Cognitive Explanations for Deixis in Narrative Fictions

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Abstract—**The understanding of deixis in narrative fictions is related to deictic projection or shift. As a conceptually cognitive activity, it is closely associated with embodied cognition and social cognition. More specifically, embodied cognition concerns simulation and imagination, while social cognition engages characters' awareness of each other in the story and readers' cognition of the story's characters.**

Index Terms—**deixis, deictic projection or shift, embodied cognition, social cognition**

I. INTRODUCTION

The phenomenon of deixis is an important topic in pragmatics, which mainly discusses the use of deixis when the speaker and the addressee share the same temporal and spatial context. In this sense, deixis primarily involves face-to-face communication, and ambiguity or indeterminacy in discourse can arise when the discourse is in a written form and participants are separated in space and time or unable to see each other (Lyons, 1977). The use of deixis in narrative discourse is different from that in spoken discourse, since its communicative behavior is not spoken, the participants are not fully delineated, or the spatial situation is the default; therefore, it is unreasonable to comprehend deixis in fictional situations with the rules of deixis in the actual context (Dancygier, 2019).

In the written text of the narrative, the author and the reader are entirely in two different times and spaces, which are likely to involve different countries, different eras, and different social backgrounds. Therefore, the processing of deixis in narrative discourse is different from its situation in real-life conditions, as the former requires readers to project their own deictic center into an imaginary deictic situation (Duchan et al., 1995). In other words, speakers need to project from their current spatiotemporal situation to the addressee's deictic center or the narrative's main character. This process of projection is the deictic projection or deictic shift (Bühler, 1982; Lyons, 1977; Levinson, 1983). Of course, the deictic center is not physically shifted, but is conceptually projected, a cognitive process that allows readers to move the deictic center from reality to a fictional narrative world and to apprehend the deictic expressions from the perspective of characters or narrators (Segal, 1995; Stockwell, 2002; Macrae, 2019). Based on the previous research, this thesis intends to further explore how the deixis is understood in narrative fictions from the cognitive perspective.

II. DEIXIS IN NARRATIVE FICTIONS AND EMBODIMENT

In a real-life context, the meaning of deixis depends, to a large extent, on the spatio-temporal co-ordinates of the action of utterance. The addressees can infer the meaning of deictic expressions through speakers' gestures, eyes, eyebrows, gaze direction, etc. (Levinson, 1983; Enfield, 2001). This bodily-based language from interlocutors in communication is essentially derived from our embodied cognition. In narrative discourse, the situation in which the story is constructed may not be real, and the use of deixis deviates from the canonical situation of discourse (Fowler, 1986), but this embodied cognitive basis also holds true in the fictional context. Although we are unable to track the recognizable body language of the speaker under this condition, this does not mean that such cross-spatial deictic expressions cannot be understood. On the contrary, our understanding of deixis in the virtual world still originates from our embodied cognition generated in the real world. Cognitive linguistics believes that the meaning of language is conceptualization (Langacker, 2008). Therefore, the understanding of deixis in narrative fictions not merely lies in the linguistic context, but also includes the situational context activated in the reader's mind. When readers conceptually project themselves into other worlds, their real-life experiences and knowledge are required to fill in the richness of detail in the textual world (Stockwell, 2002). This process of conceptualizing deictic meaning in texts and this real-world experience and knowledge are closely related to our embodied cognition. More specifically, it stems from our simulation and imagination.

A. Deictic Projection, Simulation and Embodiment

It is human nature and instinct to simulate. Aristotle believed that human beings, whether they are philosophers or ordinary people, acquire knowledge at the initial stage through simulation. A large number of ancient Greek literatures have shown that epics, comedies, tragedies, etc. are all mimesis, a kind of mimesis for the creative process, "the very aim of mimesis is to create ... the story world as real" (Macrae, 2019, p. 20), so narration is seen as an art of simulation, a simulation of a possible reality. Recently, scientists have conducted numerous experimental studies, and the research

findings show that simulation is a re-enactment of sensory, motor, and introspective states, which is established through the interaction of the body and mind with the physical world (Barsalou, 2008). This innate ability of human beings to imitate is closely related to the nervous system of the human brain. Cognitive scientists have discovered that there is a kind of cell named "mirror neuron" existing in the human brain. When human beings either make a certain action or experience a certain emotion, or see others do the same action or express the same emotion, mirror neurons are activated to make the same or similar response. The human simulation mechanism is based on mirror neurons, because mirror neurons support mental simulation (Stamenov & Gallese, 2002; Hickok, 2014). The similar actions or responses we have made can be regarded as a simulation.

Cognitive linguists have also noticed this peculiar behavior of human beings and have introduced simulation into the study of language, arguing that simulation plays an important role in conceptualization and cognitive semantics (Langacker, 2008). In this sense, simulation is embodied, that is, embodied simulation (Barsalou, 2009; Semino, 2010; Bergen, 2012). The embodied simulation hypothesis believes that languages, like other cognitive functions, depend on simulation. People can project their own visual, auditory, tactile, kinesthetic, and other sensory experiences into the minds and actions of others, which can be taken advantage of to imitate the objects or experiences described by languages, including the objects and actions pointed to the text. Thus, our understanding of the meaning of language is what is constructed in our minds based on our own experiences (Bergen, 2012). This means that through languages, we can understand not only things and events in the real world, but also things and events that do not exist at all. The issues of time, place, and characters are all created by the author in a narrative discourse. When authors talk about these contents, they refer to the things in the discourse based on their cognition and experience in the real world. Likewise, even if readers do not know who the author is and cannot see the author face to face, they can also comprehend the deictic meaning in the fictitious stories in the fictions through their own cognitive experience.

Furthermore, as a general feature of cognition, simulation is essential in activating a virtual observation point or viewing environment (Langacker, 2008; Gibbs, 2017). This factor also explains why readers, when reading the text, can adopt the perspective of the narrator or character, through which readers can perceive things in the story world and feel what they feel, as "cases of simulation include a reader's visualization of a character's actions in a story" (Hogan, 2017, p.113-114). We, therefore, assure that people's imitative behavior allows readers to activate a fictional viewing perspective when reading the text, so that they are able to perceptually shift their real-world deictic center to the story situation created by the text. The shift or projection is based on their ability to imitate all basic cognitive behaviors in the real world, which is an indispensable prerequisite for understanding the phenomenon of deixis in the fictional world.

B. Deictic Projection, Imagination and Embodiment

It is also true that simulation alone is not strongly sufficient to figure out the meaning of deixis in narrative fiction, because an important feature of simulation is its abstract or schematized nature. The simulation is partial in most cases (Barsalou, 2009), and simulation is less elaborate (Langacker, 2008). Although the concept of deixis itself is abstract, grasping its specific meaning in different contexts requires more details, and another important factor that fills in these details for schematic simulation is imagination. The simulation itself involves various cognitive activities, including imagination (Semino, 2010). We are able to think that the characters depicted in the fictional stories have the same cognitive abilities as we human beings in the real world. We could even feel the characters have a superpower that does not exist in our human beings.

When referring to the problem of deixis, Bühler specifically discussed the deixis at phantasma, which is used to describe the use of deixis in imaginary scenes (Bühler, 1982). In this sense, the speaker will shift his deictic center from the actual condition to the imaginary scene to comprehend the deixis in the imaginary situation by conceptually projecting to the deictic context. Imagination is a significant cognitive ability of human beings. "Without imagination, nothing in the world could be meaningful. Without imagination, we could never make sense of our experiences. Without imagination, we could never reason toward knowledge of reality" (Johnson, 1987, p. ix). These few sentences by Johnson not only show the importance of imagination to human experience, but more importantly, it reveals that imagination is not without a logical foundation. On the contrary, it is closely related to human cognition and is based on human interactions with the real world. The human grasp of knowledge and the acquisition of the meaning of concepts are largely aided by imagination, because "conceptualization is seen as being both physically grounded and pervasively imaginative" (Langacker, 2008, p. 539). That is, we are able to imagine many things and scenarios thanks to our rich experience of interacting with the real world. For example, when we see birds flapping their wings and flying in the sky, we can imagine ourselves galloping through the sky through visual experience, although we do not have the ability to fly.

In narrative discourse, understanding narrative requires vivid imagination (Clark & Wage, 2015). Since imaginary situations cannot be perceived in real-world conditions, "the cognitive ability of imagination is the only source for the addressee to construe an object of conceptualization" (Verhagen, 2019, p. 355). Only when the author or reader projects themselves into the virtual world can they make sense of the deixis in it, and this projection requires the use of our inherent imagination. Indeed, the imagination is well-grounded. Although the fictional textual world is considered to be a possible world created by the author, this possible world has a set of internal logic that can explain the characters' behavior and action in the story (Girle, 2003). And this set of logic rules should also be accessible and experienceable. While the configuration of the fictional world does not necessarily need to correspond to the real world, it must contain

predictable and recoverable content (Kukkonen, 2017). This is what we often call evidentiality. Not only does language needs evidentiality to support its semantic meaning, but fictional storylines also need it to make the plot predictable and reasonable, and this evidentiality derives from our embodiment (Langacker, 2017). It is through the experiences we have gained by interacting with the physical world that we could imagine an illusory space where characters inhabit and perform their actions, and everything goes on as our human world. In this fictional world, the narrator guides the reader through the use of the deixis, allowing them to perceive what they can see and hear in that fictional world through their eyes or ears of the "mind" (Bühler, 2011). We are able to infer or understand their behavior, language, and emotions in that world by imagining that these fictional characters share the same physical senses and mental activity as humans do. To put it more specifically, "we can imagine a total body transplant, that is, the implantation of our mind in someone else's body, yet we would still count as ourselves" (Varela et al., 2016, p. 66). This also explains again why we can project ourselves into the story situation depicted in the text, or onto the deictic center of the characters in the story to imagine the scene they see from their perspectives. After all, one of the properties of perspective is its embodiment (Vandelanotte, 2017).

C. The Role of Simulation and Imagination in Deixis Comprehension

Both authors and readers have their own ability to imitate and imagine. The author would project his deictic center on the fictional discourse world he constructs for the needs of the creation of the works. In this regard, he has to imitate the experiences in the physical world and activate his imagination to transcend what he experienced in reality to enable the scenes and characters in the narration to become more vivid, alive and realistic. Similarly, when the reader reads the narrative text, he also needs to use his own actual experience to project his deictic center into the current fictional text world through simulation and imagination; otherwise, he is unable to track what is proceeding in facing a number of deixis in the narrative text. In addition, imagination and simulation are not independent of each other. On the contrary, "simulation is the imaginative generation of particular conditions and trajectories beyond direct perceptual experience and conceptual inference" (Hogan, 2017, p. 113). Imagination is all about simulation (Matlock, 2017); that is, identifying other conceptualizers and their mental experiences are all through simulation (Langacker, 2008). For example, we visually simulate what we see, and descriptions such as "put yourself in one's shoes" or "immersive experience" are often simulations of a point of view, because simulation assumes a perspective on events or actions, usually someone else's perspective, and concretely imagine particulars from that perspective. Directive projection is made possible when we can simulate the perspective of another person, whether that person exists in the real physical world or a fictional textual world. The comprehension of the deixis in the following two English passages is a good illustration of the relationship between imagination, simulation, and embodiment.

(1) The door to Henry's lunchroom opened, and two men **came in**.

(Hemingway, *The Killers*)

(2) *__1801__*. *__I__* have just returned from a visit to my landlord—the *__solitary__* neighbour that *__I__* *__shall__* be troubled with. **This** is certainly a beautiful country! In all England, *__I__* do not believe that *__I__* could have fixed on a situation so completely removed from the stir of society.

(Emily Jane Bronte, *Wuthering Heights*)

(3) To begin my life with the beginning of my life, *__I__* record that *__I__* was born (as I have been informed and believe) on a Friday, at twelve o'clock at night. It was remarked that the clock began to strike, and *__I__* began to cry, simultaneously.

(Charles Dickens, *David Copperfield*)

Fragments from Hemingway's short story "*The Killer*" are often discussed analyzed. Previous studies have shown that this event could be inferred to have happened through expressions of "opened" and "came in", and the narrator was in the lunchroom at that time and observed from that vantage position. Accordingly, readers' deictic center of time also shifted from the present to the past, and the space of the deictic center is transferred from the physical world they locate to the lunchroom in the narrative space, and the scene is imagined from the narrator's point of view. Apart from that, we are able to take the narrator's perspective because our bodies acquire a CONTAINER image schema through dynamic interactions with the real-life environment, indicating the concepts of inside and outside. At the same time, the word "came" is often directed at the speaker rather than the hearer, so it is possible to locate the narrator in the room. Only through this deeply embodied cognitive processing can we simulate the narrator's point of view, project our deictic center into an imaginary room, and observe from that perspective.

In (2), the time 1801 presented in the opening chapter explains the narrator's narration time, indicating the time when the story happened. Obviously, this time indicates a time period in the past, both in terms of when the story has happened and when the story is narrated. In general, events can only be narrated after they have happened, and the narration time will be later than the story time (Chatman, 1978). Rather than employing the past tense in this condition to indicate the past time, the entire passage uses the present tense to describe past events. The purpose of using the present tense to narrate previously happened events is to invite readers to engage in the current story situation so that the narrator is able to communicate with readers (Verhagen, 2019). Therefore, readers could conceptually shift their cognitive ground from the real world to the text world, and imagine their time in 1801 to follow the narrator to configure the storyline and experience the story plot. This "involves bringing the distal space into the ground in the

form of a representation" (Nijk, 2019, p. 327). At the same time, readers not only imaginatively change the time in the cognitive context from their present reading time, but also adopt the perspective of the characters so that they can imagine and feel what the character has experienced at that moment by simulating their own experiences of dealing with neighborhood or seeing others dealing with the neighborhood in the real world, as well as simulating the mood of seeing beautiful scenery. That is, reading literature inspires people to make a fuller and more embodied simulation.

Different from (2), the deixis of 'I' in (3) respectively refers to the characters in different periods. The character recalling the scene of being born as a child activated readers' minds about the scene of a baby's birth. In such a scenario, based on real-life experience, a baby is usually born with a cry. Therefore, readers can not only understand that the last demonstrative word 'I' refers to the character's self when he was born, but also feel the state of the character crying loudly as a baby by simulating the feeling of a baby's cry.

In addition to the simulation of the story scene, the use of deixis in narrative discourse also involves the simulation of the way of narration. In many discourses, we usually find that narrators would use the plural form of the personal deixis to refer to themselves or uses the second-person demonstrative "you" to refer to nobody in the text. The special use of personal demonstratives is a kind of simulating the way of dialogues in the real situation, as is the case in the following two narrative discourses:

(4) The magi, as _**you**_ know, were wise men—— wonderfully wise men——who brought gifts to the Babe in the manager.

(O. Henry, *The Gift of Magi*)

(5) _**We**_ did not say she was crazy then. _**We**_ believed she had to do that. _**We**_ remembered all the young men her father had driven away, and _**we**_ knew that with nothing left, she would have to cling to that which had robbed her, as people will.

(William Faulkner, *A Rose for Emily*)

From the above discourses, the second person deixis "you" in (4) does not refer to a specific character in the story, and the most likely referent here is the reader who is reading the paragraph in real life. The narrator directly addressing the reader as "you" implies that both he and the reader are co-existing in the fictional scene at the same time (Macrae, 2019). The reason why readers can break the "fourth wall" and identify this personal deixis is that they simulate the situation of chatting with friends in real-life situations, and the narrator is describing to the addressee an event that is known to both of them. Similarly, in (5), although we don't know who the person deixis "we" refers explicitly to, the reader will not find this unidentified deixis confusing. As a matter of fact, this kind of usage is universally seen in talk show, cross talk, and drama, etc., in real life. For example, cross talk is a two-people way of telling stories to the audience on stage. During the process of narrating stories, the audience will occasionally be "awakened" and interact with the onstage performers. With such a real-life experience, readers have the opportunity to simulate this communication method so as to enter the current narrative situation and imagine a dialogue with the narrator. As Dancygier has proposed that the use of various temporal adverbs, spatial adverbs, and demonstrative pronouns serve the interpretation of narrative rather than directly construing events in terms of readers' current deictic center (Dancygier, 2019).

III. DEIXIS APPREHENSION AND SOCIAL COGNITION IN NARRATIVE DISCOURSE

In addition to simulation and imagination, social cognition is another important factor for authors and readers to successfully project their deictic centers into fictional texts. The world in which we live and are engaged is not only physical but also social (Langacker, 2008). Although pragmatics also discusses social deixis, it merely focuses on the social roles of participants, the social relationships between participants, and the social context in which the utterance is uttered (Lyons, 1977; Levinson, 1983). Social cognition is an extensive concept, emphasizing the interaction between people and their living social environment, as well as the social behaviors generated under this interaction. This not only includes social information that reflects the social status of participants, but also includes a socially cognitive way of looking at self and others (Wen, 2019). We human beings are a special kind of species with social attributes and will certainly form a set of concepts and social moral values shared by social groups by interacting with the community environment in which they are dwelling in. Meanwhile, their moral values are imprinted with personal characters due to their unique family environment and education. Narrative work is not only a matter of narrating stories, but also expresses a certain ideology, such as social morality and values, through the narrated story, which means that each virtual character in the story will be imagined as a real social individual with flesh, blood, and thought. Story narration should emphasize the narrative contextualizing power of narratives and a commitment to social theoretical concerns (Fina & Georgakopoulou, 2015). However, the ideology in the fictional world could conform to real-world social values or violate the shared social beliefs, so the underlying social meaning needs to be judged and given by readers. The social cognition in the fictional world includes both how characters perceive each other in stories and how narrators or readers perceive characters in fictional stories.

(6) "Jim, darling," she cried, "don't look at me _**that**_ way. I had my hair cut off and sold because I couldn't have lived through Christmas without giving you a present…"

(O. Henry, *The Gift of Magi*)

(7) "why, look at you all!" bawled this figure, addressing the inn servants. "Why don't you go and fetch

things, instead of standing ***there*** looking at me? I am not so much to look at, am I? ..."

<div align="right">(Charles Dickens, A Tale of Two Cities)</div>

In most cases, the proximate deixis "this" is used to indicate a person or an object that is closer to the speaker, and vice versa, the distant deixis "that" is used. However, in some special cases, the speaker will deliberately violate this rule to express a certain utterance intention. In (6), the speaker uses the distal deixis "that" to refer to the expressions of the characters in front of him. Previous studies have used "psychological distance" to explain this phenomenon, which is considered to be a psychological rejection of the speaker's current behavior (Yule, 1996). However, this article intends to gain an in-depth understanding of it and believes that the underlying reason for this psychological distance is our social cognition, since psychological emotion itself is a feeling that has been given meaning by society (Stets, 2003). The fact that the wife in (6) is afraid of being looked at unlovely to be reprimanded by her husband for having her hair cut, so she does not want to see the expression made by her husband in front of her. The distal deixis "that" expresses the wife's fear or prayer for the husband. Likewise, in (7) the woman and the servant are in the same space and the distance between them two may not be too far apart, while the use of distal deixis "there" shows her rudeness to the servant. And it is her social identity with her servants that determines her rude behavior. People tend to form their attitudes towards members of different social groups through social group categorisation. Those groups they identify with are called ingroups, and those they disagree with are called outgroups. People usually reject or harbor hostile attitude toward members of outgroups (Tajfel & Turner, 1986). The hostess does not think she belongs to the same group as her servant, so even when confronted with them at a close distance, the hostess uses the distal deixis "there" to deliberately show the social distance between herself and heir servants. The above discourses are the characters' speech, which can be regarded as the characters' social cognition of each other. Readers' understanding of character's mental behaviour is based on the cognitive projection of this real-life social cognition knowledge to the fictional story world.

IV. CONCLUSION

Whether in daily-life communications or in reading narrative texts, the deictic projection or shift plays an essential role in interpreting deixis. Although in narrative discourse, the elaboration of deixis is more complicated, which draws the readers' attention not only to the process of the author's creation of discourse and construction of deictic centre, but also to the process of reading text and interpreting deixis meaning (Stockwell, 2002; Tsur, 2008). This paper argues that this conceptually deictic projection or shift is closely connected with our human's cognitive ability. More specifically, it is inseparable from embodiment and social cognition. Interpreting the meaning of deixis from a cognitive perspective broadens cognitive linguistics and cognitive poetics' research on the deixis issue, breaking the limitations of previous traditional single-disciplinary research. When applying one thing to another, people may be made to rethink the thing, including the theory or method, being applied, because new evidence for something always tells us more about that thing (Troscianko & Burke, 2017). From the perspective of cognitive linguistics, the cognitive study of deixis in narrative discourse expands the definition of deictic center and deictic context. While from the perspective of cognitive poetics, it provides the cognitive rationale for multiple interpretations of literary works.

ACKNOWLEDGEMENTS

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