



**Universidad de Quintana Roo**

**División de Ciencias Políticas y Humanidades**

**The Use of Translation Techniques in the text Communication and  
Language**

**Trabajo monográfico**

**Para obtener el grado de:**

**Licenciado en Lengua Inglesa**

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LICENCIADO EN LENGUA INGLESA

COMITÉ

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COMMUNICATION AND LANGUAGE ENGLISH TEXT

COMMUNICATION AND LANGUAGE SPANISH TRANSLATION

## **Presentation**

Over the years translation has taken place because of the existence of different languages and cultures.

Translation helps people express themselves so that everybody can read and understand a message in his own language.

Baker (1998) considered translation as a tool of communication that connects language cultures and people, making communication possible.

It is a common belief that anyone who speaks two languages can be a translator; however, this is a misconception because a translator is both a reader and writer in order to preserve the original meaning of the author and at the same time make the text understandable enough. Before starting to do his job, a translator must consider some important points; for instance: the time and bibliography such as dictionaries or books or websites; then, he/she has to read the text and analyze the message.

According to Paz (1990), a translator is one whose native or dominant language is the target language, and who has undergone professional training in translation techniques.

Another definition stated by Enani(1994:5) is that, a translator is seen as "a writer who formulates ideas in words addressed to readers. The only difference between him and the original writer is that these ideas are the latter's".

I support these two previous statements mentioned because a translator must give the ideas of the original text; in other words, he/she has to keep the same idea from the original author even if he/she has to add or omit words in the translation work. Knowledge of a foreign language is not enough to be a translator. Moreover, translators should be familiar with the culture of the target language before they start to work on a translation.

I remember when I was in the fifth semester in the English language major a friend of mine from the Anthropology major asked me if I could translate an article about religion from English into Spanish; the article had seven pages. He needed the translation of that article for writing a report. He said that his teacher had told the students that they should be able to read in English since the first semester. He asked me to do the translation in one week. I agreed to do the work and told him not to worry.

I thought there were not any difficulties in translating the text into Spanish and I did not do a previous research about the topic; however, I did not know what I was dealing with. I read the whole text and I found a lot of new vocabulary, entangled sentences and difficulties in finding equivalences to some phrases.

I did not use translation techniques properly because I had not taken a translation course before. Nevertheless, I tried to do a good and understandable translation.

I observed that that situation is common in some other majors. Some other friends asked for help when they had to read technical articles in English. I think the main reasons for which students fail to understand the texts correctly are: time, poor English skills and a lack of knowledge about which translation features should be considered.

According to this experience described above, students should be able to read and understand English according to their subjects of study, but they are not able to do so because of the level of English required in their major. Students are affected by the information given in English; they sometimes do not understand a topic and they fail their exams.

In addition, students and teachers at this university and other schools come to the Uqroo library to look for information that is just available in English. They sometimes try to translate the information by themselves in order to have a Spanish version.

In the anthropology career from the first year they have subjects whose part of the bibliography is in English, especially in the subject General Anthropology; there is little bibliography available in Spanish.

Students sometimes have to translate the articles by themselves and they are sometimes able to understand them fairly well. Nevertheless, most of them are not always able to understand the text and thus they lose the original message that the authors expressed in the articles. For that reason a professor from the anthropology major gave me an important text to translate in order to help his students in the future because he realized that students face different problems when they try to write the reports only from the English text.

The name of the text to translate is "Communication and Language", which according to Professor Guillermo Velásquez Ramirez will be necessary for Anthropology teachers and students to have this information.

In the translation field, there are certain steps that must be followed in order to transmit the original text. Some of these procedures involve translation techniques: borrowing, calque, literal translation, transposition, modulation, equivalence, adaption, among others. In this work I will present these techniques which were useful for this particular work.

Besides those procedures, it is important to find specialists in the fields of Translation because their opinions will be essential to check the work and to be able to confront with them the most adequate equivalences.



## **JUSTIFICATION**

The results of this translation will be of great use for students and teachers from the Anthropology department where Professor Guillermo Velásquez Ramirez provided the article to be translated. He mentioned that the text "Communication and Language" Chapter Nom. 4 from the book "Cultural Anthropology" and the authors Carol R. Ember Y Melvin Ember is part of the bibliography used in the subject " Antropología General" from the Anthropology career. This translation will thus provide them with a tool in Spanish which will help them to obtain suitable knowledge about the text.

I believe this topic is relevant especially when there has not been a previous translation of this text.

Moreover, this monographic work will be useful for those students who are taking translation courses so in this way students can have a better idea of the steps required for a translation. In addition, this translation can be useful for teachers because they can use it as a kind of guide in the classroom to illustrate examples or create exercises based on the analysis of the article.

## **OBJECTIVES**

It is well known that English is the most used language around the world; regardless of nationality, and many people speak English and use it for business purposes, for education, for technology and to share ideas with people from other countries. This fact, leads to the first objective of this monographic work, which is to carry out an effective translation work which conveys the idea of the writer, a translation which is understandable, easy to read and moreover a work which is able to show the reader the ideas and intention of the author .

The general objective of this monographic work is to facilitate Anthropology teachers and students with a translation into Spanish of the text “Communication and Language “. This monographic work will provide a good translation of an important text that was written in English and which will be used in the future for “General Anthropology class” as a part of the bibliography.

The above mentioned purpose can be achieved by the correct use of translation techniques stated by some of the most important theorists in the field of translation: Jean Paul Vinay and Jean Darbelnet.

Another objective of this monograph is to demonstrate that a technical text can be translated adequately, using the techniques of the Canadian school (explained in detail in the theoretical framework).

## **Theoretical Framework**

The purpose of translation is transmitting a message, in the most natural way, of something that has been written in a source language. However, translation is not just transmitting a message; it is a difficult job because every language is different. Furthermore, a translator has to face a lot of problems at the moment of communicating the message of the source language into the target language.

From ancient times either writing or spoken translation has been used in commerce, politics, religion and many other areas, translation has been considered a bridge among languages and civilizations.

Orellana, M. (1997) defines translation" as the faithful transfer of the ideas from a source language to a target language in a correct, precise and appropriate style".

In this translation work it is necessary to take into consideration the type of text. It is essential to classify it as technical, literary, scientific etc. The reader has to feel that he/she is reading what was written in his own language. For that reason it is necessary for the translator to be familiar with translation techniques which will facilitate the task.

In the field of translation there are three schools which are very much recognized in relation to the classification of techniques. They are:

The Canadian school by Vinay and Darbelnet in 1958. They stated seven translation techniques divided into two groups, the Direct translation techniques (borrowing, calque, literal translation) and the Indirect translation techniques (transposition, modulation, equivalence, adaptation, compensation)

The American school by Malone. This translation school has the following techniques: Matching, substitution and equation, zigzagging, divergence and convergence, recrescence, amplification and reduction, repacking, diffusion and condensation, and finally reordering. Venuti (1981).

The Russian translation school by the theorists Restsker and Shveistser. They stated that translation is divided in two categories. Fawcett (1997) "Translation as an "analogy" which covers the situation of one-to-many correspondences between languages. Translation as "adequacy" which covers cases where there is no one-to-one equivalence and readily definable contextual correspondence in the form of collocation." This Russian school includes four techniques concentration, logical derivation, anatomic translation and compensation.

**According to Garcia, V. (1989).** "Las técnicas de traducción son herramientas de la cuales se vale el traductor para lograr su trabajo." Translation techniques are necessary in order to start working on a translation. These three schools stated above are acceptable in any translation work, however, the Canadian school is widely recognized because its techniques are easy to apply and allows the translator to have some freedom in his /her decisions at the moment of translating.

This Translation work is based on the Canadian school techniques by its authors Vinay and Darbelnet.

The following contains a list and a explanation of the different procedures which encompass the point of view of different theories.

Within the Direct Translation group we can find:

### **Borrowing**

López Guix and Wilkinson (1999), define borrowing as a “word taken it from its native language without being translated” .The borrowing technique consists on taking words directly from one language into another without translation or without any other change. This is done because the concept of the word exists in the target language with the same word; therefore it is not necessary to translate it in order to convey its meaning.

Examples: **Taco, garage, chef , software y hardware**

## **Calque**

According to Venuti, L (2000), "calque is a kind of borrowing where a language borrows a word or an expression from another language and translates literally each of its elements". This technique is similar to the borrowing technique. The difference is that the procedure translates the word literally.

There are two types of calque: Lexical calque, which keeps the syntactic structure of the target text Example:

**Basketball ----- Baloncesto**

and structural calque which presents a new structure into target language example:

**Science Fiction ----- Ciencia Ficción.** Lopez and Wilkinson (1997p.242-243)

## **Literal Translation**

Lambert (1998) "Literal translation may be an excellent strategy to use in order to relay the meaning from the source text." This translation technique consists on translating word by word where it is possible using its first equivalent and allows keeping the original order of words because there is not any change in the source grammar and syntax .

**The girl is sick. ----- La niña está enferma .**

**How are you? ----- ¿Cómo está usted?**

Within the group of oblique or indirect translation we can find:

### **Transposition**

In this technique the translator can change the grammar categories without changing the sense of the message. It keeps the original idea but it does not follow the grammatical form

Examples:

**He likes swimming. ----- Le gusta nadar.**

**A very beautiful woman arrived ----- Una belleza llegó**

### **Equivalence**

Lopez Guix and Wilkinson, (2001) this translation technique has been described as the closest natural equivalent of the source language message”.

This translation technique is considered as the translation of phrases from one language to another. It transmits the same message but using different means as stylistic and syntactical structures. This technique is used mainly for translating idioms, slang, proverbs or onomatopoeia of sound of animals.

Examples:

**Heads or tails. ----- Aguila o sol**

**Speak of the devil ----- Hablando del rey de Roma**

## **Adaption**

The main goal of this technique is to obtain equivalence between situations; it is used if the message does not exist in the target language and it has another situation as reference. In this technique the source language is expressed in a totally different way which is familiar or appropriate in the target culture. In addition, this translation technique is used for translating cultural aspects.

Examples:

**He kissed his daughter on the mouth.----- Abrazó tiernamente a su hija.** Lopez Guix and Wilkinson (1997 p.277)

**What he is saying is Greek to me.----- Me esta hablando en chino.**

## **Modulation**

**Venuti (2000)**, “this technique consists on using a phrase that is different in the source and target languages ,to convey the same idea”. This is done by a variation of the structure of the message, changing the point of view and the semantics of the source text.



Types of modulation:

Free lexical modulation which is used in a free way taking into account if the chosen expression is often used or not.

**It is not difficult to show ----- Es fácil demostrar.** Torre ,E (1994,p 129 )

Lexicalized or compulsory modulation which tends to get only one solution.

**You can have it ----- Te lo dejo.** Fawcett (1997,p38)

**Dress rehearsal ----- Ensayo general.**

According to Vinay and Derbelnet the techniques are condensed to just seven. However, there are other more translation procedures which are not usually mentioned because they are part in the adaptation and modulation techniques.

### **Expansion**

Bassnett (1997 ) this technique consists on the addition of the words when it is required in a text to be translated. The extent to which it happens will depend on the attitude of the translator to the readership and to hard work.

**Examples: “Thanksgiving Day” ----- “El Día de la Acción de Gracias”.**

## **Reduction**

This technique consists on the omission of information considered to be unnecessary, of little importance, or unlikely to make sense to the target language reader. It is commonly used in Spanish to English translation.

## **The day after tomorrow ----- Pasado mañana**

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These translation techniques stated for the authors Vinay and Derbelnet are really useful in the field of translation because they contribute and give the translator a clear view of how to proceed during the process of translation. The function of the techniques is to describe, explain and predict the future problems that a translator faces in the moment of making a translation. These translation techniques will be useful in this translation work.

## **Methodology**

According to Newmark, . (1981) “Two stages are identified in the process of translation. The first one consists of understanding the original text, and the second one consists of expressing in the message into the target language”.

Before carrying out a translation, the text was read once in order to have a general view of it, after that it was read again to carry out a text analysis to identify the type of a text it is : literary, scientific, technical, informative, persuasive, and argumentative, etc. Then was necessary to Identify the language level used in the text: standard, formal. Furthermore to identify cultural references contained in the text. In general it was necessary to do a conscientious reading of the article in order to identify and underline unknown words and expressions using one or more of the contextual analysis; synonyms, antonyms, examples.

The next phase was to write the first draft of the translation and find different possible versions, next selected informants to give their points of views on the best version. The informants in this case were English translation teachers, and Anthropology teachers who are bilingual and can help understand better the language most used on the text from different points of view.

Once the translation was reviewed and corrected the researcher selected those examples which required the use of the techniques of Vinay and Darbelnet. Those examples would contain a detailed explanation about the reason of using those techniques. The examples were listed in a chart containing the Spanish and the English version. Finally, conclusions were given.

## **Analysis**

Even though for the layman, it seems very easy to put into one language (source language) what is said in another language (target language), translation is really the result of a careful process. First, the translator must analyze different aspects to take into consideration such as the type of text. It is essential to classify it as technical, literary, scientific etc. Then, in order to focus his work on the characteristics of the type of text so as to know what to expect. The reader has to feel that he/she is reading what was written in his own language. For this, it is necessary that the translator be familiar with translation techniques which will facilitate the task.

It is very important to take into account these points mentioned above because in that way the translator is going to decide how he/she is going to work on the translation of a given text. The purpose of translation is transmitting a message, in the most natural way, of something that has been written in a source language. However, translation is not just transmitting a message; it is a difficult job because every language is different.

The translation in this work is a scientific translation as is the original text. This means that the translation must be very close to the original and the translator will have to use techniques that will help to select the most adequate terms.

As it was stated in the theoretical framework, in this text the main techniques that were used are literal translation, modulation, transposition, equivalence adaptation and addition.

## LITERAL TRANSLATION

As stated before, the literal translation technique consists on translating word by word where it is possible using its first equivalent and allowing to keep the original order of words because there is no change in the source grammar and syntax.

### Original text

**Yet that moment was a milestone for us.**

### Translation

**Sin embargo ese, momento marca un hito para nosotros. P.48**

In this example it is possible to see that the structure of the sentence in the original text fits perfectly well with the sentence structure of the target language t, so it is possible to translate these words using their first equivalence.

### Original text

**Someone was drawing water and my teacher placed my hand under the spout. P.48**

### Translation

**Alguien extraía agua y en ese momento mi maestra me puso la mano bajo el chorro.**

In this example it was not necessary to use another special technique since the sentence is clear and simple because the concepts exist in both languages and can be said with the same syntax.

This example is a quotation that a writer expresses in the text.

**Original text**

**“In the room the women come and go/talking of Michelangelo” P.49**

**Translation**

**“En la habitación las mujeres van y vienen /hablando de Miguel Ángel”**

It was useful to use Literal translation because the organization of the sentence, gender and coherence was possible in the target language. The Spanish translation kept the original style and effect of source text.

## Modulation

As Vinay and Darbelnet state, with the modulation technique, the translator changes the “form of the message” (Venutti, L 2000). The modulation technique involves changing the semantics and point of view of the source text. This technique is used in all types of translations (literary, scientific or technical) because it is a handy resource to be used to clarify meaning.

### Original text

Everything had a name, and each name **gave birth to a new thought.** P.48

### Translation

Todo tenía un nombre y cada nombre **daba lugar a un pensamiento.**

The words **gave birth to** was modulated in **daba lugar a** because this option sounds much better than the option **daba nacimiento a / o paría** so the translator used the most common and level correct expression because it keeps the main idea and helps not to create ambiguity.



### Original text

**Against all odds**, Helen Keller had come to understand the essential function that language plays in all societies.

### Translation

**A pesar de todas sus dificultades**, Helen Keller había logrado comprender la función esencial que tiene la lengua en todas las sociedades. **P.48**

The phrase **against all odds** was translated to **a pesar de todas sus dificultades** because it refers to Helen Keller who was left deaf and blind by illness. On the other hand, the translator thought if “against all odds” is translated into Spanish using a literal translation; then, the message can be wrong. For instance, the literal translation is: **en contra de todas las rarezas**. As it was mention before this phrase does not fit well in the Spanish expression.

### Original text

One of the biggest **scholarly debates** is the degree to which nonhuman animal...**P.49**

### Translation

Uno de los grandes **debates de los especialistas**, es el de cómo los animales...

It was necessary to use of modulation in this sentence because the phrase **scholarly debates** does not make any sense if we use the literal translation technique as **debates escolares o debates de los eruditos** so the best option is **debates de los especialistas** because it keeps the original idea that the author wants to give to the text.

Something similar happened with the following example where the use of modulation technique was really useful and helpful.

### Original text

They point out that **discontinuity theorists** are constantly raising the standards for the capacities thought necessary for languages. **P.49**

### Translation

Estos investigadores señalan que los **teóricos de la diferencia** están constantemente elevando los estándares de las capacidades que se consideran necesarias para una lengua.

In this example the modulation technique was useful because the phrase **discontinuity theorists** in the original text refers to these theorists that are always updating information about human communication and nonhuman communication and they are against those theories that state humans came from monkeys so the suitable option is **teóricos de la diferencia** to indicate the real meaning of the phrase.

#### Original text

**While no primatologist** disputes the complexity and infinite variety with which human languages can combine sounds. **P. 50**

#### Translation

**Aunque ningún especialista en primates** dispute la complejidad y la infinita variedad con las cuales las lenguas humanas pueden combinar sus sonidos.

In this example it was not viable to use literal translation. First of all, the word primatologist is impossible to translate it into Spanish because it does not exist in Spanish. So **especialista en primates** is the correct phrase for the word **primatologist**. In addition, it maintains the same level of formality in the Spanish translation.

### Original text

They break *off* vegetation **where trails fork** and point the broken plants in the direction to follow. **P.50**

### Translation

Estos monos, **cuando llegan a una bifurcación**, parten ramas de la vegetación para señalar con éstas el camino a seguir.

One more time it was necessary to use of modulation because in this way the idea the author expresses in the text can be adequately transferred, that is when the monkeys arrived to a path which is divided into two parts and they leave some clues to for the other monkeys to follow. The modulation for the phrase **where trails fork - cuando llegan a una bifurcación** which means when monkeys arrived to a path that is divided in two ways.

## Transposition

This technique consists of changing the grammar category of a word. Throughout the text, there were different types of grammatical changes. The transposition technique is often used when – ing form appears in the sentences.

### Original text

**In becoming acquainted** with all the complex, elaborated behavior that constitutes our culture. **P.48**

### Translation

**Sino en el conocimiento de todo** el comportamiento complejo y detallado que constituye nuestra cultura.

In this example the translator turned the verb into a noun. The translator made the change in order to make the sentence understandable and thus, easier to read.

## Equivalence

In Lopez Guix and Wilkinson, (2001) this translation technique has been described as the closest natural equivalent of the source language message”.

This translation technique is considered as the translation of phrases from one language to another. It transmits the same message but using different means as stylistic and syntactical structures. This technique is often used to translate idioms, slang, proverbs or onomatopoeia of sounds.

### Original text

A **North American Infant** in an English –speaking family first applies the “word” **dada** to all adult males and gradually learns to restrict it to one person. **P.49**

### Translation

Un niño **estadounidense** en una familia anglohablante por primera vez dice la “palabra” **dada** a todos los adultos masculinos y gradualmente aprende a decírselo a solamente una persona.

In this example the use of equivalence was really important because the appropriate translation for **North American is estadounidense** . **North American** cannot be translated as **norteamericano** or **americano** because Canadians and Mexicans are part of North America too. Furthermore to some Canadians and for all Mexicans, the word **dada** would be confusing because it does not establish an onomatopoeic link.

### Original text

American Signs Language (ASL; used by **the hearing impaired** in the United States) **P. 50**

### Translation

El Idioma Americano por Señas (por sus siglas en inglés ASL empleado en los Estados Unidos por los **hipoacústicos**)

It was difficult to make a decision about this equivalence because the transposition technique can be used too in order to translate these words **the hearing impaired** since the verb in – ing form appears in the sentence and it can be used as a compound noun. However, the equivalence **hipoacústicos** is generally used because it refers to a group of people who have damaged part of their hearing system having a hearing loss in the ability to detect or understand sounds.

## Adaption

As it was stated in the theoretical framework the main goal of this technique is to obtain equivalence between situations. In this technique the source language is expressed in a totally different way which is familiar or appropriate in the target culture. In addition, this translation technique is used for translating cultural aspects.

### Original text

There were barriers still; it is true, barriers that could in time be **swept away**. P.48

### Translation

Aun había barreras, es verdad, pero barreras que podrían **derribarse** con el tiempo.

The adaptation technique is used in the verb swept away because if the literal translation is used the original context would be misleading, the literal translation will be **barrerse** that is not a clear translation because las barreras se derriban y no se barren. So it was necessary to adapt the verb **swept away** in order to clearly express the original idea of the article.



### Original text

When he is not willing to continue a training session, Alex says: “I’m sorry ....  
**Wanna go back” P.50**

### Translation

Cuando Alex no esta dispuesto a seguir en la sesión de entrenamiento dice:  
**“siento querer volver jaula”**

It was necessary to take into account that in the sentence the subject is a parrot who is talking and the author wants to show that an animal cannot have a perfect English grammar. The sentence was adapted in order to have the same idea that a parrot is talking and not a human being. In addition, it keeps the same cultural effect.

### Original text

Washoe originally learned the sign *dirty* to refer to feces and other **soil**. **P51**

### Translation

Washoe en un principio aprendió el símbolo de *suciedad* para referirse a las heces fecales y a otros **desperdicios**.

It was essential to adapt the word **soil** because it has different meanings such as earth, mud dirty... does not keep the original meaning that is **desperdicios** in this case the idea of the sentence refers to residues or garbage .

## Addition

This technique can be classified under modulation. It is necessary to use this technique in some cases in order to make the text in the target language more natural.

### Original text

Without language, the transmission of **complex traditions** would be virtually impossible.

### Translation

Sin la lengua seria virtualmente imposible transmitir las **tradiciones que normalmente están compuestas de múltiples elementos.**

In the example stated above it was important to use this technique in order to give the reader full information and clear meaning because the translation of **complex traditions** could be **tradiciones complejas**, but this does not express the real meaning the author intends to express. In this case it was necessary to add some words that give the same idea without changing any meaning.

### Original text

We walked down the path to the well house, attracted by the fragrance of the **honeysuckle** with which it was covered.

### Translation

Caminamos por el sendero hasta llegar al pozo, atraídas por la dulce fragancia de la **enredadera de madreSelva** que lo tapaba.

The use of the addition technique in the phrase **enredadera de madreSelva** sounds more natural in this text. The sentence is referred to a well house that has a kind of roof and it is covered by a kind of creeper plant so it will not be correct just let **madreSelva** as the translation of honeysuckle. Adding the word **enredadera** helps to understand and specify something which gives a better picture. For that reason was necessary to add a noun in order to help the reader understands.

## **Conclusions**

The Work of translating consists on more than changing words from one language to another. The translator has to take the role of both the writer and reader, in order to express the idea of the author in a clear way and allow the readers to have a better understanding of a text or an article. In addition, a translator will always face a lot of problems in order to achieve the goal that is to transmit the reader the correct message from the author.

As in all translations the ideas and style of the author should be respected by the translator. For instance, a translator cannot add meanings that the author does not express in a text or an article; a translator can add words to clarify a meaning but not to write words or ideas that the author does not express. The translation has to be the closest and the most accurate to the original text.

For doing this translation work it was necessary to look for the different translation techniques in order to overcome problems and transmit a clear message into the target language. There are some other tools that a translator can use in order to reach a good translation such as dictionaries, books, magazines, websites and informants, among the others which are really helpful and useful at the moment of searching for clarification and solutions of some translation problems.

A translator not only takes the position as a writer or a reader in order to have a good translation because the translation also takes the role of a researcher at the moment he/ she has to look for the appropriate word and technique to transmit the same idea into the target language.

At the beginning of starting to work on this translation, the translator faced some problems because some words were translated using literal translation, so at the moment of reading the text it did not make any sense because the author's message was expressed in a wrong way. That happened because the translation of the text was understandable for the translator, but in the daily use there are some expressions or words that are not used in classes by students and teachers. Then, it was necessary to interview the informants and they made the necessary corrections and they suggested some words that helped to confirm that the translation sounded natural and understandable. Finally, having all the corrections done the translator took the decision of what kind of techniques were the most appropriate to do in the translation this scientific text.

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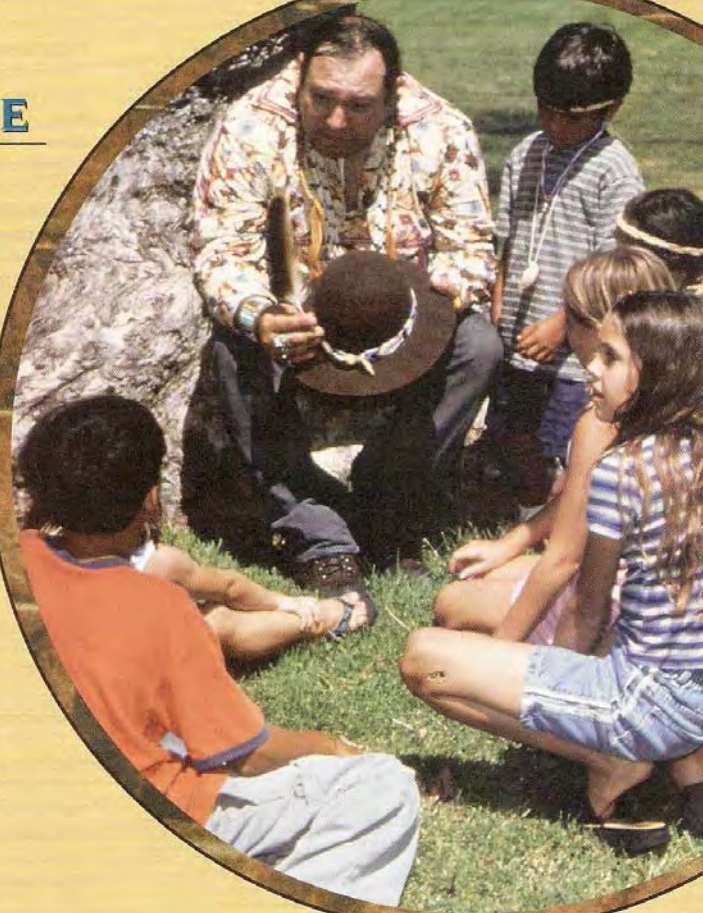
# COMMUNICATION AND LANGUAGE

# 4



## CHAPTER OUTLINE

- ◆ Communication
- ◆ The Origins of Language
- ◆ Descriptive Linguistics
- ◆ Historical Linguistics
- ◆ The Processes of Linguistic Divergence
- ◆ Relationships between Language and Culture
- ◆ The Ethnography of Speaking



Few of us can remember when we first became aware that words signified something. Yet that moment was a milestone for us, not just in the acquisition of language but in becoming acquainted with all the complex, elaborate behavior that constitutes our culture. Without language, the transmission of complex traditions would be virtually impossible, and each person would be trapped within his or her own world of private sensations.

Helen Keller, left deaf and blind by illness at the age of 19 months, gives a moving account of the afternoon she first established contact with another human being through words:

[My teacher] brought me my hat, and I knew I was going out into the warm sunshine. This thought, if a wordless sensation may be called a thought, made me hop and skip with pleasure.

We walked down the path to the well house, attracted by the fragrance of the honeysuckle with which it was covered. Someone was drawing water and my teacher placed my hand under the spout. As the cool stream gushed over one hand she spelled into the other the word water, first slowly, then rapidly. Suddenly I felt a misty consciousness as of something forgotten—a thrill of returning thought; and somehow the mystery of language was revealed to me. I knew then that *w-a-t-e-r* meant the wonderful cool something that was flowing over my hand. That living word awakened my soul, gave it light, hope, joy, set it free! There were barriers still, it is true, barriers that could in time be swept away.

I left the well house eager to learn. Everything had a name, and each name gave birth to a new thought. As we returned to the house every object which I touched seemed to quiver with life. That was because I saw everything with the strange, new sight that had come to me.<sup>1</sup>

## Communication

Against all odds, Helen Keller had come to understand the essential function that language plays in all societies—namely, that of communication. The word *communicate* comes from the Latin verb *communicare*, “to impart,” “to share,” “to make *common*.” We communicate by agreeing, consciously or unconsciously, to call an object, a movement, or an abstract concept by a common name. For example, speakers of English have agreed to call the color of grass green, even though we have no way of comparing precisely how two persons actually experience this color. What we share is the agreement to call similar sensations green. Any system of language consists of publicly accepted symbols by which individuals try to share private experiences.

### NONVERBAL HUMAN COMMUNICATION

As we all know from experience, the spoken word does not communicate all that we know about a social situation. We

can usually tell when someone says, “It was good to meet you,” whether he or she really means it. We can tell if people are sad from their demeanor, even if they just say, “I’m fine,” in response to the question “How are you?”

Obviously, our communication is not limited to spoken language. We communicate directly through facial expression, body stance, gesture, and tone of voice and indirectly through systems of signs and symbols, such as writing, algebraic equations, musical scores, dancing, painting, code flags, and road signs. As Anthony Wilden put it, “*every act, every pause, every movement in living and social systems is also a message; silence is communication; short of death it is impossible for an organism or person not to communicate.*”<sup>2</sup> How can silence be a communication? Silence may reflect companionship, as when two people work side by side on a project, but silence can also communicate unfriendliness. An anthropologist can learn a great deal from what people in a society do not talk about. For example, in India, sex is not supposed to be talked about. HIV infection is spreading very fast in India, so the unwillingness of people to talk about sex makes it extraordinarily difficult for medical anthropologists and health professionals to do much to reduce the rate of spread.<sup>3</sup>

Some nonverbal communication appears to be universal in humans. For example, humans the world over appear to understand facial expression in the same way; that is, they are able to recognize a happy, sad, surprised, angry, disgusted, or afraid face. How the face is represented in art appears to evoke similar feelings in many different cultures. As we explore later in the arts chapter, masks intended to be frightening have sharp, angular features and inward- and downward-facing eyes and eyebrows. But nonverbal communication is also culturally variable. In the chapter on the concept of culture, we discussed how the distance between people standing together is culturally variable. In the realm of facial expression, different cultures have different rules about the emotions that are acceptable to express. One study compared how Japanese and Americans express emotion. Individuals from both groups were videotaped while they were shown films intended to evoke feelings of fear and disgust. When the subjects saw the films by themselves, without other people present, they showed the same kinds of facial expressions of fear and disgust. But there was a cultural effect too. When an authority figure was present during the videotaping, the Japanese subjects tried to mask their negative feelings with a half-smile more often than did the Americans.<sup>4</sup> Many gestures are culturally variable. In some cultures an up and down nod of the head means “yes,” in others it means “no.”

Despite all the various systems of communication available to us, we must recognize the overriding importance of spoken or vocal language. It is probably the major transmitter of culture, allowing us to share and pass on our complex configuration of attitudes, beliefs, and patterns of behavior.

### NONHUMAN COMMUNICATION

Systems of communication are not unique to human beings, nor is communication by sound. Other animal species communicate in a variety of ways. One way is by



Research suggests that many human emotions are expressed in the same ways all over the world. Can you guess what emotions are being expressed by these faces?

sound. A bird may communicate by a call that “this is my territory”; a squirrel may utter a cry that leads other squirrels to flee from danger. Another means of animal communication is odor. An ant releases a chemical when it dies, and its fellows then carry it away to the compost heap. Apparently the communication is highly effective; a healthy ant painted with the death chemical will be dragged to the funeral heap again and again. Another means of communication, body movement, is used by bees to convey the location of food sources. Karl von Frisch discovered that the black Austrian honeybee—by choosing a round dance, a wagging dance, or a short, straight run—can communicate not only the precise direction of the source of food but also its distance from the hive.<sup>5</sup>

One of the biggest scholarly debates is the degree to which nonhuman animals, particularly nonhuman primates, differ from humans in their capacity for language. Some scholars see so much discontinuity that they postulate that humans must have acquired (presumably through mutation) a specific genetic capability for language. Others see much more continuity between humans and nonhuman primates and point to research that shows much more cognitive capacity in nonhuman primates than previously thought possible. They point out that the discontinuity theorists are constantly raising the standards for the capacities thought necessary for language.<sup>6</sup> For example, in the past, only human communication was thought to be symbolic. But recent research suggests that some monkey and ape calls in the wild are also symbolic.

When we say that a communication (call, word, sentence) is *symbolic*, we mean at least two things. First, the communication has meaning even when its *referent* (whatever is referred to) is not present. Second, the meaning is arbitrary; the receiver of the message could not guess its meaning just from the sound(s) and does not know the meaning instinctively. In other words, symbols have to be learned. There is no compelling or “natural” reason that the word *dog* in English should refer to a smallish four-legged omnivore that is the bane of letter carriers.

Vervet monkeys in Africa are not as closely related to humans as are African apes. Nevertheless, scientists who have observed vervet monkeys in their natural environment consider at least three of their alarm calls to be symbolic because each of them *means* (refers to) a different kind of predator—eagles, pythons, or leopards—and monkeys react differently to each call. For example, they look up when they hear the “eagle” call. Experimentally, in the absence of the referent, investigators have been able to evoke the normal reaction to a call by playing it back electronically. Another indication that the vervet alarm calls are symbolic is that infant vervets appear to need some time to learn the referent for each. When they are very young, infants apply a particular call to more animals than adult vervets apply the call to. So, for example, infant vervets will often make the eagle warning call when they see any flying bird. The infants learn the appropriate referent apparently through adult vervets’ repetition of infants’ “correct” calls; in any case, the infants gradually learn to restrict the call to eagles. This process is probably not too different from the way a North American infant in an English-speaking family first applies the “word” *dada* to all adult males and gradually learns to restrict it to one person.<sup>7</sup>

All of the nonhuman vocalizations we have described so far enable individual animals to convey messages. The sender gives a signal that is received and “decoded” by the receiver, who usually responds with a specific action or reply. How is human vocalization different? Since monkeys and apes appear to use symbols at least some of the time, it is not appropriate to emphasize symbolism as the distinctive feature of human language. However, there is a significant quantitative difference between human language and other primates’ systems of vocal communication. All human languages employ a much larger set of symbols.

Another often-cited difference between human and nonhuman vocalizations is that the other primates’ vocal systems are *closed*—that is, different calls are not combined to produce new, meaningful utterances. In contrast, hu-

man languages are *open* systems, governed by complex rules about how sounds and sequences of sounds can be combined to produce an infinite variety of meanings.<sup>8</sup> For example, an English speaker can combine *care* and *full* (*careful*) to mean one thing, then use each of the two elements in other combinations to mean different things. *Care* can be used to make *carefree*, *careless*, or *caretaker*; *full* can be used to make *powerful* or *wonderful*. And because language is a system of shared symbols, it can be re-formed into an infinite variety of expressions and be understood by all who share these symbols. In this way, for example, T. S. Eliot could form a sentence never before formed—"In the room the women come and go/talking of Michelangelo"<sup>9</sup>—and the sense of his sentence, though not necessarily his private meaning, could be understood by all speakers of English.

While no primatologist disputes the complexity and infinite variety with which human languages can combine sounds, the dichotomy of closed versus open distinction has been called into question by research on cotton-top tamarins, pygmy marmosets, capuchin monkeys, and rhesus macaques. These nonhuman primates do combine calls in orderly sequences.<sup>10</sup>

Another trait thought to be unique to humans is the ability to communicate about past or future events. But Sue Savage-Rumbaugh has observed wild bonobos leaving what appear to be messages to other bonobos to follow a trail. They break off vegetation where trails fork and point the broken plants in the direction to follow.

Perhaps most persuasive are the recent successful attempts to teach apes to communicate with humans and with each other using human-created signs. These successes have led many scholars to question the traditional assumption that the gap between human and other animal communication is enormous. Even a parrot, which has a small brain, has been taught to communicate with a hu-

man trainer in ways once thought impossible. Alex (the parrot) can correctly answer questions in English about what objects are made of, how many objects of a particular type there are, and even what makes two objects the same or different.<sup>11</sup> When he is not willing to continue a training session, Alex says: "I'm sorry ... Wanna go back."<sup>12</sup> Chimpanzees Washoe and Nim and the gorilla Koko were taught hand signs based on American Sign Language (ASL; used by the hearing impaired in the United States). The chimpanzee Sarah was trained with plastic symbols. Subsequently, many chimpanzees were trained on symbol keyboards connected to computers. For example, Sherman and Austin began to communicate with each other about actions they were intending to do, such as the types of tools they needed to solve a problem. And they were able to classify items into categories, such as "food" and "tools." Some of the best examples of linguistic ability come from a chimpanzee named Kanzi. In contrast to other apes, Kanzi initially learned symbols just by watching his mother being taught, and he spontaneously began using the computer symbols to communicate with humans, even indicating his intended actions. Kanzi did not need rewards or to have his hands put in the right position. And he understood a great deal of what was spoken to him in English. For example, when he was 5 years old, Kanzi heard someone talk about throwing a ball in the river, and he turned around and did so. Kanzi has come close to having a primitive English grammar when he strings symbols together.<sup>13</sup> If chimpanzees and other primates have the capacity to use non-spoken language and even to understand spoken language, then the difference between humans and nonhumans may not be as great as people used to think.

Are these apes really using language in some minimal way? Many investigators do agree about one thing—non-human primates have the ability to "symbol" to refer to something (or a class of things) with an arbitrary "label"

Researcher Joyce Butler teaching Nim, a chimpanzee, the sign for "drink."



(gesture or sequence of sounds).<sup>14</sup> For example, the gorilla Koko (with a repertoire of about 375 signs) extended the sign for *drinking straw* to plastic tubing, hoses, cigarettes, and radio antennae. Washoe originally learned the sign *dirty* to refer to feces and other soil and then began to use it insultingly, as in “dirty Roger,” when her trainer Roger Fouts refused to give her things she wanted. Even the mistakes made by the apes suggest that they are using signs symbolically, just as words are used in spoken language. For example, the sign *cat* may be used for dog if the animal learned *cat* first (just as our daughter Kathy said “dog” to all pictures of four-footed animals, including elephants, when she was 18 months old).

When we discuss the structure of sounds (phonology) later in this chapter, we will see that every human language has certain ways of combining sounds and ways of not combining those sounds. Apes do not have anything comparable to linguistic rules for allowed and not allowed combinations of sounds. In addition, humans have many kinds of discourse. We make lists and speeches, tell stories, argue, and recite poetry. Apes do none of these things.<sup>15</sup> But apes do have at least some of the capacities for language. Therefore, understanding their capacities may help us better understand the evolution of human language.

## The Origins of Language

How long humans have had spoken language is not known. Some think that the earliest *Homo sapiens*, perhaps 100,000 years ago, may have had the beginnings of language. Others believe that language developed only in the last 40,000 years or so, with the emergence of modern humans. Because the only unambiguous remains of language are found on written tablets, and the earliest stone tablets date back only about 5,000 years,<sup>16</sup> pinpointing the emergence of earliest languages remains speculative. Theories about when language developed are based on nonlinguistic information such as when cranial capacity expanded dramatically, when complex technology and symbolic artifacts (such as art) started to be made, and when the anatomy of the throat, as inferred from fossil remains, began to resemble what we see in modern humans.

Perhaps the majority of scholars believe that spoken language was a radical departure from communication that preceded it. However, as we have noted, based on observations of nonhuman primates in the wild and in the laboratory, many primatologists have questioned whether there is an enormous gap between nonhuman primate and human communicational capacities. In fact, some think that all the brain prerequisites for language were in place before the evolutionary split between apes and humans, and they view the emergence of spoken language as a quantitative rather than a qualitative difference.<sup>17</sup> These two points of view have led to lively debate.

Noam Chomsky and other theoreticians of grammar suggest that there is an innate *language-acquisition device* in the human brain, as innate to humans as call systems are

to other animals.<sup>18</sup> If humans are unique in having an innate capacity for language, then some mutation or series of mutations had to be favored in human evolution, not before the human line separated from apes. Whether such a mechanism in fact exists is not clear. But we do know that the actual development of individual language is not completely biologically determined; if it were, all human beings would speak the same brain-generated language. Instead, about 4,000 to 5,000 mutually unintelligible languages have been identified. More than 2,000 of them were still spoken as of recently, most by peoples who did not traditionally have a system of writing.

Can we learn anything about the origins of language by studying the languages of nonliterate and technologically simpler societies? The answer is no, because such languages are not simpler or less developed than ours. The sound systems, vocabularies, and grammars of technologically simpler peoples are in no way inferior to those of peoples with more complex technology.<sup>19</sup> Of course, people in other societies, and even some people in our own society, will not be able to name the sophisticated machines used in our society. All languages, however, have the potential for doing so. As we will see later in this chapter, all languages possess the amount of vocabulary their speakers need, and all languages expand in response to cultural changes. A language that lacks terminology for some of our conveniences may have a rich vocabulary for events or natural phenomena that are of particular importance to the people in that society.

If there are no primitive languages, and if the earliest languages have left no traces that would allow us to reconstruct them, does that mean we cannot investigate the origins of language? Some linguists think that understanding the way children acquire language, which we discuss shortly, can help us understand the origins of language. Recently, other linguists have suggested that an understanding of how creole languages develop will also tell us something about the origins of language.

### CREOLE LANGUAGES

Some languages developed in various areas where European colonial powers established commercial enterprises that relied on imported labor, generally slaves. The laborers in one place often came from several different societies and in the beginning would speak with their masters and with each other in some kind of *pidgin* (simplified) version of the masters' language. Pidgin languages lack many of the building blocks found in the languages of whole societies, building blocks such as prepositions (*to, on,* and so forth) and auxiliary verbs (designating future and other tenses). Many pidgin languages developed into and were replaced by so-called *creole languages*, which incorporate much of the vocabulary of the masters' language but also have a grammar that differs from it and from the grammars of the laborers' native languages.<sup>20</sup>

Derek Bickerton argues that there are striking grammatical similarities in creole languages throughout the world. This similarity, he thinks, is consistent with the idea

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## CHAPTER 4

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Son muy pocas las personas que pueden recordar el primer día en que se percataron que las palabras tienen significado. Sin embargo, ese momento marca un hito no solo en lo que concierne a la adquisición de la lengua sino en el conocimiento de todo el comportamiento complejo y detallado que constituye nuestra cultura. Sin la lengua sería virtualmente imposible transmitir las tradiciones que normalmente están compuestas de múltiples elementos y cada persona quedaría atrapada dentro su propio mundo de sensaciones privadas.

Helen Keller, sordomuda y ciega a causa de una enfermedad a la edad de 19 meses, brinda un dramático relato de la tarde en que por primera vez hizo contacto con otro ser humano por medio de las palabras:

(Mi maestra) me trajo mi sombrero y supe que saldría a la cálida luz del sol. Este pensamiento, si es que a una sensación sin palabras podría llamársele pensamiento, me hizo saltar y brincar de alegría.

Caminamos por el sendero hasta llegar al pozo, atraídas por la dulce fragancia de la enredadera de madre selva que lo tapaba. Alguien extraía agua y en ese momento la maestra puso mi mano bajo el chorro. Mientras que el chorro fresco del agua me empapaba una mano, ella deletreaba en la otra la palabra “agua”, primero despacio y después de prisa. De pronto tuve una sensación confusa como de que algo se me olvidaba la emoción de un pensamiento que regresaba y de algún modo se me rebeló el misterio del lenguaje. Supe entonces que “a-g-u-a”



significaba esa maravillosa frescura que rozaba mi mano. Esa palabra viva despertó mi alma, la liberó, le dio luz, esperanza y alegría. Aun había barreras, es verdad, pero barreras que podrían derribarse con el tiempo. Me fui del pozo ansiosa de aprender. Todo tenía un nombre y cada nombre daba lugar a un pensamiento. Mientras regresábamos a la casa, cada objeto que yo tocaba parecía temblar de vida. Era porque yo lo veía todo con esa extraña y nueva visión que había vivido.<sup>1</sup>

## **La comunicación**

A pesar de todas sus dificultades, Helen Keller había logrado comprender la función esencial que tiene la lengua en todas las sociedades: la función de la comunicación. La palabra comunicación proviene del verbo en latín “comunicare” que significa, transmitir, compartir” poner en común”. Nos comunicamos al ponernos de acuerdo consciente o inconscientemente en nombrar un objeto, un movimiento ó concepto abstracto con un nombre común. Por ejemplo los hablantes de la lengua inglesa han acordado llamar verde, al color de la hierba, aunque no hay forma de comprobar cómo dos personas realmente pueden percibir este color. Lo que si compartimos es el acuerdo de llamar verde a todo lo que tenga similitud con la sensación de este color. El sistema de cualquier lengua se

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refiere a un grupo de símbolos aceptados por la sociedad en los que los individuos tratan de compartir sus experiencias personales.

### **La comunicación humana no verbal**

Como todos sabemos, con base a nuestras experiencias no siempre una palabra puede comunicar todo nuestro conocimiento de una situación social. Normalmente percatamos cuando alguien nos dice “gusto en conocerlo” si lo dice de verdad o no. De la misma manera nos percatamos cuando una persona está triste con solo ver su semblante aunque respondan “estoy bien” a la pregunta “cómo estas”.

Es evidente que la comunicación no esta limitada solo a la comunicación verbal. Nos comunicamos de manera directa a través de una expresión facial, una postura, un gesto o un tono de voz. Así mismo nos comunicamos de manera indirecta por medio de sistemas de símbolos y signos, tales como la escritura, ecuaciones algebraicas, notas musicales, bailes, pinturas, banderas codificadas y señales viales. Como Anthony Wilden dijo” cada acto, cada pausa, cada movimiento en los sistemas de vida y en los sistemas sociales son también un mensaje: El silencio es comunicación. Al menos que una persona o organismo este muerto es imposible que comunique”<sup>2</sup> ¿cómo el silencio puede ser comunicación? El silencio puede representar acompañamiento, como cuando dos compañeros trabajan en equipo uno al lado del otro en un mismo proyecto, sin

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embargo, el silencio también puede representar enemistad. Un antropólogo puede obtener mucha información de lo que las personas en una comunidad no dicen. En la India, por ejemplo, no se supone que se hable de sexo. El virus del VIH se está expandiendo rápidamente en todo el país; Por esta indisposición de hablar de sexo, a los médicos antropólogos y a otros profesionales de la salud se le hace extraordinariamente difícil hacer algo por reducir el índice de expansión del virus del sida <sup>3</sup>

Algunas formas de comunicación no verbal parecen ser universales. Un ejemplo de esto es que los seres humanos en todo el planeta usan expresiones faciales de una misma manera, así las personas son capaces de reconocer cuando una persona tiene una expresión feliz, triste, enojada o temerosa feliz, triste, enojado, disgustado o con miedo. La forma en que el arte representa un semblante evoca sentimientos similares en muchas culturas diferentes. Como se expresa más adelante en el capítulo de arte, las máscaras que pretenden ser aterradoras tienen rasgos angulosos y afilados, y los ojos y cejas hacia adentro y hacia abajo. Sin embargo, la comunicación no verbal es también culturalmente variable. En el capítulo dedicado al concepto de cultura se expone como la distancia entre personas podría variar dependiendo de su cultura. En el terreno de las expresiones faciales las diferentes culturas tienen reglas diferentes acerca de las emociones que se pueden expresar. En un estudio se comparó como los

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japoneses y los americanos expresan sus emociones de manera distinta. El estudio consistió en que ambos individuos por grupo fueron grabados en video mientras veían películas con escenas desagradables que normalmente inspiran miedo y disgusto. Cuando los dos sujetos vieron la película solos, mostraron las mismas expresiones faciales de miedo y de disgusto. No existía diferencia entre ambos grupos. También hubo un efecto cultural. Cuando estaba presente una persona de autoridad durante el experimento, los japoneses trataban de enmascarar sus emociones negativas con una semi-sonrisa en muchas más ocasiones que los norteamericanos<sup>4</sup>. Muchos gestos varían dependiendo de la cultura. En algunas culturas mover la cabeza hacia arriba y abajo significa "sí" otras veces significa "no"

A pesar de todos los diversos sistemas de comunicación con los que contamos debemos reconocer la importancia avasalladora del lenguaje oral o hablado. Esta lengua es probablemente el mayor transmisor de cultura, permitiéndonos compartir y transmitir nuestra compleja configuración de actitudes, creencias y patrones de conducta.

### **La comunicación animal no humana**

Los sistemas de comunicación así como la comunicación por sonidos no son de uso exclusivo de los humanos. Otras especies de animales se comunican de

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distintas formas. Un medio por el cual los animales se comunican son los sonidos. Por ejemplo un pájaro puede emitir un canto en forma de alerta para indicar cual es su territorio. De igual forma una ardilla puede emitir un chillido para alertar a las demás ardillas y así huir del peligro. Otra forma como los animales se comunican es por medio del aroma. Una hormiga emite una sustancia cuando muere y sus compañeros se la llevan a la pira de abono. Aparentemente la comunicación es altamente efectiva: una hormiga saludable impregnada con esta sustancia de la muerte, será llevada a la pira una y otra vez. Otra forma que los animales tienen para comunicarse es por medio del lenguaje corporal, esta forma de comunicación es normalmente utilizada por las abejas para indicar donde se encuentra localizada una fuente de alimento. Karl Von Frisch descubrió que las abejas negras austriacas al escoger una danza circular o una danza rítmica o una carrera corta y directa pueden comunicar no solamente la ubicación específica del alimento sino también la distancia de la colmena<sup>5</sup>.

Uno de los grandes debates de los especialistas, es el de cómo los animales, particularmente los primates difieren de los humanos por su capacidad de lenguaje. Algunos especialistas ven este tema con tantas discrepancias que postulan que los seres humanos deben haber adquirido una capacidad genética específica hacia las lenguas (presuntamente por medio de la mutación) . Por su parte otros investigadores ven mucho mas continuidad en la capacidad del lenguaje entre los humanos y los primates y señalan investigaciones que muestran

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mucha mas capacidad en los primates no humanos que lo que se había considerado hasta ahora. Estos investigadores señalan que los teóricos de la diferencia están constantemente elevando los estándares de las capacidades que se consideran necesarias para una lengua<sup>6</sup>. Por ejemplo en el pasado, se pensaba que solamente la comunicación humana era simbólica. Sin embargo, estudios recientes señalan que algunos gritos emitidos por monos y otros simios en la selva, también son simbólicos.

Cuando decimos que una comunicación es simbólica (voces, palabras, oraciones) nos referimos al menos a dos cosas. Primero, la comunicación tiene significado aún cuando su referente (a lo que se refiere) no está presente. Segundo, el receptor del mensaje puede no adivinar su significado solamente por su(s) sonido(s) y no recibe el significado a través de su instinto. En otras palabras la simbología se tiene que aprender. No hay una razón “natural” ni apremiante para que la palabra dog (perro) en Inglés se refiera al animal omnívoro de cuatro patas que es la molestia de los carteros.

Los monos **Velvet** de África no están tan relacionados con los humanos como lo son los simios africanos. Sin embargo, los científicos que han observado durante años a esta especie de monos Velvet en su hábitat natural consideran simbólicas al menos a tres tipos de gritos/emisiones de alerta ya que cada uno representa a

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NT: Velvet es el nombre correcto de este tipo de monos en español por lo tanto, no fue necesaria la traducción por que la equivalencia de esta palabra existe en español.

un depredador diferente: águilas, pitones y leopardos y los simios reaccionan de forma diferente a cada emisión. Por ejemplo los monos Velvet alzan la mirada cuando escuchan la alerta de águila. De forma experimental, en la ausencia de un referente, investigadores han sido capaces de evocar la reacción normal de una emisión de alerta al efectuarla electrónicamente. Otro indicador de que las alertas que usan los monos Vervet son simbólicas, las crías de estos monos aparentemente necesitan un tiempo para aprender los referentes de cada emisión. Cuando son muy pequeñas las crías le dan a cada emisión mas animales que los monos adultos. Un ejemplo de esto es que dan el grito de alerta de águila cuando ven pasar cualquier ave. Las crías aparentemente aprenden los referentes apropiados mediante la repetición de los simios adultos de las emisiones correctas de las crías; de cualquier manera las crías aprenden gradualmente a restringir las alertas solamente a las águilas. No es muy diferente a la forma en que un niño estadounidense en una familia anglohablante por primera vez dice la “palabra” **dadda** a todos los adultos masculinos y gradualmente aprende a decírselo a solamente una persona<sup>7</sup>.

Todas las vocalizaciones no humanas que hemos descrito hasta ahora les permiten a los animales transmitir mensajes. El emisor transmite una señal al receptor, quien la descifra y normalmente reacciona con una respuesta o una acción específica. ¿Entonces, cómo es la vocalización humana diferente? Ya que los monos y los demás primates parecen usar el lenguaje simbólico al menos en

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Nt: La palabra **dada** no se tradujo porque es la forma onomatopéyica de daddy que el bebe estadounidense ha escuchado.

parte del tiempo, no sería adecuado enfatizar que la comunicación simbólica es una característica que distingue solo al ser humano. Sin embargo hay una gran diferencia muy grande entre el lenguaje humano y el sistema de comunicación vocal de los primates. Esto es debido a que el lenguaje humano maneja un número mucho mayor de símbolos.

Otra diferencia frecuentemente citada entre la comunicación humana y la comunicación animal no humana, es que la comunicación de los otros primates es cerrada: es decir, no se combinan las emisiones para producir una expresión significativa nueva. A diferencia del lenguaje humano que constituyen sistemas abiertos regidos por reglas complejas de cómo los sonidos y las secuencias de sonidos se pueden combinar para producir una variedad infinita de significados<sup>8</sup>. Por ejemplo, un hablante de la lengua inglesa puede combinar puede combinar las palabras “care” y “full” (careful) con un significado y usar cada uno de estos elementos en otras combinaciones con otros significados. “care” puede usarse en inglés para formar palabras como “carefree” (despreocupado) “careles” (descuidado) ó “caretaker” (guardián) y full puede ser usado para formar palabras como “powerful” (poderoso) y o “wonderful” (maravilloso). Y debido a que el lenguaje es un sistema de símbolos compartidos, se puede reformar en y dentro de una variedad infinita de expresiones y lo pueden entender todos los que usan comparten estos símbolos. Debido a esto, por ejemplo, el escritor T.S Eliot

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Thomas Stearns Eliot) pudo elaborar una frase que nunca antes se había formulado: “*In the room the women come and go, talking of Michelangelo*”.<sup>9</sup>

“En la habitación las mujeres van y vienen hablando de Miguel Ángel” Y el sentido de este enunciado aunque no sea su significado específico, puede su significado ser entendido por cualquier hablante de la lengua inglesa.

Aunque ningún especialista en primates dispute la complejidad y la infinita variedad con las cuales las lenguas humanas, pueden combinar sus sonidos, se ha puesto en discusión la dicotomía sistema abierto – cerrado debido a investigaciones con monos titi cabeza de algodón, los marmosetes, capuchinos y macacos rhesus. Estos primates no humanos si combinan emisiones en secuencias ordenadas.<sup>10</sup>

Otra característica que se considera única en los seres humanos, es la habilidad para comunicarse eventos del pasado y del futuro. Sin embargo la investigadora Sue Savage – Rumbaugh que ha observado a los monos bonobos en su hábitat natural señala que estos dejan pistas a los demás miembros de la manada para que puedan seguir en el mismo camino. Estos monos, cuando llegan a una bifurcación, parten ramas de la vegetación para señalar con éstas el camino a seguir.

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**NT:** De igual manera no fue necesaria la traducción de los nombres de estos tipos de monos ya que sus equivalencias existen en español.

Tal vez algo mas convincente sean los últimos estudios realizados con éxito en diferentes simios, al intentar enseñarles a comunicarse con los humanos y entre si usando un sistema de símbolos creado por los humanos. El éxito de estas investigaciones ha llevado a muchos científicos a cuestionar la hipótesis tradicional de que la brecha de comunicación entre humanos y otros animales es enorme. A un perico, que tiene un cerebro pequeño, un entrenador ha podido enseñarle a comunicarse, algo que al principio anteriormente no se consideraba posible. El perico "Alex" es capaz de responder preguntas hechas en inglés, tales como ¿De que están hechas las cosas? ¿Cuántos objetos hay de diferentes tipos hay? Y hasta entre dos objetos, ¿qué los hace diferentes o iguales?<sup>11</sup> Cuando Alex no esta dispuesto a seguir en la sesión de entrenamiento dice: "siento querer volver jaula".<sup>12</sup> A los chimpancés Washoe, Nim y al gorila Koko se les enseñó a comunicarse usando el Idioma americano por señas (por sus siglas en inglés ASL empleado en los Estados Unidos por los hipoacústicos.) A una chimpancé llamada Sarah se le enseñó con símbolos plásticos. Posteriormente, muchos chimpancés los entrenaron con símbolos utilizando teclados conectados a computadoras. Por ejemplo, a los chimpancés Sherman y Austin comenzaron a comunicase entre sí en cuanto a las acciones que iban a realizar, tales como qué herramienta necesitaban para resolver un problema. Además eran capaces de clasificar los objetos en diferentes categorías, como "comida" y "herramientas". Algunos de los mejores ejemplos de habilidad lingüística los proporcionó una

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chimpancé llamada Kanzi. En comparación con otros chimpancé, Kanzi inicialmente aprendió los símbolos solo al observar cómo enseñaban a su madre de manera espontánea empezó a usar los símbolos que estaban conectados al teclado de la computadora para comunicarse con los humanos e inclusive a indicar sus intenciones. Para indicar sus acciones. Kanzi no tenía necesidad de ser recompensado por sus actos o de que le colocaran sus manos en la posición correcta y entendía mucho de lo que se le decía en Inglés. Por ejemplo, Un día cuando Kanzi tenía cinco años escuchó a alguien hablando sobre lanzar una pelota al río; Kanzi tomó la pelota y la lanzó al río. Kanzi ha estado muy cerca de poseer una gramática del Inglés primitiva al enlazar símbolos.<sup>13</sup> Si los chimpancés y otros primates tienen la capacidad de usar un idioma no hablado y aún más de entender el idioma hablado, entonces la diferencia entre el lenguaje humano y el de los animales no humanos podría ser menor de lo que se pensaba anteriormente.

¿Están estos primates usando el lenguaje de una forma mínima? Muchos investigadores sí concuerdan en de una cosa: los primates no humanos tienen la habilidad de “simbolizar” para referirse a algo (o a un grupo de cosas) con una “clasificación” arbitraria (ya sea con gestos o con secuencias de sonidos)<sup>14</sup>. Por ejemplo el gorila Koko (con un repertorio de alrededor de 375 símbolos) amplió el símbolo de popote a tubos de plástico, mangueras, cigarrillos o antenas de radio.

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La chimpancé Washoe en un principio aprendió el símbolo de suciedad para referirse a las eses fecales y a otros desperdicios. Después Washoe usó este símbolo como insulto, cuando su entrenador Roger Fouts se negaba a darle algo que ella quería y le formaba con los símbolos la frase “sucio Roger”. Inclusive los errores que los simios cometen sugieren que están usando los símbolos de la misma manera que usamos las palabras en el lenguaje hablado. Por ejemplo el símbolo para representar gato puede ser usado para representar perro, si el animal esta aprendiendo aprendió primero el concepto de gato ( tal como paso con nuestra hija Kathy cuando tenía 18 meses usaba la palabra perro para referirse a todas las imágenes que contenían animales de cuatro patas incluyendo elefantes).

Más adelante al discutir acerca de la estructura de los sonidos (fonología) veremos que, y nos daremos cuenta de que cada lengua humana tiene su forma particular de combinar sonidos y formas de no combinar estos sonidos. Los simios no tienen reglas lingüísticas comparables con el uso permitido o no permitido de combinaciones de sonido. Además los seres humanos tienen distintos tipos de discursos: hacemos listas y discursos, contamos cuentos, argumentamos y recitamos poemas; los simios no pueden hacer ningunas de estas cosas<sup>15</sup>; sin embargo, los simios sí tienen algunas capacidades de lenguaje. Por lo tanto, el entender sus capacidades para el lenguaje podría ayudarnos a comprender mejor la evolución del lenguaje humano.

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## CHAPTER 4.- COMUNICATION

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