Metonymy and meaning construction in Persian nominal compounds: A close-up on one-part metonymical combinations

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Metonymy has been discussed as one constitutive process among others in the formation of figurative compound meaning in previous research. An explicit focus on the qualitative types of metonymic processes involved in the construction of compound meaning, however, has so far not been pursued. The current study zooms in on metonymy as a constitutive phenomenon of compound meaning taking Persian compounds as a test case. An analysis of 166 Persian noun-noun compounds that contain one metonymical part is geared at answering the question of whether the type of metonymy affects the construction of meaning in the metonymical compounds. The analysis reveals that there are different degrees of metonymic complexity, based on the relation between the metonymical element and the referent. While in some cases, the metonymical constituent does not match with the referent, there are other cases where the metonymical named element represents the referent name in a subordinate relation or is expressed directly in the referent name. In addition, metonymical complexity depends on the prototypical nature of the metonymic association in the frame-based combination of the compound constituents. These two factors imply that a continuum can be postulated that ranges from simple metonymies to complex metonymies.

Keywords: metonymy, compounds, Persian, meaning construction

1. Introduction

Since the 1980s, metonymy and metaphor have been considered as key conceptual mechanisms in cognitive semantics as initially laid out in Lakoff and Johnson (1980). They define metonymy as a 'stand for' relationship in which one named entity is used to refer to another (1980: 36). Later, following further development in Cognitive Linguistics, the definition and formulation of metonymy became more diversified (see section 2). Surveys such as that conducted by Drożdż (2014) show that cognitive linguists have still not reached a complete consensus on the definition of metonymy even though there is general agreement on the essential role of metonymy for encoding meaning in language. Among various language forms that highlight the role of conceptual metonymy, the semantics of compound words has been a major interest. Some previous studies have discussed the immanent role of conceptual metonymy (and metaphor) in the meaning of compounds (see section 3). However, research so far has not highlighted the potential qualitative difference of metonymical relations in compound meaning construction. To shed some light on this semantic question, this study is based on a dataset of 166 Persian noun-noun compounds that contain one metonymical part. The analysis of the data aims at clarifying the kind of metonymical relation and the simplicity/complexity of meaning construction in compounds.

The paper first gives a brief overview of how conceptual metonymy is defined in cognitive linguistics (section 2). This is followed by a discussion on the representation of metonymical associations in the meaning of compounds (section 3). Section 4 outlines the methodology used for this study, and section 5 is devoted to the analysis of the selected Persian

metonymical compounds. Central to that will be the discussion of how metonymy relates to the simplicity/complexity of meaning construction in compound words.

2. Metonymy in cognitive linguistics

In the traditional view, metonymy was regarded as a figure of speech in rhetoric that leads to "a shift of a word meaning from the entity it stands for to a 'contiguous' entity" (Ullman 1957: 232; as stated in Croft 1993: 347). Following the advent of cognitive linguistics, metonymy went beyond purely stylistic and rhetorical considerations and turned into a central cognitive semantic process. Lakoff and Johnson (1980: 39) state that metonymy is another conceptual mechanism beyond metaphor that does not function exclusively at the level of words but "structures our thought, attitude, and actions" (Evans & Green 2006: 311). They define metonymy as a mechanism which allows human beings "to conceptualize one thing by means of its relation to something else" (Lakoff & Johnson 1980: 37, 39). Later, Lakoff (1987) revised the definition of metonymy by introducing the concept of Idealized Cognitive Models (ICMs). He states that, metonymy is a stand for relation between two elements of the same ICM or one of the elements of an ICM and the whole ICM (1987: 78–79).

As part of the development in Cognitive Linguistics, the discussion of metonymy has become diversified involving other cognitive concepts. Based on Langacker's (1987) ideas, Croft (1993, 2002) applies the notion of domain matrix and claims that metonymy leads to the foregrounding or highlighting of one domain within a domain matrix (2006: 321). Another widespread definition of metonymy has been proposed by Radden and Kövecses (1999). Using Lakoff's (1987) notion of ICMs, they describe metonymy as follows: "A cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same idealized cognitive model (ICM)" (ibid.: 21).

An alternative perspective of metonymy is suggested in Peirsman & Geeraerts (2006). In their prototype-based approach to metonymy, they take spatial part-whole relations as the prototypical core of the category since they show the strongest degree of contiguity. The degree of contiguity weakens for metonymical relations that range from containment and contact to adjacency without contact (2006: 309).

Panther and Thornburg (2007) provide yet another description. They characterize metonymy as a cognitive process where: 1) a source content provides access to a target content within one cognitive domain; 2) there is a contingent relation between the source and the target content; 3) the source content is backgrounded, and the target content is foregrounded; and 4) depending on the conceptual distance between the source and the target and the salience of the source, the metonymic link between the source and the target may be weak or strong (2007: 242).

Another important definition that needs to be mentioned is proposed by Barcelona (2011). Considering metonymy as a reference point phenomenon, he refines the definition of metonymy as "an asymmetric mapping of a conceptual domain, the source, onto another domain, the target" (2011: 52). Barcelona argues that the source and the target are both elements of the same functional domain which are related by a "pragmatic function" (ibid).

The short overview of some important definitions of metonymy shows that researchers mainly rely on the notions of domains and contiguity when defining the process of metonymy. This is also true for some other contributions to metonymy in the literature (cf. Benczes, Barcelona & Ruiz de Mendoza Ibáñez 2011; Kosecki 2007; Panther & Radden 1999). Among

these approaches, the prototype view proposed by Peirsman & Geeraerts (2006) adds a qualitative dimension to the notion of metonymy as, depending on the strength of contiguity, metonymical relations can be more or less prototypical, i.e. central to the phenomenon of metonymy. Our findings on different metonymical relations in the set of Persian compounds discussed in section 5 corroborate a prototypical view of metonymy, which helps to differentiate metonymical compounds on a cline of metonymical complexity. Before the data analysis and discussion, the next section will outline some previous research on metonymy in compounding to show the importance of that process in a semantic analysis of compounds.

3. Metonymy in compounding

Cognitive linguists argue that conceptual processes affect linguistic structures (Evans & Green 2006). Conceptual metonymy is one of the main mechanisms beyond conceptual metaphor that contributes to the semantics of compounds as previous research has shown. Geeraerts (2002) analyzed various interactions of metaphor and metonymy in the semantics of idioms and compounds. He states that on a possible continuum between metaphor and metonymy, at the one end lie "expressions that are fully metonymical" (2002: 449). Among his examples, *hanglip* is mentioned as a completely metonymical compound involving two metonymical extensions (BODY PART FOR PERSON and EFFECT FOR CAUSE) that make up its meaning of 'an unhappy, sulky, pouting person' (2002: 456–457).

Focusing on hyponymic compounds as the most common type of English compounds, Radden (2005) observes that in a hyponymic compound the modifier foregrounds one salient property of the category through metonymy. For example, in *wheelchair* the modifier focuses on the wheels. According to Radden (2005: 19), "compounds thus typically involve a PART FOR WHOLE metonymy". This implies that the morphological process of compounding would in itself be metonymic (also see Janda 2011), which has been cogently criticized in Brdar & Brdar-Szabó (2014).

Another attempt that has elucidated the role of metonymy, specifically in the semantics of selected English and Spanish bahuvrihi compounds is made by Barcelona (2008). He demonstrates that the exocentric nature of all bahuvrihi compounds is motivated by the metonymy of CHARACTERISTIC PROPERTY FOR CATEGORY. He also discusses three ways of conceptualizing the characteristic property mapped onto the target category, including literal (e.g. *humpback*), metonymical (e.g. *hard top*), and metaphorico-metonymical (e.g. *blockhead*) relations. More recently, Barcelona (2012) has also presented examples for the role of metonymy in grammar and discourse to illustrate the function of metonymy on three levels of the lexicon, namely under the lexicon (phonology and morphology), in the lexicon (lexical metonymies), and above the lexicon (grammar). Acknowledging the important role of metonymy in grammar, Barcelona (2012: 261) introduces compounding as one part of grammar that can be motivated by metonymy.

Benczes (2006a) provides a further cognitive semantic analysis of compounds that draws on metonymy and metaphor for explaining the creation of noun-noun compounds. She investigates the American neologism *freedom fries* as an exocentric compound in which both constituents are respectively affected by METHOD OF PRODUCTION FOR PRODUCT (fried in oil for potatoes) and DEFINING PROPERTY FOR CATEGORY (freedom for America) metonymies. In her major study on *Creative Compounding in English*, Benczes (2006b) devotes one chapter to different patterns in which conceptual metonymy can affect English noun-noun combinations.

She discusses five patterns, including metonymy-based modifier, metonymy-based profile determinant, metonymy-based modifier and profile determinant, metonymy-based compound as a whole, and metonymy-based relation between the two constituents of the compound. In addition, Benczes (2011) investigates the semantics of metonymical (and metaphorical) compounds to explore the role of domains in conceptual metonymy. She claims that multiple metonymies (and metaphors) can act upon the meaning of compounds, which chimes in with previous research such as Geeraerts's (2002) discussion on the interaction of metaphor and metonymy mentioned above.

Based on Radden & Kövecses's (1999) definition of metonymy, Kuczok (2007) analyzes a number of English noun-noun compounds which are motivated by one (e.g. *bear jam*) or two (e.g. *white-collar*) metonymies (and/or metaphors).

The effect of conceptual metonymy and metaphor in the semantics of novel English noun-noun compounds has also been shown in Onysko (2014, 2016). Carrying out an empirical study that investigates the process of figurative meaning interpretation, Onysko (2014) confirms that conceptual metonymy (besides conceptual metaphor) underlies various types of meaning associations. As far as metonymy is concerned, his data on meaning interpretations of novel compounds show that metonymy is the most frequent, i.e. basic, figurative process used by the participants (Onysko 2016).

In a detailed examination of the role of metonymy in word-formation, Brdar & Brdar-Szabó (2013) show that metonymy may affect the head or the modifier of compound words, prior or posterior to the compounding process. In other words, they believe that compounding as a concatenative process might be preceded or followed by conceptual metonymy. In a recent major study, Brdar (2017) shows that metonymy can affect the compound constituents and the overall meaning of the compound.

Altogether, previous research on the role of metonymy in compounding has confirmed the important function of metonymy (alongside conceptual metaphor) for the construction of meaning in compounds. The main lines of research so far have investigated different types of metonymies, their relation to the compound constituents and to the overall meaning of the compound, and their interaction with conceptual metaphors. Our study attempts to go a step further and explores the qualitative difference of metonymies and whether that can potentially be related to associative complexity in the meaning of compounds. Before we precede with that question, the data and methods of analysis will be briefly described in the next section.

4. Methodology

As in many languages of the world (see Lieber & Štekauer 2011) compounding is a major process of word formation in Persian. Compounding in Persian stands out from other languages as Persian allows for both right and left-headed compounds (see Kalbassi 1997; Shariat 2005). While the role of headedness in the construction of compound meaning is not the focus of this study, it plays a role when analyzing metonymies according to their location in the modifier or head constituent of the compound (see below).

In general, Persian offers a well-documented and not very frequently studied data set of compounds that serves as a good basis to explore the role of metonymy (or metaphor, cf. Torabian 2013). *Sokhan* (Anvari 2003), an eight volume Persian Monolingual Dictionary, serves as a database of metonymical compounds in this study. All noun-noun nominal compounds were extracted from the dictionary, which amounted to a total of 720 compounds. As a next step, the possible effect of metonymy and/or metaphor in the meaning of the collected words was examined. This procedure yielded 347 compounds with no metaphor/metonymy, 166 compounds with one metonymical part, 79 items with one metaphorical constituent, 46 terms with one metaphorical and one metonymical constituent, 63 words in which both constituents are metonymical, and 19 compounds in which a metonymical mapping underlies the meaning of the compound as a whole. To zoom in on the qualitative difference of metonymical relations in the meaning construction of compounds, we limited our study to compounds which have just one metonymical component.

Due to the existence of right and left-headed compounds in Persian, the data set of one-part metonymical compounds comprises instances of metonymies in the head or the modifier regardless of the constituent's location in the compound. For example, *xan-?amu* (leader + paternal uncle), meaning 'the oldest and respected paternal uncle', is a right-headed compound whose modifier *xan* 'khan' involves the metonymy of PERSON FOR PROPERTY. A good example of a metonymical left-headed compound is *komak-ranande* (help + driver) meaning 'someone who helps the bus driver in intercity travel'. The head element of *komak-ranande*, i.e. *komak* 'help', is motivated by the metonymy of ACTION FOR AGENT. Another example of a metonymical left-headed compound is *ab-andzir* (water + fig) meaning 'water with the flavor and color of fig', where the modifier, i.e. *andzir* 'fig', stands metonymically for its properties (ENTITY FOR PROPERTIES). In the analysis below, the head constituent is marked in bold print to provide a visual aid for understanding the compound structure.

4. Data analysis

As mentioned earlier, this study aims to investigate the possible relationship between the quality of the metonymical relations and simplicity/complexity of meaning construction in Persian metonymical nominal compounds. In general, "meaning construction is an inferential process" (Radden, Köpcke, Berg & Siemund 2007: 10). In the case of metonymical units, meaning construction relates to the process of inferring the referent of the metonymical compounds. Depending on the conceptual relation of the metonymical element and the referent, different degrees of complexity are evident in the inferential process. For the sake of illustration, this difference can be displayed on a scale of complexity. At the upper end of that scale, metonymical compounds show a higher degree of complexity when the metonymical constituent does not match with the referent of the compound. Consider the following examples:

- (1) xan-**?amu** (khan + paternal uncle) 'the oldest and respected paternal uncle'
- (2) xan-daji (khan + maternal uncle) 'the oldest and respected maternal uncle'
- (3) *xan-dadaf* (khan + brother) 'the oldest and respected brother'
- (4) *gol-mix* (flower + nail) 'a decorative nail'

- (5) *Jab-bu* (night + smell) 'a kind of flower that smells at night'
- (6) **ab**-andzir (water + fig) 'water with the flavor and color of fig',
- (7) *ab-alu* (water + plum) 'water with the flavor and color of plum'
- (8) *ab-zerefk* (water + barberry) 'water with flavour and color of barberry'
- (9) pa-tag(foot + arch) 'the lowest part of the arch'
- (10) *tfub-parde* (wood + curtain) 'rod where a curtain is hung up'

Examples (1) to (3) comprise three right-headed compounds which follow the same construction of xan + x. In Persian, xan 'khan' is a title to refer to the most respected tribal elder who decides about all internal and external affairs of a tribe. Thus, the modifier xan 'khan' contributes to the meaning of the head element via the same metonymy of PERSON FOR PROPERTY. The referent, however, follows from a literal interpretation of the compound head. Similarly, *gol-mix* (flower + nail) in (4) is also a right-headed compound where the modifier, i.e. *gol* 'flower', as a whole thing stands metonymically for its ornamenting function (ENTITY FOR FUNCTION). Another interesting metonymical right-headed compound is *Jab-bu*. In contrast to examples (1) to (4), in this right-headed compound the head element *bu* 'smell', is metonymical. It refers to the flower via the metonymy of PROPERTY FOR ENTITY while the modifier of the compound specifies the time when the flower exudes its smell.

Examples in (6) to (10) represent five metonymical left-headed compounds. The metonymical modifier is observable in (6), (7), and (8). In these three left-headed compounds the modifier represents the name of a fruit which does not actually exist in the referent as *ab*-andʒir, *ab*-alu, and *ab*-zerefk are produced by soaking the respective dried fruit in water and removing it before consumption. Thus, the fruit stands for its color and flavor as expressed in the metonymy of ENTITY FOR PROPERTY. By contrast, *pa*-taG and *tfub*-parde in examples (9) and (10) are two left-headed compounds, in which the head element is motivated by metonymy. In *pa*-taG, *pa* 'foot' stands metonymically for its low position in the body (BODY PART FOR POSITION IN SPACE). In *tfub*-parde, the head *tfub* 'wood' stands for the object (rod, even though it is usually made of metal nowadays) and creates a metonymic link to the referent of MATERIAL FOR ENTITY.

A close look at the metonymical constituent and the referent in (5), (9), and (10) shows that they share a common feature. In all these examples, the conceptual relation between the head constituent and the referent of the compound is non-literal but can be construed via metonymy. Thus, in *fab-bu*, 'smell' is the named element but 'flower' is the actual referent, and, in *pa-tag*, 'foot' is named but the meaning only relates to the low position of the entity. The metonymic links between the head element and the referent are based on the typical metonymies of PROPERTY FOR ENTITY (as a specification of a PART FOR WHOLE metonymy) in (5), ENTITY FOR PROPERTY (as a specification of a WHOLE FOR PART metonymy) in (9), and on a MATERIAL FOR ENTITY metonymy in (10).

Alternatively, there are some compounds where the metonymical element is expressed in the referent, typically in a subordinate/superordinate relation. Let us take a closer look at compounds where the metonymical component represents such a relationship with the referent.

- (11) *dʒa?be-pargar* (box + compass) 'box including compass, ruler, protractor, etc.'
- (12) **dʒa?be**-rang (box + color tube) 'painting box set; box including paint tubes, brush, canvas board, etc.'
- (13) *mafin-hesab* (machine + counting) 'calculator'
- (14) *dam-pezefk* (cattle + doctor) 'veterinarian'
- (15) *qalpaq-dozd* (hubcap + thief) 'thief who steals exterior accessories of cars'

Examples in (11) and (12) are two left-headed compounds which are based on the construction of *dza?be-x*. In (11), the modifier, *pargar* 'compass', stands for the whole tools in the box through the metonymy of MEMBER FOR CATEGORY. In the same way, the modifier in (12), i.e. *rang* 'color tube', refers to all tools included in a painting box, evoking the same metonymy of MEMBER FOR CATEGORY. *Rang* 'color tube' and *pargar* 'compass' exist as part of the whole referent. Another example of a left-headed compound with a metonymical modifier is provided in (13). In *mafin-hesab*, the modifier, i.e. *hesab* 'counting', refers to calculating through the metonymy of PART OF ACTION FOR WHOLE ACTION.

The examples in (14) and (15), *dam-pezefk* and *qalpaq-dozd*, are two right-headed compounds that contain a metonymical modifier. They also evoke a MEMBER FOR CATEGORY metonymy as *dam* 'cattle' in (14) stands for the category of animals, and *qalpaq* 'hubcap' in (15) refers to all exterior accessories of a car.

As these examples show, in some cases, the metonymical constituent is conceptually an inherent part of the referent, because the named element represents the referent more directly via a subordinate/superordinate relation. Based on this kind of relationship with the referent, the claim can be made that inferring the referent in these compounds is not as associatively complex as in compounds in which the metonymical link between the metonymical constituent and the referent is not based on purely taxonomic relations but emerges from a contiguous relation within one conceptual domain. Another example of a superordinate – subordinate relation can be seen in (16).

(16) *kolah-pust* (hat + skin) 'lambskin hat'

kolah-pust is a left-headed compound whose modifier, *pust* 'skin', refers to lambskin through the metonymy of CATEGORY FOR MEMBER. Although the metonymical constituent in this compound is also present in the referent, it connects to the referent through a 'type of' relation, which is different from the 'part of' relation in the previous examples (11–15).

Keeping the case of *kolah-pust* in mind, consider the following compounds which show a lower level of complexity:

- (17) *dʒudʒe-kabab* (chicken + kebab) 'chicken meat kebab'
- (18) *halim-buqalamun* (porridge + turkey) 'porridge containing turkey meat'

Example (17) and (18) share the same metonymical relation in the modifier. In *d₃ud₃e*-*kabab*, the modifier, *d₃ud₃e* 'chicken', stands for chicken meat via the metonymy of ANIMAL FOR EDIBLE SUBSTANCE OF ANIMAL. The same metonymy holds in *buqalamun* 'turkey', as the modifier in (18). In (17) and (18), the metonymies are prompted by the other component of the compound. For instance, in *d₃ud₃e*-*kabab* (chicken + kebab) 'chicken meat kebab', the head element evokes the frame of food and prepares the ground for the metonymic reference to the meat of the animal. In the other compounds discussed earlier, the metonymical components do not relate so closely to the meaning of the constituent. In other words, in (17) and (18) the frame of the non-metonymical compound constituent creates a context that prompts the specific metonymic relation, which becomes associatively salient, i.e. expectable.

Example (16) *kolah-pust* (hat+ skin) can illustrate that difference. Even though *kolah-pust* shares a general WHOLE FOR PART metonymy with the examples (17) and (18), its specific 'type of' relation is less predictable than in the latter group of compounds. Thus, it appears that examples (17) and (18) in the data at hand constitute the lowest degree of metonymic complexity.

To sum up, the close analysis of Persian compounds that involve one metonymical constituent shows that different degrees of metonymic complexity can be distinguished in the data. In that type of analysis, complexity can be gauged by two interpretative criteria. On the one hand, it is based on the conceptual relation between the intended referent of the metonymical constituent and its lexical expression. On the other hand, complexity can be related to how likely the metonymical target emerges from the frame-based interaction of the compound constituents. Figure 1 illustrates a continuum of metonymical complexity from low to high based on these criteria.



Figure 1. Continuum of metonymical complexity in one-part metonymic compounds

The two dimensions of complexity in Figure 1 describe different aspects that are indicative of the associative relation and its linguistic expression on the surface. In a view of modifiers filling a role in the head frame of the compound (cf. Wisniewski 1997; Onysko 2010), this frame-based specification can follow from more or less prototypical associations. The assumption

here is that more prototypical (i.e. likely) associations underlie less complex meaning construction in conceptual combination. The second dimension takes the similarity/difference between the intended referent and its lexical expression as a qualitative criterion of metonymical associations. If, as shown in the data analysis, the metonymical target is (partly) expressed in the linguistic form, the construal of the referent follows from an associatively less complex metonymy.

One of the questions that arise from the continuum of metonymical complexity is whether it makes a difference if the metonymy occurs in the modifier or the head constituent of the compound. This question follows from the observation that the link between the compound constituents and the overall referent of the compound is frequently not symmetrical, but the head constituent tends to be prominent in building the referent category (just consider the simple, non-metonymical compound *table cloth* whose referent category is a type of cloth). Empirical testing of this issue and of the other predictions emerging from the model in Figure 1 would be a next necessary step to consolidate or falsify the proposal inferred from the data.

6. Concluding remarks

Considering the important role of metonymy in the meaning of compounds, this study set out to investigate differences in the metonymic construals in one-part metonymic Persian compounds. As the analysis showed, the relation between the metonymical constituent and the referent of the compound is not the same in all cases of metonymic compounds. While in some examples, the metonymical element does not match with the referent (e.g. pa-tag foot + arch), there are some instances where the metonymical element represents the referent name in a subordinate relation, for example through the metonymy of MEMBER FOR CATEGORY (e.g. d3a?be-pargar box + compass). The 'type of' relation in kolah-pust (hat + skin), on the other hand is similar to compounds in which the metonymical element is expressed in the referent name. This implies that metonymic strength varies in different metonymical compounds and there are different degrees of metonymic complexity based on the relation between the metonymical element and the referent. A second dimension of metonymical complexity follows from how prototypical the metonymic association is in the frame-based combination of the compound constituents. Based on these factors, a continuum can be postulated that ranges from simple metonymies to complex metonymies. The analyzed compounds in this study lie on different points of this continuum. The current proposal calls for future studies that will allow consolidating the continuum of metonymical complexity empirically with different datasets and experimental studies.

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