Metonymic-Based Metaphor—A Case Study on the Cognitive Interpretation of "Heart" in English and Chinese

Li Qian¹

¹ Center for Lexicographical Studies, Guangdong University of Foreign Studies, Guangzhou, Guangdong, China Correspondence: Li Qian, Center for Lexicographical Studies, Guangdong University of Foreign Studies, Guangzhou, Guangdong, China. E-mail: lqchristina@gdufs.edu.cn

Received: October 10, 2016 Accepted: October 13, 2016 Online Published: November 21, 2016

Abstract

English is particularly rich in both metonymic and metaphorical expressions making use of the concept *heart* to speak of emotional issues (Niemeier, 2000). It is not difficult to find a large number of Chinese linguistic expressions in terms of "\(\digcup\)" (xin) (heart)" to refer to emotion or other concepts. In the present study, under the categorization of heart by Niemeier (2000), we took some examples of heart in Chinese and gave a comparison between the metonymy-based conceptual metaphors in these two languages. This study found some positive evidence for the metonymic base for metaphors. In addition, there are some different interpretations of Chinese heart expressions due to the specific culture background.

Keywords: metaphor, metonymy, metonymic-based metaphor

1. Introduction

Metaphor is not just related with language. From a broader perspective, human beings think in a metaphorical way (Lakoff & Johnson, 1980, p. 6). Metaphor can be seen everywhere in our daily life. As such, it becomes one of the major topics in cognitive linguistics. Meanwhile, researchers found that as compared to metaphor, metonymy is another popular cognition phenomenon (Panther & Radden, 1999). Recently, researchers pay increasing attention to the relationship between metaphor and metonymy.

2. Metaphor and Metonymy

2.1 Metaphor

We need to distinguish a linguistic metaphor from a conceptual metaphor. Linguistic metaphor is a rhetoric device which is used in spoken or written language. But conceptual metaphor is not much concerned with words in language use.

With a conceptual metaphor, the words that are used are often of little interest, what is important is the abstract underlying relationship(s) between two concepts or entities, for example, the relationships like PEOPLE ARE PLANTS that underlie expressions, such as "she's blooming" or "he's a budding journalist" (Littlemore & Low, 2006b). With linguistic metaphor, the entities may have to be inferred, but with conceptual metaphor, they almost always have to be inferred, leading to frequent arguments concerning their optimal specification. The two main components of a conceptual metaphor are by convention written in capital letters (e.g., LOVE IS JOURNEY) and constitute separate domains.

Conceptual metaphors can be said to represent ways of thinking, in which people typically construe abstract concepts such as time, emotions, and feelings in terms of more easily understood and perceived concrete entities, such as places, substances, and containers (Lakoff & Johnson, 1980; Lakoff, 1993). They are conventionally expressed through an A IS B structure. Lakoff (1993) describes the relationship between the two domains (source and target domains) of a conceptual metaphor as a "function", where specific features of the source domain are transferred to (or mapped onto) the target domain.

We may note that the exact words used to describe the two domains in a conceptual metaphor (like TIME and MONEY) are not so important (Littlemore & Low, 2006b). There is another case for the linguistic metaphors. For the linguistic metaphor, the exact words are so crucial to constitute the metaphor. Indeed, a conceptual

metaphor is deviated from actual exemplars (Littlemore & Low, 2006b). Conceptual metaphors are concerned with various domains across different language backgrounds.

It is hard to identify the essence of the relationship between linguistic and conceptual metaphor (Littlemore & Low, 2006b). For a linguistic metaphor in a discourse, we may search for an underlying conceptual metaphor and/or figuring out connections with other parts of the discourse. However, the conceptual metaphor will not be highly connected with the elements in the discourse (Littlemore & Low, 2006a). More subtly, linguistic metaphors are related with specific features of the local context (Cameron, 2003).

2.2 Metonymy

Metonymy has received much less attention from cognitive linguistics than metaphor, although it is probably even more basic to language and cognition (Barcelona, 2000, p. 4; Niemeier, 2000). Unlike metaphor, metonymy has always been described in conceptual, rather than purely linguistic, terms (Radden & Kovecses, 1999). "Metonymy is a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same domain or ICM" (Kovecses & Radden, 1998, p. 39). In other words, metonymy consists of a mapping within the same experiential domain or conceptual structure. In principle, either of the two conceptual entities related may stand for the other, i.e., metonymy is basically a reversible process (Radden & Kovecses, 1999).

In the relevant contemporary literature, two major approaches to metonymy can be distinguished depending on whether the nature of the conceptual relationship between two entities or the range of the semantic extension between them is used as the main criterion (Feyaerts, 2000, p. 62). The two approaches share something in common, that is the schematic representation of a metonymic relationship as "A stands for B". By the first approach metonymy is depicted in terms of "contiguity" and thus the nature of the relationship between the concepts involved appears as the focus. It derives from the traditional structuralist theories in which "linguistic meaning is seen as applying to an objective reality" (Feyaerts, 2000, p. 62). In this view, the notion of contiguity appears to be limited to an observable, real-world relationship between two referents (Feyaerts, 2000).

The second approach was developed in cognitive semantics and treats metonymy from the perspective of the conceptual extension involved. More specifically, it defines metonymy as a "conceptual extension taking place within the boundaries of a single domain matrix and bringing about a referential shift" (Feyaerts, 2000, p. 62). Corresponding to this definition, metaphor is then defined in terms of "an extension taking place between different domain matrices" (p. 62). However, there exist some problems with the use of the notion of domain matrix as the key element in the distinguishing metaphor from metonymy (Feyaerts, 2000).

3. Metonymic-Based Conceptual Metaphor

Although there is now a consensus about the important role metaphor and metonymy play in human conceptualization, more discrepancies exist concerning the relationship between metaphor and metonymy, "both of which represent mental strategies that are considered to facilitate understanding and that carry extra information as opposed to more 'neutral' ways of expression" (Niemeier, 2000).

First of all, it is admitted that metaphor and metonymy are different on several aspects. According to Lakoff and Johnson (1980),

"Metaphor and metonymy are different kinds of processes. Metaphor is principally a way of conceiving of one thing in terms of another and its primary function is understanding. Metonymy, on the other hand, has primarily a referential function, that is, it allows us to use one entity to stand for another. But metonymy is not merely a referential device. It also serves the function of providing understanding" (p. 36).

Another difference is that metonymy is established on contiguity whereas metaphor is based on similarity (Fass, 1997). Contiguity and similarity are two kinds of association. Contiguity refers to a state of being connected or touching whereas similarity refers to a state of being alike in essentials or having characteristics in common (Fass, 1997).

The above difference does not mean an absolute separation between these two processes. Contrast with the traditional view about the separation between metaphor and metonymy, some researchers have put forth the argument that metonymy and metaphor may compose a continuum with unclear of fuzzy cases in between. Metonymy and metaphor may be seen as prototypical categories at the endpoints of this continuum (Radden, 2000). Metaphor and metonymy are closely related with each other. Sometimes, it is even so hard to distinguish a metonymic expression from a metaphoric one or vice versa. To explore the origin for this continuum, some researchers have conducted studies on both metaphor and metonymy interpretation. For example, the conceptual metaphor SEEING IS KNOWING. This metaphor may have a metonymic concept because of the fact that, in

many cases, we have to see something in order to identify it (Kovecses, 2002, pp. 157-158), evaluate it, or draw conclusions about what to do next. As a result, the intermediate notion of metonymy-based metaphor appears. Metonymy-based metaphor involves two conceptual domains which are rooted in one conceptual domain (Radden, 2000, p. 93). This notion overcomes at least part of the problems created by distinguishing one's study to either metaphor or metonymy (Radden, 2000). And a large number of studies concerning the metonymic motivation for conceptual metaphor have received great attention in cognitive linguistics (Barcelona, 2000; Debus, 2013).

According to Lakoff and Johnson (1980, p. 39), the grounding of metonymic concepts is "in general more obvious than is the case with metaphoric concepts, since it usually involves physical or causal association". Metaphors which are grounded in metonymy are more basic and natural than those which do not have a metonymic basis: with these, metonymy provides an associative and motivated link between the two conceptual domains involved in metaphor (Radden, 2000, p. 93).

In Barcelona (2000), the metonymic motivation is discussed in details. Instead of being necessarily tied up with a sequential ordering of the mappings, the metonymic motivation and metaphor itself may occur simultaneously. In other words, the metonymic understanding of the source or the target domain in a metaphor need not have become conventionalized chronologically prior to the conventionalization of the metaphor (Barcelona, 2000, p. 31). We rely on metonymical aspects to understand metaphors by "finding another domain whose abstract image-schematic structure at least contains the same substructures" (p. 31).

According to Barcelona (2000), there are two main kinds of metonymic motivation for metaphor. In one kind, a metonymic model of the target domain of the metaphorical mapping has been claimed to motivate and constrain the choice of the source domain in the metaphor (e.g., sweet music, loud color). The metaphor does not really develop "out of" the metonymy. It is simply motivated and constrained by the metonymic model of the target (p. 40). In the other kind, the metaphor comes into existence as a generalization of a metonymy. The generating metonymy takes place within what eventually becomes the target domain in the metaphor. But it is developed into a metaphor thanks to a further metonymy taking place within the metonymic source domain (Barcelona, 2000, p. 44).

Some linguists have uncovered the metonymic motivation of most metaphors for emotion (anger, happiness, sadness, love, pride, fear, etc.) on the basis of physiological or behavioral responses to emotions (Barcelona, 2000).

Kovecses (1995) studies emotional metaphors in different languages (in English, Chinese, Japanese, Hungarian, Tahitian and Wolof). In different language, those emotional metaphors seem to be constrained by physiological responses to anger. Dirven (1985) studied 24 senses of the English word cup, which developed over time from the original sense, i.e., that of a prototypical cup with its typical shape and function (drinking). In most cases, the extensions due to metonymy and synecdoche preceded those due to metaphor. Dirven (1985, p. 103) noticed that in all the metaphorical extensions "some characteristic features of the concept cup are in their entirety or partial aspects transferred to other domains". All of the metaphorical extensions consisted of a transfer of some aspect of the cup, that is, they presupposed a metonymic understanding of the cup (Barcelona, 2000). In a diachronic study of metonymic extensions, Goossens (1995) found that many metonymic extensions are prior to metaphorical ones. Pauwels (1995) also emphasizes the metonymic motivation of metaphor in a number of instances. Rudzka-Ostyn (1995) did a historical analysis of the metaphorical semantic extension of English verbs of answering to other semantic domains, and found that under an extended (i.e., not necessarily referential) notion of metonymy "any extension affected by abstraction, metaphoric or not, can be seen as involving a metonymic dissociation" (p. 241). Taylor (1995) gives some examples of metonymy-based metaphors, noting that this seems to be a typical, rather than an exceptional pattern. Allan (1995) studies the semantic extensions of back. It is found that this type of extension presupposes a metonymic understanding of the concept BACK as fundamentally "non-interactive" (Barcelona, 2000).

To conclude the previous studies on metonymy-based metaphors and his own study results, Barcelona (2000, p. 52) find several grounds for the claim that metaphorical mappings are necessarily based on metonymy:

- 1) There are a large number of metonymy-based metaphors. This is common and cannot be a casual fact.
- 2) Metaphors are normally "partial", i.e., they focus on just one or a few aspects of the target.
- 3) Metaphors are based on experience.
- 4) Both perception and mental activation are normally "partial".

4. Case Study on "Heart" in English and Chinese

From Kovecses' series studies, we may find that studies on emotion can serve as a good example for the analysis on metonymy-based metaphor.

Niemeier (2000) studies the metonymic basis for various metaphors involving *heart*. She also concerns about that how the language user's understanding, as a metaphor or as a metonymy, of a given linguistic expression including vocabulary from *heart* domain, depends upon the degree of his/her awareness of the subtle intermediate conceptual steps linking the source to the target. Based on the analysis on a large corpus of linguistic expressions involving *heart* as a domain in metaphor and/or metonymy, the study pays attention to the interaction between various metaphors and different aspects of the folk model of *heart*. In her study, all the linguistic expressions are arranged into four overlapping categories, established on the basis of strength of the metonymic motivation of the corresponding metaphors. This metonymic motivation becomes increasingly less obvious as one moves from the first category, in which it is clearly perceivable, to the fourth one, in which it is quite remote.

In her study, Niemeier claims that, in many cases, metaphor results from the generalization of a metonymy.

"While the folk model of *heart* as the site of emotions does not qualify as a cultural universal, it is nevertheless found in many different cultures" (Niemeier, 2000, p. 195). English is particularly rich in both metonymic and metaphorical expressions making use of the concept *heart* to speak of emotional issues (Niemeier, 2000). This statement serves as the motivation for choosing *heart* as the study topic. In the five-thousand-year history of China, it is also not difficult to find a large number of Chinese linguistic expressions in terms of "心" to refer to emotion or other concepts. Thus, in the following section, under the categorization of *heart* by Niemeier (2000), we would like to take some examples of *heart* in Chinese and give a comparison between the metonymy-based conceptual metaphors in these two languages. All the examples are four-word Chinese idioms or phrases which are extracted from *Modern Chinese Dictionary* (1999). Most of the English examples are mainly from Roget's Thesaurus.

Heart as a metonymy for the person

On the most specific level of meaning, *heart* stands metonymically for the whole person (Niemeier, 2000). It is the most salient body part in the folk model understanding of emotions. In English culture, the most prototypical emotion connected with *heart* is love (Niemeier, 2000). In Chinese culture, this emotion may be broadened into all the precious feelings among people. Let us take the following examples:

Ex 1: set one's heart on somebody

Ex 2: great heart

Ex 3: 心心相印 (xīn xīn xīang yìn) (to be in love with each other so that the two hearts are matching)

Ex 4: 心有灵犀 $(x\bar{i}n\ y\check{o}u\ ling\ x\bar{i})$ (hearts which beat in unison are linked so that two people understand each other well and think of the same idea spontaneously)

In the English examples, *heart* is conceptualized both as A MOVABLE OBJECT or CHANGEABLE IN SIZE (Niemeier, 2000). In Ex 1, the movement of *heart* refers to the movement of one's attention or love and in Ex 2, *heart* is supposed to be changed in size so as to arrive at a large size and to house a variety of good feelings. But in Chinese examples, instead of standing for A MOVABLE OBJECT, *heart* is conceptualized as AUTONOMOUS ENTITY. In Ex 3 and 4, the two persons in love or in close relation can still own their hearts but in a special way—to echo and match even in distance. This kind of showing love to each other is so different from that of Western cultures: in Chinese culture, love is hidden deeply at the bottom of heart, rather than expressed openly. At this point, difference in cultures results in the different metaphorical interpretations of *heart* in English and Chinese.

Heart can not only stand for love, but some other feelings either positive or negative. Let's first look at the following examples:

Ex5: soft heart

Ex 6: heart of iron, heart of stone

Ex 7: 心慈手软 (xīn cí shǒu ruǎn) (to describe a person with soft heart and soft action)

Ex 8: 铁石心肠 (tǐe shí xīn cháng) (to describe a person who has a heart of iron)

Ex 9: 刻骨铭心 (kè gǔ míng xīn) (to describe something unforgettable which is carved in the heart)

The above examples show the sub-folk model of HEART AS AN OBJECT. This object may be made of soft or hard material. In both English and Chinese cultures, soft material is metaphorically related with the feeling of tenderness and reacting positively and voluntarily to people's need. Therefore, *heart* (in Ex 5 and 7) stands for the benevolence, sympathy or compassion. In contrast to soft material, heavy and hard materials are metaphorically connected with an unyielding attitude and "hard" feelings. Thus, *heart* (Ex 6 and 8) in this sense stands for the coldness or stubborn attitude both in English and Chinese examples. In addition, Ex 9 in Chinese culture is different from the above conceptualization. Hard materials (such as stone, iron, steel) in Chinese culture are not only metaphorically endowed with coldness, cruelty but also a firm and strong willing and some unforgettable characteristics.

Just as we cannot possibly perceive every detail of a percept at the same time (Gregory, 1998), we probably cannot activate every subdomain of a domain at the same time in our minds. This parallel between perception and mental activation probably makes it inevitable to select metonymically both the aspects of the target domain to be "elucidated" by means of a metaphor, and the main subdomains of the source to be mapped onto the target (Barcelona, 2000, p. 52).

In Ex 8 and 9, the hardness of the material is reinterpreted into two senses—the coldness in attitude and firmness in attitude. The two types of hardness are metaphorically mapped onto the domain of *heart*. Further, "these metaphors are again used metonymically insofar as they pick out one salient detail of a person's disposition which then stands for the whole moral outfit of that person" (Niemeier, 2000, pp. 201-202).

Heart as a LIVING ORGANISM

Different sub-folk models focus on different aspects of the general folk model of *heart* as an organism (Niemeier, 2000).

Ex 10: heart-burning

Ex 11: an aching heart

Ex 12: pierce the heart

Ex 13: 心急如焚 (xīn jí rú fén) (similar to heart-burning)

Ex 14: 心病难医 (xīn bìng nán yī) (mental worries cannot be cured by medicine)

Ex 15: 心如刀割 (xīn rú dāo gē) (feel as if a knife were piercing one's heart)

The metonymic effects on perceivers also depend on our sensory experience in both domains (Barcelona, 2000). In the above metaphors, heart exists independently to have its own feeling. One's heart can be hurt or destroyed by various means: one's heart may break, ache, bleed or be pieced or burned. All the above metaphors (except Ex 16) are based on a prior metonymic understanding: "one experiences a certain kind of physiological pain when hurt or disappointed, or when suffering a loss, and subjectively this pain is interpreted as stemming from diverse types of weapons and is thus experienced and expressed differently" (Niemeier, 2000, p. 204). Chinese and English metaphors above are similar to each other and they all share the same metonymic base, because the basic feelings resulting from aching, being pierced and burned are the same among different cultures. When heart is conceptualized as a LIVING ORGANISM, the metonymies involved are less basic ones and often rely on double metonymizations (Niemeier, 2000, p. 204) or even appear as metaphors. Nevertheless, the underlying metonymic basis is kept intact in both Chinese and English examples.

Heart as an object of value

At a more general level of conceptualization, heart is treated as a kind of treasure chest containing something of great value to its owner and possibly also to other people.

Ex 16: to win someone's heart

Ex 17: to steal every heart

Ex 18: 心血之作 (xīn xuè zhī zuò) (refers to the valuable achievement after painstaking work)

Ex 19: 心肝宝贝 (xīn gān bǎo bèi) (refer to the most valuable things or used by parents to refer to the dearest child)

In Chinese culture, it is more salient and common to connect the treasure, or valuable achievement or dearest person with heart and blood. In Chinese culture, even in ancient times, the heart and blood are placed in a holy status with respects. In English examples, because of its value, hearts can be won or stolen in order to be taken control by other people. *Heart* in the above examples is seen as an entity and as an object of value. This level of

meaning is rather culture-specific because the notion of value is highly culture-determined asset. In every day usage, the meanings in the sub-folk models are often mixed up. Nevertheless, these meanings are all well based in the construal of our everyday experiences. In the above examples, the metonymic bases are not as noticeable and obvious as that in the first and second category, but they are still present in the general understanding of these expressions (Niemeier, 2000). For example, without knowing the metonymic base of *heart* in Chinese culture, a foreigner cannot understand why Chinese parents treat their children as "心肝宝贝" (xīn gān bǎo bèi).

Heart as a CONTAINER

CONTAINER is one of the most pervasive and common metaphors in everyday language usage. It can also be applied to the human body and its major parts, such as the head, the heart, the chest may all been seen as containers.

Ex 20: to open one's heart

Ex 21: a heart overflowing (with gratitude)

Ex 22: find somebody in one's heart

Ex 23: 心胸狭窄 (xīn xīong xía zhaǐ) (a narrow/small-sized heart; to describe a person who is not willing to accept, or even be hostile to any opposite suggestion or criticism; the opposite of "generous" to some extent)

Ex 24: 心满意足 (xīn mǎn yì zú) (to be fully satisfied)

Ex 25: 敞开心扉 (chẳng kaī xīn feī) (to open one's heart)

In all the above examples in both English and Chinese, *heart* is viewed as a container. Some containers are with lids (in Ex 20, 25); some can be filled (Ex 21, 24); some can be measured (Ex 23); some can be further regarded as a storehouse (Ex 22). In different sub-folk models, *heart* can be viewed as different types of containers (Niemeier, 2000, p. 207). We may deal with different facets of the conceptualization of *heart* as a CONTAINER, such as an INTERNAL CONTAINER, STOREHOUSE CONTAINER.

As compared with the culture-specific nature of *heart*, the container schema seems to be a more universal type of schema. The container schema is not unique to the folk model of *heart* but applies to lots of different contexts. In this sense, the underlying metonymies are not as obvious as the other categories. This category seems to be dependent on the existence of the other categories which provide its metonymic basis (Niemeier, 2000, p. 209).

5. Conclusion

Niemeier (2000) explores the metonymic base for metaphor on the case study of *heart* in English expressions. This study finds a metonymic perspectivization in the folk model of *heart*. Her study is only focused on the English expressions and English conceptualization. The present study elaborates the examples in both English and Chinese in order to find whether there are metonymic bases in Chinese expressions of *heart*.

The study has found some positive evidence for the metonymic base for metaphors. In addition, there are some different interpretations of Chinese *heart* expressions due to the specific culture. Radden (2000) claimed that for metonymy-based metaphors, the conceptual domains are interrelated by a cultural model. Quinn and Holland (1987, p. 4) define cultural models as "presupposed, taken-for-granted models of the world that are widely shared [...] by the members of a society and that play an enormous role in their understanding of that world and their behavior in it". This definition shall include folk model as naive theories of the world. Cultural models can only play this "enormous" cognitive role if their elements are closely interconnected and seen as belong to the same domain of experience (Radden, 2000, p. 103). In different cultures, the metaphor of *heart* results from different experience and metonymic bases (Bartolomeo, 2008). Last, one point should be noted that the metonymic-base does exist but does not exist in every metaphor (Barcelona, 2000).

References

Allan, K. (1995). The anthropocentricity of the English word(s) back. *Cognitive Linguistics*, 6, 11-31. https://dx.doi.org/10.1515/cogl.1995.6.1.11

Barcelona, A. (2000). On the plausibility of claiming a metonymic motivation for conceptual metaphor. In Barceloca (Ed.), *Metaphor and metonymy at the crossroads: A cognitive perspective*. Mouton de Gruyter.

Bartolomeo, P. (2008). The neural correlates of visual mental imagery: An ongoing debate. *Cortex*, 44, 107-108. https://dx.doi.org/10.1016/j.cortex.2006.07.001

Cameron, L. (2003). Metaphor in Educational Discourse. London: Continuum.

- Debus, D. (2013). Thinking about the past and experiencing the past. *Mind and Language*, 28, 20-54. https://dx.doi.org/10.1111/mila.12006
- Dirven, R. (1985). Metaphors as a basic means of extending the lexicon. In Paprotte, & Dirven (Eds.), *The ubiquity of metaphor. Metaphor in language and thought.* Amsterdam/Philadelphia: John Benjamins Publishing Company. https://dx.doi.org/10.1075/cilt.29.06dir
- Fass. (1997). Processing metonymy and metaphor. Alex Publishing Corporation London.
- Feyaerts. (2000). Defining the Inheritance Hypothesis: Interaction between metaphoric and metonymic hierarchies. In Barceloca (Ed.), *Metaphor and metonymy at the crossroads: A cognitive perspective*. Mouton de Gruyter.
- Goossens, L. (1995). From three respectable horses' mouth. Metonymy and conventionalization in a diachronically differentiated data base. In Goossens et al. (Eds.), *By word of mouth. Metaphor, metonymy and linguistic action in a cognitive perspective*. Amsterdam/Philadelphia: John Benjamins Publishing Company. https://dx.doi.org/10.1075/pbns.33.07goo
- Kovecses, Z., & Radden, G. (1998). Metonymy: Developing a cognitive linguistic view. *Cognitive Linguistics*, 9, 37-77. https://dx.doi.org/10.1515/cogl.1998.9.1.37
- Kovecses, Z. (1995). Anger: Its language, conceptualization, and physiology. In Taylor, & Maclaury (Eds.), *Language and the cognitive construal of the world* (pp. 181-197). Berlin: Mouton de Gruyter.
- Kovecses, Z. (2000). The scope of metaphor. In Barceloca (Ed.), *Metaphor and metonymy at the crossroads: A cognitive perspective*. Mouton de Gruyter.
- Lakoff, G. (1993). The contemporary theory of metaphor. In Andrew Ortony (Ed.), *Metaphor and thought* (2nd ed., pp. 202-251). Cambridge University Press. https://dx.doi.org/10.1017/cbo9781139173865.013
- Lakoff, G., & Johnson, M. (1980). Metaphors we live by. The University of Chicago Press.
- Littlemore, & Low. (2006a). Metaphoric Competence, Second Language Learning, and Communicative Language Ability. *Applied Linguistics*, 27, 268-294.
- Littlemore, & Low. (2006b). Figurative thinking and foreign language learning. PALGRAVE MACMILLAN.
- Niemeier. (2000). Straight from the heart—Metonymic and metaphorical explorations. In Barceloca (Ed.), *Metaphor and metonymy at the crossroads: A cognitive perspective*. Mouton de Gruyter.
- Panther, K., & Radden, G. (1999). *Metonymy in language and thought*. Amsterdam/Philadelphia: John Benjamins Publishing Company. https://dx.doi.org/10.1075/hcp.4
- Pauwels, P. (1995). Levels of metaphorization. In Goossens et al. (Eds.), *By word of mouth. Metaphor, metonymy and linguistic action in a cognitive perspective*. Amsterdam/Philadelphia: John Benjamins Publishing Company. https://dx.doi.org/10.1075/pbns.33.05pau
- Quinn, N., & Holland, D. (1987). Culture and cognition. In Holland, & Quinn (Eds.), *Cultural models in language and thought*. Cambridge University Press. https://dx.doi.org/10.1017/cbo9780511607660.002
- Radden, & Kovecses. (1999). Towards a theory of metonymy. In Panther, & Radden (Eds.), *Metonymy in language and thought*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Radden, G. (2000). How metonymic are metaphors? In Barceloca (Ed.), *Metaphor and metonymy at the crossroads: A cognitive perspective*. Mouton de Gruyter.
- Rudzka-Ostyn, B. (1995). Metaphor, schema, invariance: The case of verbs of answering. In Goossens et al. (Eds.), *By word of mouth. Metaphor, metonymy and linguistic action in a cognitive perspective*. Amsterdam/Philadelphia: John Benjamins Publishing Company. https://dx.doi.org/10.1075/pbns.33.08rud
- Taylor, J. (1995). Linguistic Categorization. In Prototypes in linguistic theory (2nd ed.). Oxford, Clarendon.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/4.0/).