

Ambiguity as a Natural Outcome of Language Evolution Serving the Communicative Function

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ABSTRACT

While defining language, its being a means of communication is always highlighted. Languages have evolved to allow individuals to express themselves and exchange information. Having said that, it is questioned why languages, as a primary tool for communication, are full of ambiguities occurring at almost all linguistic levels. To answer this question, this paper attempts to analyze the concept of linguistic ambiguity examining its role and function in the language. For achieving this purpose, the concept of ambiguity has been explained thoroughly and argued that despite some occasional misunderstandings in communication, ambiguity is a merit of a language rather than a drawback for humans who have inherent and sophisticated cognitive mechanisms to understand what is meant. The claim that ambiguity is a curse not a blessing is applicable to computer sciences where Natural Language Processing is inhibited due to ambiguity. Arising from the disproportion between linguistic items and realities, ambiguity should be regarded as a natural evolutionary outcome thanks to which easier and shorter words are reused making the language more efficient.

Key words: ambiguity, meaning, multiple, language, function, communication

INTRODUCTION

As known, ambiguity means a double or multiple meaning. Being a pervasive phenomenon in language, it occurs at all levels of linguistic analysis. For example, [teɪl] is ambiguous in oral speech either meaning “a tale” or “a tail”. In the sentence “She cannot bear children” “bear” is lexically ambiguous between the meanings “to accept, tolerate, or endure something, especially something unpleasant” or “to give birth to young, or (of a tree or plant) to give or produce fruit or flowers”. (<https://dictionary.cambridge.org/dictionary/english/bear>) Also, “The shooting of the hunters was terrible” [Chomsky, 2002, p. 53] is syntactically ambiguous as the same sentence can have two distinct sentence trees.

THE AMBIGUITY PHENOMENON IN LANGUAGE

In order to be able to identify its function in languages, we should first analyze ambiguity as a linguistic phenomenon. The popular question whether ambiguity is a curse or a blessing is one of the debatable issues in linguistics. Natural languages are said to be highly ambiguous and many wonder why. One may claim that the factors behind ambiguity do not matter too much, because, normally, we are hardwired to resolve the ambiguity and understand the intended meaning. For example, while reading the ambiguous newspaper headline “*Two sisters reunited*

after 18 years in checkout counter" [Altmann, 1998, p. 1] most of us will not think that the sisters spent 18 years at the checkout but will prefer to interpret the sentence meaning that it was the checkout counter where two sisters met for the first time after 18 years. That is why, it is true that "as listeners and readers, we rarely notice the ambiguity that pervade our everyday language" [Altmann, 1998, p.2]. However, this argument cannot explain why languages have evolved to be ambiguous, as disambiguation mechanisms could have emerged as a natural outcome of ambiguity. Additionally, no one can claim that these mechanisms provide perfect understanding in any circumstances. This is how A. Cohen describes the problem: "Powerful though they unquestionably are, these disambiguation mechanisms are not perfect, and misunderstandings do occasionally occur, with consequences varying from the hilarious to the disastrous." (<http://www.bgu.ac.il/~aric/Ambiguity.pdf>).

S. Cushing examines ambiguities in language and other causes of miscommunication between pilots and air traffic controllers [Cushing, 1997]. We may be surprised by the number of the accidents caused by ambiguities described in the book but what should be emphasized is that conditions where normal human communication occurs are rather different from the above mentioned.

We think that the important point of the question whether ambiguity is a curse or blessing is to identify "for whom". That is, while posing this question we should extend it by adding "for humans or for machines". Our assumption is that in the first case, the ambiguity is a blessing more than a curse, while in the second case it is totally a curse. Not surprisingly, computer scientists define ambiguity as following: "Ambiguity is a real-world phenomenon that rears its ugly head in many disciplines including writing, linguistics, philosophy, law, and of course, software engineering, especially requirements engineering" (Berry et al., 2003). When computational linguists state that "there may be hundreds, perhaps thousands of syntactic parse trees for certain very natural sentences of English" (Church and Patil, 1982) we may think of it as an exaggeration, but in fact it is not. It is reported that a sentence "List sales of the products produced in 1975 with the products produced in 1972" had 455 distinct parses in the computer system, while most people would naturally interpret it as an imperative sentence (Wasow, 2015). Based on these facts, it is more reasonable to think that ambiguity is not a serious problem for humans who have innate linguistic competence in Chomsky's view (Chomsky, 2002). Boeckx (ed. Salvatore, 2017) expresses the same idea: "... the recognition of ambiguity (pragmatic or otherwise) is likely to be an innate feature of human cognition".

Following this, another question arises: If ambiguity is not a real threat, what was the maxim "Avoid ambiguity" about? As known, H.P. Grice back in the XX century wrote: "Avoid ambiguity" (ed. Salvatore, 2017). This was one of the several maxims falling under the general category of "Manner" in "Cooperative Principle". If languages are highly ambiguous and the maxim against ambiguity is regularly violated, it means P. Grice was not aware of the ambiguous nature of language?! The answer is that Gricean maxim was only about the use of deliberate ambiguity in the cases when a speaker/ writer "goes out of his way to choose an ambiguous utterance" (Wasow, 2015). We are firmly convinced that advantages of ambiguity far outweigh its disadvantages.

AMBIGUITY AS AN EVOLUTIONARY OUTCOME

Now, as to the origin and reasons of ambiguity, we would like to explain it with Aristotle's theory of disproportion. This simple, yet meaningful theory was actually about the reasons of homonyms in language. However, we think that it was through this theory that he also set the tenets to explain ambiguity. The theory says that the number of items that form the vocabulary of any human language is much smaller than the number of realities these items are supposed to refer to, so it is quite natural also inevitable, in our opinion, to have both lexical and syntactic ambiguity in language. If reality is more complex than language, we are bound to have occasional misunderstandings or mismatch between what we mean and how we are understood. D.Pehar explained this disproportion in terms of the fundamental economic principle "supply versus demand" and we think it is worth mentioning here: "... supply shortage in words makes their average value higher, but it also leaves the consumer needs and demands to an extent unmet" (Pehar, 2001). The fact that the number of realities is more than the linguistic units removes the obligation of human brain to learn every word for every reality causing polysemy, homonymy and ambiguity, though. With limited human brain capacity, the otherwise situation would put a lot of strain on it, so ambiguous language appears to be much suitable for humans.

THE LINGUISTIC FUNCTIONS OF AMBIGUITY

So far, we have come to the conclusion that natural languages are bound to be ambiguous and this ambiguity is not a real obstacle in human communication as it goes unnoticed in many cases. Even if people spot it, they can usually resolve it easily. If it is so, then what is the function of ambiguity in language? We think that the role of the ambiguity should be explained with reference to the role of language in our life. As known, the main function of language is to be a communication means between humans. Chomsky, however, thinks that language is not the best and perfect option which deserves to meet people's communication needs: "If you want to make sure that we never misunderstand one another, for that purpose language is not well designed, because you have such properties as ambiguity. If we want to have the property that the things that we usually would like to say come out short and simple, well, it probably doesn't have that property" (Chomsky, 2002). This argument suggests that core features of linguistic systems are not properly tailored for communication, because if the primary function of language is to be a means of communication, why couldn't language get rid of ambiguity throughout the evolution process? Despite being a logical question, S.Piantadosi et al. challenged the Chomskyan view and we assume this sounds more rational: "... ambiguity is in fact a desirable property of communication systems, precisely because it allows for a communication system which is "short and simple." We argue for two beneficial properties of ambiguity: first, where context is informative about meaning, unambiguous language is partly redundant with the context and therefore inefficient; and second, ambiguity allows the re-use of words and sounds which are more easily produced or understood" (Piantadosi et al., 2012).

If these two properties are analyzed using examples, we believe it may be easy to see why ambiguity is not against but for the communicative function of language. According to the first property, context can resolve any ambiguity. When we say "context", we mean not only the linguistic environment where items occur but also physical situation. Talking about the importance of context S. Attardo writes: In fact, "every linguistic element out of context is ambiguous.... only contextual disambiguation allows us to select one sense" (Salvatore, 2017). D. Oaks while discussing the ambiguity of transitive verbs in English writes that "Call me a

doctor” is structurally ambiguous (Oaks, 2010, p. 178) and we also believe it is. However, if said in a situation where someone not feeling well needs a doctor, it doesn’t mean that the person wants to be addressed as a doctor, thus doesn’t yield the answer “OK, you are a doctor”. In relation to the importance of context for ambiguity resolution D. Aarons writes: “Thus, no matter how faulty the signal, humans incline towards an interpretation that makes sense in the context of utterance” (ed. Salvatore, 2017). Consequently, it cannot but lead us to think that pure linguistic ambiguities would be truly rare if linguists did not cite isolated examples. The bottom line is that as unambiguous language would be both redundant and inefficient, ambiguity removes the potential redundancies in language turning it into a more efficient communicative system.

As to the second beneficial property of ambiguity, it can clearly be seen that ambiguity mainly covers short and frequent words and structures which are reused in language. With a closer look at how language works we can find out that long words and structures are not exposed to the effects of ambiguity as much as the short ones. The shorter the items, the less clear they are, the fact which leads to ambiguity. As an example, we can analyze the following sentence: “Our coach trusts me more than my friend”. This sentence being syntactically ambiguous can be understood in two ways:

- a. Our coach trusts me more than my friend trusts me.
- b. Our coach trusts me more than he trusts my friend.

As seen, if the sentence is enlarged by fully expressing the intended meaning, the ambiguity disappears, but the fact is that speakers do not have to articulate every shade of meaning because they also rely on the inferences their recipients make continually for communicative success. With regard to this, Levinson as cited by Piantadosi et al. writes: “... speaker articulation, not hearer inference, is the principal bottleneck in human language” (Piantadosi et al., 2012). So, even if there were completely ambiguity-free language, it would be doubtful whether this imaginary language would suit our communicative needs better than the language used by humans now.

S. Piantadosi et al. tested the above mentioned claim in English, German, and Dutch and came to the same conclusion: “ ... ambiguity allows re-use of the easiest linguistic units. These results are hard to explain with anything other than a theory based on efficient communication”. Considering our explanations about the benefits of ambiguity, it can be suggested that any system which strives to be both communicatively and cognitively efficient is bound to be ambiguous. That is why though ambiguity is a mystery to some researchers, “it is not a puzzle for communicative theories of language” (Piantadosi et al., 2012).

There is one more function of ambiguity in language which can be considered as a secondary one. We assume the reason why Piantadosi et al. have not discussed it may be that this function was not closely connected with the genesis of ambiguity and the process how language evolved. However, there is no doubt that ambiguity serves this function perfectly. The function we are talking about is language play. D. Crystal in his “Language play” expresses his surprise why this function of language has not been studied thoroughly. “...the ludic function of language is generally not mentioned in dictionaries or introductory texts- or it is at best marginalized” (Crystal, 1998). The author thinks that the reasons for this negligence could be the language study that has focused in one direction- language as information. Also, the topic of language

play might not be considered appropriate for a serious study. If language is only for communication (for sending/ receiving messages), then why is the meaning together with logic rules are manipulated? Why do we purposefully float Gricean maxims using ambiguity while we can cooperate to the communicative success by obeying them? The answer is that language does not only exist for communication, so ambiguity results not only from the pressures for efficient communication but also leads to creating humor effects. Ambiguity and humor are closely connected with each other. Not surprisingly, V.Raskin writes: "... deliberate ambiguity will be shown to underlie, much if not all, of verbal humor" (Raskin, 1985). The similar opinion is expressed by D.Oaks: "Of course, most humor does not rely on structural ambiguities ... but structural ambiguities are at the heart of some of the most memorable and intriguing examples" (Oaks, 2010). Ambiguity enables us to play with language for fun or some other reasons, so it is described as one of the secrets to comedy writing. Owing to this linguistic phenomenon, it is easier to manipulate the meaning despite the context, because context loses its control over meaning choice in the humorous texts. "When we enter the realm of humor, it simply is not true that the context disambiguates the utterance" (Oaks, 2010). To illustrate this point, we would like to resort to famous comedian Groucho Marx's line: "Once I shot an elephant in my pajamas. What he was doing in my pajamas I will never know" (Oaks, 2010, p. 388). It is true that prepositional phrases (for example, "in my pajamas") are one of the areas where ambiguity frequently occurs, but without the second part of the sentence it would be much easier to refer "in my pajamas" to the verb "shot" not to the noun "elephant". Taking advantage of the ambiguity in the sentence it is quite possible to manipulate the meaning for laughter which was the main purpose of the comedian G.Marx in this line.

In addition to all these, it is worthy of notice that ambiguity is deliberately used in diplomatic documents ranging from peace treaties to governmental policies or in advertising sector in order to lead to multiple meaning for the interests of the parties. With regard to this issue D.Pehar writes: "By making an important treaty provision ambiguous, a treaty-maker hopes that she can temporarily meet the conflicting demands of the parties to the treaty. One party will focus on ambiguity's possible meaning A, whilst the other will focus on possible meaning B. Both parties will, at least provisionally, hope that the ambiguous provision carries enough substance to satisfy their demands" (Pehar, 2011).

CONCLUSION

To conclude, ambiguity has emerged as a natural outcome of the evolution process of languages in which the numbers of linguistic items and their referents could not obviously overlap. Considering the limits in human memory capacity and inborn ability of people to understand what is said and what is meant, ambiguity appears to be an advantage of language users. Although, it complicates the mission of computational linguistics, we humans do not seem to suffer from this. Accordingly, it should not be regarded as a curse. Ambiguous nature of language enables "easy" words and items to be used over and over. Despite this, the sophistication of human cognitive mechanisms disambiguates almost every ambiguity. This property of language serves communication process and participants to a great extent, because without ambiguity humans would have to put more efforts and spend more time for expressing their ideas with lengthy utterances/ sentences. As discussed above, the role of ambiguity in language is connected with its main function as means of communication. So, it serves this function in the possibly best way making the communication process both easy and "cognitively

cheap". What is more ambiguity is one of the commonly employed tools in creating a humorous effect.

References

- [1]. Altmann G.T.M. (1998) Ambiguity in sentence processing. Trends in cognitive sciences, Vol. 2, No. 4, pp 146-152.
- [2]. Berry M.D., Kamsties E., Krieger M.M. (2003). From Contract Drafting to Software Specification: Linguistic Sources of Ambiguity. A Handbook.
- [3]. Cohen A. (no date) Why ambiguity? <http://www.bgu.ac.il/~aric/Ambiguity.pdf>
- [4]. Cowie F., (2003) Innateness, philosophical issues about, Encyclopaedia of Cognitive Science, Macmillan Publishing Co., 2003, pp. 1-8.
- [5]. Chomsky N.(2002) Syntactic structures. Berlin New York: Mouton de Gruyter.
- [6]. Church K., Patil R. (1982) Coping with syntactic ambiguity or how to put the block in the box on the table. American Journal of Computational Linguistics, Vol. 8, No 3-4, pp. 139-149.
- [7]. Crystal D. (1998) Language Play. UK: Penguin.
- [8]. Cushing S. (1997) Fatal Words: Communication Clashes and Aircraft Crashes. US: University of Chicago Press.
- [9]. Oaks D. (2010) Structural ambiguity in English. New York: Continuum.
- [10]. Pehar D. (2011) Diplomatic ambiguity: Language, power, law. LAP Lambert Academic Publishing.
- [11]. Pehar D. (2001) Use of ambiguities in peace agreements https://www.researchgate.net/publication/200667590_Use_of_Ambiguities_in_Peace_Agreements
- [12]. Piantadosi S.T., Tily H., Gibson E., The communicative function of ambiguity in language, Cognition 122 (2012), pp. 280–291.
- [13]. Raskin V. (1985) Semantic mechanisms of humor. Dordrecht/ Boston/ Lancaster: D.Reidel Publishing Company.
- [14]. Salvatore A. (1990) The violation of Grice's maxims in jokes / Proceedings of the sixteenth annual meeting of the Berkeley Linguistics Society, pp. 355-362.
- [15]. Salvatore A. (ed) (2017), The Routledge handbook of language and humor. New York London: Routledge.
- [16]. Salvatore A. (1994) Linguistic theories of humor. Berlin New York: Mouton de Gruyter.
- [17]. Wasow T. (2015) Ambiguity avoidance is overrated. <https://www.semanticscholar.org/paper/Ambiguity-Avoidance-is-Overrated-Wasow/d8a1fafc8e1c98d8103310ad4904ae8183d2cb87>