



HÁSKÓLI ÍSLANDS

Hugvísindasvið

Language or Communication?

Is Language unique to the human species?

Ritgerð til BA prófs í Ensku

Guðný Eygló Ólafsdóttir

Maí 2013

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ABSTRACT

This essay discusses whether or not language is unique to humans or if animals are able to learn human language skills. It also discusses animal communication and whether any other species acquires communication methods comparable to the human language and if that method qualifies to be considered a language. Humans may dominate most of the planet when it comes to power however; they do not when it comes to numbers. There are various different species on this planet and almost every species acquires their own communication method. Animals mostly communicate to locate a food source or to alert danger however, there are some species that seem to use communication to express emotions and to mate with others of their species. Researches have been done on apes since the 1900s to study whether they are able to learn the human language. There have been made interesting result on the subject. Other animals such as honeybees, dolphins, vervet monkeys, parrots and others, have been studied as well. The conclusion made in this research indicates that the human language is much more complex than other communication methods and therefore should not be regarded as language.

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INTRODUCTION

There are up to 7000 forms of languages spoken on the Earth today (Sipra 2013). Languages are constantly changing as speakers adapt it to new circumstances. There have been made various researches on why and if humans are the only species that has the ability to speak. Humans are born with the ability to speak and to make new words and sounds (McGilvray, 2005). Apes and chimpanzees have been known to use sign language however; they are not able to vocalize as humans can (Walton, 2002). Animals have their own system of communication, which most often consists of signs that are very different from human language and human language signs. Signs take various different forms, for example words, images, sounds, odors, flavors, acts or objects. Most animals seem to have their own way to communicate with each other. What I hope to determine with this essay is whether or not animal communication should be regarded as language or if animals are in fact able to learn human language. Various different opinions have been made on the subject, I want to provide an insight into those opinions, and the researches made. Language is one of the most important factors in human lives and I want to examine whether this is the case with animals as well or if language is unique to humans. To answer these questions I will:

- Provide an overview on what language is and what communication is.
- Examine different researches made on the great apes on whether or not they have the ability to speak or communicate with human language.
- Investigate animal communication with monkeys, honey bees, parrots, birds and dolphins

Different types of animal have different way to understand one another for example; the honeybees perform the honeybee dance, they perform a dance that indicates the distance and quality of a food source (Gadagkar, 1996). The Vervet monkey has different looks and action that indicates the level of danger they are in and even elephants use low frequency sounds to communicate (Hart, 2012). Even though most animals have a way to communicate the question whether or not we can call it a language is debated. This evokes the question whether or not humans are the only

species in the world who are qualified to say that our communication is the only language or that we are the only ones who have the ability to speak. The human language has been known to be very complex and more evolved than other communication methods. The aim of this essay will be to answer the questions about whether or not language is unique to the human species.

1 LANGUAGE VERSUS COMMUNICATION

Humans may dominate the Earth in terms of power however; they do not dominate in terms of numbers. We share the planet with various different species. Still our knowledge of the other species on the planet is limited since we cannot simply ask them what it is like to be an ape, for example. Language is a form of communication that humans use, however animals do have their different communication methods even though most of them or none could be regarded as a language. The importance of communication between animals cannot be underestimated. Animals depend on communication to find food, avoid their enemies, mating and caring for their young. The study of communication between humans and animals is fascinating. The great development of human communication is what makes humans exclusive to any other species. Language is the only way of communication that humans can really make sense out of and truly understand. We can communicate through art or a dance, however our true way of communicating is through language and that is the only way we can truly express ourselves without confusion and gestures. Humans also depend on sight, touch, smell and body language, still our main communication skill is to speak (Holmberg). With language, we can understand each other without almost any confusion. When an animal uses a sign it has just one meaning however when human uses a sign it can often have multiple meaning. Human language is an open form as new words can be added to it through culture or over time. Language also helps to preserve our history and knowledge as we use language to write, read and speak. Humans can understand how people used to think over the last decades only by reading. Animal form of communication is different as there is no flexibility. Animals are born with the ability to communicate however; they usually do not have the ability to learn other ways to do so. Humans can also use language in creative ways as they can talk about imaginary things,

the past, the future, different places and times. While animals usually just respond to the environment around them during that time, like when locating a food source or alerting a danger (Hurford, 2004). Therefore human language is context free while animal communication is context bound. Human language is far more complicated than any other system of communication. No other species on the planet has a communication system like the human language. The human language provides us with the possibility to distinguish between a language and communication. There are different opinions on what language really is. Dr. Steven Pinker, a cognitive scientist, believes language is made out of two components, word and grammar. He believes that if these two factors are not a part of the communication it cannot be called a language (Johnson, 1995). Many linguists have argued that no other species has any language at all. Animals do not seem to have the ability to make a sound that explains exactly what they want to do. For example, when a woman says to her husband that she wants to go out he will understand that she wants to go out. Still when a dog barks at the door, we assume that they do want to go out without exactly being sure. The main difference between language and communication is that we can communicate without language; however, communication can often be limited and can be misunderstood without words if we use the way to communicate in the wrong way. Animals such as primates have mastered their own way of communication through for example smell, touch and sight and for them it is not limited since they understand each other that way, as if we understand one another through language. The way we understand language does not have to be the way that animals understand it, for them a dance, types of sounds or action is their way of understanding each other (Hart, 2012). The question is whether other communication methods are qualified to be considered a language or not. The human language is much more complex than other communication methods and seems to be available only to humans. To answer this question we will have to talk about other species and see their developments.

2 CAN APES BE TAUGHT THE HUMAN LANGUAGE

A big question within linguistics in the past fifty years is whether the possibility to learn language is only available to humans and we have been researching that so far. There is

only one way to find out whether the human language is available to other species and that is to investigate whether or not non-humans are able to learn human language with proper training. An interest has been taken in our closest relatives, the non-human primates. Researches have been made to discover whether they can be taught to communicate with us in human spoken language or sign language. If an ape were able to acquire the same level of linguistic competence as a human child, it would indicate that language is not only available to humans and that it can be learned by other species. Whether or not apes have the ability to acquire the human language or not have been researched over time and have led to interesting results. Apes are often said to resemble humans however our language is one of the defining difference between humans and apes. Descartes said, „I think, therefore I am „as he refers to that animals do not think as they are only beast machines. There have been various different opinions on whether an animal can learn to think in the same way as humans do. La Mettrie, a Descartes follower pointed out that deaf people have difficulties learning how to speak however, with a great teacher they could, and therefore they could do the same with apes. Attempts to teach chimpanzees to speak were made in the 1900s and through 1930s. The chimpanzees were brought up by human parents who tried to teach human language to them as they would teach a child. These attempts were almost complete failures as the chimpanzees accomplished very little linguistic skills. Apes do not have the same ability as human to perform vocalization since they have thinner tongues and higher larynx, which makes it very hard for them to pronounce vowel sounds (Hart, 2012). Attempts to teach non-vocal communication did not start until in the 1960s when American Sign Language was taught to the chimpanzee Washoe and the gorilla Koko. Since it could be difficult to understand when apes use sign language, as the apes are less adept to produce signs with their hands than humans are some trainers decided to use a different approach. A chimpanzee called Sarah was taught how to use plastic symbols and another chimpanzee called Lana learned how to use an early computer keyboard. These projects were all successful. During the 1960s until the 1970s, researching language ability with apes was very popular. The apes seemed to be very successful and there researchers claimed they had learned hundreds of signs however the question was, did the apes really understand what the signs really meant or did they only use the signs their researchers wanted them to use. Chomsky developed a theory about Universal

Grammar that language is a skill limited only to humans. He states as Johnson described so well (1995): "Humans can fly about 30 feet-that's what they do in the Olympics. Is that flying? The question is totally meaningless." Steven Pinker believes that apes can be trained to do great things. Still he believes that the apes use the sings only to receive reward from their trainer. Many language researchers are doubters who do not believe that the apes can develop or learn language skills, however there are also those who do believe that they can learn a language skill. Researches have been made on several apes with different but interesting results (Johnson, 1995).

2.1 VIKI

Viki was probably the chimpanzee who came closest to speaking a human language. Viki was brought up with a human couple and that raised her like a baby. She was taught to speak human language however it was without great results. Viki did learn to respond to number of sentences. Still it is unknown how much she actually understood. Viki could with difficulties only speak three or four recognizable words they were, papa, mama, cup and up. This project was close to a success and it was explained that the difficulties were because of chimpanzee's ability to produce speech were limited. When Viki was seven years old, she died of viral meningitis (Wayman, 2011).

2.2 WASHOE

In the 1960s, the Gardners recognized that chimpanzees naturally gestures would make chimpanzee's great students in sign language. They started working with a chimpanzee called Washoe. Washoe was taught sign language through instruments and imitation. Her caretakers the Gardner mostly used sign language when Washoe was around. Washoe learned how to use sign language and was very successful, she was able to transfer signs to a referent without getting instructions to do so and she was able to use them spontaneously. When Washoe died, she had learned over 250 signs and could put different signs together and make a simple sentence like "you me go out hurry". Washoe's caretakers and teachers decided to extend their experiment and started to

teach few more chimpanzees. They started working with chimpanzees called Moja, Pili, Tatu and Dar. They were successful with all of them. The chimpanzees signed to friends, to each other and even to other animals, toys and trees. The most interesting development in their success was when Washoe adopted a chimpanzee called Loulis. Humans never used sign language around Loulis but still Loulis learned over 50 signs, which he picked up from the other chimpanzees. The other chimpanzees did not do much of teaching. Louis picked up these signs from them. It seemed similar to when people pick up something from their cultural circumstances. Louis was the first ape to learn signs from other apes (Duignan, 2007).

2.3 KOKO

Koko was a gorilla who was taught sign language. Her sign language experience started in 1972 and she was taught by a graduate student Francine Patterson. Koko understood spoken English and knew around 1000 signs. Koko's IQ was tested and it was claimed to be just under the average of a human, her IQ was claimed to be around 70-95. Dr. Herbert Terrace who trained Nim Chimpsky explained that the signing behavior Koko exhibited had nothing to do with understanding and speaking language. He said she was only responding to cues from her trainer. The research made with Koko was insufficient and like Stephan R. Andersen (2004) describes it in *Doctor Doolittle's Delusion*:

Unfortunately, since this project represents an equally canonical example of how not to produce genuinely scientific results from research on the cognitive abilities of other species, we learn next to nothing of substance (though much about research methodology) from what Koko's friend Penny Patterson has written about her supposed abilities. (p. 268)

This project was a total failure in science even though teaching Koko was a success to her trainer (Duignan, 2007).

2.4 LANA

The chimpanzee Lana was taught to communicate using an electronic keyboard. Lana would have to press a key and each key had a meaning of one word. The lexigram of the key would appear on a projector when she pushed it. Sometimes Lana would hit the wrong button and when that happened she would press the period key, to end the sentence, as is it was wrong and she would start over. Lana started to use the word “no” when she wanted to protest, like when someone was drinking a coke in front of her and she did not have one. Lana would also use the word “this” when she did not know the name for something. Lana learned to use the word “this” and “no” on her own however, her trainer admitted that Lana might not understand the meaning of the words as humans understand them (Switzer, 1999).

2.5 SARAH

David Premack wanted to make a different experience than the other trainers and teachers. He decided to teach a chimpanzee called Sarah to communicate with plastic tokens. Each token represented one word and each token was different in shape, color, size and texture. This language made it possible to study memory without any problem. Sarah was taught nouns, adjectives, verbs, quantifiers and pronouns. Sarah was very successful and learned about 150 words. She could answer most questions her trainer presented to her. Sarah was given a new trainer to test her abilities. When the new trainer asked her questions, she answered more wrong than usually however she still answered many right so it could not have been just a lucky guess (Switzer, 1999)

2.6 KANZI

Dr. Savage-Rumbaugh used the same language communication as Sarah was taught, to use plastic tokens. Savage-Rumbaugh adopted a 10-year-old bonobo named Matata. Rumbaugh taught her to use the plastic tokens without good results. After 2 years of training, Matata only learned about 12 words. What was so interesting about his discoveries was Matatas adopted child, Kanzi who attended her sessions, however he

never seem to be interested in learning and just wanted to play. When Matata was taken away for breeding Kanzi started to use the 12-lexigram keyboard. Kanzi had been secretly following the sessions and he learned quickly after that. Kanzi acquired a large vocabulary fast and his 256-lexigram keyboard was soon not enough. Savage-Rumbaugh tested Kanzi in many ways to find out if he was only following a routine or not. Kanzi did not only learn close to 400 symbols, know the vocabulary of more than 3000 words but he also understands spoken English. When Kanzi “speaks”, he follows grammatical rules and syntax. Savage-Rumbaugh concluded that he had acquired language skills of a two or a three-year-old child (Duignan, 2007)

2.7 NIM CHIMPSKY

In the 60s and the 70s there were many projects where chimpanzees were being taught human language. Project Nim Chimpsky named after the linguistic Noam Chomsky was one of them. It started in 1973 when he became a student in the psychology Department of Columbia University. Nim lived with a human family where he was taught signs in class at the university. He learned a pidgin version of a sign language since non-humans do not have vocal apparatus to allow them to imitate human speech. Dr. Herbert Terrace, a Columbia University psychologist who was his teacher was skeptical and did not believe that the chimpanzees could use and understand sign language. He believed that if chimpanzees could learn language they would use it in the wild however they do not. He would mean that the chimpanzees were only performing memorization tasks similar to what pigeons have been known to do. He believed that the chimpanzees used signs to please their trainers in order to get reward. The project lasted for 44 months and Terrace was successful in teaching Nim to use signs however, he still believed the apes imitated their trainers and that while there is no actual proof apes can create a sentence he could not believe it. Nim was able to learn an extensive vocabulary however; Nim was not able to acquire grammatical skill and therefore could not combine words to create a new meaning. What was different from what human children did was that Nim almost exclusively asked for items or favors from his trainers. Children of course do that as well however, they also comment on their own activities and ask questions. What made this project different from other language project with chimpanzees was that

the entire process was observed through a window and videotaped. Terrace already knew chimpanzees could learn how to use some sign and how to put them in sequences, what was not known was whether these sequences were only learnt by imitating the human trainers or if they were learning the rules of grammar. The purpose of this project was to learn whether a chimpanzee could learn rules of grammar. When Terrace was watching a video of Nim with his trainer, he saw that the chimpanzee was tracking his trainer's signs and he did almost never make up his own sign. Even though Terrace did not believe at this point that the apes could create sentences, he was still hopeful that with the right motivation someone would find a way to teach them (Adler, 2008).

2.8 CHIMPANZEES IN THE WILD

A primate's genetics are very similar to human genetics however, the most important difference with humans and primates is their ability to communicate, to read, write and speak. Even though primates do not have the ability to communicate with sign language, they still do have their own way to communicate to one another.

Chimpanzees have different types of vocal calls when they locate food. They make types of grunts, barks and pant hoots to let others know where the food is located. What is more fascinating is that each chimpanzee has developed their own "pant-hoot" which gives them their own identity. This way the other monkeys know who is calling them. After the chimpanzees return from hunting and are successful in killing a prey they make intense excited calls to alert others of their success. When there is a danger, the chimpanzees have their own way to alert the others, they make a loud "wraaa" sound. Not only do chimpanzees use sound to communicate to one another but also through posture and gesture. To express emotion they use physical contact, posture and gesture. When a chimpanzee wants to proclaim his dominance they do so by slapping their hands together and stomping their feet. When they are angry, they stand upright on their legs, waving their arms or even throw rocks. With this expression of a motion, the other chimpanzees have been alerted to stay away. Often when chimpanzee become afraid they begin to grin which can be compared to a human's nervous smile when they are laughing at something awkward. Chimpanzees do not communicate with sign language

in the wild just as if Dr. Herbert Terrace claimed they would do if they understood and knew how. Still they do have their own simple way to communicate.

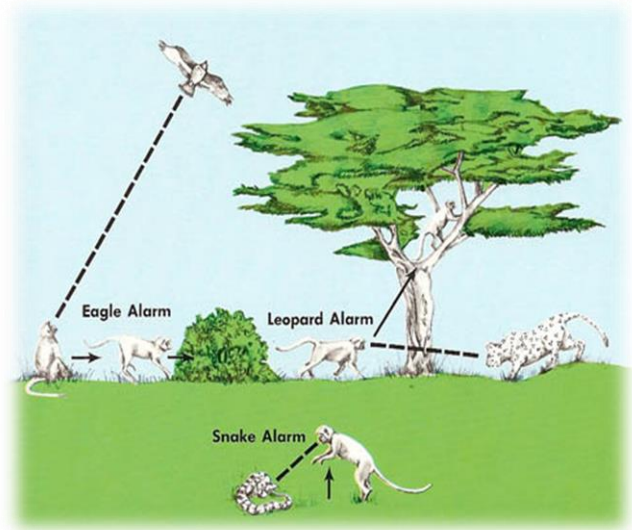
3 OTHER ANIMALS

Even though human language with apes has been the primary research, they are not the only animal capable of communication. Other animals such as the vervet monkey, honey bees, whales, dogs, dolphins, parrots and almost every species on the planet has their own specific way to communicate. Animals as well as humans have developed a system to communicate with others of their species. Humans use language and communication for various different things. For example expressing emotions, to write, read, learn, and communicate. Animals use communication mostly to let others know when they have found a food source or to alert when there is a danger and even to navigate. Most animals are born with the ability to communicate to each other when there are only few who are not and must develop the skill to be able to socialize with others of their species. For example, the few known animal that need to learn to communicate are whales, dolphins, bats, parrots, songbirds, humans and other primates. Communication is important to all species and most animals use communication for survival. The human language is the most complicated and developed communication method that is known of. You might say that the human language is unique even though other animals do communicate with each other (Hurford, 2004). Animals use their communication to interact with each other and sometimes even to socialize. Various investigations on animal communication methods have been made in order to compare them to human language and to investigate the importance of their communication. Chimpanzees share most of human genetic information, which made them the primary subject on studying the human language with animals however, what was learned was that they do not have the ability to speak. Humans have the great ability to produce vocal tract and communicate in that way however humans are not alone in having the ability to communicate as various animals use signs to communicate in different ways. Animal communication can be by scent, with lights, dance, sounds, electricity, colors, electricity, ultrasounds, songs, calls, posture, and gesture or even by facial expression.

Communication is important to both humans and animals and even though animal communication methods are different, they are effective nonetheless.

3.1 VERVET MONKEY

The African vervet monkeys live in a close group in open areas and in forests. They have an interesting way to communicate with others of own their species. The vervet monkeys have been researched and the results were very interesting, as they seem to have their own unique system to alert danger to other vervet monkeys in their group. When they would see a snake in the grass they



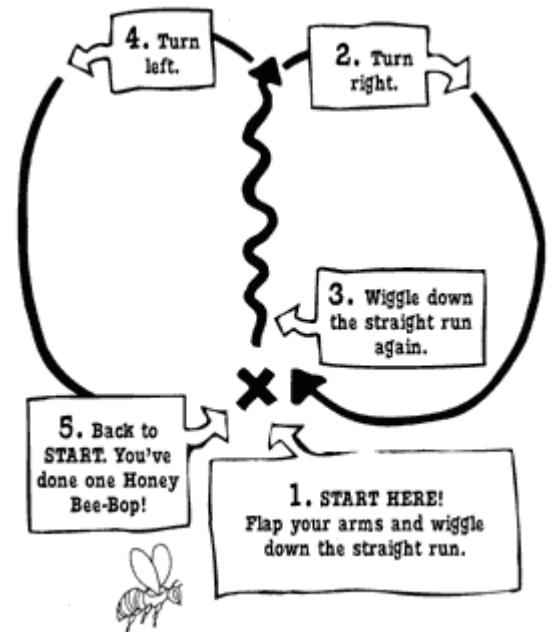
they scream or give up one call, which is similar to what a human would do but what they have developed is an alarm call to alert the other monkeys when a danger is approaching. Not only does the alarm call to alert a danger but also what type of danger is approaching. The vervet monkeys use a language code to warn the other vervet monkeys of the type of predator approaching. Whenever the monkeys make a “chutter” sound they are warning others there is a cobra or a puff adder approaching, when they make the sound “rraup” they are warning others that there is an eagle close by. The vervet monkeys do not only make a sound when a danger is close but also demonstrate a specific sign to the other monkeys. When a monkey sees an eagle closing in they look up and run into the bushes, when they see a snake approaching they look down and gang up against it and escort it out of their territory, when they see a large predatory they rush into the trees and hide. This behavior conveys meaning where each call is supposed to alarm the other monkeys of a specific danger (Anderson, 2004). The calls also refer to an object or event and are meaningful to the vervet monkeys. What is most interesting about the calls is that they are communicative however, there is no specific structure or creativity in the calls as in human language and therefor it is usually not considered a language. The monkeys are unable to use the calls to refer to the past or to

object that is not there during this particular moment. The calls only purpose is to alarm the danger that is present at the time. Even though their system is very effective, it is not comparable to the human language in structure or complexity. What the vervet monkeys have developed is their own simple way to alert one another only of danger and not to express emotions, communicate about the day or even to locate a food source.

3.2 HONEY BEES

Honeybees have their own system of communication. They communicate the location of a food source by dancing three different dances, where each dance gives information of a quality of the food source and where it is located. Honeybee dancing is often considered as the most intriguing aspect of their biology and could be considered one of the most fascinating behaviors in animal life. The bees do not only perform a particular dance but also understand what it means when another bee performs the dance. The queen bee does not perform the dance however she does understand what it means. When a working bee has found a food source,

she returns to the hive and performs a dance for the other bees. The dance indicates key information about the food source. The other bees need to understand the dance and follow its direction to locate the food source found. When the food source is close to the hive or less than 50 meters the bee makes a round dance where she runs in circles then suddenly reverses the dance. Sometimes she repeats the dance. The dance communicates how close to the hive it is but gives no further information such as directions. When the food source is about 50 – 150 meters the bees do the sickle dance, which indicates directions as well. The tail-wagging dance lets us know that the food source is no more than 150 meters from the hive. This dance communicates both distance and direction (Gadagkar, 1996). This tells us that bees do have their own system of communication that indicates meaning but it is indeed very different then our way of communication. The main difference between the honeybees and for example,



the vervet monkey is that the honeybees can communicate about an object that is not present at the time and that demonstrates how more similar to human language than the vervet monkey communication is. There have been debates whether or not the dance is really a language or even whether or not they do really communicate with the dance. The bees always perform the dance in front of other bees, it is always performed near the hive and it always follows a standard template for conveying directions and distance. The dance is also complex just like our language, it is stable and it is symbolic. These are all the same factors as the human language has and they indicate that the dance is in fact a way to communicate and there for is the language of the honeybees. Not everyone agree that the honeybee dance is a language and explain that is because it is genetically fixed not learned and it lacks syntax for example. Some researchers have established that the honeybee uses an odor to locate the food and to proof that theory a robot bee was built. The robot bee is able to perform the dance without being able to produce the odor. What was most fascinating about the robot bee was that the other bees understood the dance and were able to locate the food source. Gadagkar says (1996): “There are good reasons to call this communication system of the honey bee a language.” This could be the perfect proof that the honeybees do communicate through the honeybee dance. Still the dance is very different from the human language and many scientist and linguists still do not agree on whether the dance should be called the honeybee language. Communication is not only the ability to perform sounds or words but also symbols and signs that each species adepts to. Communication is important to all species, whether it is to communicate the distance and quality of a food source, to alarm danger or just to communicate feelings. Humans and animals have been able to communicate in some way for many years. Whether the honeybees do in fact communicate through the honeybee dance or with odor, they still are communicating to each other in way that they will understand.

3.3 DOLPHINS

Dolphins are mammals like humans and they do have to swim to the surface to breathe air. Dolphins are very smart and they have a way to talk to each other, the appearance of dolphins brain is said to be similar to a human brain. Dolphins have different sounds to

determine whether it is communicative or navigational. Echolocation sounds are produced in their nasal passages and are called clicks. They can produce the clicks so fast it can sound like buzzes. Various researches have been made to discover whether dolphins communicate with language however, there have been little scientific data supporting those claims. Dolphins often team up and work together to accomplish tasks. When a dolphin vocalizes, it often seems that another one is answering. When dolphin communicates, he does it through body postures, blowing bubbles, jaw claps and fin caresses. Scientist seems to think that dolphins talk about everything from emotions, to presence of danger and location of food. When a dolphin faces a danger, he usually calls for back up, letting his friends know that he needs help. Dolphins depend on echolocation, vocalization and ultrasound to communicate with each other and to navigate. With echolocation, dolphins can use up to 700 clicking sounds per second and with that, they can detect location and a size of a single object from over 100 meters away. Dolphins love to make sounds. Sometimes when a group of dolphins is together, it can sound like when a group of people is talking all at once (Omar and Liron). When dolphins communicate, they seem to take turns on vocalizing which can sound like they are having a conversation. Some researchers have claimed that it appears that dolphins have certain names for each other or at least they seem to make a certain noise only in the presence of a certain dolphin however, this has not been established (Morell, 2013). It certainly sounds like dolphins have their own language even though humans do not understand it. Their language or communication is unlike any language humans know.

3.4 BIRD COMMUNICATION – CHICKADEE CALLS

Many birds have interesting songs and sounds to communicate. One very common songbird has developed their own calls, which are called the Chickadee Calls.

Vocalizations in birds are often divided into two categories, songs and calls. Songs are usually given in the mating season and are mostly directed toward mates. The calls are any other vocalization and they fall into the category of functions such as food calls, alarm calls or contact calls. Songs are usually complex when alarms are usually simple however; the Chickadee calls are a very complex system of calls. The Chickadees are American birds that belong to the family of tits. The calls they make are interesting as

they are made up of a small set of discrete sounds, which are combined with a system, they are according to certain rules and the birds produce large set of facial expressions, which is very similar description to the human language. For example, the black capped chickadee uses four note types to produce different call types, which appears in a fixed order. These note types can be repeated number of times. There are many different types of calls. This communication system appears to be similar to human language in some ways. Small set of speech sounds are combined together to make a set of words and new words can always be added. A large set of words can be combined to make various sentences just like the human language. The chickadees have developed their own stress call for example to alert others of the species when there is a predator close by with the calls. They do not only use the alert when there is a predator nearby but also whether he is moving fast or the size of the predator. They produce two very different alarm signals when they alert the danger of a predator. When the danger is a another type of bird coming from the air such as hawks, falcons or owls they produce high pitched, soft calls however when the danger is on the ground they use a loud “chick-a-dee-dee-dee” alarm to recruit other birds to come and help them to send the predator away. Researcher Susan M Smith has demonstrated that these are the typical chickadee songs and calls:

Chick-a-dee-dee : Male and female chickadees use this call to announce a good food source, help reunite separated flock-mates, or signal “all clear” when danger has passed.

The variable See: This high, thin note may be given by one or both birds before or during mating.

Broken Dees: Nesting females give this call to tell their mates to bring food.

Begging Dee: This call sounds like “feed me! feed me me!” It is given by young chickadees when they encounter adults after leaving the nest.

Tseet: This soft, high note is given continuously by undisturbed chickadees to communicate with one another. The call stops suddenly when the chickadee is disturbed.

Ch’dle-ee, ch’dle-ee: Typically given during disputes over territory or other aggressive situations, this call is one example of the chickadee’s gargle vocalization. Individual chickadees may have fifteen or more different gargles.

The calls seem to get louder when the size and danger of the predator was bigger. The chickadees can alter their calls any way they want and even so humans cannot hear them, they also change the dee dee of the calls by adding more too them or adding them at the end of the calls. The birds seem to add more “dee dee” to the calls depending on the danger adding too them if the risk or danger became higher (Smith, 2010). The birds seem to change their calls depending on the circumstance and their language seems to be open to changes just like human language. Even though the chickadee calls are complicated, open to new words and have other similarities to the human language. The calls are not as complex and as developed as the human language and therefore does not come close in comparison to the human language.

3.5 PARROTS

Apes seemed to have enough capacity to be able to learn the human language however they did not seem to be able to perform articulation of speech. This seemed to be the opposite for a parrot. Grey parrots have successfully been taught to communicate with humans using English words. Irene Pepperberg was successful in teaching the parrot Alex the English language or at least sentences in the English language. Alex was successful in:

- labeling number of objects
- using hierarchical concepts like “red”, “blue”, and “green”
- Form simple sentences like “wanna go X”.

Pepperberg has been able to teach her parrot to do complicated tasks that few non-humans have been able to do. Alex can vocalize and does not only imitate humans. Pepperberg's researches have led her to the conclusion that Alex can speak and think. Pepperberg says that Alex can answer if you ask him what color corn is even though there is no corn around. Only chimpanzees and dolphins are able to complete similar tasks to what Alex has been able to do even though of course they cannot vocalize as he can. Alex can identify about 50 objects. Alex knows five shapes and seven (Smith,

1999). Even though Alex can speak and seems to be able to answer questions his teacher Dr. Pepperberg does not claim that he knows “language” she says:

"I avoid the language issue," she said. "I'm not making claims. His behavior gets more and more advanced, but I don't believe years from now you could interview him." She continued: "What little syntax he has is very simplistic. Language is what you and I are doing, an incredibly complex form of communication." (Smith, 1999)

The meaning of a sentence the bird makes might mean something different to the bird or even nothing at all however, it always has a certain meaning to humans. Even though Alex can vocalize and form simple sentences still he is not able to use language in the way humans do and therefore it is difficult to call his way of communicating „language“.

4. BIOLOGY

Animals can communicate in various ways that is beyond human capabilities. Bats communicate with ultrasound, some fish with electricity, elephants use infrasound and whales use underwater songs. It is impossible for humans to communicate in these ways. Our language is as inaccessible to animals as for example ultrasounds in bats are for us. Animals are biologically structured with evolution to survive in their own environment, which also applies to humans. Many researchers have been driven to proof that there is nothing unique about the human language and that animals, especially those are the closest to us could control our system of communication. Animals just like humans are born with some abilities to communicate. Humans have a vocal tract and seem to be born with the ability to learn language however; animals do not seem to have these factors just as humans do not have the ability to communicate with electricity. Noam Chomsky reasons that an animal could not have the cognitive capacity to learn the human language since they never show that in nature. If the animal acquired a human language skill, they would use that skill. As Stephen R Anderson (2004) describes it:

“To say that an animal could manifest an ability as evolutionarily advantageous as language, but simply has never done so, is as

ridiculous as saying that somewhere an island exists on which birds are perfectly capable of flight, but have not yet thought to do so and need human instruction to induce them to fly.” (P. 306,307)

Many researchers have rejected this argument and believed that it would be possible to teach an animal to speak with a proper training. What most researches have demonstrated is that no animal has been able to show control over the human language (Anderson 2004). What is most likely with this case is that language is unique to humans because of our biological nature just like detecting a prey is the nature of a snake for example.

5. THE HUMAN LANGUAGE IS UNIQUE

Most people have a great understanding on what language is. When we first think of language, we most often think of our native language. Humans often make the mistake of thinking that real language is only the dominant language in a culture, for example with some Arabs who do not believe that the informal varieties of their language, which they use on daily bases, are real languages. There are myths which are racist that people with pre modern material culture like Australian aborigines, have only vocabulary of few hundred words and that they have no real grammars. No evidence exists that humans are different from each other as far as the complexity of a language is concerned, or as James R Hurford (2004) describes it:

„An overwhelming body of natural experiments, in the form of adoption of children between societies belonging to different language families, testifies that (pathology aside) any human child is born with the capacity to master any human language.”

Humans are all born with the same capability to learn language and there are no groups or cultures of people without a complex language. In fact, a complex language is what defines humans. The difference between humans and animals is very clear when it comes to communication, the human language contains grammar, semantics like noun, verb, present and past to express human meaning. Animals are not able to communicate about the past or the present for example. Human language is also the only known

communication system that is independent which means humans do not only communicate in several different ways, for example humans are able to use sign language and the written language to communicate. Language also makes science possible for humans. Language makes theories about language possible as if English allows humans to make a distinction between the meaning of communication and language (Hurford 2004). When almost all species communicate in one way or another it is not even, close to how humans communicate with language. The way humans communicate with one another is uniquely important in our everyday lives. Without language, the world would not have developed as it has and probably would have the same appearance as million years ago. How humans have developed is constitutes how unique we are and how different from other species we really are.

CONCLUSION

After having examined various different animals and communication behavior it is clear that language is unique to humans. Language as complex as the human language, does not seem to be available to other species at this point. It is possible that at some point we will learn differently however at this point our studies animals do not acquire the skill to understand and learn language in the way humans do. Even though animals have their own, way to communicate, it does not seem to have enough similarity or complexity to a human language to be called a “language”. Human language is not just speech or signs; it is so much more than that. It involves syntax, lexicons and phonology only to name a few. Humans have various ways to communicate through language, either with written language, spoken language, sign language, facial expressions, and signs or even through the language of love or a dance. Animals only seemed to have a fraction of the ability that language requires. Most often animals do only communicate the location of a food source or a circumstantial matters like when there is a danger approaching. Most animals do not express emotion like the one human do even though it also seems to be the case with dolphins. There does not seem to be an actual proof that apes really understood what they were saying even though they learned various words. The apes also never reached the level of linguistic skills to be compared to humans even though the bonobo Kanzi came close. Dolphins are smart and their

communication method seems to be similar to language however, it is impossible at this point to confirm that they do have their own language. The chickadees have a complex system of calls, which could be compared to the human language still the human language still is more complex and more developed. Humans would not be at this stage in our development if not for language, we even might still be living in caves if not for our language. In my studies on whether or not animal communication can be called a “language” or if the language is unique to humans. I have provided an overview on language and communication, examined different researchers on different animals and investigated animal communication. My conclusion is that language is too developed and complex to be compared to animal communication which seems to be in most cases simple.

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