

Explore the arguments, for and against, the view that no other species besides humans possesses language. Then offer a judgement, supported by argument and evidence, as to whether only humans do possess language.

- 1 When it comes to deciding which species do or not possess language, firstly it is important to ascertain what a language is. As I am writing as a human being, I think it is only fair to take the human definition of language as the basis from which I shall work. The Collins English Dictionary defines language thus:

'a system for the expression of thoughts, feelings, etc., by the use of spoken sounds or conventional symbols.' (Fourth Edition, 2000)

- 2 However as we well know there are many human languages and many variants of these languages that are still assumed or proven to be distinct and valued languages so what components do all of these have in common and do any other species share them? The majority of research trying to teach another species language has been done using apes as they are closest to humans genetically, therefore throughout this investigation I shall question apes' ability to conform to the strictures of human language.
- 3 Also, what is language for, if not communication? How do we justify that a language is more than just communication and can be classified in its own right? No one would argue that animals do not communicate, so what is it that sets human language apart? Pinker states emphatically that 'language is as different from other animals' communication systems as the elephant's trunk is different from other animals' nostrils.' (1994: 334). Yet is the case so cut and dry? Humans do not only communicate through the spoken or written word, there has been much research in to body language for example, so what aspect does language add?
- 4 There is much discussion within linguistics about what a language is, for example a sociolinguist might class a pidgin as a language, where a psycholinguist might only class it as a language once it had formed into a creole. However, no matter what one classes as a human language, there are certain aspects which they all, in theory, will share. Trask (1999) names five key design features of human language;
 - Duality of patterning - present in the structure of all spoken human languages where all units of meaning are made up of meaningless units (phonemes).
 - Displacement- that all humans possess the resources to describe things other than the here and now.
 - Open-endedness - that previously unheard utterances can be produced and understood, creating a potentially infinite number.
 - Stimulus freedom - the choice that humans have over what to say and when to say it, including nothing at all.
 - Arbitrariness - that the form of a word must not have a direct correlation to its meaning.
- 5 Trask argues that these design features are not, with the exception of arbitrariness, present in animal communication so we cannot class it as language. There is but one exception, that of the common honey-bee, which shows displacement in its ability to report back where it has found food. His argument is that these design features make language what it is, therefore anything without them is defunct as language, even the exception of the honeybee is flawed as it has been proven that the bees have no way of indicating 'up'. Where humans possess the ability to play with language, to be ironic, to lie or create a story an animal can only report the truth of here and now, their responses are instinctive and automatic.
- 6 The concept of grammar comes up repetitively with respect to the acquisition of language. A child learns the grammar of their native tongue without any explicit instruction, they may not be able to describe the rules yet they will know instinctively by the age of about 8 or 9 whether a sentence is grammatically correct. Pinker (1994) argues that grammar as a discrete

combinatorial system makes human language uniquely infinite, digital and compositional, in much the same way as Trask's design features imply. So could an ape learn the principles of grammar? In fact this seems to be the question that both camps agree most on. All the research up till now seems to prove that apes cannot, in fact use grammar, though whether they can understand its subtleties is more contentious. Savage-Rumbaugh (1998) seems to admit that apes cannot utilize grammar, but argues that this does not prevent them possessing language. When it was attempted to teach chimps American Sign Language it was found that signs were not inflected for aspect or agreement which is the primary mode of signalling who did what to whom. (Pinker, 1994) This to some proves that apes cannot master grammar, yet the reality remains that humans learning a foreign language often have relentless problems with grammar, grammar of a non-native language is most certainly not as simple to learn as one might think.

- 7 However Pinker also defines three different systems of non-human communication, which do not allow the same flexibility as human language, and states that all animal communication is restricted to one of these systems. In the case of many animals they will have a limited number of calls, one meaning danger etc. which means that rather than having an infinite number of utterances they in fact have a specific number. The common honey-bee communicates using the second system, 'a continuous analog signal that registers the magnitude of some state'. (Pinker, 1994: 334) The ferocity of the bee's dance indicates the abundance of the food source being reported on. The third system is that which bird-song is based upon, the repetition of a theme (or song) with slight variation each time. If animals' communication fits neatly into these three categories it is easy to agree with the theory that animals do not possess language. Yet what evidence is there to support the argument that animals can or do possess language?
- 8 The majority of opinion is agreed that natural animal communication is not equal to language, as it does not allow the same diversification as human language. As I mentioned above humans communicate by many different means other than language, animals too possess other ways of communicating. Wundt (1973) describes a language of gestures where he argues that gestures were the predecessors of language and suggests that animals may use gestures in the same way as humans, presumably attributing them with some of the same cognitive powers. So if animals do have the same cognitive powers as humans, then in theory they should be able to be taught language, even if they do not possess it.
- 9 Many experiments have been carried out trying to teach apes various languages; sign language or constructed languages of lexigrams. These have been successful to varying degrees, the most publicised and successful being an ape called Kanzi. The problem of proving that any of the apes studied have acquired language has thwarted many researchers. Many critics have accused enthusiastic researchers of seeing meaning where there was none, or seeing sign language signs that were not there.
- 10 In the case of Kanzi there has been reliable and tested results proving what he can, and cannot do. Kanzi is unusual as the researchers, most notably Sue Savage-Rumbaugh, did not initially try and teach Kanzi the language that they had constructed using lexigrams, but were teaching his mother. It was only when he was separated from his mother when he was weaned that Kanzi showed the ability to employ all the ten lexigrams that they had been attempting to teach his mother. Not only was he able to understand the semantic connections between the lexigrams and the objects they referred to, on hearing the spoken word he could identify the corresponding lexigram. This was a revelation in teaching apes language as such symbol (spoken word) to symbol (lexigram) transfer had never been identified in a non-human species, and it was also proven in controlled tests. Such findings were clearly incredible and an advance, but would Kanzi be successful in learning an entire language, would he prove the critics wrong?
- 11 The latest numbers for Kanzi's repertoire of symbols is that he knew 500 words receptively and 200 productively. Now knowing these symbols alone would not constitute language but it can be argued that Kanzi possesses a simple language. One of the main arguments for Kanzi having language was that he showed evidence of displacement and aspects of duality. Savage-Rumbaugh (1998) states that Kanzi was capable of referring to the future and the past and could

combine symbols to convey meanings that neither could individually convey. So in a response to Trask's design features of language perhaps Kanzi was on his way to obtaining language, yet it is inescapable that he had no real grasp of grammar. This is why even Savage-Rumbaugh only claims Kanzi's language to be basic.

- 12 One key factor that I have not yet mentioned is that humans' vocal tract is pre-disposed to speech where an apes is not. Now speech is not the only form of language, but it is true that language is spoken before it is written. The human vocal tract is extended and in comparison to a chimp's shorter vocal tract it allows many more sounds to be produced, dozens in comparison to perhaps three. As the arrangement of our vocal tract is actually more dangerous, it is thought by many researchers that it has evolved for the sole purpose of speech. Trask (1999) hypothesises that the development of our vocal tract must have been accompanied by the evolution of our brain to its present day size. So it is through speech that we developed language and it is unquestioned that the acquisition of language has become vital to humans.

Without language, we could hardly have created the human world we know (Trask, 1999: 1)

- 13 Speech is perhaps the single most distinguishing physical capability that humans possess, yet is it then self-evident that it is only humans can master language? Could another species obtain a language, even without speech?
- 14 Savage-Rumbaugh (1998) argues that Kanzi's main downfall is that he cannot speak. Humans trying to use the same keyboard as Kanzi would take perhaps a year to master it as fluently as him. The keyboard was limited and adding new symbols would only make its use more laboured even for humans. Human's communicative skills however, were not tested through the keyboard as they could also speak. Nevertheless Savage-Rumbaugh's critics would implicitly deny that Kanzi had language, however simple, on the basis that he could not use grammar.
- 15 Throughout the many thousands of years since humans first developed language there is no question that it has increased in diversity and complexity, it is only dead languages, such as Latin that remain inert. Over that time language has become such an integral part of human society that it is impossible to imagine life without it. Yet the main supposed reason that we developed language in the first instance, is that we felt it to be necessary, it furthered our needs. Perhaps it is the case that other species do not require language.
- 16 Overall the evidence seems to point towards the idea that humans are the only species that do possess a language, but it is inconclusive as to whether they have the ability. How could one chimp acquire language to the same degree as a human in a matter of months or years? When humans have been developing language for hundreds of thousands of years, and with that have evolved to the state where speech is as natural as walking. Perhaps that is what is most important and so eludes all other species- language has to be developed through some kind of medium and speech appears to be the best medium for this development. So as yet no species other than human does possess language in its highest form, yet it cannot be ruled out that one day it might just happen.

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