

Review

Aristotle's Definition of Language

Wen Qiu

School of Chinese Language and Literature, Beijing Normal University

School of Languages, Cultures and Societies, University of Leeds. E-mail: wenqiubnu@gmail.com. Phone: 07419210443

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Aristotle defines "speech" as a kind of articulated "voice", and the basic difference between "voice" and "speech" is the process of articulation which is performed by the tongue. He draws such a difference from the aspect of vocalization organs. Judged from this biological base, speech does not belong to human beings uniquely, some other animal species also have the ability of speech, and the difference is just the degree of the ability to use speech. In Aristotle's view, the distinguishing feature of human language is its semantic scope. Aristotle thinks that only human beings has the ability to use "language"(λόγος) to indicate the advantageous and the harmful, the right and the wrong, while other animals can only emit voice to indicate painful and pleasant things. Such a difference is based on the different faculties of the soul. Animal speech origins from the sensation faculty, while human language involves not only the sensation faculty, but also a higher faculty of soul, namely thinking faculty. The perfect human language ability needs human beings to use their mind and intellect to control the vocalization fully. It is the common ground for Aristotle and Chomsky to emphasize the contribution made by human mind to human language, but Chomsky stresses the syntax of human language decided by human mind, Aristotle stresses the semantic scope of human language endowed by human mind. Again different with Chomsky's view that human language is innate and universal, Aristotle thinks that human language is social and diverse. He regards human language as a kind of man-made arbitrary symbol, the meaning of this symbol is not from the voice itself, but established by convention among human beings.

Key Words: voice(φωνή) sound(ψόφος) animal speech(διάλεκτος) human language(λόγος) semantic scope mind and intellect social and conventional

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INTRODUCTION

Human beings rely on language to express themselves, communicate with others, and know the world. As early as more than two thousand years ago, the ancient Greek scholars have begun to study language. Till now language has become the central topic of western humanities. Not only linguists, but also more and more philosophers, psychologists, sociologists and scholars of other fields have began to pay attention to language. Then what is language? What are the special features of human language? This is the first and most important problem for language research to solve. The solutions of other problems related with language, for example, the

meaning of language, the use of language, the rule of language, the scope of language, the relationship between language and other research fields, are all base on the understanding of language. Modern linguistics, mostly influenced by Chomsky, pay much attention to syntax.

Avram Noam Chomsky sometimes called as the "father of modern linguistic", challenges structural linguistics with his *Syntactic Structures* and introduces the theory of transformational grammar. The basis of his theory is that the underlying structure of human language is decided biologically by the human mind and transmitted

genetically. Chomsky emphasizes the biological basis of human language and sees it primarily as a mental faculty, which is a unique development of the human brain. So human language is innate, universal, and different from other animal communication modes. His evidence is the fact that a human baby can acquire its native language successfully in little time, but the animal which is exposed to the same linguistic data could never acquire the language ability. In Chomsky's view, the most distinguishing feature of human language is "productivity" or "creativity", that is to say, human beings can produce and understand an infinite number of sentences with a limited set of grammatical rules and words. So the most important task for linguistics is to find the generative grammar of human language.

The brief introduction of the Chomskyan linguistics brings us to the consideration of Aristotle's work because Aristotle is the pioneer of western linguistics. Although Aristotle does not write a book about language, he makes lots of discussions about language, which are all scattered among his different works. Among these scattered discussions, Aristotle puts forwards many profound and enlightening linguistic views, many contemporary linguistics theories can be traced back to these views, or to say, Aristotle has made similar arguments in more than two thousand years ago. Many scholars have already paid attention to Aristotle's discussions of language, but they mainly focuses on two aspects, first, most books discuss Aristotle's philosophical language in the background of philosophy, including the essence of language, cognition of language, meaning theory, the relationship between language and reality¹; second, some books focus on Aristotle's viewpoints about language in his *Organon*, discussing Aristotle's influence on language made by his logic works². Few scholars has ever paid attention to Aristotle's definition of language, and Aristotle's views about the distinguishing feature of human language, which is the base of Aristotle's other

¹ Miriam Therese Larkin(1971), *Language in the philosophy of Aristotle*, Mouton, Hague.

Deborah K.W. Modrak(2001), *Aristotle's theory of language and meaning*, Cambridge University Press, Cambridge;New York.

Julie K. Ward(2008), *Aristotle on homonymy : Dialectic and science*, Cambridge University Press, Cambridge.

David Charles(2000), *Aristotle on meaning and essence*, Clarendon Press; Oxford University Press, Oxford; New York.

Marguerite Deslauriers(2007), *Aristotle on definition*, Brill, Boston.

L.M. De Rijk(2002), *Aristotle: semantics and ontology. Volume II, The metaphysics. semantics in Aristotle's strategy of argument*, Brill, Boston.

² Hans Arens(1984), *Aristotle's theory of language and its tradition : texts from 500 to 1750*, Benjamins, Amsterdam.

Robert Wardy(2000), *Aristotle in China : language, categories, and translation*, Cambridge University Press, Cambridge.

Scott G. Schreiber(2003), *Aristotle on false reasoning : language and the world in the sophistical refutations*, State University of New York Press, Albany.

discussion of language. In this paper, I try to conclude Aristotle's definition of language through his related discussion in *Historia Animalium*, *Parts of Animals*, *Generation of Animals*, *On Interpretation*, *Politics*, *Poetics*, *On the Soul*, *Problems*. Although these discussions are different in context and purpose, I will show that they fit together to constitute a basic definition of language and demonstrate the distinguishing feature of human language compared with animal voice. It is hoped that, on the one hand, such an endeavor can deepen our understanding of language, may even inspire new perspective of language study, because Aristotle is one of the earliest linguists, on the other hand, it can enrich people's understanding about Aristotle, not as a philosopher or logician, but as a linguist.

1. Comparison of Speech (διάλεκτος) and Voice (φωνή), Sound (ψόφος)

In terms of physical media, language is a kind of voice and the discipline which studies the voice is called Phonetics. General Phonetics includes two aspects of research, namely narrow Phonetics and Phonology. Narrow Phonetics studies the process of the voice's production, transmission, perception, Phonology studies the distinctive features of voice and the specific rules for its operation in a particular language, that is, studies how human beings differentiate the different voice in a series of sound, and how human beings combine different voice in order to express a certain meaning. Narrow Phonetics focuses on the physical level, studies how human beings use different kinds of body organs to make different voice, Phonology focuses on the psychological level, discussing how human beings use voice to express inner thoughts. Narrow Phonetics includes three branches: articulatory phonetics, the study of the production of speech sounds by the articulatory and vocal tract by the speaker; acoustic phonetics, the study of the physical transmission of speech sounds from the speaker to the listener; auditory phonetics, the study of the reception and perception of speech sounds by the listener. Aristotle explores in detail how the living animals comprehensively use the body organs, such as lung, throat, tongue, lips, teeth, to make a voice in his works *Historia Animalium*, *Parts of Animals*, *On the Soul*. From the perspective of modern linguistics, Aristotle is the founder of articulatory phonetics.(Moreover, Aristotle briefly introduces the physical process of sound transmission in the Volume 2 Chapter 8 of *On the Soul*, which covers the research scope of acoustic phonetics.³) The paper will begin with Aristotle's discussions about the biological base of language, trying to discover the difference between human language and animal voice in the aspect of

³ Aristotle, translated by W.S. Hett(1957). *On the Soul*, William Heinemann Ltd, London; Harvard University Press, Cambridge, Massachusetts.

vocalization.

Again, some emit a noise (ψοφητικά), some are mute (ἄφωνα); some have a voice (φωνήεντα); and of the latter some are articulate (διάλεκτον) and others inarticulate (ἀγράμματα); some are always chattering, some tend to be quiet; some are tuneful, some are not. But it is common to all of them to sing or chatter most of all about the time of mating. (*Historia Animalium* 488a32-36)(Aristotle, translated by A.L. Peck, 1965)

Aristotle classifies the animals according to the difference of vocalization. Some animals are mute (ἄφωνα), some make a noise (ψοφητικά), some have a voice (φωνήεντα), as for the animals having a voice, some use the speech (διάλεκτον), the other have no speech (ἀγράμματα). Aristotle does not make a definition for each of them (ψόφος, φωνή, διάλεκτος), but through the comparison of speech (διάλεκτος) and voice (φωνή), sound (ψόφος).

1.1. Comparison of sound(ψόφος) and voice(φωνή)

Voice (φωνή) is the sound (ψόφος) produced by a creature possessing a soul (ἐμψύχου); for inanimate things (ἀψύχων) never have a voice(οὐθέν φωνεῖ); they can only metaphorically be said to give a voice(φωνεῖν), e.g., a flute or a lyre, and all the other inanimate things which have a musical compass, and tune, and modulation. The metaphor is due to the fact that the voice (φωνή) also has these, but many animals-e.g., those which are bloodless, and of animals which have blood, fish-have no voice (οὐκ ἔχουσι φωνήν). And this is quite reasonable, since sound is a kind of movement of the air. The fish, such as those in the Achelous, which are said to have a voice (λεγόμενοι φωνεῖν), only make a sound (ψοφοῦσι) with their gills, or with some other such part. Voice (φωνή), then, is a sound (ψόφος) made by a living animal (ζώου), and that not with any part of it indiscriminately. But, since sound only occurs when something strikes something else in a certain medium, and this medium is the air, it is natural that only those things should have voice (φωνοίη) which admit the air.(*On the Soul* 420b6-17)(Aristotle, translated by W.S. Hett,1957)

The organ of respiration is the throat, and the part which this is designed to serve is the lung; it is because of this part that the land animals have more heat than the rest. But the region about the heart also has a primary need of respiration. Hence it is necessary that in respiration the air should enter the body. Hence voice (φωνή) consists in the impact of the inspired air upon what is called the windpipe under the agency of the soul (ψυχῆς) in those parts. For, as we have said, not every sound (ψόφος) made by a living creature (ζώου) is a voice (φωνή)(for once can make a sound (ψοφεῖν) even with the tongue, or as in coughing),but that which even causes the impact, must have a soul (ἐμψυχόν), and use

some imagination (φαντασίας); for the voice(φωνή) is a sound (ψόφος) which means (σημαντικῶς) something, and is not merely indicative of air inhaled, as cough is; in uttering the voice the agent uses the respired air to strike the air in the windpipe against the windpipe itself.(*On the Soul* 420b23-421a2) (Aristotle, translated by W.S. Hett,1957)

From a physical point of view, "sound" is the noise produced by something striking another thing in a medium. "Voice" is also a kind of "sound", but not every "sound" is a "voice". First, "voice" is the "sound" produced by a living creature (ζώου) with soul (ἐμψύχου). All the things without soul have no "voice". People often say that some musical instruments can emit "voice", play music, but this is just a metaphor.

Next, not all the "sound" produced by a living creature with soul is "voice", the living creature must use some special organs to produce "voice". Aristotle points out that since "voice" must transmit in the medium of air, so the living creatures, in order to emit "voice", must have some organs that can accommodate air, these organs are lung and throat which deal with breath. All the living creatures without lung and throat cannot produce "voice", but they can still make "sound" using other body parts. As for human beings, such "sound" is a kind of "noise". For example, the insect can produce "sound" by the internal pneuma.

Thus insects produce neither voice (φωνεῖ) nor speech (διαλέγεται), though they produce a sound (ψοφεῖ) by their internal pneuma (not by externally emitted pneuma, for none of them breathe), but some of them buzz, e.g., the bee and other winged insects, and some "sing" as the saying is, e.g., the cicada. All these insects produce the sound (ψοφεῖ) by means of the membrane which is under the hypozoma (this of course refers to those whose bodies are divided at this point), e.g., a certain kind of cicada, which makes the sound by friction of the pneuma; and so do flies and bees and all the others, as by their flying they produce the lifting and contracting movement: the noise (ψόφος) is actually the friction of the internal pneuma. The noise (ψόφον) made by grasshoppers is produced by rubbing with their "paddles".(*Historia Animalium* 535b3-13)(Aristotle, translated by A.L. Peck,1965).

All the Cephalopods and Crustacea cannot make any "voice" or any "sound". Fish cannot produce "voice" because they have no lung, windpipe, throat, but they can emit "sound". In *Historia Animalium*, Aristotle analyzes the different "sounds" made by different kinds of fish, and summarizes the reasons for these "sounds". "In all these what appears to be the voice (τὴν δοκοῦσαν φωνήν) is caused in some of them by rubbing their gills(which spiny), in others by internal parts round their stomach, for every one of them has pneuma inside it, and by rubbing and causing movement with this they produce their sounds (ποιεῖ τοὺς ψόφους)" (Aristotle, translated by A.L. Peck,1965). Aristotle also emphasizes, in the case

of these animals, the word “voice” is not appropriate, using the word “sound” is more exact.

But to say that these creatures emit a voice (φωνεῖν) is incorrect; it should be called a sound (ψόφος). Thus the scallop, when it passes along supporting itself on the water (this is what they describe as “flying”), makes a whizzing; so does the sea-swallow: this fish flies quite clear of the water, without touching it, having long broad fins. So, just as the sound (ψόφος) made by the wings of birds when in flight is not voice (φωνή), neither is the sound which any of these creatures makes (οὕτως οὐδὲ τῶν τοιούτων οὐδενός). (*Historia Animalium* 535b25-32) (Aristotle, translated by A.L. Peck, 1965).

Animals with vocal organs such as lung and throat can produce “voice”. For example, dolphins can produce “voice” by using their lung and windpipe when they are out of the water and exposed to the air. But dolphins have no lips, their tongue cannot move freely, so they cannot “utter any articulated voice” (ἄρθρον τι τῆς φωνῆς ποιεῖν). Oviparous quadruped with tongue and lung can produce “voice”, although the “voice” is very weak. Different from ordinary oviparous quadruped, frogs has a tongue of peculiar formation, “the front part is firmly attached as in fishes (whereas in other animals it can move freely), but the part towards the pharynx can move freely, and has a fold in it” (Aristotle, translated by A.L. Peck, 1965). With the special tongue, frogs can “produce their peculiar cry” (ὡς τὴν ἰδίαν ἀφίησι φωνήν). The male frogs make such croaking in the water in order to call to the females at breeding time.

Again, not all the “sound” produced by the living creatures with soul, using their vocal organs such as lung and throat, is “voice”. “Voice” is accompanied by some “imagination” (φαντασίας), and is a sound meaning something. Aristotle points out that the cough is just a “sound”, because it is just an air mass activity in the organ, which has not any meaning.

In conclusion, “sound” must match three conditions to become “voice”, first, speaker must be a living creature with soul. Secondly, speaker must use his special vocal organs such as lung and throat. Thirdly, “sound” such made must means something.

1.2. Comparison of voice (φωνή) and speech (διάλεκτος)

Voice (φωνή) differs from sound (ψόφος), and speech (διάλεκτος) from both. Now the only part of the body with which any animal can utter a voice (φωνεῖ) is the pharynx; hence those that have no lung have no voice (οὐδὲ φθέγγεται) either. Speech (διάλεκτος) is the articulation (διάρθρωσις) of voice (φωνῆς) by means of the tongue (γλωττή). Now vowel sounds (φωνήεντα) are produced by the voice (φωνή) and the larynx; consonantal sounds (ἄφωνα) by the tongue and the lips; and of this speech consist (ἐξ ὧν ἡ διάλεκτος ἐστίν).

Hence, those animals which have no tongue, or a tongue which cannot move freely on its own, cannot produce speech (διαλέγεται); though of course they may be able to produce sounds (ψοφεῖν) by others parts of the body. (*Historia Animalium* 535a28-535b3) (Aristotle, translated by A.L. Peck, 1965)

In *Historia Animalium* 535a28-535b3, Aristotle further analyzes the difference between “speech” (διάλεκτος) and “voice” (φωνή), “sound” (ψόφος). “Speech” is also a kind of “voice”, in order to emit “speech”, the speaker first must match the three conditions needed by producing “voice”. But not all “voice” is “speech”, the production of which needs some more conditions. The animals which have a tongue, and the tongue can move freely on its own, can use the tongue to articulate “voice”. The result is some vowel sounds and consonantal sounds, out of which the “speech” is combined. Oviparous quadruped can produce “voice” but have no the ability to use “speech”. Aristotle thinks that only human beings are good at “speech”. “This power is peculiar to man. The possession of this power implies the possession of a voice (φωνήν), but the converse is not true. All persons who are deaf from birth are dumb as well: though they can utter a sort of voice (φωνήν μὲν οὖν ἀφίᾳσι), they cannot talk (διάλεκτον δ’ οὐδεμίαν). Children, just as they have not proper control over their limbs generally, so cannot at first control their tongue, which is imperfect and attains complete freedom of motion later on; until then they mumble and lisp for the most part” (Aristotle, translated by A.L. Peck, 1965).

As said above, Aristotle classifies the animals having a voice into two kinds, some use the speech (διάλεκτον), and the others have no speech (ἀγράμματα). So speech is a kind of articulated voice which is different from the “ἀγράμματα” voice. In *Problems*, Aristotelian authors also analyze the difference between articulated speech and “ἀγράμματα” voice. The authors point out that, compared with other animals, only human beings have different forms of language (πολλὰ διαλεκτοί). It is because man can utter a number of letters (γράμματα), but other animals utter none or only a few consonants (ἀφώνων). “These consonants combined with vowels (φωνήεντων) make articulate speech (διάλεκτον). Now speech (λόγος) consists of conveying a meaning (σημαίνειν) not by the voice (φωνή), but by certain affections (πάθεισιν) of it, and not only shows pain and pleasure. Now the letters (γράμματα) are affections (πάθη) of the voice (φωνῆς). Children and beasts show their meaning (δηλοῦσιν) in the same way, for children cannot yet pronounce the letters (γράμματα)” (Aristotle, translated by W. S. Hett, 1936). The speech of human beings has the greatest number of differences and forms, and the other animals pronounce no letters or very few (ἢ οὐθὲν γράμμα ἢ ὀλίγα), so compared with other animals which make a voice, the speech of human beings develops much later. This is because “what is most variable and has the greatest number of different forms must develop in the

longest time” (Aristotle, translated by W. S. Hett, 1936).

The noun “γράμμα” originates from the verb “γράφω” (write), its original meaning is “that which is drawn”, the plural form “γράμματα” often means “lines of a drawing”, “figures in a picture”. Based on the original meaning, “γράμμα” leads three meanings, “character”, “letter”; “set of written characters”, “piece of writing”; “letter”, “learning”. The original use of “γράμματα” implies the meaning of division, it signifies not the whole picture, but the lines and figures in the picture. “The term *gramma* was used to refer to minimal units of speech-sound. Hence the term *agrammatos* and *eggrammatos* when applied to vocalization should be taken to mean ‘not resolvable into discrete units of speech-sound’ and ‘resolvable into discrete unit of speech-sound’ respectively” (John Corcoran, 1974). So it follows that the feature of articulated speech that Aristotle discusses in these passages is that the sound of articulated speech can be resolvable into different letters (*γράμματα*) which are further formed through the combination of vowels and consonants. Then in Aristotle’s view, the basic difference between “voice” and “speech” is the process of articulation which is performed by the biological organ tongue.

2. Comparison of human language (λόγος) and animal speech (διάλεκτος)

Based on the discussions above, Aristotle altogether makes four requirements for “speech”: it must be made by a living creature with soul; it must be vocalized through some special vocal organs such as lung and throat; it must be articulated by the tongue and resolvable into different letters; it must be a meaningful sound. Then we must check whether only human beings have such speech described by Aristotle. If other animal species can also use speech, what is the difference between human speech and animal speech?

2.1. The continuity of biological communication system

Speech is a kind of articulated voice and the process of articulated is performed by the tongue. If an animal can emit voice, and at the same time it has a tongue, then it is possible for this animal to use its tongue to articulate the voice, that is to say, this animal may have the ability of speech. This is just the ability Aristotle finds in birds, especially the birds with broad tongue. In *Historia Animalium* 504a35-37, Aristotle points out that, “all birds have a tongue, but it is not the same in all: some have a long tongue, some a broad one. More than any other animals, and second only to man, certain kinds of bird can utter articulate sounds: this faculty occurs chiefly in the broad-tongued birds” (Aristotle, translated by A.L.

Peck, 1965). Afterwards in *Historia Animalium* 536a21-31, he analyzes the “speech” produced by some birds using the tongue to articulate the voice.

Birds utter a voice (*φωνήν*), and those which have a broad tongue can articulate (*διάλεκτον*) best; so too those that have a thin fine tongue. In some species the male and the female have the same note, in others, different ones. The smaller birds are more vocal and chatter more than the larger ones, and every kind of bird is noisiest of all at the pairing season. Some utter a cry while fighting, e.g., the quail, others when challenging before a fight, <e.g., partridges>, or when they have won their fight, e.g., the domestic cock. Some male birds have the same song as the female. Thus both the cock and the hen nightingales sing, except that the hen ceases when sitting on the eggs and rearing her young. In some instances only the cock sings, e.g., the domestic fowl and quails, and the hen does not sing at all. (*Historia Animalium* 536a21-31) (Aristotle, translated by A.L. Peck, 1965)

From the examples above we can see that, birds can use the articulated voice to communicate with each other, such as attracting mates, warning risks, expressing victory. Aristotle points out in *Parts of Animals* 660a35-b2 that, “All birds use their tongues as a means of communication with other birds, and some to a very considerable extent, so much so that it is probable that in some cases information is actually conveyed from one bird to another. I have spoken of these in the researches upon Animals” (Aristotle, translated by A.L. Peck, 1937). Birds not only use speech as a means of social communication, but also to convey information to each other, so their speech is of course meaningful.

Then we can check the articulated voice of birds according to the four requirements which Aristotle makes for speech. Birds are living creatures with soul; the voice of birds is vocalized through organs such as lung and throat; birds have tongues and can use their tongues to articulate the voice; the articulated voice of birds is meaningful. So, speech does not belong to human beings uniquely, other animal species also have the ability of speech, the difference is just the degree of the ability to use speech. Human beings are especially good at “speech” because of their special vocalization organs.

In *Parts of Animal* Aristotle analyzes the difference of the vocal organs between human beings and animal species. Except human beings, all animals use the lips to preserve and protect the teeth. The lips of human beings are soft, fleshy, and can be separated. As for human beings, the lips is to protect the teeth, but besides this, the lips has another important purpose, “they subserve a good purpose, inasmuch as they are among the parts that make speech (*λόγω*) possible” (Aristotle, translated by A.L. Peck, 1937).

This double function of human lips, to facilitate speech (*λόγου*) as well as to protect the teeth, may be compared with that of other animal tongue, which is unlike that of

any other animal, and is used by nature for two functions (a device of hers which we have often noted),(a) to perceive the various tastes, and (b) to be the means of speech. Now vocal speech (λόγος) consists of combination of the various letters or sounds (διὰ τῆς φωνῆς ἐκ τῶν γραμμάτων σύγκειται), some of which are produced by an impact of the tongue, others by closing the lips; and if the lips were not supple, or if the tongue were other than it is, the greater part of these could not possibly be pronounced. For further particulars about the various differences between these sounds you must consult the authorities on Metre. (*Parts of Animals*659b35-660a8)(Aristotle, translated by A.L. Peck, 1937)

The tongue of most oviparous and blooded land-animals is fastened and hard, which is useful for taste, but not suitable for speech. The tongue of viviparous quadrupeds is hard, thick, not sufficiently loose, so they have a limited vocal articulation. Some birds have a broad tongue, they have much more vocal articulation. Compared with other animals, the tongue of human beings is “the freest, the softest, and the broadest of all”(Aristotle, translated by A.L. Peck,1937), this is because the tongue, like the lips, has two functions, namely taste and language.

On the one hand, it has to perceive all the various tastes. Now man has the most delicate senses of all the animals, and as taste is a sort of touch, the tongue must be as responsive as possible to every contact, and that is why it is soft. It has, also, to articulate the various sounds and to produce speech (πρὸς τὴν τῶν γραμμάτων διάθρωσιν καὶ πρὸς τὸν λόγον), and for this a tongue which is soft and broad is admirably suited, because it can roll back and dart forward in all directions; and herein too its freedom and looseness assists it. This is shown by the case of those whose tongues are slightly tied: their speech is indistinct and lisping, which is due to the fact that they cannot produce all the sounds (γραμμάτων). (*Parts of Animals*660a20-28)(Aristotle, translated by A.L. Peck, 1937)

Because human beings use their lips and tongue in the process of vocalization, and the tongue of human beings is highly free and flexible, so they can produce many articulated sounds which other animals cannot make. These articulated sounds provide rich material for human speech, so Aristotle thinks that human beings are especially good at speech. But this does not mean that speech is unique to human beings, because some animal species can also utter the articulated speech in a limited degree.

2.2. The distinguishing feature of human language

As discussed above, Aristotle regards the basic difference between “voice” and “speech” as the process of articulation which is performed by the tongue. He

draws such a difference from the aspect of vocalization organs. Judged from the biological base, both human beings and animal species have the ability of articulated speech, human speech is not thoroughly distinguished from animal speech, but performs as a more complex degree among the whole biological communication continuum. But in *Politics*, Aristotle puts forwards a different and even contradictory view with that in the works about animals. He thinks that “man alone of the animals possesses speech (λόγον)” (Aristotle, translated by H. Rackham,1932).

And why man is a political animal in a greater measure than any bee or any gregarious animal is clear. For nature, as we declare, does nothing without purpose; and man alone of the animals possesses speech ((λόγον). The mere voice (φωνή), it is true, can indicate (ἔστι σημεῖον) pain and pleasure, and therefore is possessed by the other animals as well(for their nature has been developed so far as to have sensations of what is painful and pleasant and to signify (σημαίνειν) those sensations to one another), but speech (λόγος) is designed to indicate (δηλοῦν ἔστι) the advantageous and the harmful, and therefore also the right and the wrong; for it is the special property of man in distinction from the other animals that he alone has perception of good and bad and right and wrong and the other moral qualities, and it is partnership in these things that makes a household and a city-state.(*Politics*1253a7-20) (Aristotle, translated by H. Rackham,1932)

It needs to be pointed out that the language which Aristotle regards as unique to human beings is not “διάλεκτος”, but “λόγος”. Animals can emit voice to express pain and pleasure, but only human beings can use “language” (λόγος) to indicate the advantageous and the harmful, the right and the wrong. Compared with other animals, the special property of human beings is the cognition of good and bad, of right and wrong, and of the other moral qualities. Household and city-state are formed based on such moral qualities. Aristotle thinks that it is because of the “language” which indicates moral qualities, human beings can form a higher political organization. So in Aristotle’s view, what distinguishes human language from animal speech thoroughly is not the vocalization organs, but their semantic scope, which is based on the different faculties of the soul.

In Aristotle’s philosophy, “soul” (ψυχή) is an important term, it means “the actuality of the kind of body”(Aristotle, translated by W.S. Hett,1957), “the soul must be substance in the sense of being the form of a natural body”(Aristotle, translated by W.S. Hett,1957). The difference between the objects with soul and the objects without soul is living. “But the word living is used in many senses, and we say that a thing lives if any one of the following is present in it-mind, sensation, movement or rest in space, besides the movement implied in nutrition and decay or growth”(Aristotle, translated by W.S. Hett,1957). So the faculties of soul include nutrition,

sensation, mind and movement or rest in space. Some animals' soul has all the faculties above, but some animals' soul has only one or several faculties above.

Now of the faculties of the soul which we have mentioned, some living things, as we have said, have all, others only some, and others again only one. Those which we have mentioned are the faculties for nourishment, for appetite, for sensation, for movement in space, and for thought. Plants have the nutritive faculty only, but other living things have the faculty for sensation too. But if for sensation then also for appetite; for appetite consists of desire, inclination, and wish, and all animals have at least one of the senses, that of touch...in addition to these senses some also possess the power of movement in space, and others again-man, and any other being similar or superior to him-have the power of thinking and intelligence.(*On the Soul*414a29-414b19)(Aristotle, translated by W.S. Hett,1957)

It is clear that perception and mind are different faculties, all animals have the faculty of perception, only a few have the faculty of mind. "Nor again in speculative thinking, which involves being right or wrong-'being right' corresponding to intelligence and knowledge and true opinion, and 'being wrong' to their contraries-the same thing as perceiving; for the perception of proper objects is always true, and is a characteristic of all living creatures, but it is possible to think falsely, and thought belongs to no animal which has not reasoning power"(Aristotle, translated by W.S. Hett,1957). One important feature of human beings is that the soul of human beings has the faculty of thinking. The feeling of pain and pleasure needs sensation faculty belonging to ordinary animals. The distinguishing between right and wrong, between good and bad, needs thinking faculty belonging only to human beings and other animals similar or superior to human beings. Although some animals can also utter articulated speech (διάλεκτος), such speech is just used to indicate painful and pleasant thing, only human beings can utter articulated speech (λόγος) to make clear moral qualities. It can be seen that animal speech and human language both need the participation of soul, but they origin from the different faculties of soul. Animal speech origins from the sensation faculty, which needs the sense organs, human language involves not only the sensation faculty, but also a higher faculty of soul, namely thinking faculty, which needs the mind. Human language is not only a kind of articulated speech, but also a rational speech because of the intellect of human beings.

The related discussions in *Problems* also prove the view that human language needs the participation of mind and intellect. The authors of *Problems* point out that among all the living creatures, human is the only one which stammers. This is because human alone has a share of language (λόγου), but the other animals only have voice (φωνῆς). The stammerers "produce voice (οἱ δὲ ἰσχνόφωνοι φωνοῦσι μὲν) but cannot connect their words(λόγον δὲ οὐ δύνανται συνείρειν)" (Aristotle,

translated by W. S. Hett,1936). Compared with adults, children are more inclined to stammer, just as they are difficult to control their hands and feet, they also cannot control their tongue. The very small children are lack of control, they cannot speak at all, but only make sounds like beasts. Lispings and defective speakers are due to the same reason, namely lack of control.

Lispings is an inability to control a certain letter (γράμματός), not any letter, but defective speech consists of omitting some letter (γράμμα) or syllable (συλλαβήν), while stammering is an inability to add quickly one syllable (συλλαβήν) to another. But all these disabilities are due to a failure of power; for the tongue will not serve the intention (τῶν αἰσθημάτων). The drunken and old men suffer the same difficulty, but all these difficulties happen less to them (i.e. than to children). (*Problems* 902b23-29)(Aristotle, translated by W. S. Hett,1936)

It can be inferred from the discussions above that, not every voice is language, only the articulated voice formed through the regulation of human beings can become components of language. The perfect human language ability needs human beings to control the vocalization fully, make some vowels and consonants, which then will combine into many words even whole sentences. The process needs the participation of human mind and intellect.

3. Human language is social and conventional

As mentioned in the introduction, Chomsky regards human language as a mental faculty and emphasizes the role of human brain in the formation of human language. So it is the common ground for Aristotle and Chomsky to pay attention to the contribution made by human mind, but the difference is that, Chomsky stresses the syntax of human language decided by human mind, Aristotle emphasizes the semantic scope of human language endowed by human mind.

In Chomsky's view, human language is innate and universal, the task of linguists is to discover the Universal Grammar of human language, because human mind is an innate mental faculty which is the same all over the world. Again different with Chomsky's these view, Aristotle thinks that human language is social and diverse. In Aristotle's view, the cognition of good and bad, of right and wrong, and of the other moral qualities is the special feature of human mind, but all these values are not innate, but social. Human beings have to learn these values in the society and also learn to use language to express these values. What is innate and universal for Aristotle is not human language, but "voice". Aristotle thinks that the animals within the same genus can emit the same "voice", but the articulated "speech" is not only different along with genus, even within the same genus, the articulated "speech" changes according to locality⁴.

⁴ Aristotle, translated by A.L. Peck (1965). *Historia*

That is to say, “voice” is a kind of innate abilities, the animals within the same genus can only emit the same “voice” because of the innate conditions. However, the formation of “speech” is not only related to innate conditions, what’s more important, different environments will often facilitate different “speech”. So Aristotle points out that “Men have the same voice (φωνήν) the world over, but different varieties of speech (διάλεκτον)” (Aristotle, translated by A.L. Peck, 1965).

Another evidence provided by Aristotle is that the meaning of human language is established by human convention. In *On Interpretation*, Aristotle emphasizes that, “a noun is a sound (φωνή) having meaning (σημαντική) established by convention (κατὰ συνθήκην)” (Aristotle, translated by Harold P. Cooke, 1938), “We have already said that a noun signifies this or that by convention (κατὰ συνθήκην). No sound is by nature a noun: it becomes one, becoming a symbol (σύμβολον)” (Aristotle, translated by Harold P. Cooke, 1938). That is to say, the meaning of human language is not from the voice, but established by convention among human beings, so Aristotle regards human language as a kind of man-made arbitrary symbol. Voice is just the material used by this symbol system, for language, it is a secondary thing, not the language itself. Any voice emitted by speech organs must further combine with some experience ingredients, which decide the meaning of the voice, otherwise it cannot become language. The relation between voice and experience ingredients is not natural, but arbitrary, decided by human convention. Aristotle thinks that the inarticulate sounds made by animals also mean something, but they are not language, because the meaning comes from the voice itself, not the convention.

CONCLUSION

Make a conclusion now. According to Aristotle’s definition, “speech” is a kind of articulated “voice”, the basic difference between “voice” and “speech” is the process of articulation which is performed by the tongue. Aristotle draws such a difference from the aspect of vocalization organs. Judged from the biological base, speech does not belong to human beings uniquely, some other animal species also have the ability of speech, and the difference is just the degree of the ability to use speech. Human beings are especially good at speech because of their special vocalization organs. So human speech is not thoroughly distinguished from animal speech, but performs as a more complex degree among the whole biological communication continuum. But once leaving the biological base and considering the meaning level, Aristotle thinks that only human beings has the ability to use “language”(λόγος) to indicate the

advantageous and the harmful, the right and the wrong, while other animals can only emit voice to indicate painful and pleasant things. It is just because of the “language” which indicates moral qualities, human beings can form a higher political organization. So in Aristotle’s view, the basic difference between human language and animal speech is the semantic scope, which is based on the different faculties of the soul. Animal speech origins from the sensation faculty, which needs the sense organs, human language involves not only the sensation faculty, but also a higher faculty of soul, namely thinking faculty, which needs the mind and intellect. The perfect human language ability needs human beings to use their mind and intellect to control the vocalization fully.

Both Aristotle and Chomsky emphasize the contribution made by human mind to human language, but Chomsky stresses the syntax of human language decided by human mind, Aristotle stresses the semantic scope of human language endowed by human mind. Again different with Chomsky’s view that human language is innate and universal, Aristotle thinks that human language is social and diverse. Human language expresses not only natural feelings but also moral qualities which are not innate, but social. What is innate and universal for Aristotle is not human language, but “voice”. The formation of “speech” is not only related to innate conditions, different environments will often facilitate different “speech”. What’s more, Aristotle thinks that the meaning of human language is established by human convention. He regards human language as a kind of man-made arbitrary symbol, the meaning of this symbol is not from the voice itself, but established by convention among human beings.

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