

Introduction

Systems of Communication

Continuity Hypothesis

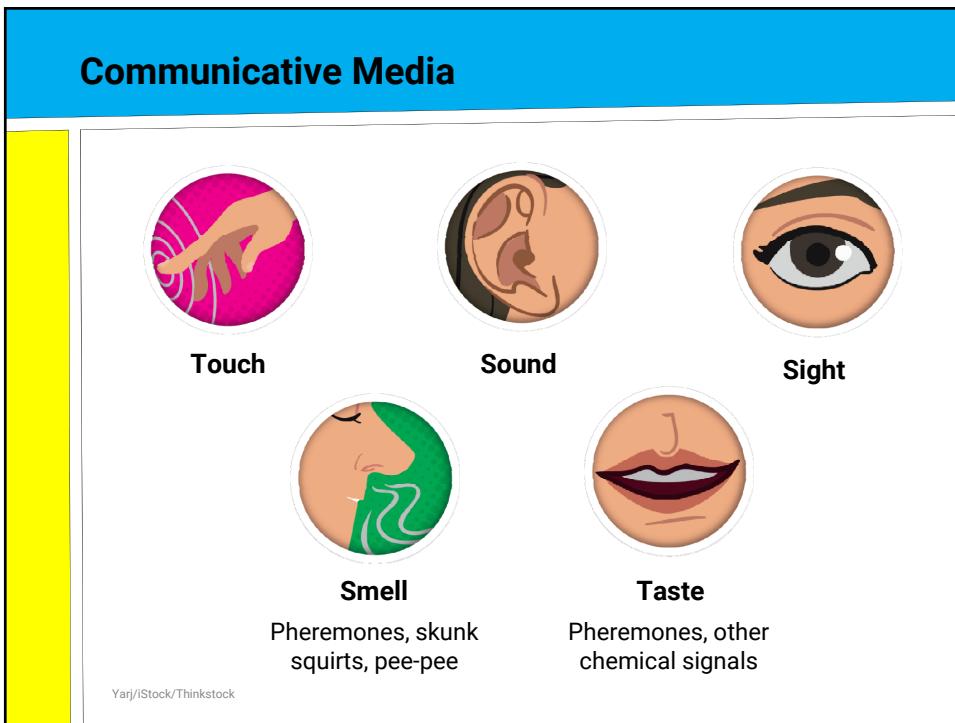
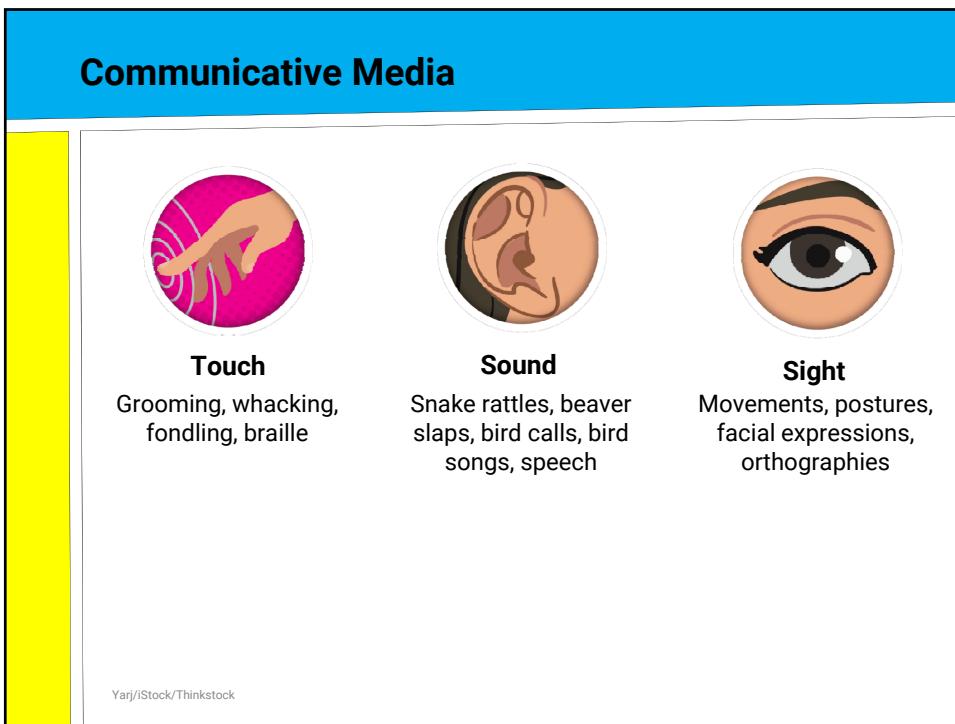
Human Language is an elaboration of other animal communication systems.

Discontinuity Hypothesis

There is something qualitatively different about human language from other species' communication systems.



Tree: stock_shoppe/IStock/Thinkstock; Giraffe: colematt/IStock/Thinkstock; Man: denis_pc/IStock/Thinkstock



Communicative Vehicles: Signs



"not here"

Both images: Randy Harris

Communicative Vehicles: Signs



Both images: Randy Harris

Communicative Vehicles: Signs

D-o-g



**Signifier
(Form)**

Object, noise, image, taste, smell

**Signified
(Meaning)**

Concept, idea, notion

Dog: cole matt/iStock/Thinkstock

Communicative Vehicles: Signs

School



**Semasiology
Form**

Object, noise, image, taste, smell



**Onomasiology
Meaning**

Concept, idea, notion

School: bluebearry/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

Signs

Types of Signs



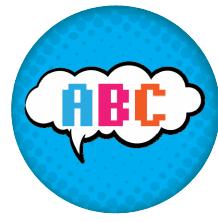
Indexical
Necessity
(esp. cause and effect)

- cat sneeze
- cat allergy
- cat paw prints
- cat poop



Iconic
Resemblance

- photograph of a cat
- drawing of a cat
- sculpture of a cat
- a cat noise

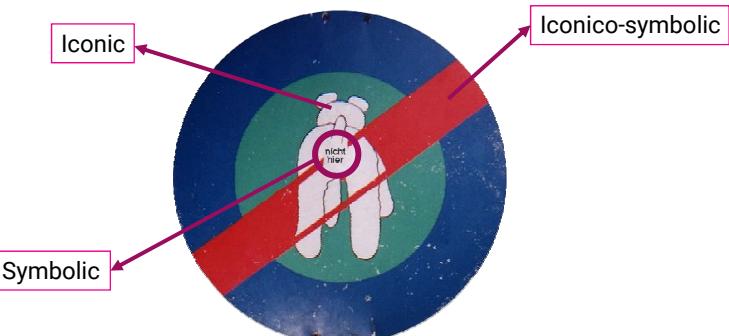


Symbolic
Arbitrariness,
convention, and learning

- cat [kʰæt]
- chat [ʃæt]
- gato [gæto]

Book, Speech Bubble, Cat: wenchiawang/iStock/Thinkstock; Dog: cole matt/iStock/Thinkstock; Sign: Randy Harris;

Composite Sign Systems



Randy Harris

Composite Sign Systems



Randy Harris

Composite Sign Systems



'Bow-wow theory'



'Pooh Pooh theory'



'Yo-he-ho theory'

Onomasiological migration theories



Dog: cole matt/iStock/Thinkstock; Baby: Bullet_Chained/iStock/Thinkstock; Caveman: hchjil/iStock/Thinkstock

Composite Sign Systems



'Bow-wow theory'

Indexes The sound the dog makes.

Icons A dog sound.

Symbols When the iconic relationship falls apart.

Onomasiological migration theories



Dog: cole matt/iStock/Thinkstock

Animal Communication Systems

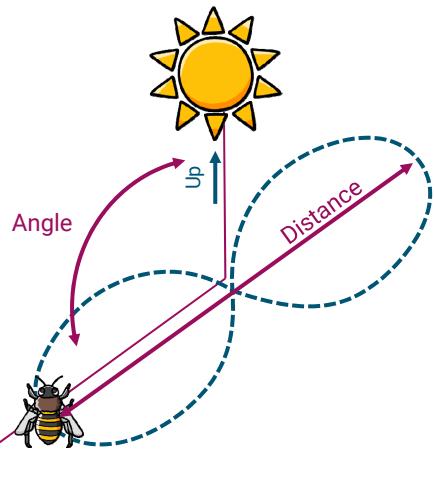
Iconic Bee Dance

The Dance Says:

- Direction
- Quantity
- Distance



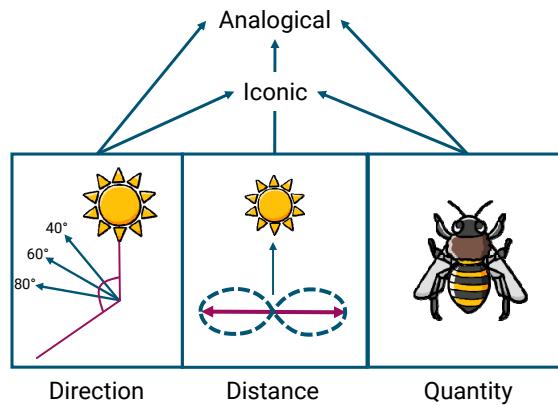
Quantity



Bee: wenchiawang/iStock/Thinkstock; Sun: wenchiawang/iStock/Thinkstock

Iconic Bee Dance

The bees' analog system



Bees have no combinatoric principals

Bee: wchenchiawang/iStock/Thinkstock; Sun: wchenchiawang/iStock/Thinkstock

Iconic Bee Dance

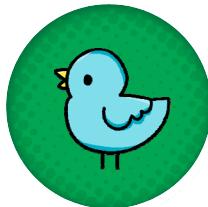
Experiments by Karl Von Frisch



Bee: wchenchiawang/iStock/Thinkstock; Beehive: Tribalium/iStock/Thinkstock; Flower: wchenchiawang/iStock/Thinkstock

Indexical Bird Calls and Monkey Yelps

Birds' (mostly) digital system



Calls

Short note sequences associated with discrete functions

Flight, alarm, nesting, enjoyment, flocking, aggression, territorial control, feeding



Songs

Long, patterned note sequences

Sex, violence

Bird: wenchiawang/iStock/Thinkstock; Music Notes: wenchiawang/iStock/Thinkstock

Indexical Bird Calls and Monkey Yelps

Vervet monkeys' (mostly) digital system



Signal	Meaning	State
Rraup!	Yikes! Something above looks like trouble!	Fear of major avian predator.
Uh!	Yikes! Something in the grass looks like trouble!	Fear of minor mammalian predator.
Nyow!	Yikes! Something just moved which looks like trouble!	Fear of mammalian or major avian predator which has just moved.
Eh, eh!	Hi! Great to see you mommy/babykins!	Joy at mother-child reunion.

Monkey: wenchiawang/iStock/Thinkstock

Human-Induced Symbolic Behaviour in Animals

Apes and Language

Different Experiments

- Bringing apes into human families
 - Not anatomically built to speak
 - American Sign Language



Nim Chimpsky
1970s

Named to refute Noam Chomsky's speciest position



Washoe
1960s-70s

Strong claims that Washoe the ape could speak American Sign Language

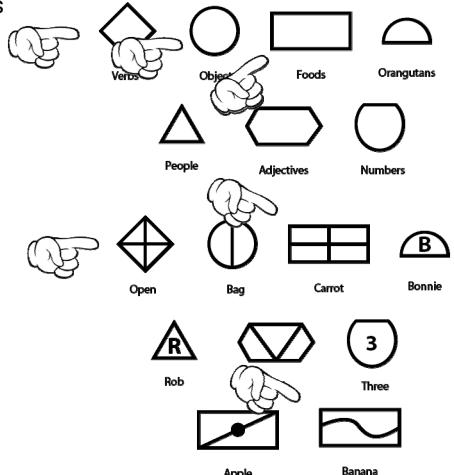


Koko
1970 - Present
www.koko.org

Nim: Icon Film/Telegraph; Washoe: Central Washington University/NY Times; Koko: Ron Cohn/Koko

Apes and Language

Plastic tokens



Plastic tokens: University of Waterloo, Burger: wenchiawang/iStock/Thinkstock

Apes and Language



Animals communicate regularly through telepathy.

"It is the most basic form of communication, an ability we are all born with. As humans, we learn to rely on verbal communication and our telepathic skills are pushed aside and become rusty. Like a muscle, unless used regularly, these skills become weak and inefficient. Humans, given the proper mindset and training, have the ability to communicate telepathically with all species."

Quote from <http://www.animaltelepathy.com/about.html>

Cat: wenchiawang/iStock/Thinkstock; Signal waves: University of Waterloo; Dog: cole matt/iStock/Thinkstock

Apes and Language



Kanzi
1980s - present

Linguistic genius –
over 200 symbols

A *lexigram* is any symbol standing for an entire word

Critical Period Hypothesis

Experiments concentrated on adults instead of children

Quantitative

This is what most ape language researchers say

Qualitative

This is what most linguists say

Kanzi: Laurentiu Garofeanu/Barcroft USA

Text-Lecture Discrepancy

Iconic Communication Systems?



Dirven and Verspoor

"Icons are probably not found in the animal kingdom."



Harris

"The bees' analog communicative dance is primarily iconic."

Bubble: wenchiawang/iStock/Thinkstock; Bee: wenchiawang/iStock/Thinkstock;

Sign Dimensionality

Dimensions of Signs



Indexicality

A semasiological tendency defined by relationship of **necessity** (esp. cause and effect).



Iconicity

A semasiological tendency defined by relationship of **resemblance**.



Symbolicity

A semasiological tendency defined by relationship of **arbitrariness, convention, and learning**.

Skunk: coffeee-in/iStock/Thinkstock; Beaker: wenchiawang/iStock/Thinkstock; Bubble: wenchiawang/iStock/Thinkstock

Dimensions of Signs



dog


Dog: cole matt/iStock/Thinkstock

Semasiological Tendencies

Metonymy
(cognitive principle)



Indexicality

A semasiological tendency defined by relationship of **necessity** (esp. cause and effect).

Metaphor
(cognitive principle)



Iconicity

A semasiological tendency defined by relationship of **resemblance**.

Symbol
(the atrophy of indexical/iconic dimensions for terms?)



Symbolicity

A semasiological tendency defined by relationship of **arbitrariness, convention, and learning**.

Skunk: coffeee-in/iStock/Thinkstock; Beaker: wenchiawang/iStock/Thinkstock; Bubble: wenchiawang/iStock/Thinkstock

Dimensions of Signs

Metaphorical Relationship



Leg



Leg

A dead metaphor

Table: wenchiawang/iStock/Thinkstock; Girl: Kharlamova/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

Metonymy

Indexicality

- A semasiological tendency defined by relationship of necessity (esp. cause and effect).
- metonymy → cognitive principle
 - One element of a set or a relationship (the vehicle) singled out to represent other element(s) (the tenor).
doing the standing
stood for

vehicle	tenor
Rae instituted photo radar.	Rae
Harris banned photo radar.	Harris
Hollywood loves westerns.	Hollywood
Toronto wins in overtime!	Toronto
Ottawa collapses!	Ottawa
	Rae's government
	Harris's government
	People who make movies
	Team representing the city
	Team representing the city

Metaphor

Iconicity

- A semasiological tendency defined by relationship of resemblance.
- metaphor → cognitive principle

One element (the vehicle) represents another element (the tenor), to which it is unrelated.

- My love is a red, red rose.
- Homer is a pig.
- Ottawa is toast.
- The leg is broken.
- The wing is closed.

vehicle	tenor
red rose	love
pig	Homer
toast	Ottawa
leg	part of table
wing	area in hospital

Attributes are invoked, by way of resemblance

- Eats a lot
- Noisy
- Not very clean

Homer: Fox Flash (2006) "Homer Simpson". Wikimedia Commons.

Indexicality

Recall



Four dimensions of Indexicality

- egocentricity (linkage to the speaker)
- deictics (pointing)
- inherent orientation
- anthropocentrism

Indexicality

A semasiological tendency defined by relationship of necessity (esp. cause and effect).

Skunk: coffeee-in/iStock/Thinkstock

Deictics

Etymology:

Greek from *deiktos* → “to show”

Deictics → pointing words



Chair: wenchiawang/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

Deictics

Etymology:

Greek from *deiktos* → “to show”

Deictics → pointing words

- pronouns
- proximals
 - location (here, there)
 - time (now, then)
 - object location (this, that)

He

Boy

She

Chair: wenchiawang/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

Indexical Orientation-Deictic Centre

Egocentricity

The speaker as the (default) reference point for all else.



Bicycle, Table: wenchiaiwang/iStock/Thinkstock; Man: Kharlamova/iStock/Thinkstock; Mountain: University of Waterloo; Squirrel: coffeee-in/iStock/Thinkstock; Tree: stock_shoppe/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

Indexical Orientation-Deictic Centre

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'Mount Pinotubo was on my left.'



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Indexical Orientation-Deictic Centre

Egocentrism

The speaker as the (default) reference point for all else.

'Mount Pinotubo was on my left.'

'The squirrel was behind the tree.'



Bicycle, Table: wenchiaiwang/iStock/Thinkstock; Man: Kharlamova/iStock/Thinkstock; Mountain: University of Waterloo; Squirrel: coffeee-in/iStock/Thinkstock; Tree: stock_shoppe/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

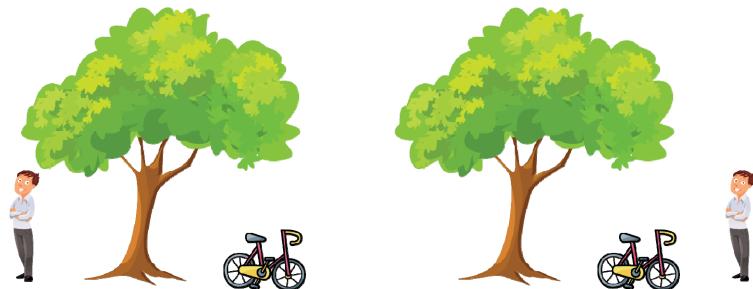
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Indexical Orientation-Deictic Centre

Pronouns

- first person (I, me, we, us, ...)
- second person (you, your)
- third person (he, she, it, they, ...)

Location (here and there)

Time (now and then)

Object/Location (this and that)

} natural order

deictic centre



Man: Kharlamova/iStock/Thinkstock; Woman 1: wenchiawang/iStock/Thinkstock; Woman 2: denis_pc/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

Inherent Orientation

Anthropocentricity

- Greek: *anthropos* → "man", "human"
- man-centred
- human-first syntax
 - 'She knows math.'
 - '*Math is known by her.'
- other objects oriented like humans
 - front, back
 - top, bottom
 - left, right



Man: Kharlamova/iStock/Thinkstock; Car/Bicycle: wenchiawang/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

Inherent Orientation

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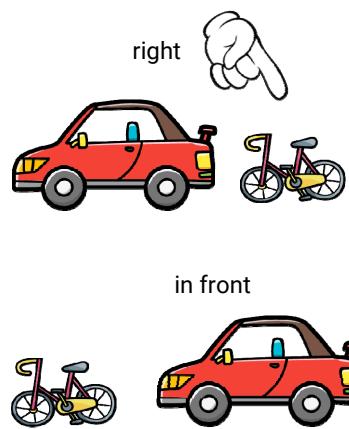


Man: Kharlamova/iStock/Thinkstock; Car/Bicycle: wenchiawang/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

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Man: Kharlamova/iStock/Thinkstock; Car/Bicycle: wenchiawang/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

Inherent Orientation

Anthropocentrism

personification

- metaphor sub-type
- X is a person



Car: wenchiawang/iStock/Thinkstock; Girl: Kharlamova/iStock/Thinkstock; Cloud: University of Waterloo

Inherent Orientation

Anthropocentrism

personification

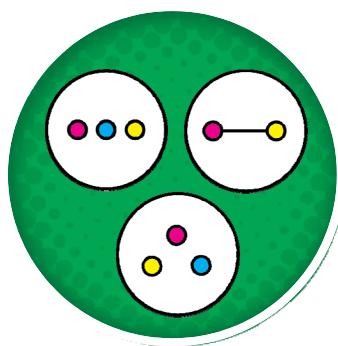
- metaphor sub-type
- X is a person
- 'My car just doesn't want to go.'
- 'Unemployment has moved into Canada.'



Car: wenchiawang/iStock/Thinkstock; Girl: Kharlamova/iStock/Thinkstock; Cloud: University of Waterloo

Iconicity

Introduction



Sequential order

Distance

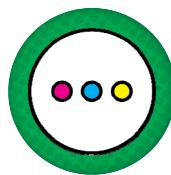
Quantity

Reduplication

Tendency to inhere meaning
through a relationship of
resemblance.

Icons: University of Waterloo

Principle of Sequential Order

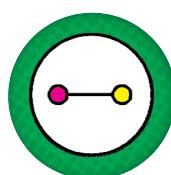


Unless marked, the order of words (by default) mirrors the order of events.

- 'He kicked sand in my face, and I got mad.'
- 'I got mad and he kicked sand in my face.'
- 'Before I got mad, he kicked sand in my face.'
- 'I got mad after he kicked sand in my face.'

Icon: University of Waterloo

Principle of Distance



Linguistic distance (proximity) tends to mirror conceptual distance.

- 'I made him leave the beach.'
- 'I asked him to leave the beach.'
- 'I wished that he would leave the beach.'

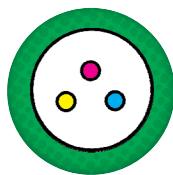
Strong
causal
linkage
Weak

- 'She kissed me.'
- 'She gave me a kiss.'
- 'She gave a kiss to me.'

Strong
causal
linkage
Weak

Icon: University of Waterloo

Principle of Quantity



Length of utterance correlates with (speaker's perception of) quantity of concept.

'Dinosaurs lived a l o o o n g time ago.'

'Dinosaurs lived a long, long, long, ... time ago.'

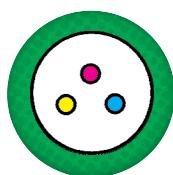
Lawyerese

- Long words
- Long sentences
- Broad gestures



Icon: University of Waterloo; Oriana with dinosaurs: Randy Harris

Principle of Quantity



Reduplication

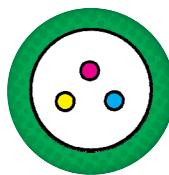
Japanese

Hito 'person'

Hitobito 'group of people'

Icon: University of Waterloo

Principle of Quantity



Conceptual Reduplication

Trinidad and Tobago

[jeswij] - Emphatic confirmation, agreement; interjective intensifier

- Yes-we?
- Yes-whee?
- Yes-oui!

Icon: University of Waterloo

Quantity or Distance?

Politeness

'No smoking.'

'Please, don't smoke.'

'Would you mind not smoking?'

'I would appreciate it if you wouldn't smoke.'

'Customers are requested to refrain from smoking if they can.'



Sign: etraveler/iStock/Thinkstock; Hand: Noedelhap/iStock/Thinkstock

Review

Review



Indexicality

- Necessary linkage
- Metonymical
- Deixis (linguistic pointing)



Iconicity

- Representational linkage
- Metaphorical
- Linguistic and conceptual linkages

Skunk: coffeee-in/iStock/Thinkstock; Beaker: wenchiawang/iStock/Thinkstock