The Cognitive Context Construction of Anaphora in Conversational Communication

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Anaphora often occurs in conversational communication. For the hearer, the cognitive context construction of anaphora plays a very important role in understanding the speaker's communicative purposes and promoting the progress of conversation. The present paper analyzes anaphora in conversation communication from the perspective of relevance theory and attempts to explore the construction of cognitive context in anaphora. This paper shows that ambiguity and conversational conflict often exists in daily communication due to the misunderstanding of the meaning of referent words caused by unclear anaphora. There are two main reasons: (1) The context constructed by the hearer about anaphora is different from the context constructed by the speaker about antecedent; and (2) For the hearer, the context constructed by the speaker about the antecedent and anaphora is not clear.

Keywords: anaphora phenomenon, optimal relevance, cognitive context

Introduction

Anaphora in discourse can effectively promote the cohesion and coherence of discourse, which is also true in verbal communication. The effective cohesion between antecedent and referent facilitates the conscious construction of relevant cognitive contexts or conversational patterns in the brains of both communicators, thus promoting effective communication of semantics and the realization of the communicative purpose between conversations. Since the discovery of the phenomenon of anaphora in language, scholars at home and abroad have conducted research on it from different perspectives. Chomsky (1981) explained anaphora under the theory of constraints, and then, Levinson (1987) carried out the studies of anaphora from the perspective of semantics and pragmatics based on Chomsky's work. Halliday (1985) suggested that anaphora is an important means of achieving coherence in discourse. Yang (2002) argued that this anaphora phenomenon within the text is not limited to the lexical and syntactic levels, but also relates to its semantic and pragmatic dimensions in discourse. From the philosophical perspective of language, Liu (2004) analyzed the rationality of the anaphora phenomenon from a philosophical perspective in conjunction with the reference theory. Most scholars focus their research on the anaphora phenomenon in written discourse, exploring the expressions of words and the function of discourse (Jiang, 2006; Qi, 2004; & Xu, 2018).

At the same time, Xu (2000) also created an analytical model of anaphora from a cognitive linguistic perspective combined with accessibility theory, which more clearly illustrates the process of understanding the

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discourse function of anaphora by the audience of a discourse. Some scholars have been aware of anaphora in conversation in terms of the cognitive dynamics of both parties of communicators. However, what they emphasized more on is the mental representation of the interlocutor, rather than the essence of cognition during the use of language. From the view of cognitive linguistics, language is the sum of human experience and is a kind of experiential cognition. This paper explores the cognitive nature of anaphora phenomenon in conversation, taking the cognitive context construction of communicators in the conversation as the entry point.

Anaphora

The definition of anaphora originates from the explanation of reference. Thanks to the different perspectives taken by scholars from home and abroad, anaphora had been defined differently. Liang, Zhang, and Wang (2012) argued that a clear distinction between anaphora and other kind of reference is a necessary precondition to define anaphora. They distinguish between anaphora and cohesion, cross-linking, indication, and co-reference, and defined anaphora from traditional linguistics, arguing that the essence of anaphora is that one linguistic unit can be explicitly referred forward to another linguistic unit on the basis of a certain degree of reliability and validity. Halliday and Hasan (2001) interpreted the phenomenon that language can express human thought beyond the semantic dimension of language itself. They had an argument that the capability of language to explain human thoughts does not only depend on language form, but it also rely on the relationship between language and objective environment where conversation is happening, as well as the connection between language forms in discourse. The former involves the phenomenon of external referencing of discourse words, while the latter is internal reference in discourse, including the phenomenon of pre-reference (also known as anaphora), post-reference where the referent word is used to refer to the linguistic component that appears later. Quirk (1993) also classified the phenomenon of anaphora into direct anaphora and indirect anaphora according to whether the referred concept is present in the discourse or not. Whether or not the referred concept is present in some linguistic form in the discourse, it is the greatest function of anaphora to create a semantic connection between the linguistic units in the discourse or in the conversation.

From the viewpoint of the nature of human cognition, the paper concluded that anaphora is a process where the cognitive experience of communicators or authors is presented in some explicit or invisible form in discourse or conversation so as to reach a consensus with the experiential knowledge of the readers or hearers. In this paper, we categorize anaphora into explicit anaphora and invisible anaphora from a cognitive perspective. Explicit anaphora is the process of constructing a consensus in explicit language forms; invisible anaphora is the process that an experience that has been agreed upon in the human mind reproduces in an implicit form in a discourse or conversation.

Anaphora's Optimal Relevance

Brown and Yule (2000) considered the readers and hearers as information processors, arguing the reason that the readers and hearers are able to understand the information interpreted by the anaphora is because they, as information processors, process the referent object as a mental representation, and simply match the later emergent anaphora with the previously constructed mental representation to achieve the association of the preceding and following information, which facilitate the understanding of the information itself. In order to explain clearly the role of conveying semantic of anaphora in conversation, whether the anaphora are presented in explicit or invisible form in a conversation does not affect the listener's ability to construct rational thought of

previous and new experiential knowledge, this section introduces relevance theory to analyze the phenomenon of anaphora in conversation from the perspective of- anaphora' s optimal relevance.

Relevance Theory

Sperber and Wilson (1986) proposed Relevance Theory. After studying the discourse comprehension from the perspective of cognitive psychology, they discovered the relationship between communication and cognition. The reason why communicators can naturally and smoothly complete the whole process of conversation after understanding the purpose of each other's conversational aim is that there is an alternating constraint of two processes in the conversation, namely, the process of cognitive and reasoning as well as the process of encoding and decoding. Reasoning and decoding processes carried out in a state of "mutual intelligibility" between the communicators. Before these two processes begin, multiple contextual hypotheses are formed in the hearer's brain. Human mind autonomously selects a context that best matches the one constructed by the speaker, and then the utterance is produced. Conversation is not recurrence of cognitive context, but expansion of cognitive context for communicators. Communication is not just a process of overlapping the original consensus experience, but also a process of communicating the unknown experience of the communicators themselves.

To understand relevance theory involves activating cognition and understanding discourse online. As a stimulus, the speaker's utterance activate the hearer's experience so that the hearer's brain produce multiple contextual hypotheses which will be selected to match with the context of speaker's utterance. The match means that hearer is understanding speaker's utterance online.

If the span between the context constructed by speaker and the hearer's contextual hypotheses is large, the degree of relevance is lower, the hearer needs to make more effort to understand the speaker's utterance; Otherwise, the higher the degree of relevance, the less effort the hearer needs to make to understand the speaker's utterance. The formation of optimal relevance refers to the process of hearer understanding the speakers utterance after human thinking makes appropriate efforts to choose the optimal context hypothesis according to the size of the span and directly match the speaker's discourse context, which can promote the smooth progress of the whole conversation.This paper studies anaphora in conversation from the perspective of optimal relevance, and analyzes the cognitive optimal relevance between communicators from two aspects: explicit anaphora and implicit anaphora in utterance.

Cases Analysis

In the last section, explicit anaphora refers to the fact that some anaphoric words can be found in a conversation or discourse with its corresponding antecedent. Implicit anaphora refers to the fact that some anaphoric words are linked to the objective context without an explicit antecedent in the conversation or discourse. From the following conversational examples, this paper intends to analyze how anaphora in conversation product optimal relevance to affect the communicator's understanding and utterance.

A: I remember the man who just walked past us.

Is **that** the guy we saw at the restaurant earlier?

B (hearer): Did we see **him** at the restaurant? I don't remember.

C (hearer): Yeah, that's **the guy** we met before, but **he**'s not the guy we met at the restaurant.

In this case, the explicit anaphora in the utterance mentioned by A are presented in bold font. "That" refers to "the man who had just passed us". Implicit anaphora in utterance is marked in the form of underline. The

referential entity of "the man seen in the restaurant" does not appear as an antecedent in A's utterance, but is directly presented in an anaphoric word (see Figure 1).
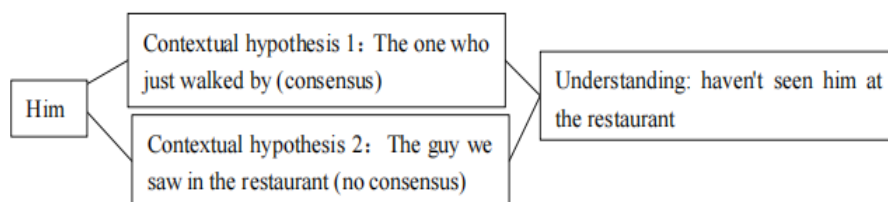

Figure 1. The analysis of B's contextual hypothesis.

First of all, this paper analyzes hearer B's reply to A. In this paper, the possible contextual hypotheses of B are taken as the starting point to analyze B's understanding of A. Does B mean "the man who just walked by us" or "the man we saw in the restaurant"? From B's words, we can see that B did not reach A consensus with A on the experience of "meeting this person in the restaurant". They may have met some people together in the restaurant, but in B's cognition, they did not mention the person they met together in the restaurant. Therefore, based on the optimal relevance, B takes into account both contextual Hypothesis 1 and contextual Hypothesis 2, potentially acquiesces that "he" is "the person I saw in the restaurant", and thus utters "I have not seen him in the restaurant". It is obvious that the referent entity in the implicit anaphora in A's utterance is unclear to B, so B produces an invalid reply to A (see Figure 2).
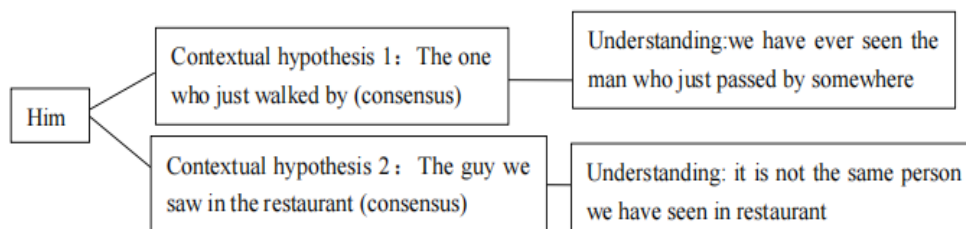

Figure 2. The analysis of C's contextual hypothesis.

Looking at the hearer C's reply to A, C also produced two contextual hypothesis after hearing A's utterance. However, it is different from the context hypotheses produced by B, that "the guy we saw in the restaurant" is consensus of C and A. Therefore, for C, both the explicit anaphora and the implicit anaphora used by A have clear referential entities. C can associate respectively them with their referential entities and produces a valid reply to A.

Considering optimal relevance of anaphora based on relevance theory, it can be found that in order to achieve the optimal relevance, when the hearer is not clear about the referent entity referred to by the anaphora of the speaker, the communication is prone to ambiguity and misunderstanding, which is not conducive to the effective conduct of conversational communication. Sperber and Wilson (1986) also believed that a shared cognitive context is the prerequisite for successful communication between communicators.

Cognitive Context in Anaphora

Human communication does not only involve the content in the traditional context. Human beings transform their perception of all objective things into abstract linguistic symbol systems for information transmission and communication. The communicator's understanding of current objective things is the presentation of his

collective past experience. Anaphora exists in conversation because, on the one hand, antecedent forms short-term memory in the communicator's brain; On the other hand, it is because the object referred to by anaphora has been integrated into the cognitive context produced by the communicator. This chapter will briefly introduce the concept of cognitive context and try to explore the process of constructing the cognitive context of communicators in conversational anaphora.

Cognitive Context

Sperber and Wilson put forward the cognitive context in 1986. Xiong (1999) believed that the process of understanding conversational meanings in human communication involves the processes of language perception, decoding, activation of mental diagrams, and semantic reasoning. The underlying factor promoting these processes is the past experience that communicators have internalized and systematized. All human experience will be integrated into the sum of individual cognition. Xiong (1996) regarded this phenomenon as an individual's social psychological representation. He believed that when a certain language expression is mentioned, a certain situation can be associated with it, and when a certain situation is mentioned, a certain language expression can be associated with it. The result of internalization and systematization of all pragmatic conditions is cognitive context. Different from the traditional context, cognitive context is a dynamic process, which is presented in the way of mental representation. At the pragmatic level of communication, this mental representation involves three pragmatic categories, namely, contextual information, situational information, and background knowledge (see Figure 3). Huang and Hu (2004) proposed the following cognitive context construction model.
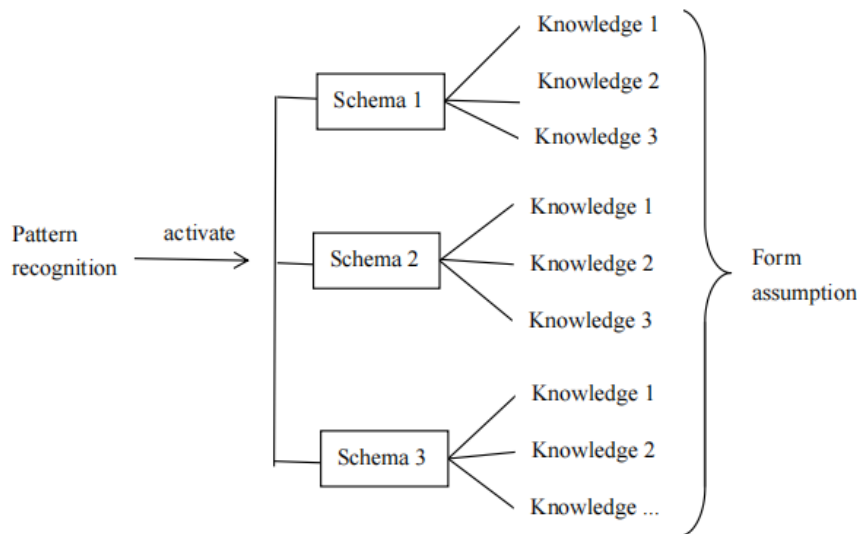

Figure 3. The process of construction.

Cases Analysis

In real life, because the cognitive context of anaphora constructed by hearer is different from that of the anaphora constructed by the speaker, there may be some ambiguities between communicators. Examples are as follows:

A：Let's go eat blue frogs tonight!

B: Yes, but I have never eaten bullfrogs, so I can try.

C：You've made a mistake. It's a Western restaurant, not a bullfrog restaurant.

B：I see. Let's go to that restaurant.

First of all, we only focus on the dialogue between A and B. The premise of A saying "blue frog" is that he knows that "blue frog" is A western restaurant and the listener B and C have reached A consensus on the understanding of "blue frog". "The blue frog" appears as a implicit anaphora. However, this implicit anaphora does not exist in B's cognition, and "blue frog" is an inexperienced word for B, so he replies to A's proposal with his original cognition of the word "frog". The cognitive context of B as a hearer is constructed as follows (see Figure 4):
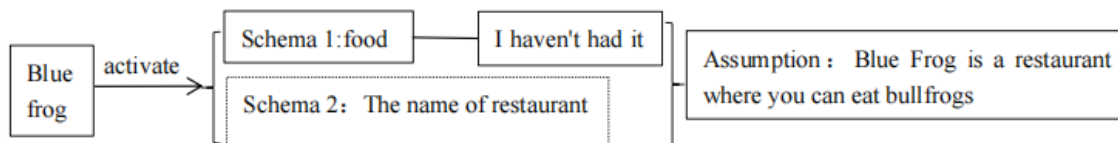

Figure 4. The process of the hearer's cognitive context construction.

By analyzing C's reply to B, C's reference to "A western restaurant" is the explicit anaphora of A's reference to "blue frog", which creates new knowledge in B's cognitive context that "blue frog" is A western restaurant. It can be seen that when the context of anaphora constructed by the hearer is different from that constructed by the speaker, conversational ambiguity and misunderstanding will easily occur. For the experience without consensus, only on the basis of explicit anaphora can the conversation process be effectively reached, which also shows once again that the communication process of the communicator is not only the reproduction of the existing experience, but also the intercommunication of the experience of the communicator. After analysis, this paper finds that the application of implicit anaphora requires a higher degree of consensus between communicators, and only referential entities that match in the cognitive context of hearers are more suitable for using implicit anaphora in conversation.

Conclusion

The anaphora phenomenon in conversation is analyzed by combining optimal relevance and cognitive context construction. This paper finds that consensus is the premise of using implicit anaphora to promote discourse communication. The cognitive context construction of explicit anaphora needs further investigation and exploration. This paper has not put forward strategies to deal with ambiguity and conflict in discourse according to the construction process of cognitive context in anaphora phenomenon. It is an important direction that we should think deeply to discover the essence of language from the cognitive perspective and propose strategies to solve ambiguity and conflict in conversation.

References

Brown, G., & Yule, G. (2000). *Discourse analysis*. Beijing: Foreign Language Teaching and Research Press.

Chomsky, N. (1981). *Lectures oil government and binding.* Dordrecht: Foris.

Halliday, M. A. K. (1985). *An introduction to functional grammar.* London: Edward Arnold．

Halliday, M. A. K., & Hasan, R. (2001). *Cohesion and coherence.* Beijing: Foreign Language Teaching and Research Press.

Huang, H. X., & Hu, X. (2004). On the constructiveness of cognitive context. *Modern Foreign Language, 27*(3), 248-254+327.

Jiang, W. Q. (2006). Discourse and anaphora. *Foreign Language Research, 29*(4), 33-44.

Levinson, S. (1987). Pragmatic and the grammar of amphora: A partial pragmatic reduction of binding and control phenomena. *In Journal of Linguistics, 23,* 379-434.

Liang, W., Zhang, Y., & Wang, M. I. (2012). Definition and cognitive nature of English anaphora. *China Electric Power Education, 28*(5), 153-157.

Liu, Y. H. (2004). Methodological transmutation of anaphora researches: Grammar, pragmatic and cognition. *Foreign Language Research, 35*(4), 17-25.

Qi, X. (2004). English nominal anaphora and its textual function. *Foreign Language Education, 26*(5), 48-51.

Quirk, R. W. (1993). Reference-point constructions. *Cognitive Linguistic, 4*(4), 1-38.

Sperber, D., & Wilson, D. (1986). *Relevance:communication and cognition.* Oxford, Blackwell.

Xu,Y. L. (2000). Refering expressions and their accessibility in Chinese and English. *Foreign Language Teaching and Research, 44*(5), 321-328.

Xu, Y. L. (2018). Referring expressions and their anaphoric function in Chinese and English discourse: A contrastive study. *Journal of foreign languages, 41*(6), 26-34.

Xiong, X. L. (1996). Pragmatics and cognitive context. *Foreign Language Research, 17*(3), 1-7.

Xiong, X. L. (1999). *Cognitive pragmatics.* Shanghai: Shanghai Foreign Language Education Press.

Yang, C. J. (2002). Studies of the textual function of anaphoric relations. *Foreign Languages In Fujian, 19*(4), 15-21.