

A cross-linguistic analysis of conceptual complexes in the domain of economics

Análisis inter-lingüístico de complejos conceptuales en el campo de la economía

MAHUM HAYAT KHAN
UNIVERSITY OF LA RIOJA

Over the past two decades, the relationship between metaphor and culture has been an important object of study in Cognitive Linguistics, especially due to the impact of globalisation on our everyday living. This impact has particularly affected the field of economy where figurative language is pervasive. Within this research context, the present article aims at exploring not only the role of metaphor in economics but also the interest of a huge amount of studies, but also the role of conceptual complexes in the languages of two historically connected countries which nevertheless differ significantly in their economic development: Britain and Pakistan. To this end, metaphors and conceptual complexes have been analysed in Urdu and English. The analysis has proved in cross-linguistic terms the intricacies of conceptual material in the field of economics and the descriptive and explanatory adequacy of the account of conceptual complexes mentioned above

Keywords: *metaphor; conceptual complexes; metonymy; economics; culture*

En las últimas dos décadas la relación entre la metáfora y la cultura ha sido objeto de estudio en la Lingüística Cognitiva especialmente debido al impacto de la globalización. Este impacto ha afectado particularmente al campo de la economía en el que el uso del lenguaje figurado está extendido. En el contexto de esta investigación, este artículo se centra en explorar no solo el papel de la metáfora, que ha sido el interés de un gran número de estudios, sino también el papel de los complejos conceptuales en las lenguas de dos países históricamente relacionados, pero con una economía muy diferente: Reino Unido y Pakistán. Para ello, metáforas y complejos conceptuales se han sido analizados en urdu e inglés. El análisis ha demostrado, desde un punto de vista inter-lingüístico, las complejidades del material conceptual en el campo de la economía y la capacidad descriptiva y explicativa de los complejos conceptuales.

Palabras clave: *metáfora; complejos conceptuales; metonimia; economía; cultura*

1. INTRODUCTION

“What does metaphor have to do with culture?” This question, posed by Kövecses in his book *Metaphor in Culture: Universality and variation* (2005), has gained ground within Cognitive Linguistics over the last decades. Cognitive Linguistics offers a new perspective on metaphor, which is defined as a mapping across discrete conceptual domains where one of them, called the *source domain*, is used to reason and talk about the other, called the *target domain* (Lakoff & Johnson, 1980; Lakoff & Turner, 1989; Lakoff & Johnson, 1999). This conception of metaphor as a cognitive operation has given rise to the Contemporary Theory of Metaphor (CTM) (Lakoff, 1993), later on simply referred to as Conceptual Metaphor Theory (CMT), which is the standard model within Cognitive Linguistics to carry out metaphor analysis (for

developments, see also Lakoff & Johnson, 1999; Dirven & Ruiz de Mendoza, 2010; Ruiz de Mendoza & Pérez-Hernández, 2011; Gibbs, 2011; Kövecses, 2013; Steen, 2013).

Going back to the question propounded by Kövecses (2005), the present article defends the view that the narrow relationship between metaphor and culture can be best addressed through the systematic cross-linguistic analysis of metaphors. This is, in itself, a mammoth task, given the large amount of languages and cultures, many of them awaiting not only description but also explanation in terms of high-level generalizations, which is the ultimate goal of linguistic analysis (Goldberg, 2006). Crosslinguistic analysis of conceptual activity can be used to reveal cultural differences manifested in language structure and use. But conversely, cultural factors are also useful to account for differences in linguistic structure. This dual role of cross-linguistic analysis, which will become manifest all through the present paper, is what underlies the main goal of the present research, which is to contrast conceptual patterns between English and Urdu in the field of economy.

To our knowledge, there is no such analysis yet. Hence, this study aims to describe, analyse, and explain the cognitive activity within the field of economy both in Urdu and English and to explore the potential cultural implications underlying the conceptual material at hand. English and Urdu are two of the most widely spoken languages¹ that have lived in interaction for almost a century (1858-1947). Remnants of this interaction, which is very well known, have been persistent over the years until our days (English has become the second official language of Pakistan). What remains to be studied is the effect of this persistency on conceptual organization in both languages in specific fields, one of them being economy. This field is particularly sensitive to the globalization of conceptual schemas, which are often embedded into more specific (or local) schemas². Moreover, economy has proved to be a productive field for research on metaphor (Herrera & White, 2012) and this is in part because of the homogeneity of objectives in this field at a global level.

Finally, the present study differs from other cross-linguistic studies on metaphor in the type of analytical tools used. Recent developments of CMT made by Ruiz de Mendoza and Pérez (2011), Ruiz de Mendoza and Galera (2014), Ruiz de Mendoza (2017), and Miró (2018) have drawn attention to the issue of conceptual complexity. Sometimes metaphorical expressions embed metonymy and even other metaphors creating unified conceptual patterns. These studies are still programmatic. It is necessary to apply the preliminary insights offered in them to more data from various languages, domains, and modes of communication. A good example of application in a specific communicative domain (English multimodal advertising) is found in Pérez-Sobrino (2017). The present article contributes to this incipient research endeavour from a cross-linguistic perspective.

The structure of this paper is as follows. Section 2 focuses on describing the relationship between metaphor, culture and economy. Section 3 describes the analytical tools that serve as the basis for the analysis. Section 4 concentrates on methodological issues, including a description of the corpus, the criteria for data selection and the methodology chosen for this study. Section 5 is devoted to a qualitative analysis and discussion of the data. Finally, section 6 focuses on the main findings and the implication of the study and it concludes by pointing out some lines for further research which are aimed at trying to overcome potential limitations in the present study.

¹ English is the second most spoken language by numbers of speakers (983 million speakers) whereas Urdu is on third position after Mandarin Chinese and English. Notice, however, that in a large amount of classifications of languages we will find the term Hindi or Hindustani instead of Urdu. Kachru (2006: 2) clarifies this distinction and she affirms that *Rekhta* ('mixed'), *Urdu* ('camp'), and *Hindi*, *Hindavi* or *Hindustani* ('Indian') are terms used to denote the same language. See Masica (1991) for further details on Urdu-Hindi.

² It goes without saying that the basic tenets of economy are well-established across the globe. However, governments of different countries shape them according to their needs or beliefs.

2. METAPHOR, CULTURE AND ECONOMY

Our study draws notions from two frameworks that interact within CMT: Cognitive Linguistics and Cultural Linguistics. Cognitive Linguistics provides a new conception of metaphor which sees it as a way of understanding the world (Kövecses, 2005: 2). The world is organized in our minds in the form of *idealized cognitive models* (Lakoff, 1987) or *cognitive models* for short (Ruiz de Mendoza & Galera, 2014). Cognitive models are generally defined as “the stored cognitive representations that belong to a certain field” (Ungerer & Schmid, 1996: 47). These cognitive representations are shaped by cultural models, i.e. these models are shared by people with similar cultures. Sharing culture implies “living in a social, historical, and physical environment [and] making sense of experiences in a more or less unified manner” (Kövecses, 2015: 96). This idea of culture is better understood under the broad term of *cultural cognition* highlighted by the supporters of Cultural Linguistics (Frank, 2015; Sharifian, 2017). According to them, the inherent link between culture and cognition gives us access to the study of language through *cultural conceptualisations* based on *cultural schemas*, *cultural categories* and *cultural metaphor and metonymy* (Sharifian, 2017: 1-3). Our focus will be on cultural metaphor and metonymy. *Cultural metaphors* are conceptual metaphors built on the basis of relevant aspects of particular cultures.

Conceptual metaphor and metonymy are at the core of CMT. Although, Lakoff and others have established the tenets of metaphorical cross-domain mappings, they have not dealt properly with cross-linguistic variation. This work has been taken up by Kövecses (2005: 64), who analyses metaphors cross-culturally and supports the view that metaphors based on universal experiences tend to be universal or at least near-universal. He also discusses metaphors at a more specific level to show that metaphors vary cross-culturally along different dimensions and from different perspectives even if they are not unique metaphors (e.g. having a culturally unique source domain and a culturally unique target domain) (Kövecses, 2005: 86). The cultural context involves having knowledge about the shared experiences that are part of a particular culture in order to understand the conceptual metaphors that could arise from it. Taking into account contextual factors, Kövecses (2015: 114) argues that they tend to produce novel and unconventional metaphors making room for what he calls *context induced metaphors*. These metaphors are based mainly on “resemblance between entities” but “what helps (triggers, prompts, etc.) us choose a source domain would be some contextual factor” (Kövecses, 2015: 116). Therefore, context determines the construction of this type of metaphors. Bringing context back is one the biggest achievements of Cognitive Linguistics (Geeraerts, 2011). In this connection, as previously stated, the context we are going to focus on is economy.

The analysis of metaphor has been considered “a key methodological instrument in economic research” (Skorczynska & Deignan, 2006: 89). According to Alejo (2010), this kind of analysis has been seen from two different perspectives: economy and applied linguistics. Economists, on the one hand, have focused on metaphors at the “theory constructive” level, which involves the understanding of “root metaphors” (i.e. metaphors that allow for the discussion, selection, and organization of the topic in question). Linguists, on the other hand, have emphasized the discursive nature of economic texts paying attention to the “typical distribution and [...] communicative function” of metaphors (Alejo, 2010: 1137).

Taking this second approach as a starting point, researchers support metaphor awareness in ESP (English for Specific Purposes) and economics (Boers, 2000; Charteris-Black, 2000; White, 2003) by looking at particular cases of metaphors which are common in economic discourse (e.g. ECONOMY IS A LIVING ORGANISM, ECONOMY IS A MACHINE). Some

studies analyse this kind of discourse considering the specific nature of the corpus (e.g. a scientific business corpus or a popular business corpus) (Skorczynska & Deignan, 2006). Others examine metaphors in different languages (English, French, Dutch, Mandarin Chinese, Brazilian Portuguese, Russian, Spanish) from the perspective of preselected source structure (e.g. warfare, path, health care, organisms) or specific targets (e.g. a crisis, austerity, cuts, debts) (Boers & Demecheleer, 1997; Charteris-Black & Ennis, 2001; Herrera & White, 2007; Wang et al., 2013; Langer, 2015; Pamies & Ramos, 2017; Soares de Silva et al., 2017, among others).

Some of the studies are aimed at teaching whereas others focus on cross-linguistic analysis. All of them prove the importance of studying metaphor in economic discourse since they come up with relevant results in this field, such as the context and purpose of the text influences metaphor choice, conceptual differences affect learning metaphors in other languages, and the choice of metaphors mirrors the economic situation of countries. In any event, as noted in the introduction, the crucial point of the present analysis, where it largely differs from other studies, is that it digs deeper into the intricacies of the conceptual material underlying linguistic phenomena by considering it in the light of the notion of conceptual complexes, as defined in Ruiz de Mendoza (2017).

3. CONCEPTUAL METAPHOR AND METONYMY

Metaphor is understood as a “mapping from a source domain to a target domain” (Lakoff, 1993: 206-207). A mapping is understood as a set of correspondences between a source and a target domain and a domain is defined as a “coherent organization of experience” (Kövecses, 2010: 4). One of the stock examples of conceptual metaphors is LOVE IS JOURNEY. We understand the highly abstract concept of love in terms of the more tangible notion of a journey as we map the characteristics of journeys onto those of love. Grady (1999) distinguished between *correlational* and *resemblance metaphors*. Correlation metaphors are grounded in experience and they are formed through conflation. However, in recent years it has been further argued that correlation involves “embodied simulation, i.e. the actual use of bodily experience when understanding abstract concepts” as is the case of ANGER IS HEAT, which comprises getting angry and the rising of our body temperature (Ruiz de Mendoza & Galera, 2014: 93). Resemblance metaphors take similarity between the source and target domain as central. To explain this type of metaphors, Grady (1999: 87) gives the example *Achilles is a lion*, in which the metaphor matches the similarities between people and animals giving rise to the metaphor PEOPLE ARE ANIMALS.

Interaction between metaphors has given rise to the study of metaphoric complexes, which are defined as “combination(s) between two or more metaphors” (Ruiz de Mendoza & Galera, 2014: 96). Types of metaphoric complexes are: metaphoric amalgams and metaphoric chains. Metaphoric amalgams can be single-source or double-source. *Single-source metaphoric amalgams* are characterized by incorporating “one of the metaphors in a complex into the internal conceptual configuration of the other” (2014: 96). A very representative example is *My boss is a pig* (Ruiz de Mendoza, 2017: 153) in which we have the metaphor IMMORALITY IS FILTH integrated into the metaphor PEOPLE ARE ANIMALS:

SOURCE 1	TARGET 1
Pig	Boss
SOURCE 2	TARGET 2
Filth	Immorality

Figure 1. Single-source amalgam for "My boss is a pig" (Ruiz de Mendoza, 2017)

Double-source metaphoric amalgams consist in “the mapping of two different source domains onto the same target domain” (Ruiz de Mendoza & Galera, 2014: 100). A clear example of this kind would be *Mary slapped some common sense into her son* (Ruiz de Mendoza, 2017: 154) in which *common sense* is figuratively transferred to Mary’s son through motion (source 1) and he acquires common sense as a possession (source 2).

Metaphoric chains take place when “the target of one metaphor becomes the source of another” (Ruiz de Mendoza, 2017: 151). The example in Figure 2 illustrates this notion:

SOURCE	TARGET/SOURCE	TARGET
Animal’s tentacles around something	Person’s arms around something	A person has control over something

Figure 2. Metaphoric chain in "Obama wrapped his tentacles around everything, from healthcare to automobiles" (Ruiz de Mendoza and Galera, 2014)

The original proponents of CMT were also concerned with metonymy, but mainly with a view to distinguishing it from metaphor. Thus, Lakoff & Turner (1989) explain that metonymy is based on a *stand for* relationship within one conceptual domain. These authors also point out that metonymy, but not metaphor, is mainly used for reference (cf. Ruiz de Mendoza & Ota, 2002: 26). An instance of metonymy is *The ham sandwich is waiting for his check* where the *ham sandwich* stands for the *customer* that has ordered a ham sandwich. Metonymy works within one conceptual domain where we can find an increase or *expansion* and a decrease or *reduction* of the amount of conceptual material initially provided by the source domain. According to Ruiz de Mendoza & Galera (2014: 93) the role of expansion is to “broaden the amount of conceptual material that we associate with the initial point of access to a concept”, while the role of reduction is to give “conceptual prominence to part of a concept”. Metonymic chains (Ruiz de Mendoza & Galera, 2014: 117) are “chained combinations of two or more metonymies in which the expanded or reduced domain that results from a first metonymic operation constitutes the point of departure for another metonymic shift”. Metonymic chains can give rise to different combinational patterns taking into account the nature of the cognitive operations applied. An instance of this kind of conceptual complex is derived from *Wall Street is in panic* (Ruiz de Mendoza & Galera, 2014: 121), which is a case of double metonymic reduction: PLACE FOR INSTITUTION FOR PEOPLE ASSOCIATED WITH THE INSTITUTION.

A further case of complex cognitive operation is *metaphtonymy*. This term was coined by Goossens (1990) and later developed by Ruiz de Mendoza & Díez (2002). Metaphtonymy consists in the interaction between metaphor and metonymy. *To have a nose for something* is a case of metonymic reduction of a metaphoric source domain in which a person’s nose stands for his or her sense of smelling and that sense of smelling is mapped onto a person’s intuition (cf. Ruiz de Mendoza & Galera, 2014: 113).

4. CORPUS AND METHODOLOGY

Our analysis relies on a collection of news and opinion articles taken from one of the largest broadcast news organization, the BBC (*British Broadcasting Corporation*). This organization works on both English and Urdu. The news websites in either language have been used to gather the data³. We have chosen the target domain of *debt* to search for metaphorical expressions in both languages. This domain has been used for two main reasons: 1) it is highly recurrent in economy; 2) it is representative of the ups and downs in the economy of a country. The collection has been used to build a small corpus of 100 examples of metaphorical expression in each language. The selection of metaphors has been carried out manually and the translations have been provided by the author of the present article.

Despite the globalization of economy, it is not easy to relate economic situations owing to the huge differences in economic standards between Pakistan and the United Kingdom. The period set to gather the corpus data is a one-month time period (September 2018) for the selection of Urdu examples. Their English counterparts will be searched on the basis of the target concept of economy and the possible equivalence with Urdu examples.

The analysis of the corpus was organised into two main stages. First, examples with *debt* as a target domain were identified and selected in the BBC Urdu News website. Then, we searched and selected the potentially equivalent examples from the BBC English News website. Literal examples with occurrences of the concept of debt were excluded. Second, every metaphorical pattern was individually analysed in detail. Source domains, mappings across domains, and the context of occurrence were considered. These factors lead to a fine-grained analysis of the examples based on conceptual complexes. The qualitative nature of our work has facilitated the formulation of generalizations and of the high-order principles motivating them.

5. ANALYSIS

Now that we have provided a theoretical discussion of the context in which this research work is grounded, in this section we focus on a descriptively and explanatorily adequate account of the conceptual motivation of the examples under analysis. We offer an overview of the analysis of the data followed by an in-depth study of some examples that are representative of the main interactional patterns.

5.1 Overall picture of the metaphors

As a developing country, Pakistan has taken loans in order to improve the economic situation of the country. That is why, the concept of debt is generally present in Pakistan's news on economy. The sources that are used to refer to debt are varied, but they always portray a negative picture of the situation. Sometimes, this negativity is drawn as an obstacle with examples like *There is a mountain of debt*, *Debts are mud puddles*, *Debts are bogs*, *Debts are labyrinths in the path of economy development*. These examples are often repeated expression in our data. Many represent a scenario in which economic development goes along a path. This triggers the metaphor GOALS ARE DESTINATIONS from which stem the correspondences PROGRESS IS MOTION FORWARD and DIFFICULTIES TO PROGRESS ARE IMPEDIMENTS TO MOTION. A mountain or a mud puddle is the impediment for economic progress; it is an obstacle. Surmounting obstacles of this kind involves facing challenges (e.g.

³ The websites are: <https://www.bbc.com/news/world> (English) <https://www.bbc.com/urdu> (Urdu)

mountains are difficult to climb, mud puddles, labyrinths and bogs are difficult to cross). Thus, these metaphors are grounded in resemblance properties between different kinds of obstacles and debts. However, resemblance underlies a correlational experience derived from the concepts of goal and destination. Achieving a goal and arriving at a destination are conflated in the mind because there are situations in which a goal can only be met by travelling to a destination (e.g. when someone has to emigrate to another more prosperous country to make a living). Situations of this kind are common to the extent that the notion of goal and destination become one in our minds. Figuratively, the government has to “climb a mountain” or “cross a bog” in order to get rid of the debts, which means that they have to make great efforts to overcome this impediment in the path of economic development.

In the English website, only the source domain of *mountain* has been found as in the example: *facing a mountain of credit debt*. A similar conceptual analysis is required here. The verb to face means ‘to compete with, come up against or fight something’, among other meanings. Therefore, the mountain is seen as an obstacle (or even an opponent) that must be dealt with and left behind. Something is left behind when there is a path and a destination to reach. Hence, as in Urdu, the metaphor GOALS ARE DESTINATIONS is involved. The difference between the Urdu and the English metaphorical expressions is prompted by the economic situation of the different countries, but it also hinges on the situational context. In Urdu there is humble attitude towards the mountain, with an underlying feeling of respect, whereas in English the mountain is an opponent that has to be defeated. The expression *to face* exists in Urdu but it does not collocate with the word *debt*. Pakistan, as a developing country, is not in the position of competing with debt as an equal. Moreover, in English, the examples that involve this metaphor (DEBT IS AN OBSTACLE) depict a low-scale situation compared to the situations described in Urdu, which involve the whole country. This happens almost throughout the set of examples. Urdu always describes debt in macro-context whereas in English individuals are addressed. DEBT IS A CONTAINER is another highly recurrent metaphor in Urdu with examples such as *sunken into debt*, *the pit of debt* or *Only a magic wand can take Pakistan out of oceans of debt*. The first example is used frequently in both languages and it is conceptualized by the logic of the container. Debt is seen as if it were a container according to the primary metaphor ABSTRACT ENTITIES ARE CONTAINERS. To be in a container could imply a positive or a negative axiology. Debt has a negative value in every culture because it involves money that one has to pay back. Sinking is also negative because when a person sinks into water it is difficult to take her or him out. Moreover, sinking implies lack of control over your situation. Therefore, the expression has a negative axiology which corresponds to the idea that DEBT IS A CONTAINER, from which, once sunken, it is difficult to get out. The other two examples (*pit of debt* and *ocean of debt*) are only used in Urdu. In Pakistan debts are seen more negatively than in developed countries, which makes their impact always higher. As a formerly undeveloped country, which is currently in development, Pakistan feared and fears debts. That is why high impact expressions in relation to debt are frequent. In English-speaking countries, this is not the case. They treat debt as part of human life, which may only require focal action in some situations that are controlled by expert economists. DEBT is also generally seen as a (typically) WEIGHTY OBJECT in Urdu with examples like *tons of debt* and *to be under debt*. In the first example debt is just treated as a highly heavy object but in the second example debt is implicitly seen as a burden that is squashing the debt payer because of its weight. In English, similar expressions are found like *to be buried under debt* and *crushing debt*. Sometimes, debt is seen from the perspective of debt takers. In the case of Pakistan, the government is responsible for that, so the government is accused of *filling its belly* with money from loans taken from rich countries. This form of understanding debt is grounded in the metaphor DEBT IS FOOD which is built on the domain-expansion metonymy FILLING BELLIES FOR EATING PLENTY OF FOOD. Although, the expression *filling*

bellies exists in English, we have not found it in relation to debt because in English it generally means to feed poor people. Loan givers, on the other hand, have been seen as ANIMALS in Urdu. Two examples are: *Snakes are waiting for their prey, They suck the blood of underdeveloped countries*. This metaphor will be addressed in the next section. Taking a loan is also a source of humiliation (DEBT IS HUMILIATION). This metaphor is recurrent in Urdu with expressions like *Pakistan's rulers take a bowl in their hands and knock doors*. The metaphor ASKING FOR A LOAN IS BEGGING MONEY is activated and it is built on the metonymy TAKING A BOWL IS BEGGING MONEY. In English expressions like *coming out with the begging bowl* or *going cap in hand* are used. The difference between the expressions of both languages is that in Urdu the conceptualization of the *cap* is not used as a *begging instrument*. This is related to an important cultural factor which involves the way English people traditionally dress.

5.2. Fine-grained analysis of selected metaphors

In this section, our first examples revolve around the metaphor DEBT IS CHARITY. Consider the following two examples:

- (1) People live in temples and nobody dies there of hunger. They eat communal meals and time passes, life goes by. Pakistan has decided to eat communal meals instead of developing its own economic system. (Urdu)
- (2) We don't want anyone's charity [...] economic justice will be at the head of our demands. (English)

Example 1 describes Pakistan's economic situation through a metaphor related to the Islamic religion. As can be observed, temples are used to reason about the economic system of countries. The specific mappings are listed in Figure 3 below:

SOURCE	TARGET
Temples	Rich countries
Poor people	Government
Hunger	Underdeveloped economy
Communal meals	Debts

Figure 3. Set of mappings in the conceptual metaphor: *DEBTS TAKEN FROM RICH COUNTRIES ARE COMMUNAL MEALS IN TEMPLES*.

The underlying metaphor is DEBTS INCURRED WITH RICH COUNTRIES ARE COMMUNAL MEALS IN TEMPLES. This metaphor is based on cross-domain resemblance. Metaphors of this type are called context-induced metaphors by Kövecses (2015). They require cross-domain resemblance and a relevant contextual factor. We understand the grounds for resemblance by looking into the source domain that is activated in connection to running a temple. In Pakistan the traditional places for prayer are mosques and temples. In temples, there are certain days in which communal meals are prepared for poor people who come to them. Their lives depend on those communal meals and they are always expecting them eagerly. The author of the news takes this common situation in Pakistani culture to match it with the current Pakistani economic system. Religion is broadly present in Pakistan's everyday life to the extent that it is highly unlikely not to find metaphors related to it in virtually any field.

In Western culture, we can find the concept of charity, which is run by religious and non-religious organizations, as example 2 shows. The speaker does not want anyone's money as *charity*. He will wait for economic justice to happen. Therefore, the underlying metaphor would

be GETTING INTO DEBT IS TAKING CHARITY. This is the perspective of debt from the outside. The following examples offer a view on how going into debt is handled metaphorically in Urdu and English:

- (3) Asking for loans is a basic need for Pakistan’s economy. They take a bowl in their hands and damage Pakistan’s image in the world. (Urdu)
- (4) Korean minister goes cap in hand to Japan (English)

In these examples, taking a loan is being a beggar. In (3), we find two complex cognitive operations in interaction. One is the metaphor ASKING FOR A LOAN IS BEGGING MONEY, whose source is constructed on the basis of a double metonymy:

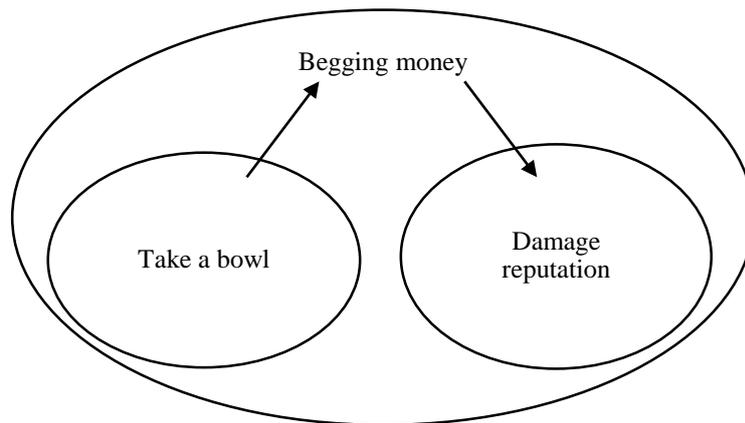


Figure 4. *Metonymic expansion plus metonymic reduction in TAKE A BOWL*

Through metonymic expansion TAKING A BOWL implies BEGGING MONEY. Begging is a disreputable activity. One of the reasons for this is that it damages people’s image. In this case, we have a metonymic reduction operation in which BEGGING MONEY STANDS FOR DAMAGING YOUR IMAGE. In terms of Langacker’s (1987) now classic profile/base distinction, the double metonymy is thus formed by two profiles (or designations) of the same base (or background) domain (begging money). An alternative to the profile of DAMAGE YOUR IMAGE is DAMAGE YOUR REPUTATION, which is used in the analysis. The metonymic re-profiling of the source domain of the metaphor directs the hearer’s attention to the element of the metaphoric target that has to be re-profiled. So, the profile-shifting of the metaphoric source has a profile-shifting in the metaphoric target. This is consistent with the fact that metaphoric sources are used to reason about target domains. Moreover, there is also a case of metaphony (metonymic expansion-reduction of a metaphoric source domain):

SOURCE	TARGET
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Take a bowl</div>	
↓ Beg ↓ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Damage reputation</div>	Ask for a loan

Figure 5. *Conceptual metaphor ASKING FOR A LOAN IS BEGGING (3)*

Finally, it should be noted that mapping ‘begging’ onto ‘asking’ is a case of *hyperbolic metaphor*. Regarding this type of metaphors, Ruiz de Mendoza (2017: 156) asserts that they are used when “the source domain is used to emphasize a gradable attribute in the target domain”. This operation is used to communicate the nature of *asking for a loan* as a highly negative action and that is why it is correlated to *begging*.

In English, the concept of *the begging bowl*⁴ is similar to the one in the example in Urdu. However, as (4) illustrates, there is also another possibility, based on the metaphor ASKING FOR A LOAN IS GOING CAP IN HAND. Both metaphors have the same target domain. Their source domain is similar because in both cases a container is associated with the act of begging. *Go cap in hand* is an expression which derives from a conventionalized metonymy and it means ‘to ask someone for money or help in a way which makes you feel ashamed’⁵. The feeling of being ashamed arises from begging and that affects your reputation. This leads to the same conceptual organization as in (3) in which a metaphoric chain, a metaphonymy, and a metaphor are found in interaction (see Figure 5).

The difference between the expressions of both languages is that in the Urdu conceptualization the cap is not a begging instrument. This is related to an important cultural factor which involves the way English people traditionally dress. The cap was an important part of men’s dressing in England, which made it essential in their everyday lives. This has paved the way for the expression *cap in hand*. In Urdu, this metonymic expression does not exist because people dress differently. The juncture point of the English and Urdu examples lies on the impregnated negativity towards debt beggars. This negativity is also illustrated in the following examples:

(5) Economy is stuck in the filth of debt interest. (BBC Urdu)

(6) He would also cut the interest on student debt (BBC English)

Example (5) presents the picture of interests on debt as filth. If we only take the first part of the sentence (where economy is seen as if stuck in filth) the underlying metaphor maps filthy conditions onto the undesirable situation of having to pay back a debt plus interests. This metaphor is grounded in the correlation between being in a filthy place and feeling uncomfortable. In the example, the resemblance between the feelings of discomfort (the effects) caused by being in a dirty location and those arising from a situation of debt interest leads to a naïve conclusion about similarity of their corresponding causes. This fake resemblance gives rise to the metaphor BEING IN DEBT INTEREST IS BEING IN FILTH and, through further generalization, (BEING IN) ANY UNDESIRABLE SITUATION IS (BEING IN) FILTH. However, taking the sentence as a whole, a different picture arises. In Pakistani culture, imposing interests on debt (or on anything) is thought to be punishable by God, so it is considered a major sin. Any immoral behaviour is a sin. Therefore, debt interest is filth. Since sins are immoral, debt interest is immorality. This constitutes a single-source amalgam grounded in a cultural factor related to religion:

⁴ Example: More grateful recipients hold their *begging bowl* with one hand and their nose with the other, insisting that there is no such thing as dirty money because a coin is morally neutral (English)

⁵ <http://idioms.thefreedictionary.com/go+cap+in+hand> (Accessed 06/07/2017)

SOURCE 1	TARGET 1
Being in filth	Being in debt with interests
SOURCE 2	TARGET 2
FILTH	Immorality

Figure 6. Single-source amalgam for *DEBT INTEREST IS FILTH* (5)

The underlying cultural factor is the fact that charging interests on debt is considered a sinful practice. Muslims believe that everything God commands is moral and everything He labels as a sin is immoral. Culturally, charging interests is considered immoral since it is considered a form of injustice towards the debt payer, who has to pay back more money than he has received. However, the main reason why charging interest is an immoral activity is that it is forbidden by God. In view of this, the metaphor in (5) is best explained as a result of combining IMMORALITY IS FILTH with BEING IN DEBT WITH INTERESTS IS BEING IN FILTH. This combination has the form of a single-source metaphoric amalgam grounded in resemblance properties (see figure 6).

Being in interest debt is not a negative situation only for the Islamic culture but also for the Western world. However, in the Western world it is not seen as sinful or immoral. It thus calls for metaphorical conceptualizations in which having to pay interest is seen as an undesirable situation that should be minimized as much as possible. Thus, cutting on the interest, in example (6), is positive. However, the notion of cutting does not always work in this way. If we take the example *German unions have vowed to resist the cuts in economy* (BBC English News), we can realise that the word *cuts* is axiologically negative. This is consistent with the fact that the context is highly valuable to put into the right perspective the use of a given knowledge schema. This is also evidenced in the next examples, where the context determines the differences between otherwise similar metaphors.

- (7) Economy is not improving [...] Debts will be paid by draining the blood of poor people (BBC Urdu).
- (8) The cover of a recent collection of articles compiled by Kilgore shows blacks toiling away as a white man in a suit drains blood from Africa into a bucket labelled “World Bank” (BBC English)
- (9) We have to trust in our resources to achieve economy development. But we tend to arrive at the doors of different institutions with our bowls who suck the blood of underdeveloped countries (BBC Urdu)
- (10) He said he has told President Obama that “If he undertook to stay in Afghanistan, it was going to suck dry his ability to fund any other domestic initiatives that he had” (BBC English).

The expressions *drain the blood* and *suck the blood* are similar since they involve the action of taking blood out of a container. However, the context shows that each expression is used to denote different types of people within the schema of debt. Figuratively, (7) conveys the idea that the government will deprive people of essential resources by having them pay back their debts. This is a metaphor whose source domain is obtained through metonymy: draining someone’s blood stands for taking away his life. Once the metaphoric source has been built, it maps onto taking away crucial resources from the poorest –and thus neediest– people (and, by implication, making their lives even more miserable). The source of this metaphor

(see figure 7) also has a hyperbolic ingredient based on the metonymic target (taking someone's life is definitely a more radical action than taking people's money):

SOURCE	TARGET
Deprive of life (Hyperbole)	Take away money
Weapon used to deprive of life	Debts
Users of the weapon	Pakistani government
Receivers of the harm	Poor people

Figure 7. *DRAIN THE BLOOD (7)*

Debts are the reason why the government will deprive people of basic living resources which stand for money. There is resemblance between the two domains analysed. Ultimately, the government will use up every single resource in order to pay the debts back, any other solution to this problem being unrealistic.

Example (8) is based on an image on the cover of a journal. This image represents black men working arduously while white men drain blood from Africa into a bucket. This depiction is based on the combination of several cognitive operations that help to flesh out the meaning impact of the DRAIN BLOOD metaphor. First, AFRICA stands for AFRICAN PEOPLE (metonymic reduction) while the WHITE MAN IN A SUIT stands for POWERFUL WESTERN PEOPLE (metonymic expansion). This metonymy is based on the usual association between a person's attire and social rank. In turn, conceptualizing Africa as a whole, and the Western world as one entity shows the power that the Western World has over Africa. The bucket into which the blood is drained stands for the World Bank (metonymic expansion). This conceptual association is grounded in our knowledge about slaughter practises, which often involve draining the animal's blood, which is spilled into a bucket (a type of container) to be used later. Interestingly, a bank, as a repository of money, can be conceptualized as a container. Their work is seen in terms of the benefits obtained, which is understood as money (CAUSE FOR EFFECT). Black men's blood, thus, is understood in terms of their lives and, as in the Urdu example, BLOOD stands for LIFE and DRAINING BLOOD for DEPRIVING (SOMEBODY) OF LIFE (see Figure 7). Therefore, in this conceptualization, powerful Western people take the benefits of black men's work and they transfer them to the World Bank in the form of money. The World Bank is represented as a bucket with which it shares the logic of the container. Considering these complex cognitive operations, DRAIN BLOOD involves the metonymic expansion of a metaphoric source domain as depicted in Figure 8 below:

SOURCE	TARGET
Depriving people of their lives (Hyperbole)	Taking away people's money
Deprivers of life	Powerful Western people
Beneficiary of the deprived lives	Beneficiary of unduly charged money (World Bank)
Sufferers	Black people

Figure 8. *DRAIN THE BLOOD (8)*

In (7) and (8), metaphors are conceptualized similarly although there are some differences in the mappings involved. In both of them, we can find hyperbolic metaphors which map life onto living resources in the form of money. In both cases, there is a resemblance relationship between a real-world scenario where somebody is abused (poor people or black people) and depriving people of their lives. The DRAIN BLOOD scenario is impacting to the extent that it conveys the injustice or abuse of people in power over poor people. This impact is higher due to the hyperbolic nature of the metaphor.

In (9), the writer of the article provides a picture of an indebted Pakistan, which asks for money from different institutions. These examples describe loan takers and loan providers. According to the example, Pakistan asks for loans from institutions. The metaphoric source domain is accessed through the metonymy ARRIVING WITH A BOWL AT SOMEONE'S DOOR FOR BEGGING. This is a case of metonymic expansion of a metaphoric source domain in which the metaphor is reinforced by a hyperbole (ASKING IS BEGGING) to highlight the act of asking for a loan.

In order to describe loan providers, we find a metonymic relation between SUCK THE BLOOD and the source of the metaphoric scenario in Figure 9:

SOURCE	TARGET
Leech	Institution
Benefit from the nutrients	Benefit from giving a loan (interest)
Physical harm	Economy damage
Receivers of the harm	Underdeveloped countries

Figure 9. SUCK THE BLOOD (9)

SUCK THE BLOOD stands for a scenario in which leeches feed on animals to benefit from the nutrients in their blood, thus doing harm to them. This maps onto the real-world scenario where institutions take advantage of underdeveloped countries by getting them into debt and damaging their economy. Therefore, there is a metonymic expansion of a metaphoric source domain. The source and target domain are based on resembling attributes which pave the way for a context-induced metaphor.

Example (10) matches the Urdu example in (9), but it offers a different context with its corresponding connotations. There is a metonymic relation between SUCK DRY and the source scenario of the metaphor in Figure 10:

SOURCE	TARGET
Leech	Staying in Afghanistan
Benefits from the nutrients	Benefits from staying in Afghanistan (political, military)
Physical harm	Damage to US economy
Object of harm	Obama

Figure 10. SUCK DRY (10)

Within the target domain there are two parallel cases of metonymic reduction that have to be taken into account: OBAMA FOR THE UNITED STATES ARMY and OBAMA FOR

the UNITED STATES ECONOMY. Therefore, the target of the metaphor is enriched through double metonymic reduction:

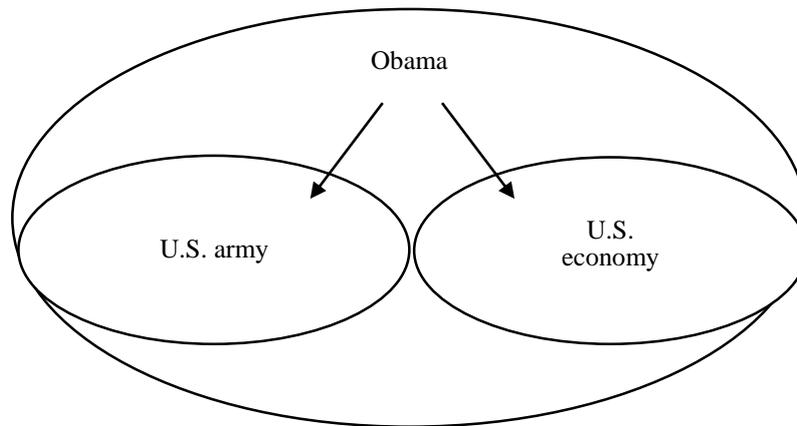


Figure 11. Metonymic reduction: OBAMA FOR U.S. ARMY FOR U.S. ECONOMY (10)

This metonymic chain enriches the target domain of the metaphor in Figure 10. It is part of a metaphonymy: double metonymic reduction of the metaphoric target domain. In addition, there is a metonymic expansion of the metaphoric target domain which corresponds to STAY IN AFGHANISTAN into a scenario in which the U.S. army is staying in Afghanistan for political or military purposes. Their stay has to be paid by United States government (or institutions which manage money) and therefore money is spent to an extent in which the government may run out of it. This leads to the idea that the government’s “ability to fund any other domestic activity” will be gone and this is the result of SUCK DRY. Therefore, the benefits and the harm of staying in Afghanistan (*leech*) are both for OBAMA (see Figure 11). The connotation that is not found in Urdu is that SUCK DRY involves a hyperbolic metaphor in which the resultative adjective *dry* implies the absence of blood as the completion of the action.

A leech’s saliva is commonly believed to contain anaesthetic compounds that numb the bitten area. Consequently, the prey does not realise that its blood is being sucked out and it will only feel the harm later on. This has meaning effects that we associate to the target. In (9) the countries do not realise that institutions are taking advantage of them. They are numbed through money loans. However, at that precise moment they do not realise that they have to pay the loan back together with the interest. They figure out the damage to their economy when it is too late. A leech’s prey also feels physical harm once its blood has been sucked out. Similarly, in (10) Obama does not realise the damage the United States economy will suffer if its army stays in Afghanistan. He is numbed by the immediate benefits to be obtained.

Considering the analysis of our examples, we can clearly confirm the relevance for this type of study of an analysis in terms of cognitive models and their combinations. In the table below, we categorize the cognitive operations used in each language. It is also determined which cognitive operations are more productive and which language proves to be more prolific in terms of complex cognitive operations:

	ENGLISH	URDU
METAPHOR	16	16
METONYMY	11	10
METAPHTONYMY	45	42
AMALGAMS	20	22
CHAINS	8	10
TOTAL	100	100

Figure 12. *Conceptual operations at work*

The types of cognitive activity used are similar in both languages. This is in line with the universal nature of our cognitive resources. Metaphor and metonymy tend to work in cooperation by using conceptual complexes. Metaphtonymy is the more productive conceptual complex in both languages. It doubles the use frequency of independent metaphors and metonymies. Therefore, studies on figurative uses of language in specific discourse domains and/or genres should begin to focus on conceptual complexes in order to produce more detailed analyses of the cases under scrutiny.

6. CONCLUSION

The present article has provided a cross-linguistic analysis of corpus-based metaphors in Urdu and English related to the field of economics from a cognitive-linguistic perspective. The analysis has been carried out by examining and explaining the similarities and differences between the Urdu metaphors and their counterparts from a contextual and conceptual point of view. The contextual perspective focuses on the cultural and situational differences between metaphors in both languages. The conceptual perspective has shed light on the relevance of complex cognitive operations (e.g. metaphtonymy, metaphoric amalgams, metaphoric and metonymic chains). It has also evidenced the importance of hyperbole as a cognitive operation.

By considering the overall picture of our analysis, three main findings arise from the present research. First, cultural differences affect the way people think metaphorically about economy in Urdu and English; second, conceptual complexes have been found in the two languages, which suggests that they may be a pivotal tool for cross-linguistic analysis; and third, cultural and political differences are not decisive in our metaphorical thinking on economy in Urdu and English but they affect it. Consider the fact that the Urdu examples tend to be filled with hopelessness and pessimism, while their English counterparts construct conceptual complexes based on a negative axiology when debt is related to others (not to the self). There are other factors, such as the presence of experiential correlations or the globalised nature of economy, which influence the conceptual grounding of the metaphors in our sample. In the light of the aforementioned outcomes, our study has implications on two levels: economy transactions and teaching ESP. Over the last decades, the globalisation of economy has become widespread. As we have seen, figurative language is pervasive in the language of economy. Therefore, cross-linguistic studies dealing with figurative language are helpful to avoid misunderstandings on high level economic transactions that could lead to big financial losses. Teaching English to economy students is another important implication to consider. Metaphors have been considered to be helpful in English for Economics owing to the vast amount of

figurative language used in this field. Hence, the pedagogical application of cross-linguistic analyses like the one provided herein could be a good way for students to acquire linguistic and conceptual knowledge at the same time.

Further research is of course needed to fully account for the differences and similarities between the two languages. In the meantime, the preliminary findings provided here lend strong support to the proposals on conceptual complexes made by Ruiz de Mendoza (2017) and his associates. To my knowledge this is the first time that such conceptual complexes are the object of systematic, even though limited, cross-linguistic analysis. This kind of analysis provides one further standard of adequacy to contemplate in studies on cognitive operations, which be added to the other standards of adequacy usually sought for by these studies, such as cognitive, pragmatic, and discourse adequacy (see Ruiz de Mendoza & Galera, 2014, for in-depth discussion of such standards). Finally, like every preliminary study, there are theoretical challenges. Among them, we would like to mention the need to study metaphors cross-linguistically using a fully contextualized large-scale corpus sample. This is necessary in order to carry out an extensive analysis on cultural and conceptual differences not only in the field of economy, but also in any other field. It is the author's hope that the present preliminary analysis will have at least paved the way for more ambitious studies of this kind.

FUNDING

The research on which this article is based has been financed by FEDER/Spanish Ministry of Science, Innovation and Universities, State Research Agency, project no. FFI2017-82730-P.

ACKNOWLEDGEMENTS

I am indebted to Prf. Francisco José Ruiz de Mendoza (University of La Rioja) and to Lorena Pérez-Hernández (University of La Rioja) for their remarks on a previous draft of this article. I am also grateful to two anonymous reviewers for their additional comments. Any remaining weakness is my own responsibility.

REFERENCES

- Alejo, R. (2010). Where does the money go? An analysis of the container metaphor in economics: the market and economy. *Journal of Pragmatics*, 4(42), 1137-1150.
- Boers, F. (2000). Enhancing metaphoric awareness in specialised reading. *English for Specific Purposes*, 2(19), 137-147.
- Boers, F. & Demecheleer, M. (1997). A few metaphorical models in (Western) economic discourse. In W. Liebert, G. Redeker, & L. Waugh (Eds.), *Discourse and Perspective in Cognitive Linguistics* (pp. 115-129). Amsterdam: John Benjamins.
- Charteris-Black, J. (2000). Metaphor and vocabulary teaching in ESP economics. *English for Specific Purposes*, 2(19), 149-165.
- Charteris-Black, J. & Ennis, T. (2001). A comparative study of metaphor in Spanish and English financial reporting. *English for Specific Purposes*, 3(20), 249-266.

Dirven, R., & Ruiz de Mendoza, F. J. (2010). Looking back at 30 years of Cognitive Linguistics. In E. Tabakowska, M. Choiński & L. Wiraszka (Eds.), *Cognitive Linguistics in Action. From Theory to Application and Back* (pp. 13-70). Berlin & New York: Mouton de Gruyter.

Frank, R. M. (2015). A future agenda for research on language and culture. In F. Sharifian (Ed.), *The Routledge Handbook of Language and Culture* (pp. 493-512). London, New York: Routledge.

Geeraerts, D. (2010). Recontextualizing grammar: Underlying trends in thirty years of Cognitive Linguistics. In E. Tabakowska, M. Choiński, & L. Wiraszka (Eds.), *Cognitive Linguistics in action. From theory to application and back* (pp. 71-102). Berlin & New York: Mouton de Gruyter.

Gibbs, R.W. (2011). Evaluating Conceptual Metaphor Theory. *Discourse Processes*, 48(8), 529-562.

Goldberg, A. (2006). *Constructions at Work. The Nature of Generalization in Language*. Oxford: Oxford University Press.

Grady, J. (1999). A typology of motivation for conceptual metaphor: Correlation vs. Resemblance. In R. Gibbs, & G. Steen (Eds.), *Metaphor in Cognitive Linguistics* (pp. 79-100). Amsterdam: John Benjamins.

Herrera-Soler, H. & White, M. (2007). A contrastive view of British and Spanish business press headlines. *Rassegna Italiana di Linguistica Applicata*, 39(1-2), 295-316.

Herrera-Soler, H. & White, M. (Eds.). (2012). *Metaphor and Mills: Figurative language in business and economics*. Berlin & Boston: Walter de Gruyter.

Kövecses, Z. (2005). *Metaphor in Culture: Universality and Variation*. Cambridge: Cambridge University Press.

Kövecses, Z. (2010). *Metaphor. A Practical Introduction*. New York: Oxford University Press.

Kövecses, Z. (2013). Recent developments in metaphor theory: Are the new views rival ones? In F. González-García, M. S. Peña Cervel & L. Pérez-Hernández (Eds.), *Metaphor and Metonymy Revisited beyond the Contemporary Theory of Metaphor* (pp. 11-25). Amsterdam / Philadelphia: John Benjamins.

Kövecses, Z. (2015). *Where Metaphors Come From. Reconsidering Context in Metaphor*. USA: Oxford University Press.

Lakoff, G. & Johnson, M. (1980). *Metaphors We Live By*. Chicago: The University of Chicago Press.

Lakoff, G. & Turner, M. (1989). *More than a Cool Reason: A Field Guide to Poetic Metaphor*. Chicago. University of Chicago Press.

- Lakoff, G. & Johnson, M. (1999). *Philosophy in the Flesh: The Embodied Mind and its Challenge to Western Thought*. New York: Basic Books.
- Langacker, R. W. (1987). *Foundations of Cognitive Grammar. Vol. 1: Theoretical prerequisites*. Stanford, CA: Stanford University Press.
- Langendoen, T. (1968). *The London School of Linguistics: A Study of the Linguistic Theories of B. Malinowski and J.R. Firth*. Cambridge, MA: MIT.
- Langer, T. (2015). Metaphors in Economics: Conceptual Mapping Possibilities in the Lectures of Economics. *Procedia Economics and Finance*, 25, 308-317.
- Maalej, Z. & Yu, N. (Eds.). (2011). *Embodiment Via Body Parts: Studies from Various Languages and Cultures*. Amsterdam: John Benjamins.
- Pamies, A. & Ramos, I. R. (2017). Metaphors of economy and economy of metaphors. *Europhras*, 2, 60-69.
- Pérez Sobrino, P. (2017). *Multimodal Metaphor and Metonymy in Advertising*. Amsterdam: John Benjamins.
- Ruiz de Mendoza, F. J. (2011). Metonymy and cognitive operations. In R. Benczes, A. Barcelona & F. J. Ruiz de Mendoza (Eds.), *Defining Metonymy in Cognitive Linguistics. Towards a Consensus View* (pp. 103-123). Amsterdam & Philadelphia: John Benjamins.
- Ruiz de Mendoza, F. J. (2017). Metaphor and other cognitive operation in interaction from basicity to complexity. In B. Hampe (Ed.) *Metaphor: Embodied Cognition and Discourse* (pp. 138-159). Cambridge: Cambridge University Press.
- Ruiz de Mendoza, F. J., & Díez, O. (2002). Patterns of conceptual interaction. In R. Dirven, & R. Pörings (Eds.), *Metaphor and Metonymy in Comparison and Contrast* (pp. 489–532). Berlin & New York: Mouton de Gruyter.
- Ruiz de Mendoza, F. J. & Galera M. A. (2014). *Cognitive Modelling. A Linguistic Perspective*. Amsterdam: John Benjamins.
- Ruiz de Mendoza, F. J. & Otal, J. L. (2002). *Metonymy, Grammar and Communication*. Granada: Comares.
- Ruiz de Mendoza, F. J. & Pérez-Hernández, L. (2011). The Contemporary Theory of Metaphor: Myths, Developments and Challenges. *Metaphor and Symbol*, 26(3), 161-185.
- Ruiz de Mendoza, F. J. & Santibáñez, F. (2003). Content and formal cognitive operations. *Italian Journal of Linguistics*, 2(15), 293-320.
- Sharifian, F. (2017). *Cultural Linguistics*. Amsterdam, PA: John Benjamins.
- Sharifian, F. (Ed.). (2017). *Advances in Cultural Linguistics*. New York, London and Singapore: Springer.

Skorczynska, H. & Deignan, A. (2006). Readership and purpose in the choice of economic metaphors. *Metaphor and Symbol*, 2 (2), 87-104.

Soares, A., Cuenca, M. J., & Romano, M. (2017). The Conceptualisation of austerity in the Portuguese, Spanish and Irish Press. In F. Sharifian (Ed.) *Advances in Cultural Linguistics* (pp. 345-368). Singapore: Springer.

Sperber, D. & Wilson, D. (1995). *Relevance. Communication and cognition*. Oxford: Basil Blackwell.

Steen, G. J. (2013). The contemporary theory of metaphor — now new and improved! In F. González-García, M. S. Peña Cervel & L. Pérez-Hernández (Eds.), *Metaphor and Metonymy Revisited Beyond the Contemporary Theory of Metaphor* (pp. 27-65). Amsterdam and Philadelphia: John Benjamins.

Ungerer, F. & Schmid, H. J. (2013). *An Introduction to Cognitive Linguistics*. New York: Routledge.

Wang, H., Runtsova, T. & Chen, H. (2013). Economy is an organism – a comparative study of metaphor in English and Russian economic discourse. *Text & Talk: An interdisciplinary Journal of Language, Discourse and Communication Studies*. 33(2), 259-288.

White, M. (2003). Metaphor and economics: the case of growth. *English for Specific Purposes*, 2(22), 131-151.