

Rethinking the Cognitive Study of Metonymy

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Abstract—In traditional studies, metonymy is defined as pure figure of speech. But from cognitive approach, metonymy is believed to be a general conceptual phenomenon as metaphor and gradually promoted to the same status of metaphor. As the philosophical basis, embodied philosophy can clearly reveal the operation of metonymy. There are two significant characteristics of metonymy: contiguity and prominence. Metonymy has also been studied on its interaction with metaphor.

Index Terms—metonymy, embodied philosophy, contiguity, prominence, interaction

I. INTRODUCTION

In the early 1980s, Lakoff & Johnson put forward the conceptual metaphor in *Metaphor We Live by* (1980) for the first time, and elucidating the nature of metaphor comprehensively and systematically from the perspective of cognition, which contributed to a metaphor revolution in cognitive linguistics. By contrast, metonymy, as the cognitive way of thinking as metaphor, played a minor role in a long time. The research on metonymy is always covered under the wave of metaphor study. Since the 1990s, people began to realize that the cognitive value of metonymy. Some scholars attempt to promote metonymy to the same status as the metaphor. They suggest that metonymy is the human basic way of thinking and behavior, and plays an important role in the formation of the concept and understanding (Goossens, 1990; Croft, 1993; Dirven, 1993; Radden & Kovees, 1999; Koeh, 1999; Barcelona, 2000). Taylor (1995) proposed that metonymy is a meaning expansion mode more basic than metaphor; Barcelona (2003a) proposed the universality of metonymy characteristic; On this basis, Radden (2005) further reveals the conceptuality and universality of metonymy, and argues that metonymy in all aspects of the language structure has a rich form of expression, including the phoneme, word meaning, lexicon, morphology, syntax and pragmatics, etc.. It is an important mean of human conceptual system organization and operation. Wen Xu and Ye Kuang (2006) pointed out that "language is metonymy in nature and originated from metonymy. We should say that what we live in is metonymy rather than metaphor." (p.13). Wang Yin (2007) even asserted that we have every reason to say "metonymy we live by"(p.236).

II. TRADITIONAL STUDY OF METONYMY

The term "metonymy" first appeared in Plato's debates about the icon arbitrariness. From the perspective of etymology, metonymy comes from ancient Greece and means "change of meaning" (Ruiz de Mendoza & Otal, 2002, p.6). The definition of metonymy is from the book "rhetoric and explanation" by the anonymous author: "metonymy is one kind of figures of speech which obtain form of language from adjacent and connected things, through which we can manage the things unnamed by words." Metonymy is regarded by traditional research as rhetorical means, that is to replace the name of one thing with the name of the adjacent object. Therefore, metonymy as a special language phenomenon is a kind of deviation from normal language structure and the ornament of language. Metonymy involving the alternative relations between two things or two expressions, is considered to be the transfer of referential meaning. The research of metonymy at this stage is known as "substitution theory of metonymy" (Panther & Thornburg, 2007, p.237), namely the source and the target of metonymy in the same alleged object with the same referential effects. Panther & Thornburg (2007) argues that substitution theory of metonymy exists the shortage from the following two aspects: one is that substitution theory only pays attention to referential metonymy, while ignoring metonymy in predication level and speech act level; the second is metonymy is not only a kind of replace operation, it also contributes to understanding. The metonymy research at this stage mainly is limited in vocabulary level, and metonymy is considered a substitute for particular rhetorical effect.

III. COGNITIVE STUDY ON METONYMY

With the development of cognitive science and cognitive linguistics, metonymy is considered to be no longer the figures of speech in the traditional sense. Lakoff & Johnson (1980) first discusses the nature of metonymy, proposes that metonymy is based a cognitive process of conceptual contiguity. It is not only a linguistic phenomenon, but also a conceptual phenomenon. Lakoff (1987) demonstrates the cognitive features of metonymy through the typical effect, and regards metonymy as a form of Idealized Cognitive Model. Langacker (1999) regards metonymy as a cognitive reference point phenomenon, that is, a cognitive process of a conceptual entity providing mental channel for another conceptual entity. Radden & Kovees (1999) discusses the three essential characteristics of conceptual metonymy: metonymy is a conceptual phenomenon; metonymy is a cognitive process; metonymy is operated in the Idealized

Cognitive Model (ICM). Radden (2005) stressed that metonymy is one of the ways of thinking in which people understand the objective world, rooting in human cognition. Panther & Thornburg (2007) summarizes the qualitative characteristics of conceptual metonymy as follows: 1) conceptual metonymy is the psychological and cognitive process providing mental access from the source to the target in the same cognitive domain. 2) the relationship between the source and target is accidental, namely it is not a must in concept. 3) target is in the status of profiling, and the source of backgrounding. 4) metonymy connection strength between the source and target depends on the conceptual distance between source and target, and also the degree of profiling of the source. The results of the study mentioned have difference in expression, but they are consistent in terms of the essential features of metonymy, namely, metonymy is a conceptual phenomenon, and the means for people to understand the world.

Conceptual metonymy as an important way of thinking and human cognitive mechanism penetrates into all aspects of language. Gibbs (1994) pointed out that metonymy reasoning is a common phenomenon. Dirven (1999) deals with the universality of metonymy: "metonymy may play a role in all language levels". Radden (2005) demonstrates the general characteristics of metonymy through the example analysis from the aspects of phonetics, meaning, lexicon, morphology, syntax, pragmatics, etc. In the field of cognitive linguistics, initial research of metonymy focused on the definition of metonymy, the classification of metonymy, the relationship between metonymy and metaphor, the conceptual nature of metonymy, and so on. In recent years, the study on metonymy as a conceptual phenomenon shows the trend of diversification. Metonymy in pragmatic study (Gibbs, 1994; Panther & Thornburg, 1998, 2003b, 2003 e; Ruizde Mendoza & Otalet, 2002; Barcelona, 2003 b; Radden & Seto, 2003; Ruizde Mendoza, 2007), metonymy in textual study (Ungerer, 2000; Al Sharaifi, 2004; Otalet, J, 2005; Barcelona, 2005), metonymy in the literature study (Jakobson & Halle, 1971; Pankhurst asserts, 1999; Jakel, 1999; Lakoff & Turner, 1989), metonymy in translation research (Jiang Li, 2009; Gao Yuan, 2010; Tan Yesheng, 2010), cause more and more attention in linguistics, which have created a new field of vision in the research of conceptual metonymy.

A. *Embodied Philosophy---The Philosophical Basis of Metonymy*

There has the close relationship between language and philosophy. As deconstruction critic Paul DE Man (1978) said all forms of philosophy are in the blame, because they rely on the figurative expression to achieve the effect of the literature. Due to this issue, all literary form to a certain extent is philosophical, including metonymy. Therefore, metonymy and philosophy are inseparable. As a stage of development of philosophy, embodied philosophy can clearly reveal the operation of metonymy, as metonymy comes from our practice and experience. Humans have some basic concepts in the direct experience which might become the source domains of metonymy by which humans tend to understand the indirectly objective world and concepts. The basis of forming category and establishment in the process of the experience of the objective world is the generalization of the relevant properties of things often assembling together. Experience, in short, is an important source of metonymy. Metonymy provides a new experience for cognitive subject through the adjustment of cognitive domain, highlighting the one side and conversing cognitive point of view. Therefore, metonymy reflects one kinds of experience of people. It is the experience of people that shapes their cognitive conceptual system of the objective world. Embodied philosophy believes that the true interpretation of the world depends on people's understanding and experience. Therefore, experience is of great significance for people's understanding of the objective world and the pursuit of truth. Cognitive linguistics holds that language gradually formed based on people's experience of interaction with the world based on their sensory organs through cognitive processing gradually formed, is the result of multiple objective and subjective interaction, which comes to the conclusion inevitably that language is experiential basis (Wang Yin, 2008). In fact, metonymy has experiential characteristics.

Generally speaking, the word "embodied philosophy" first appeared in Lakoff and Johnson in 1999 published "Philosophy in the Flesh: The Embodied Mind and its Challenge to Western Thought". Embodied experience is very rich in content, and its core idea is summarized as three basic principles: mental embodiment, cognitive unconsciousness and metaphorical thinking. Lakoff and Johnson pointed out that each kind of experience (late tend to use the word "embodiment") happens under the background of cultural default ... we experience the world in this way, so that our culture has been experienced in the experience itself." (Qin Shengyong, Zhang Changjie, 2004, p.6) Based on Lakoff and Johnson's point of view, embodiment philosophy is the second generation cognitive science, and also the philosophical foundation of cognitive linguistics (Wang Yin, 2002). Lakoff and Johnson believe that human language depends on experience and perception which to a large extent restricts the language structure and meaning. Concept and meaning cannot be isolated from people's experience and perception to the outside world through the human body including human sense and mind through which human beings get a correct understanding of the outside world in the process of experience, and determines the corresponding concept and meaning of the concept and meaning on the basis of fully understanding the objective world, and form language by expressing using particular symbols as sounds and words (Yang Huiyuan, 2009).

B. *Contiguity in Metonymy*

The traditional rhetoric and cognitive linguistics both admit that metonymy is based on contiguity. But the differences are obvious for what is contiguity. Traditional rhetoric view thinks that contiguous relationship can take place in language, such as Jakobson says contiguity exists between language symbols. It is regarded contiguous relationship as the adjacency between the meanings of two words, between which metonymy occurs. Metonymy is

based on three kinds of contiguity: spatial contiguity, time contiguity and causal contiguity. Contiguity in cognitive view is first proposed by Lakoff and Johnson who believe that the basis of the concept of metonymy involves physical or causal link (Lakoff & Johnson, 1980). This definition is broad, including the contiguous inter- and intra- relationship among language, reality and concept. Lakoff (1987) proposed the idealized cognitive model, and its characteristics are: 1) humans organize the knowledge structure through ICM each of which is a complicated structure as a whole and has a gestalt structure; 2) ICM does not necessarily faithfully reflect the reality, but it is the highly simplification of some hypothesis of the background; 3) ICM includes not only the knowledge of specific areas, also the culture, customs, etc. On this basis, we believe that there are two kinds of contiguity: one is the contiguity between the overall ICM and its parts; the second is between the parts of the ICM. In ICM, contiguity is not the adjacent relation inside the language structure, but the proximity between the concepts. On the basis of the two contiguous relations, we can find the generation of metonymy has two integrated configurations: whole for part or part for whole, and part for part. These two comprehensive configurations can summarize all the relations of metonymy.

1. Accidental contiguity

Metaphor depends on the relations of similarity that generally have stable reasonable basis with variable degrees. However, the contiguity in metonymy can be built on the reasonable basis, such as the composition of the relationship between part and whole, specific causal proximity, etc., at the same time, it can be completely determined by an accidental encounter. The feelings experienced together produce a single result in the sense due to being close to each other are easy to be experienced again. The proximity of "experience" can be composed of two completely different things meeting by chance in the same time and space, such as a person walking through a park has contiguous relationship with the park. Both traditional rhetoric study of metonymy and cognitive study just focus on the stable adjacent relation, but without involving accidental neighboring relationship. According to different degree of stability, the stable adjacent relations can be further divided into two categories: one is the inherent relationship between things, mainly as the relationship between the whole and parts, the thing and its compositions, tools, materials, characteristics, such as the adjacent relations between "people" and the composition of body parts as "hand" "feet" "mouth" "tongue" which are the most stable, and in all cases cannot be cancelled. Another stability of the contiguity is less stable, such as the relationship between one thing and its associated characteristics, illustrated as humans and their spoken language, clothes, personality, etc., with the relative stability and the relative variability. The degree of stability of this kind exists between integral and part and accidental adjacent relations. Three kinds of degree of the stability of the contiguity can be expressed as: relationship between the whole and the parts > > relationship between things and the associated characteristics > > accidental neighboring relationship. From left to right, the stability of the adjacent relation in turn reduces.

2. Coordination of objective contiguity and cognitive subjective motivation

Contiguity exists everywhere, but not all of the contiguity can lead to the generation of metonymy. Contiguity is the coordination of the objective adjacent relation and the subjective motivation. The contiguity, either stable or accidental, which is realized and used by the subject of cognition in specific cognitive activities, may become the foundation of metonymy. The stable adjacent relation without the subject's realization cannot constitute a metonymy, such as if the obvious contiguity between "face" and "nose" does not make sense to specific cognitive activity, the subject won't be aware of the existence of the relationship. Likewise, if in a certain communicative activities two adjacent objects without stable relationship in the objective physical world are endowed with contiguous relations by cognitive activities, there is also contiguity between them. Therefore, the contiguity in metonymy is not a general objective relation, but the coordination of objective adjacent relation with subjective factors, that is, for the importance of a specific cognitive activity.

C. Prominence in Metonymy

The analysis above showed that contiguity embodied in each level with a variety of types. However, will the two contiguous objects with alternative relations definitely lead to the generation of metonymy? The answer is no. two contiguous objects may not be able to understand one object by the other. As for "people" as a whole, face, hands, feet, arms, legs, torso, etc. are the compositions which hold relationship with "people" as whole and parts. These parts belong to the category of "people". There is no doubt that these components themselves are also exist contiguity. But why can we use the "face", "hand" and "foot" refers to "man" as in "old face", "new hand" and "national foot" and rarely use "hand" to refer to "feet", or use the "mouth" to refer to the "nose"? We will not put "I hit him in the eye" into "I hit his ears", although "eyes" and "ears" with contiguity. Therefore, we believe that the establishment of metonymy should be on the basis of contiguity plus another condition: two objects with contiguity also have significant differences in prominence at the same time, that is, an object, compared with another object, has greater prominence in cognition. With this condition, we will be able to explain why some examples with contiguity do not occur to replace each other. In some cases, we can use "eyes" to stand for "person", as the characteristics of a person can be focused on the "eyes" which in turn have cognitive prominence; we cannot use "eyes" to stand for the "ears", as it is hardly to imagine that there exists significant difference in prominence between them in any circumstances. That cognitive linguists say "to understand one thing by another thing" or "one thing provides mental access to another thing" should be further explained as "to understand one thing with lower degree of prominence by another thing with higher degree of prominence" or "one thing with higher degree of prominence provides mental access to another lower degree of

prominence.”

IV. INTERACTION BETWEEN METAPHOR AND METONYMY

Jacobson's (1956) brief paper “The metaphoric and metonymic poles” was the first linguistic light signal in an age of objectivist structuralism and oncoming formalism. What is most remarkable is that Jacobson was the first to pay equal attention to both metonymy and metaphor, which was even impossible at the time of the metaphor revolution started by Lakoff & Johnson's canon shot known as *Metaphor We Live By* (1980). It took almost another twenty years to wholly correct the balance between metaphor and metonymy, and culminated in Panther & Radden's *Metonymy in Language and Thought* (1999) and Barcelona's *Metaphor and Metonymy at the Crossroads* (2000).

A recent tendency in cognitive linguistics which subsumes metaphor and metonymy as special cases of more general mental mapping mechanisms is the theory of “blending” or conceptual integration, which is an extension of Gilles Fauconnier's earlier work on mental space (Fauconnier, 1994) and has been developed by him and Mark Turner (Fauconnier 1997, Turner and Fauconnier 1995). This new theory seeks to explain how speakers and hearers keep track of referential values and build new inferences throughout discourse, often by construction provisional conceptual domains or “blends”.

A. John Taylor's Model

John Taylor is the first, in the cognitive linguistic world, to develop the idea of metonymy-based metaphors. He takes the concept of metonymy in a very broad sense, comprising, as a prototypical member, referential metonymy, either conventionalized cases or else conversationally relevant references. But Taylor also links these metonymic cases with pre-metonymic phenomena. Pre-metonymic phrases are expressions denoting activities to an object's part by naming the whole object as in *Could you fill, wash, vacuum-clean, and service the car?* These are instances of conceptual “modulation” (Cruse) or “active zone highlighting” (Langacker). In his view on metaphor, Taylor mainly explores an original avenue, i.e. to what extent metonymy forms a basis for metaphor. John and Lakoff (1987) suggest that most metaphors are based on image schemas such as containment, motion, proximity and distance, linkage and separation, front-back orientation, part-whole relations, linear order, up-down orientation, etc. Taylor's thesis is that in many cases there is a metonymic relation between the notion of verticality and the metaphoric extensions into notions of quantity, evaluation, and power. Taylor wonders to what extent metaphors are based on metonymies more general. This question was systematically discussed by Goossens.

B. Patterns of Interaction in Linguistic Action

At the same time that Taylor (1989) developed his view of a strong interaction between metonymy and metaphor, Louis Goossens (1990) built up the aptly named concept *metaphonymy*, which is entirely based on the conceptual structuring of the domain of communication, or in Goossens' terminology, linguistic action. He proposes four different types of interaction: metaphor from metonymy, metonymy within metaphor, metaphor within metonymy, and de-metonymisation.

C. Nick Riemer's Model

Nick Riemer concentrates, just as Barcelona, Taylor, Radden, Goossens, and Geeraerts, on the demarcation problem between metaphor and metonymy. Whereas Warren concentrates on the differences between metaphor and metonymy, and Goossens on their intertwining, Riemer is, just like Barcelona, more interested in the ambiguities, overlapping and uncertainties of metaphor and metonymy status. For this purpose he concentrates on an area of great doubt, i.e. dead metonymies and dead metaphors, or in the terminology he proposes post-metonymies and post-metaphors. A post-metonymy is found in expressions such as to kick someone out of his flat, where the literal action kicking could, in extreme cases, lead to expulsion. This is a dead metonymy in which it is not a real act of kicking, but psychologically or juridically forceful action that causes the effect of expulsion. In spite of this uncertain metonymic status, the notion of metonymy remains valid, since the action stands for the effect.

D. Gunter Radden's Model

Gunter Radden sees four different types of metonymic basis for metaphor: a common experiential basis, an implicature basis, a category structure basis, and a cultural model basis.

A common experiential basis of the two domains involved can consist of either a correlation between two domains or the complementarity of two counterparts. Correlational metaphors which have a metonymic basis are, for instance, MORE IS UP, FUNCTIONAL IS UP, IMPORTANT IS BIG, ACTIVE IS ALIVE, SIMILARITY IS CLOSENESS, etc. Complementary elements like lovers or body and mind form a strong unity, which is at the basis of conceptual metaphors such as LOVE IS A UNITY or THE MIND IS A BODY, as found in expressions such as *have a strong will* or *handle a situation*.

Implicature, as is well known, accounts for many historical changes and extensions. Thus, the meaning extension of *go* to the sense of futurity as in *It is going to rain* has been shown to involve stages of context-induced reinterpretations arrived at by implicature. Implicature may be based on sequential events as in seeing something and then knowing it, which gives rise to the metaphor KNOWING IS SEEING. Another type of implicature is based on the relation between

events and their results, which gives rise to the metaphor HOLDING IS POSSESSION as in *to hold power*. The most common type of implicature may well be the metonymic link between a place and an activity performed at the place as in *to go to the church* or *to go to the bed*, which gives rise to the metonymy-based metaphor PURPOSES ARE DESTINATIONS.

Category structure is the relation between a category and in-members. This relationship of inclusion is often exploited in metonymy so that a member of a category may stand for the whole category or vice versa. This relationship is further exploited as metaphorisation process as in *to have a say in something*, in which one specific form of communication stands for the communication of one's opinion.

Cultural models are understood as widely shared models of the world and relations in it, which influence members of a society in their understanding of the world and their behavior. These cultural models are manifest, first of all, in physical forms, which are seen as an internal force or impetus in objects. Thus FORCE is metaphorically seen as A SUBSTANCE CONTAINED IN CAUSE, e.g. *His punches carry a lot of force*.

E. Dirk Geeraerts's Model

Whereas Dirven, in the wake of Jakobson's ideas, linked the metaphoric pole to paradigmatic relations and metonymic pole to syntagmatic ones, Geeraerts analyses both metaphor and metonymy in composite expressions along both their paradigmatic and syntagmatic axes. According to Geeraerts, the interaction between metaphor and metonymy can occur in three different ways: in consecutive order, in parallel order, or interchangeably. Geeraerts compares his prismatic model to Goossens' metaphonymy concept. The main difference is that Goossens sees mainly one path, i.e. from metonymy to metaphor, whereas Geeraerts exploits their interaction in all possible directions.

F. Barcelona's Patterns of Interaction

Barcelona (1996) proposes that the patterns discussed by Lakoff & Turner (1989) and more systematically by Goossens (1990) can be classified into these two main types: interaction at the conceptual level and purely textual co-instantiation of a metaphor and a metonymy in the same linguistic expression.

The most important type is the first one, which is the interaction at the conceptual level. There are two subtypes of metaphor-metonymy interaction at this level: the metonymic conceptual motivation of metaphor and the metaphorical conceptual motivation of metonymy.

V. CONCLUSION

Metonymy is traditionally viewed as a figure of speech that involves a process of substituting one linguistic expression for another. It was basically thought of as a matter of language, especially literary or figurative language. In the last decades, with the advent of cognitive linguistics, it is generally believed that metonymy as well as metaphor in more than a linguistic device. Contemporary cognitive linguistics generally views both metaphor and metonymy as fundamental to the structuring of our conceptual knowledge. As the basis of metonymy, embodied philosophy makes contribution to the operation of metonymy. Both contiguity and prominence are believed to be the necessary characteristics for determining metonymy. In addition, the interaction between metaphor and metonymy has got great attention from cognitive linguists who propose different patterns of interaction.

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