen). Es wurde nachgeprüft durch Hän-  
schelstößen und hier wurden Reactionen  
unzweifelhaft festgestellt; sie bekunde-  
ten sich durch Lidbewegungen, die stets  
unmittelbar auf den Schall folgten. Der  
Versuch wurde zuerst in seiner Nähe am  
Winkelbalken gemacht (etwa 3/4 M. Entfernung);  
die Wirkung des mechanischen Lufterschüttes.

Schallreaction



SPEECH DEVELOPMENT  
OF  
A BILINGUAL CHILD  
A LINGUIST'S RECORD

*Volume I*  
VOCABULARY GROWTH  
IN THE FIRST TWO YEARS

BY  
BERNARD F. LEOPOLD  
HARTMAN ATTARD, IN COLLABORATION



NORTHWESTERN UNIVERSITY PRESS  
EVANSTON, ILL.





## **Dorothea Agnes McCarthy 1906-1974**

McCarthy, D. (1929). The vocalizations of infants. *Journal of Genetic Psychology*, 36, 583-591.

McCarthy, D. (1930). *The language development of the preschool child* ( No. 4). Minneapolis: Institute of Child Welfare, Monograph Series.

McCarthy, D. (1946). Language development in children. In L. Carmichael (Ed.), *Manual of child psychology* (pp. 476-581). NY: John Wiley & Sons.

## Arnold Lucius Gesell (21 June 1880 - 29 May 1961)







## ***Longitudinal Studies***

Classics: 3 children; Regular longitudinal visits; Audio recorded

Major Studies: Brown (1973): Adam, Eve, Sarah; Bloom (1970): Eric, Gia, Kathryn  
Braine (1963): Gregory, Andrew, Steven;

Transcribed: handwritten in early studies; now entered into computer files

CHILDES

## ***Experimental Studies***

Habituation

Violation of expectancy

Good control of variables but low  
ecological validity

Video

Eye-tracking

Neuro





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## Deb Roy: The birth of a word (2011)



- Linguistic approaches vs
- Psychological approaches

# Patterns in L1 Development

## Before First Words -

- The earliest vocalizations
  - Involuntary crying (when they feel hungry or uncomfortable)
  - Cooing and gurgling – showing satisfaction or happiness
- “Babbling”
  - Babies use sounds to reflect the characteristics of the different language they are learning.

# Patterns in L1 Development

## First Words –

- Around 12 months (“one-word” stage):
  - Babies begin to produce one or two recognizable words (esp. content word); producing single-word sentences.
- By the age of 2 (“two-word” stage):
  - 1) at least 50 different words
  - 2) “**telegraphic**” sentences (no function words and grammatical morphemes)  
e.g., “Mommy juice”, “baby fall down”
  - 3) reflecting the order of the language  
e.g., “kiss baby”, “baby kiss”
  - 4) creatively combining words  
e.g., “more outside”, “all gone cookie”

# The First Three Years:

- High degree of similarity in the early language of children
- Developmental sequences
- The earliest vocalizations (involuntary crying)
- Cooing and gurgling sounds
- Infants are able to hear subtle differences between the sounds of human languages.
- By the end of first year, most babies understand quite a few frequently repeated words.
- At twelve months, most babies produce a word or two that everyone recognizes.

# Patterns in L1 Development

## Characteristics of the language of children:

- Their language development shows a high degree of similarity among children all over the world. There are predicable patterns in the L1 development and their L1 developmental patterns are related to their cognitive development (**predictability**).
- Their language reflects the word order of the language that they are hearing. The combination of the words has a meaning relationship (**learning through imitation**).
- Their language also shows they are able to apply the rules of the language to make sentences which they have never heard before (**creativity**).

- Gesture
- Joint attention
- Triadic communication
- Intersubjectivity
- Rhythms
- The social construction of “cognition”





**Liz Bates**

**Threshold Model (1979)**

**Imitation**

**Analytic decomposition**

**Gesture**

Either objects stand out as meaningful to an organism because of what its biology brings to it as its perspectives, or by

'an *improvement of perceiving with practice and the education of attention* - [by which means] - Differences are noticed that were previously not noticed. Features become distinctive that were formerly vague' (Gibson, 1979: 254, emphasis added).

**Biology** provides a perspective such that an organism's sense organs are selected so as to attune for it an appropriate *Umwelt*.

**Individual learning** experiences provide an 'improvement of perceiving with practice'.

**Cultural activities** add to this an 'education of attention' through:

providing the developing human with interactive experiences that involve body and mind in attuning his or her perceptions to a shared *Umwelt*,

and thereby recruiting the process of human development into social practices in which knowledge is generated and regenerated (rather than acquired)

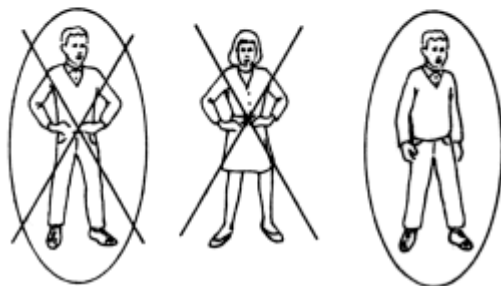
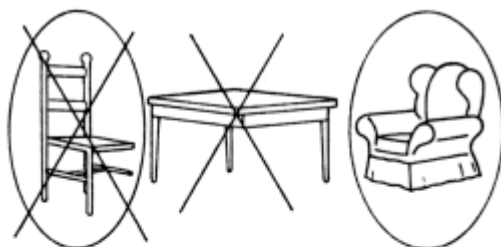
- *To the as-yet-unborn, to all innocent wisps of undifferentiated nothingness: Watch out for life. I have caught life. I have come down with life. I was a wisp of undifferentiated nothingness, and then a little peephole opened quite suddenly. Light and sound poured in. Voices began to describe me and my surroundings. Nothing they said could be appealed. They said I was a boy named Rudolph Waltz, and that was that.*
- Kurt Vonnegut, *Dead Eye Dick* (1982: 1)

Witkin and Berry (1975: 6) shows differences between people on a continuum from more to less differentiated

*greater differentiation shows itself in the tendency for parts of the field to be experienced as discrete from the field as a whole, rather than as fused with the field, or experienced as global, which is indicative of lesser differentiation .*

*All the higher functions originate as actual relations between human individuals (Vygotsky, 1978: 57).*





# Hess and Shipman 1965

- *· I've got some chairs and cars, do you want to play the game?*
- *· Child does not respond.*
- *· Mother continues: O.K. What's this?*
- *· Child: A wagon?*
- *· Mother: Hm?*
- *· Child: A wagon?*
- *· Mother: This is not a wagon. What's this?*

Hess, R. and Shipman, V. (1965) Early experience and the socialization of cognitive modes in children. *Child Development* 36: 869-86.



# Hess and Shipman 1965

- -Mother: *Now, I'll take them all off the board; now you put them all back on the board. What are these?*
- -Child: *A truck.*
- -Mother: *All right, just put them right here; put the other one right here; all right, put the other one there.*

# Hess and Shipman 1965

- *•Mother: All right, Susan, this board is the place where we put the little toys; first of all you're supposed to learn how to place them according to color. Can you do that? The things that are all the same color you put in one section; in the second section you put another group of colors, and in the third section you put the last group of colors. Can you do that? Or would you like to see me do it first?*
- *•Child: I want to do it.*

# Basil Bernstein

- (1) Three boys are playing football and one boy kicks the ball and it goes through the window and the ball breaks the window and the boys are looking at it and a man comes out and shouts at them because they've broken the window so they run away and then that lady looks out of her window and she tells the boys off.

# Basil Bernstein

- **(2)** They're playing football and he kicks it and it goes through there it breaks the window and they're looking at it and he comes out and shouts at them because they've broken it so they run away and then she looks out and she tells them off.

- *It is contended that members of the unskilled and semi-skilled strata, relative to the middle classes, do not merely place different significances upon different classes of objects, but that their perception is of a qualitatively different order (Bernstein: 1958: 24).*

Hartmann, E. and Haavind, H. (1981)  
Mothers as teachers and their children as  
learners: Study of the influence of social  
interaction upon cognitive development. In  
W.P. Robinson (Ed.) *Communication in  
development*. London: Academic Press.  
Pp. 129-58.

# Communication about communication: Theory and research on early communication development in the last 40 years

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