

**Lecturer:** Dr. Amina Hadid  
**E-mail:** hadidamina90@gmail.com  
**Module:** Linguistics  
**Level:** First year

## **An Introduction to Linguistics**

### **Part 2**

#### **Human language characteristics (part 2)**

##### **Cultural Transmission**

Another important difference is that human language is culturally transmitted. Human beings, brought up in different cultures, acquire different languages. Humans can also learn other languages via the influence of other cultures. Animals lack this capacity; their communication ability is transmitted biologically, so they are unable to learn other languages even of other animals.

#### **6- Human Language Vs Animal Language**

Animal can convey various messages to each other, such as: feelings (anger, fear), warnings, and locations of food sources. Nonetheless, animals' language is nothing like human language. According to primate studies, animal language and human language are similar in essence, but different in degree.

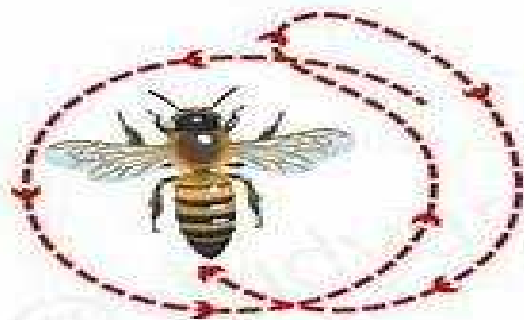
##### ***A. Examples of Primate Studies***

###### ***Honeybee:***

Honeybees have a **dance language** that they **use to communicate information about the source of the food they discovered**. They do the **round dance** when there is **food nearby** their hive. When a food source is very close to the hive (less than 50 meters), a honeybee performs a round dance. She does so by running around in narrow circles, suddenly reversing direction to her original course. She may repeat the dance several times at the same location or move to another location to repeat it. **A round dance**, therefore, **communicates distance** ("close to the hive," in this example), but not direction.

**Lecturer:** Dr. Amina Hadid  
**E-mail:** hadidamina90@gmail.com  
**Module:** Linguistics  
**Level:** First year

The wobble dance, or wag-tail dance, is performed by bees to locate food sources that are more than 150 meters from the hive. This dance, unlike the round dance, communicates both distance and direction. A bee that performs a wobble dance runs straight ahead for a short distance, returns in a semicircle to the starting point, runs again through the straight course, then makes a semicircle in the opposite direction to complete a full figure-eight circuit. While running the straight-line course of the dance, the bee's body, especially the abdomen, wags vigorously from side to side. This vibration of the body produces a tail-wagging motion. At the same time, the bee emits a buzzing sound.



Round dance



Wobble dance

However, a honeybee cannot communicate a location that is really new. An experiment was conducted by placing a food source at the top of a radio tower, while the bee hive was placed at its foot. Ten honeybees were sent back to their beehive after taking them to the top of the tower to taste the food. They performed their dance to inform the other bees about the food source, but they kept flying aimlessly in all directions and failed to spot the food. This experiment has shown that bees have a limited set of signals used to locate food placed in a horizontal distance only. Bees do not have a signal or a dance of the word 'UP' in their communication system, and obviously, they cannot invent one. This inability to produce new signals, is referred to as "fixed reference". This example highlights the lack of productivity in animal

**Lecturer:** Dr. Amina Hadid  
**E-mail:** hadidamina90@gmail.com  
**Module:** Linguistics  
**Level:** First year

language; animals cannot learn new structures or produce novel utterances for new situations or to describe new events. However, bees do have some kind of displacement in their language as they can communicate information about the place about food sources.

### *Chimpanzees*

**Gua** is the baby chimp that was raised by a scientist couple with their actual human baby. The couple tried to teach the chimp to use human language. **Gua** showed the ability to understand around a hundred words, but was unable to pronounce or say them.

**Viki** is another chimp that was also raised by another couple who tried, for five years, to make her pronounce some words. **Viki** did succeed at producing poorly articulated versions of the words 'papa, mama, and cup'.

**Washoe** is a female chimp that was taught to use a version of American sign language. The scientist couple who raised her as a baby child, always used those signs in her presence to encourage her reproduce them. In three years, **Washoe** was able to produce signs for a hundred words, and she could even combine them to make sentences to communicate with the couple, such as: *open food drink* to get them to open the refrigerator. Showing the ability of being productive, is a further impressive achievement; Washoe could even invent new forms such as: *water bird* to refer to a swan.

Another chimp called **Sarah** was raised in a cage, and trained to use a number of plastic shapes which represent words to communicate with humans. It is important to note that, the plastic shapes were arbitrary as they had no logical connection with the words they represented (for e.g. a blue triangle represents the word apple). In return for using those shapes, Sarah would get an apple as a reward whenever she does it correctly. She was able to make both simple and complex

**Lecturer:** Dr. Amina Hadid  
**E-mail:** hadidamina90@gmail.com  
**Module:** Linguistics  
**Level:** First year

sentences by arranging those plastic shapes to communicate with humans.

Animal language is nothing like human language; they are similar in essence (communication), but they are, definitely, different in degree (productivity, complexity, flexibility...etc). The following table highlights the main differences between them:

<b>Characteristic</b>	<b>Human Language</b>	<b>Animal Language</b>
<b>Duality of Patterning/ Double Articulation</b>	Two levels of language: Meaningless: sounds Meaningful: the combination of sounds into meaningful units of language.	The signs of animal communication systems are inborn, and each sign has one and only one function; each meaning can be expressed in only one way.
<b>Creativity/ Productivity</b>	New utterances (sounds, words, sentences) can be created easily in different new ways.	Animals have a limited repertoire of signs, and are unable to learn new structures or create new utterances.
<b>Displacement</b>	Humans can talk about remote, abstract, or imaginary things that aren't happening in their immediate environments.	Animal communication is context driven—they react to stimuli, or indexes in the present.
<b>Cultural Transmission</b>	Humans acquire language culturally—words must be learned.	The way that animals communicate are biological, or inborn.
<b>Arbitrariness</b>	No inherent, natural relationship between the signs (sounds or letters) and their meaning.	Animal language have is fixed reference, i.e. a certain sign has a specific and fixed meaning.

**Lecturer:** Dr. Amina Hadid  
**E-mail:** hadidamina90@gmail.com  
**Module:** Linguistics  
**Level:** First year

***Note:*** *For more Human Language Characteristics, and Primate Studies Examples, check 'The Study of Language' by George Yule, Chapter 2.*