

Cognitive Context's Role in Discourse Interpretation

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Abstract—One of the main functions of language is to convey meaning between human beings, so how to use and interpret language appropriately is very important in communication. According to the dynamic study of context, firstly, this thesis discusses how language users actively manipulate aspects of context and produce favourable context to attain their communicative goals. It concentrates on the relations between cognitive context structrization factors and discourse production. As different individuals in the society, such different factors as different cognitive ability, different educational and cultural backgrounds and different experiences in the social life will affect individual's cognitive context and discourse interpretation.

Index Terms—Relevance Theory, cognitive context, discourse, interpretation, optimal relevance

I. INTRODUCTION

Since Grice's theory about implicature was put forward, pragmatic inference and the interpretation of discourse has been the focus of the linguistic research. Many Linguists (Grice, 1975; Lewis, 1979; Searle, 1975etc) analyzed the relations between signals and the use of the signals from different angles. They held identical views that the relations between the information and intention of the signals were inference-based supra-signal relations. (Xiong Xueliang, 1999) Since the 1980s, Sperber and Wilson have begun to make some researches on the relations between language and signals from cognitive angle. Sperber and Wilson indicate that the traditional encoding-decoding process is attached to the cognitive-inferential process. In communication, by ostensive behaviors, the speaker makes his informative and communicative intentions manifest to the hearer and provide necessary evidences for him to infer from; according to the speaker's ostensive behaviors, the hearer infers from these evidences in order to search for the relevance. It is called optimal relevance that the utterance will have adequate contextual effects for the minimum necessary processing effort. Communication can be achieved because people unconsciously obey the principle of relevance when communicating ... Every act of ostensive communication communicates the presumption of its own optimal relevance" (Sperber & Wilson; 1995)

In the process of communication, linguistic signals just provide the direction of achieving the information, help produce some similarities between the mental representations of the addressors and addressees, thus communicative effects can be achieved. Both the linguistic form of the discourse and the factors of context can influence the understanding of the discourse. Understanding of the discourse is a dynamic process. Under the influence of the dynamic context, a same discourse may have several different interpretations. How can the addressee choose the adequate one among them? Sperber and Wilson hold that it is the principle of relevance that guides the communication of human being. The addressor will use the inferential system, connect the literal meaning of the discourse with the possible implications and contextual assumptions, to find the innate connections between the discourses, or the optimal relevant explanations.

From the addressee's point of view, communication is an inferential process. The addressees always assume that the discourse is relevant to the existing communicative situation; its implications can be inferred by connecting the manifested information (discourse) with contextual assumptions. This chapter will have a discussion on how cognitive context influence the discourse interpretation.

II. DISCOURSE INTERPRETATION WITH CHOOSING AND CONSTRUCTING COGNITIVE CONTEXT

A. *The Addressor's Restriction on the Cognitive Context and Discourse Interpretation*

van Dijk (1975) thought that discourse could not be considered as an isolated and abstract linguistic variants we should connect that context if we want to have an overall description for it. Crystal (1991) claims that context includes the linguistic and non-linguistic background of a discourse. Within the framework of relevance theory, context is a set of assumptions that include the concrete content of the cognitive environment on the spot and the mutual-manifest or their own background knowledge. These assumptions can contribute to the understanding of the discourse. Sperber and Wilson claim that the principle of relevance can affect people's identification of the proposition forms, that is to say, the addressee will understand the discourse in the way of searching for relevance. In the process of communication, the addressor hopes the addressee to understand the discourse correctly. If an utterance can be comprehended into different

explanations, the addressor will use different means (linguistic or non-linguistic) to constrain the contextual assumptions the addressee will choose. In other words, he will show the direction of interpreting his communicative intentions. There is a mutual linkage between linguistic structure and pragmatic interpretation and no need for any special pragmatic conventions or interpretation rules; the speaker merely adopts her utterance to the way the hearer is going to process it anyhow, given the existing, structural and temporal constraints.

First, We will shed light on how the addressor adopts linguistic means to help the addressee understand his communicative intention. For example:

(1) A: Do you remember John, the headmaster of our school? He is the mayor of this city now!

B: Really?

In this example, both the addressor and the addressee know a lot of "John"s. The addressor uses "the headmaster of our school" to constrain "John" and the addressee's choice of cognitive context thereby. The more explicit of the discourse the stronger the addressee will be constrained in choosing cognitive assumptions in the communication. By constraining the addressee's cognitive context, the addressee will be easy to achieve the addressor's communicative intention with least efforts. Here is another example:

(2) Xiao Li comes again.

In this example, the word "again" constrains that Xiao Li is the one who left just now and not other people named by Xiao Li. Blakemore (1987) puts forward the semantic constraints on relevance, that is to indicate the illocutionary force through analyzing some modal indicators, discourse particles or discourse connectives. These linguistic means restrict the addressee's choices of the cognitive context. For example:

(3) A: Mary did not cook yesterday.

B: Tom was at home.

If there are not any constraints on the utterance B, the relevance of B has multiple directions. Every proposition or manifest communicative behaviour should assume its own optimal relevance. (Sperber and Wilson, 1995)The communicative intention will be realized successfully if the addressor uses the linguistic means to restrict the direction of relevance. For example:

(4) A: Mary did not cook yesterday.

B: I. Because John was not at home.

II. After all, John was not at home.

III. You see John was not at home.

IV. So John was not at home.

According to different constraints of the linguistic means, the addressee will understand the addressor's different communicative intentions respectively

In addition, the addressor can also use the non-linguistic means to restrict the scope of cognitive context among which the addressee will choose. The non-linguistic means include: gesture, facial expressions, intonation and the like, by which the addressee can understand the addressor's communicative intention without misunderstanding. For example:

(5) "Fire!"

This simple discourse has different meanings in different situations. If "fire" is said in a low and leisure intonation, the addressee will understand that he wants to ask for help to light a cigarette. On the contrary, the addressee will understand that somewhere is caught fire if "fire" is said in a high and anxious intonation.

(6) What time is it?

If this utterance is uttered in the declarative intonation, the addressor's communicative intention is to inquire time. If the addressor asks the question and refers to the clock at the same time, the utterance involves the meaning of approaching and reminding. If the speed of the speech is very high, it seems that the addressor is busy. If the speed is low, the addressor is leisurely and so on. In the process of communication, the addressor may use various kinds of non-linguistic means to restrict the addressee's choosing of cognitive context and make his communicative intention more explicit at the same time.

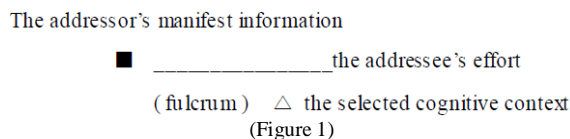
B. Principle of Lever

Within the framework of relevance theory, cognitive context includes the information stored in the long-term memory or short-term memory, encyclopedic knowledge, the situational information and so on. The information does not form a single context, but a set of contextual assumptions. In the process of understanding the discourse, it is impossible for the addressee to select all of the assumptions for understanding the discourse. He tries to select some appropriate ones to understand the discourse with least effort as possible as he can and achieve the contextual effect. Resources have to be allocated to the processing of information which is likely to bring about the greatest contribution to the general cognitive goals at the smallest processing cost.

If the addressee selects the unsuitable context, he can't understand the discourse correctly no matter how many efforts he takes. The mismatch between the context envisaged by the speaker and the one actually used by the hearer may result in a misunderstanding.

From the relevance theoretic point of view, communication is an ostensive-inferential process. To the addressor, communication is a process of manifest, he should show his communicative information to the addressee as manifest as

he can. To the addressee, communication is a process of inference; he will combine the manifest behaviour and contextual assumptions to achieve the contextual effect. We can use the lever to show this process.



In this picture, the left square shape is the manifest information. The fulcrum is the cognitive context selected by the addressee. The closer the selected cognitive context to the addressor's cognitive assumptions about the discourse when he produces it the least effort the addressee will take. The balance of the lever shows that the addressee understands the communicative intention of the addressor. In the communication, the addressee will evaluate the information the addressor wants to transform then selects the appropriate cognitive context and achieve the biggest contextual effect. Other things being equal, the least effort the addressee takes the more relevant the discourse is and vice versa. Other things being equal, the least effort the addressee takes the bigger the contextual effect the discourse is and conversely. A speaker who intends an utterance to be interpreted in a particular way must also expect that the hearer to be able to supply a context which allows that interpretation to be recovered.

For example:

(7) A: What time is it?

B: Mr Li has come back.

In this example, what B wants to transform is not just the literal meaning of the sentence. We assume that:

i. A should go to have a meeting with Mr Li. Mr Li has come back. Obviously, B has been late for the meeting. B's answer has something of deriding.

ii. Mr Li always comes back at six, then B's answer means that it has past six.

In this process of understanding, A should look for the appropriate position for the fulcrum to achieve the balance between the manifest and receiving with least efforts as possible as he can. Since any two people are sure to share at least a few assumptions about the world, they should use these similar assumptions.

C. The Principle of Resonance

Human being tends to achieve the biggest effect with least effort. This is a natural tendency. In the framework of relevance theory, the understanding of discourses also follows the principle of least effort. As the understanding process involves the selective attention, the addressee will select the more relevant contextual assumptions to understand the discourse. Comparatively speaking, selecting this kind of context will need less effort.

Relevance Theory is based on the definition of relevance and two principles of relevance we have mentioned before. In the process of communication, different experiences in life and different knowledge structure will influence the cognitive mental state. Owing to different cognitive ability, different people construct different mental representations and cognitive environment. A same discourse may be interpreted from different ways. When the addressor produces a discourse, he will have an expectation for relevance, the addressee will construct and choose a set of assumptions and search for the appropriate one to arouse sympathy with the addressor's communicative intention and the choice is spontaneous and virtually unconscious. That is to say, the addressee has a tacit understanding of the communicative intention of the addressor unconsciously.

The two prerequisites for this principle: i. the scope of the addressee's knowledge is close to the addressor's. ii. the addressee's cognitive ability is similar to the addressor's. For example: A, B, C and D are colleagues, they know different Xiao Wang respectively. B's friend is also Xiao Wang by name and always comes to their office recently. One day, A comes into the office from outside and said: "Xiao Wang is coming." In this case, they will consider that this Xiao Wang is B's boyfriend and not other Xiao Wang they know. Otherwise, they will think he is other Xiao Wang they are familiar. When communication is unproblematic, the hearer just take for granted that the speaker has an adequate appreciation of what would be relevant to him; when problem arises, the hearer should try to find out under what mistaken image of him the speaker could have thought that her utterance would be optimally relevant. (1995)

III. COGNITIVE CONTEXT AND DISAMBIGUATION

As we have mentioned before, relevance theory considers that human beings' interpretation of discourse is based on the principle of relevance. Which one will the hearer choose among the several possible interpretations of an utterance in the verbal communication? Wilson (1994) claims that:

"In disambiguation, the first interpretation consistent with the principle of relevance is the only interpretation consistent with the principle of relevance: all other interpretations are disallowed."

That is to say the hearer is inclined to choose the kind of interpretation that can produce sufficient contextual effect while demanding the most economical effort. During the process of interpreting utterances, the hearer will search for the appropriate contextual assumptions to understand the utterance and such an interpretation will need least effort at the same time. Throughout the comprehension process, context formation is open to choices and revisions for

understanding the discourse correctly.

Look at the following example:

(8) John cooked...

These two words have multiple levels of representation. For example, "John" is a noun, and it takes no argument. Besides, the word "cooked" is ambiguous. The word "cooked" could be either a verb in past tense or a past participle. It could be used as passive or active, etc. For example:

(9) a. John cooked a meal.

(9) b. John who has been cooked.

The processing of the string "John cooked..." can be viewed as simultaneously selecting appropriate assumptions from the cognitive context to satisfy multiple levels of representations. Suppose that the conversation is about a person who is a skilled cook or an industrious husband, the hearer will interpret that he cooked a meal. Conversely, on condition that this utterance occurs in the famous cartoon *Chicken Run*, a chick named by John, accordingly it will be interpreted the other way, because all the assumptions in the hearer's cognitive context are the chicken that are fighting for freedom in spite of facing with the fortune of being cooked.

Look at another example:

(10) I saw the students reading in the classroom.

This is ambiguous utterance. The hearer can interpret it from two different ways and achieve two different possible interpretations.

(11)a. I was in the classroom saw the students reading.

(11)b. I saw the students who were in the classroom reading.

Generally, the hearer will choose the second interpretation. Every assumption in cognitive context is not independent from each other, they are connected to construct structurization factors of cognitive context such as frame, schema, knowledge script and so on as we have noted above. People usually connect 'student' with the 'classroom' because they belong to same chunk in their cognitive contexts.

Cognitive context's function in disambiguation can be further illustrated by the following example:

(12) The shooting of the hunters was terrible.

Obviously, the utterance has at least two interpretations:

(13)a. It was terrible that the hunters shot.

(13)b. It was terrible that the hunters were shot.

In normal circumstance, the only reasonable interpretation would be on the line of (13)a. How can this be explained? From experiences in the social life, human being achieves various kinds of knowledge and internalizes them in the brain to establish the encyclopedic knowledge. According to knowledge script in their cognitive context, they assume that hunter shoots animals. Choosing this interpretation should be more reasonable to him and need least effort in the processing interpretation.

IV. COGNITIVE CONTEXT AND INTERPRETATION OF IMPLICATION

As we have mentioned in Chapter II, communicators have more than one way to transform a same message. According to different communicative situations, they will select adequate ways to organize their words either directly or indirectly. If an utterance is expressed directly, the hearer can interpret it correctly just by its linguistic meaning. Implication arises if the utterance is expressed indirectly. It is necessary for the hearer to go beyond the utterance's linguistic meaning in order to recover a proposition that yields adequate contextual effects. In interpreting the implications, the addressee will expand his/her cognitive context to achieve the contextual assumptions or contextual implications. In other word, the utterance will trigger an update of the hearer's cognitive context for interpreting the discourse. Implication is divided into implicated premise and implicated conclusion. Implicated premise is taken from the hearer's memory while implicated conclusion is deducted from the interaction of the grammatical meaning and the context of utterance.

For the same utterance, the hearer may infer quite a few implications that vary from one to another in their strength. He/she will not stop expanding his/her cognitive context until he/she achieve the adequate implications of the utterance. For example:

(14) A: Did I get invited to the conference?

B: Your paper is too long.

In this example, B does not answer A's question directly, A can not achieve something relevant to his/her question just according to the linguistic properties of B's utterance. Then A will expand his/her cognitive context and achieve a set of assumptions about B's answer:

(15) a. B does not answer my question directly because he wants to show politeness. He wants me to feel better.

(15) b. If my paper is too long for the conference, I won't be invited.

(15) c. If I am not invited to the conference, there will be no papers on pragmatics at the conference.

(15) d. If there are no papers on pragmatics at the conference, Nigel will not attend.

...

Among the implications, (15) d. is the weakest one which totally depends on the hearer's subjective conjecture, and

for which the speaker is not responsible. Generally speaking, A will stop expanding his/her cognitive context when he/she has achieved (15) a. and (15) b.. Additional efforts must be taken if he/she wants to achieve additional effects.

As we have noted, A speaker's decision to convey information implicitly rather than explicitly is governed by his assessment of the hearer's contextual resources. According to different ways of expression, the hearer supplies specific contextual assumptions and derives specific contextual effects. The hearer's interpretation is constrained by her/his assumption that the utterance is consistent with the principle of relevance. What varies is the degree of specificity of the speaker's expectations about the way that optimal relevance will be achieved, and hence, the degree of responsibility that he must take for the particular contextual assumptions made and the particular conclusions derived. (Blakemore 1992)

A speaker who does expect his utterance to be interpreted in a particular way must assume that the contextual assumptions required for the recovery of this interpretation are immediately accessible. For example:

(16) A: Where is John?

B: There is a yellow Mercedes outside Jack's house.

If the communication is unproblematic, B knows that there is the assumption that Jack always drives a yellow Mercedes and can infer that John is in Jack's home. A can interpret B's utterance immediately and achieve more information than from direct ones.

(17) a. John and Jack are good friends and he often pays a visit to Jack.

(17) b. John is very rich for he has an expensive car.

(17) c. John is the kind of person who likes displays of wealth.

The indirect utterances can transform much more information than direct ones. Besides the meaning that the direct answer can transform, there are also rooms for hearer's further thinking. If there is no such an assumption that John always drives the yellow Mercedes, the communication is problematic. The hearer will be misled.

V. COGNITIVE CONTEXT AND INTERPRETATION OF METAPHORICAL AND IRONICAL UTTERANCES

Literalness is only one kind of expression ways. More often than not, the communicator adopts other ways such as metaphorical or ironical utterances to express their ideas. Traditionally, metaphor and irony are considered as two kinds of the rhetoric devices. From Grice's point of view, he considers that such kind of utterances violate the co-operative principles. However, Sperber and Wilson argue that metaphor and irony are not the result of violating some principles but loose uses of language.

Everything has its distinctive characters and these characters are internalized into human being's mind to construct some stereotypical assumptions and conceptualized to stand for certain meaning. All of the following examples are metaphorical utterances:

(18) The building is giraffe in this area. (The building is very high.)

(19) He is a fox. (He is very sly.)

(20) The room is a pigsty. (The room is very dirty.)

The speaker of metaphorical utterances must want to express something other than its literal meaning. When the thing is mentioned, the first meaning comes into the hearer's mind is the assumption about its distinctive characters. Moreover, the effort he/she takes in interpreting metaphorical and ironical utterances is less than in interpreting literal ones. For example:

(21) My neighbor is a dragon.

Most hearers will have immediate access to stereotypical assumptions about dragons (or about what people say about dragons) and achieve the following implications:

(22) a. The speaker's neighbor is fierce.

(22) b. The speaker's neighbor is unfriendly.

There are other less idiosyncratic stereotypical assumptions such as a long tail about dragons. (21) will have another implication:

(22) c. The speaker's neighbor has a long tail.

Generally speaking, the speaker would not wish to endorse the implications yielded by such stereotypical assumptions unless that the speaker might be taken to have in mind an image of fierceness or unfriendliness which is beyond most people's experience, and the hearer is encouraged to explore a range of other contextual implications having to do with the nature of the neighbor's unfriendliness, the behavior that manifests it and perhaps the neighbor's appearance. (Blakemore 1992, p.163)

Obviously, these are weak implications compare with (22)a. and (22)b. The hearer will first select the strong ones. The weaker ones are by-products during the process of interpreting the main idea of the utterance.

Ironical utterance, as another kind of loose use of language called by Sperber and Wilson, transforms the meaning the opposite of what the sentence uttered literally means. The speaker could be regarded as having said one thing and means the opposite. How can the hearer/reader interpret it?

Living in society, people have some concepts about antonyms in their mind. According to the view of cognitive pragmatics, they are the constituents of the assumptions in cognitive context. The utterance that expresses the opposite meaning in a certain situation will attract more attention of the hearer, who will connect these assumptions with the

utterance to achieve a strong contextual effect than the literally expressing ways.

For example:

(23) 东京也无非是这样。上野的樱花烂熳的时节，望去确也象绯红的轻云，但花下也缺不了成群结队的“清国留学生”的速成班，头顶上盘着大辫子，顶得学生制帽的顶上高高耸起，形成一座富士山。也有解散辫子，盘得平的，除下帽来，油光可鉴，宛如小姑娘的发髻一般，还要将脖子扭几扭。实在标致极了。(鲁迅，藤野先生，1926)

In this passage, the writer first described the behavior of the students who were sent to Japan to study by the government of Qing Dynasty. At that time, China was invaded by many countries and at the edge of national doom. Obviously, the students' behavior was very ugly, but the author said that they were really 'biao zhi' (beautiful). Chinese word 'biao zhi' (beautiful) was used to describe the male Chinese students in Japan strengthens the ironical effect of the passage. With ironical expression, the speaker/reader conveys not only the factual information, but also his strong attitude to the students' incapable, stupid and ridiculous behavior and their indifferent attitude to their motherland. During the process of interpretation, the reader combines the assumptions about the students' behavior and the background knowledge at that time with this surprising expression, a stronger contextual effect is constructed.

VI. CONCLUSION

Communication occurs between the participants, so it is a constant interactive process between them. In this interaction, the addressor produces various kinds of discourses in service of his social and communicative goals. The whole communication is context dependent. Thus, secondly and mainly, the thesis has some discussions on how cognitive context influences the discourse interpretation. In this chapter, the relations between relevance and coherence, the principles for the addressee's selecting and constructing cognitive context, disambiguation and interpretation of implication, metaphorical and ironical utterances are taken into consideration.

From the above analysis, we can see that cognitive context plays an important part in the development of pragmatic competence, which means appropriate interpretation and production on the basis of the knowledge of context. To be pragmatically competent, one should be capable of actively manipulating and choosing aspects of context not only to express appropriately but also to interpret meaning efficiently.

To conclude, the study about how cognitive context influences the interpretation and production of the discourse can help people communicate successfully and improve their pragmatic competence to avoid pragmatic failures in the communication.

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