Psycholinguistic Study: Factors Affecting the Comprehension and Interpretation of Animal Metaphors in a Foreign Language

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Abstract:

The present study discusses animal metaphor from both a cognitive and cultural perspective to get more insightful understanding on animal metaphor comprehension in a foreign language. The study examines the understanding of animal metaphors associated with personal characteristics by foreign language learners and those key factors that can interplay in the foreign learners' acquisition of metaphors. It attempts mainly to find out to what extent English learners' first language may influence metaphoric processing in the target language and what factors promote this influence. The study concludes that first language interference in the interpretation of animal metaphorical expressions can be attributed to two main factors which are the degree of frequency and saliency of the metaphorical meaning in both the native and target language and the type or nature of meaning involved in the metaphorical processing.

Keywords: Comprehension, animal metaphors, acquisition of metaphors cognitive perspective.

العوامل النفسية اللغوية التي تؤثر على الاستيعاب وتفسير اللغة المجازية التي توظف الحيوان في اللغات الاجنبية

الملخص:

تناقش الدراسة الحالية اللغة المجازية التي توظف الحيوان من منظور إدراكي وثقافي للحصول على فهم أعمق حول استيعاب هذه اللغة التي توظف الحيوان في لغة اجنبية. وتنظر الدراسة في فهم اللغة المجازية التي توظف الحيوان المتعلقة بالسمات الشخصية من قبل متعلمي اللغة الاجنبية والعوامل الرئيسية التي تلعب دوراً في فهم هذه اللغة المجازية. وتحاول بشكل رئيسي لاكتشاف مدى تأثير الاولى على فهم متعلمي اللغة الانجليزية لهذه اللغة المجازية باللغة الهدف وما هي العوامل التي تعزز هذا التأثير.

نستنتج هذه الدارسة ان تدخل اللغة الاولى في فهم تفسير هذه اللغة المجازية المتعلقة بالحيوان ممن الممكن ان يعزى الى عاملين رئيسيين وهما مدى تكرار وأهمية المعنى المجازي في كل من اللغة الاصل و اللغة الهدف و طبيعة المعنى المتعلق لابالعملية المجازية.

كلمات مفتاحية: الاستيعاب، اللغة المجازية المتعلقة بالحيوان، الرؤيا الادلراكية لاكتساب اللغة المجازية.

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1. Introduction

1.1. Theoretical Framework: Conceptual Metaphors and Animal Metaphors

The study of metaphors as a figure or matter of thought rather than as an ornamental figurative device has been the subject of interest of so many studies in the past years. With the emergence of the theory of Cognitive Metaphor (CM) proposed by Lakoff and Johnson (1980). The basic ideas of this theory views metaphor as a way of conceptualizing human experiences. This gave the term "conceptual metaphors" that refers to those deep metaphors "embedded" in the language, described by Lakoff and Johnson (1980), that shape the way people think about the world and reconstruct their thoughts, attitudes and ideologies (Moon, 1998:202). According to Lakoff and Johnson (1980), a conceptual metaphor provides an understanding of a particular type of experience in terms of another similar one (154).

Barcelona (2000) referred to conceptual metaphor as "a cognitive mechanism" by which one experience is "mapped into" or "projected onto" another one (3). That is, the understanding or the experiencing of a particular thing or "experiential domain" in terms of another one. This indicates a type of relationship of "correspondence", "projection" or "mapping" between two things in a metaphor the **source domain** (the conceptual domain from which we draw metaphorical expressions) and the **target domain** (the conceptual domain that we try to understand). In short, a conceptual metaphor consists of sets of 'correspondences' or 'mappings' between two domains the target and the source domain (Kövecses, 2010:197). The different source domains of metaphors in general include food, time, body and animals. However, among these domains, animals tend to be the richest source (Song, 2009 cited in Aliakbari and Faraji, 2013:4). Consequently, when referring to animal metaphors in particular, speakers of a language associate animal characters and connotations attached to them (source domain) to human characters (target domain). Such metaphors are not only cognitively driven but also culturally (Aliakbari and Faraji, 2013:4). In the light of this, animal metaphors in a particular language can function as indicators of its culture.

1.2. Metaphor-Culture Interface

As it can be noted from the previous discussion, animal terms or names are evaluative in nature. They involve transference of evaluative affective meanings. In figurative expressions including animal metaphors, connotations associated with animals are transferred to the topic (human beings). Many authors made the point that the basis of metaphorical transference is related to affective/ associative meaning rather than denotative one (Deignan, 1997:282). Keats (1980) for instance, indicated that the metaphor "Man is a wolf" does not "denote objective similarity between man and

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wolf". It is the associative connotative meaning of viciousness attached to the denotative literal meaning which is transferred to the man ((212), cited in Deignan, 1997:282). Similarly, in a metaphorical sentence like "Ali is a fox" it doesn't mean that Ali is an actual fox. Rather, the connotations of cunning attached to the literal meaning of 'fox' are transferred to the topic 'Ali'.

It is worth mentioning at this point that, as indicated earlier, such a transferred meaning in metaphor is **culture and context dependent**. For instance, despite the existence of particular shared associative meaning of an animal in two languages, it might be notice another cultural-specific one and which is absent in the other language.

1.3. Cognitive Processing and Understanding of Metaphorical Meaning in L2

In the previous part of the study, it has been stated that within the theory of Cognitive Metaphor, metaphors are "ways of thinking" and "conceptualizing" entities and objects in the world whose their main function isn't to create an aesthetic effect but rather to "structure abstract or complex thoughts" through a 'mapping' or 'correspondence' between two domains.   As indicated earlier, such type of mapping is both culturally and cognitively constrained. However, it is important to mention another feature of 'mapping' which is its 'automaticity'. That is to say, "the system of conventional conceptual metaphor is mostly unconscious, automatic and with no noticeable effort" (Lakoff, 1993:245, cited in Valenzuela and Soriano, 2007:282-283). This in fact raises the question whether such 'atomicity' is always present in the processing of metaphorical expressions in (L2) and especially when foreign language learners have to interpret a metaphorical expression in L2 which is unknown to them. If learners cannot understand or comprehend a metaphorical expression in L2 automatically or unconsciously how then can they try to comprehend and process such expressions? And even when the metaphorical meaning of a conceptual metaphor is interpreted and comprehended with atomicity and effortlessly, what are the mechanisms and cognitive processes that are involved in metaphor comprehension?

Understanding or interpreting a metaphor is a type of cognitive processing. From a cognitive linguistic perspective, an activation of the knowledge of the source domain and the target domain should be made by learners' himself/herself in order to process a metaphor. For a foreign language learner this will involve the "mobilization" of the learned knowledge of the source and target domains of the target language while at the same time activating and/ or suppressing those features associated with source and target domain in the first language (L1) (Hoang, 2014:5). Other mechanisms for metaphor comprehension and processing had been suggested in the literature. According to Littlemore and Low (2006), metaphor comprehension involves five psychological

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processes; **noticing**, **activation** of source domain knowledge, **associative fluency**, **analogical reasoning** and **image formation**. For them, such processes help learners focus on the relationship between the source domain and target domains and thus help them understand metaphors (cited in Hoang, 2014:5). Hence, when learners cannot understand the meaning of a metaphor from the context and there is no equivalent in their L1 they will try to interpret it by identifying those aspects of the source domain that are relevant to the target domain within the given context. However, the lack of knowledge of those conventional features associated with the domains will make them find it difficult to interpret/understand. Yet, the application of such psychological processes will facilitate this procedure by employing these psychological processes in interpreting metaphors. Thus, when applying **associative fluency** (the ability to give all possible association/ a wide range of connections when given a stimulus) strategy in the metaphor interpretation process, learners need to look for all the possible meanings or associations ('semic webs'/ network of associations) connected with or surrounding the source domain and then try to figure out which of these associations overlap or connected/ close to the source domain. After accessing all possible meanings and associations of the source domain, learners need to apply **analogical reasoning process** which involves identifying all possible links between the source domain and the target domain. That is, to observe the partial similarities (drawing an analogy) between the domains which could be better understood as **performing the mapping** between the source domain and the target domain so the characteristics of the source domain can be used to shed light on the target domain. However, it is important to note that this type of process is mainly based on context that is in order to perform the mapping or evaluating the match between the two domains, learners need to rely on context. Thus, analogical reasoning must take place between the unknown meanings of a concept/domain and the context in which it appears. The analogy is to be made on the base of the surrounding context. The use or evoking of mental image in the **image formation strategy** can facilitate the involvement or the engagement in both of the associative fluency and analogical reasoning. Forming a mental image of metaphorical expressions, that is an interactive one between the source domain and the context in which it appears can help learners in making association in the comprehension process (Littlemore, 2002:44, Littlemore 2008:202-203).

1.3.1 Animal Metaphorical Meaning: Formation, Mechanisms and Cognitive Processing of Animal Metaphor.

The previous discussion on how metaphor can be cognitively understood and processed sheds light on the formation of animal metaphorical meanings. However, we should understand first what

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animal metaphor is, and how can those animal terms produce metaphorical meanings and how such animal metaphorical expressions get their established connotations and interpretations in all languages. According to Feng (2014), animal metaphors can be comprehended as metaphorical expressions with animal images in languages to which people of a certain culture attach certain shared connotations (68). Generally, animal metaphorical meanings are developed gradually through getting into close contact with some animals in human life experiences. Human beings in their life are in close contact with many animals. Animals can be pets, friends or objects for use and therefore play an important role in human life. Accordingly, people have some profound knowledge about the characteristics and behavior of animals and hence in their linguistic cognitive processing (linguistic development) associate their feelings, behaviors and human characteristics with animal images which in turn promote the projection between the source and target domain. In this way, attributes associated with animals are mapped onto human beings (Feng, 2014: 68). Thus, people use their knowledge of the behavior or attributes of a particular animal (which is sometimes culturally specific) to structure and develop their understanding of some personal human traits or characteristics.

To conclude, animal metaphor belongs to the group of conceptual metaphors which are culturally and cognitively motivated (Littlemore and Low 2006). Unlike linguistic metaphor, which depends on the form/structure and does not require any background knowledge from L2 learners, conceptual metaphor is based on the meaning and "relationship(s) between two concepts or entities". Accordingly, learning and understanding animal metaphor requires not only linguistic knowledge but also native speaker competence. According to Bachman (1990), understanding of metaphors falls within sociolinguistic competence. Therefore, the main focus in comprehension and interpretation of animal metaphors (and conceptual metaphors in general) should be made on developing sociolinguistic competence in L2 learners.

Conceptual metaphor is, therefore, the product of society. The relationships between source and target domains derive from collective knowledge. Animal metaphors are the result of interaction between humans and animals, observation of animal behavior and transferring of animal features to human beings. However, various cultures perceived animal features differently which led to the fact that one and the same animal metaphor in two cultures can have different meanings.

1.4. Review to Related Literature

As indicated earlier, animal metaphors belong to the type of conceptual metaphors and are the product of culture. Therefore, metaphors are seen as a direct part of sociolinguistic competence. For

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this reason, comprehension and interpretation of metaphors requires not only linguistic knowledge from learners but also understanding of cultural background of the target language country. Thus, metaphors convey different connotations for language users, a fact that stresses the need to conduct more studies on how learners of a foreign language comprehend and interpret animal metaphors in L2 and whether knowledge of L1 and its culture might affect their understanding of such metaphors in L2. As it had been indicated by Faghih (2001), when a particular meaning or connotation is in the target language and the native language is the same but it is expressed by a different "formal device" a negative transfer will take place (12). In fact, this goes in line with what Littlemore and Low (2006) have suggested on how metaphors form a challenge to language learners. According to them, despite learners' knowledge and experience of the target language, they will have a difficulty in understanding figurative language due to the lack of what is called "native speaker competence" (3, cited in Hoang, 2014:4)) which includes "awareness of cultural conventions, cultural connotations and figurative language repertoire" (Hoang, 2014).

Various studies have proved the interplay between knowledge of L1 and its culture and metaphor comprehension in L2. The study by Deignan, et al. (1997) focused on culture as the main source for metaphors. According to the researchers lack of cultural background is one of the key factors that prevent language learners from proper comprehension and interpretation of metaphors in target language. The research showed the level of difficulties between the understanding the meaning of conceptual metaphors in L1 and English. Deignan (2003) claims that "1) different cultures may hold different folk beliefs about attributes of the source domain; and (2) the source domain may be less salient in different cultures" (257). It was also revealed that if the same conceptual metaphor cannot be found nor has different meaning in L1 than in English, learners are inclined to have difficulties with its comprehension (Deignan, et al. 1997).

The study conducted by Boers and Decemecheleer (2001) provides empirical data comparing the use of metaphoric expressions in French with their synonyms in English. Results show that similar source domains in L1 and L2 make the process of metaphor comprehension faster and easier. In contrast, different source domains for metaphors in L1 and L2 will create much confusion for learners.

These studies go in line with observation of Lowery (2013) who advocates the idea that culture is pivotal for metaphor understanding. The study suggests that there is a great number of non-universal conceptual metaphors which are based on local culture and which are intuitively understood by native speakers who were brought up in that culture. As an example, the scholar

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refers to the domain of *baseball* – which is predominantly typical of North America and rarely has followers outside of it. Therefore, such metaphors as "I hit it out of the park" and "I struck out" are based on the knowledge about baseball game that an average American has. When used in the context of business meeting, the first metaphor would mean that the meeting was successful while the second one would mean that the meeting was a failure.

Such findings are supported by Littlemore (2003) research where the native value system of language learner is compared to that of the target language country. Results of the study showed that the value system indeed influences perception of metaphors in the process of L2 acquisition. As a matter of fact, the more connected are the two value systems, the higher are chances that the learner will intuitively understand conceptual metaphor. This perspective presupposes that language learners with cultural background greatly varying from the target language culture will have many difficulties in perception of L2 metaphors.

The study by Charteris-Black (2001) provided interesting results. The scholar focused on connotations that source domains in English and Malay have. More specifically, the author reveals how differences in connotations of metaphors in native and target languages influenced the learner. In other words, the author aimed to show whether L2 learner who is from different cultures acquires L2 metaphors through the prism of connotations that these metaphors have in L1. Results of the study show that such hypothesis is true: in case metaphor had positive meaning in L1 and negative meaning in L2, speaker was more inclined to comprehend and interpret it through the prism of its native culture and language. The study implies that sharp differences in metaphors are almost impossible to overcome on the linguistic level. Therefore, apart from linguistic knowledge an integral part is cultural education.

These studies imply the notion of "metaphor awareness" which is based on the cognitive approach that language is motivated. According to Boers (2004), metaphor awareness indicates the ability to comprehend and interpret linguistic instantiations of metaphorical expressions. A good indicator of metaphor awareness is speaker's ability to identify metaphor in various grammatical forms. The study also implies that metaphor awareness is one of the most effective tools of vocabulary retention and should substitute traditional vocabulary memorizing. However, one of the limitations of learning metaphors is the necessary language level that speakers should have. It is not possible to develop language awareness in speakers whose linguistic competence has not reached intermediate level at least. Such limitation is based upon the fact that linguistic competence also plays an important in L2 vocabulary acquisition. The research by Wang (2006) included a sample of 60 non-

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English speakers and aimed at verifying whether teaching conceptual metaphors improved learners' vocabulary and metaphorical thinking. Results of the empirical study suggested that such approach indeed develops metaphorical thinking as learners rely on the rote less.

2. Objectives

As noted in the literature, various studies have proved the interdependency between the culture and metaphoric awareness: the closer is the learner's culture to that of the target language, the less difficulties will learner have in understanding conceptual metaphors. However, to the researcher's best knowledge, there has been scarcely any study on the comprehension and understanding of animal metaphors in English by Arab foreign learners and the extent to which their L1 (Arabic) and its culture might influence their interpretation of such metaphors in English. Accordingly, the present study aims at examining the extent to which L1 and culture may influence animal metaphorical processing and comprehension in L2 and try to find out what factors that can promote this influence.

3. The Study

The experiment presented in the current study was designed to investigate the understanding and interpretation of a number of animal metaphorical expressions denoting human personal characteristics (e.g., he is a snake) in English by some Arab foreign learners. The purpose of this was to examine the extent to which Arabic learners of English tend to interpret English figurative expressions involving animals in terms of their connotations or symbolism in their first language and culture. As it has been shown earlier the meaning of some animal metaphorical expressions is cultural-specific hence the same animal term is associated with some connotations/meanings in English that might be missing in Arabic and vice versa. Thus, the study is about investigating whether those culturally bound differences in the use and interpretation of animal metaphors in both English and Arabic may affect Arabic learners' understanding and mastery of such expressions in English. Moreover, the study attempts to find out those factors that might promote the influence of those learners' first language on their interpretation of animal metaphors in English.

4. Methodology

In order to analyze the participants' interpretation and understanding of some animal metaphorical expressions in English, the researcher conducted individual interviews for a group of graduate English students. The sample comprised of 36 graduate students of English linguistics at the University of Jordan aged 25- 40 years-old. In the interviews, the participants were asked to respond quickly and spontaneously to a comprehension test designed by the researcher to examin

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their interpretation of some animal metaphors in English (see Appendix 1). Their oral responses were written down and documented by the researcher. The test was divided into two main parts; in the first part, the participants were given four animal terms to which they were asked to mention the human personal characteristics that they think are associated with each one of them in English. The second part was a multiple-choice test where the participants were given various choices on the personal characteristics that are associated with each animal term. The choices included those characteristics that are culturally bound; that is they only exist in English, only exist in Arabic, and those that are shared in both Arabic and English. The selection of the characteristics given in the choices and the classification of meaning relation in both Arabic and English associated with each animal term is based on the results of a previous study in contrastive linguistics by the researcher Rababah (2014).

That study conducted a semantic contrastive analysis on about 80 English and Arabic figurative expressions associated with animal metaphors (metaphorical expressions, idioms and proverbs etc.) to highlight the similarities and differences in the symbolic significance of the animal names used in the expressions and their connotations. Four animal items were selected one mammal animal; a camel, an insect; butterfly, a bird; an owl and a reptile; a snake. The main aim of the study was to explore the differences in the animal terms adopted in metaphorical expressions denoting certain human personal traits and interpretations assigned to them in Arabic and English. The test was to examine if these participants comprehend English animal metaphor or animal symbolism associated with them in term of their L1 or not.

5. Results and Discussion

The results of the study have shown various degree of correlation between the degree of the saliency and familiarity of the metaphorical meaning associated with each animal item in both the target and native language and the degree of L1 interference in the metaphor interpretations. In addition, the nature or the type of meaning whether it is based on a behavioral personal characteristics or physical appearance ones seem to count in this respect.

Animal name	Meaning	The number & percentage of Students who opted for the meaning	Similar meanings in both English and Arabic	Culture-specific		Frequency of meaning in English		Frequency of meaning in Arabic	
				only in English	only in Arabic	more salient	less salient	more salient	less salient

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	patient	32	89%	×				×		×	
	per servant	14	39%	×				×		×	
	strong	16	44%	×				×		×	
	huge /big	6	17%	×							
camel	Obstinate/ stubborn	4	11%				×		×		×
	vengeful	12	33%				×			×	
	faithful /loyal	14	39%				×				×

The above table shows the responses of the students regarding the symbolic significance or human characteristics associated with camel metaphorical expressions. Expectedly, those shared characteristics of 'patience', 'perseverance' and 'strength' were opted for by most of the respondents. Such characteristics are the most salient in both Arabic and English. This is manifested in the common Arabic/ English idiomatic metaphorical expression *"the straw on the camel's back"* as in referring to the last little burden or problem that causes everything to collapse . As a matter of fact, the only salient semantic features of camel in English seem to be restricted to 'patience', 'perseverance', 'strength' and 'huge/ big size'. As for the other features of 'vengeance', 'obstinacy', 'loyalty/ faithfulness' and 'obedience' are not at play in English metaphorical expressions Rababah (2014). They are only restricted to Arabic. These culture-specific meanings were opted for by some of the respondents with somewhat lower percentage and thus reflecting L1 interference in interpreting camel metaphor in English. Among these meanings, the feature 'obstinacy' has the lowest percentage, which is 4 (11%) of the respondents chose this meaning perhaps due to the fact that it is less salient in Arabic than the other two features of 'vengeance' and 'loyalty'. This indicates that the degree of saliency of meaning in L1 might to some extent correlate with the possibility of L1 interference; the more an L1 metaphorical meaning is salient the more possible for it to interfere in metaphoric comprehension and processing in L2. The same thing applies to the degree of saliency in the target language, the less frequent or salient the meaning in the target language is the lower the chance that this meaning is known to English L2 learners.

A consideration of the type and nature of symbolic significance or meaning seems to play a role in the interpretation process; those salient meanings of 'patience' and 'perseverance' are generated or derived from the physical feature of huge size; the image of the huge camel overweight by heavy burdens. It seems that the 'automatic' 'subconscious' process of image formation is at play in this regard. Such associated meanings or connotations that are originally generated from image formation based on a mental image of physical appearance of the source domain (huge camel with

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burdens) can be described as more 'accessible' and more 'transparent' in the metaphor comprehension process.

The responses on the associative characteristics and meanings related to butterfly metaphor in English in the below table present a parallel pattern.

Animal name	Meaning	The number & percentage of Students who opted for the meaning	Similar meanings in both English and Arabic	Culture-specific		Frequency of meaning in English		Frequency of meaning in Arabic	
				only in English	only in Arabic	more salient	less salient	more salient	less salient
butterfly	naïve (foolish)	8 22%			×		×		
	rash	10 28%			×		×		×
	Tender (vulnerable)	18 50%	×				×		×
	beautiful colorful and gaudy	30 83%	×			×		×	
	freedom swiftness of movement	18 50%	×			×		×	
	unease nervousness	2 5%		×			×		

Again, those shared and similar connotations in both English and Arabic of "attractive gaudy colorful beauty", "elegance", "freedom and swiftness of movement" and "tenderness" have the highest percentage of the total responses on the interpretation of butterfly metaphor. As it is the case with the result of the analysis of camel metaphor interpretation, the high degree of "saliency", "accessibility" and "transparency" of the associative meaning of the target domain is a key factor in this respect. The cognitive process of mental image formation of physical appearance and features of a butterfly enhance the projection and mapping between the source and target domain. Hence, such meanings seem to be derived from mental images of brightly colored wings and attractive fluttering flight of a butterfly. In both Arabic and English literary works butterflies are usually presented in colorful visual imagery of natural scenery where butterflies flutter swiftly among the flowers. These associative meanings are transferred or 'projected' onto a human being character.

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Thus, a beautiful and innocent lady or a little child is usually likened to a butterfly in both languages, Rababah (2014:8). Accordingly, the mental image formation involved in the 'mapping' and projection' in the butterfly metaphor cognitive processing can enhance its interpretation and perception in the target language. This is reflected in the high percentage of the responses opting for these meanings (83%, 50% for 'beautiful'/ 'colorful and gaudy', 'tender' and 'freedom and swiftness of movement' respectively). The percentage on the 'beautiful/ colorful' interpretation 83% correlate with the degree of saliency; the activation of the visualized mental image of colors and beauty seems to be more persistent (more accessible) than the other meanings of 'tenderness' and 'free and swift movement' (accounting for 50% of the responses) that are 'mapped' into some metaphorical expressions describing human behavioral characteristics rather than physical ones. For instance, in English a person that is chiefly occupied with the pursuit of pleasure is called a butterfly as in "*She is like a butterfly. She flirts in and out of people's lives"* (Merriam Webster Online Dictionary, 2004, Wehmeier, 2006). Besides, the metaphorical expression *"social butterfly"* is used to describe a person who goes to many parties and other social event as in *"she is a social butterfly"* (Merriam Webster Online Dictionary, 2004, Wehmeier, 2006).

L1 interference in the interpretation seems to be present in butterfly metaphor interpretation. This is revealed in the choice of two culture-specific meanings restricted to the Arabic language in the respondents' interpretation of butterfly metaphors in English. However, such a negative transfer occurs with somewhat low percentage (22% for naïve or foolish and 28% for rash). The two characteristics of 'naivety' and 'rashness' are specific to Arabic and seem to be nonexistent in butterfly metaphor in English. For instance, in some Arabic proverbs, a butterfly connotes 'foolishness', 'rashness', 'ignorance' and 'recklessness' as in "اطيش من فراشة" (more reckless than a butterfly) and "اجهل من فراشة" (more foolish than a butterfly) (Elkhadem, 1991, cited in Rababah, 2104: 8). These associative meanings could be derived from the fact that a butterfly is usually allured by a light lamp or a fire light and keep on foolishly approaching it until burning itself to death. Hence, a person that shows no proper concern about the possible bad results of his or her actions is usually likened to a butterfly in Arabic. This meaning is also evident in a Qur'anic verse which describes peoples' behavior and feelings of shock and calamity on the day of resurrection in terms of a 'butterfly metaphor' as in "يوم يكون الناس كالفراش المبثوث" (A day when people will come out like scattered swarms of butterflies) (Surah Al Qari'ah: verse 4). According to Alrazi (2004), people are compared to butterflies in this verse because these insects when they are in groups and shocked and provoked, they fly rashly in different directions (cited in Islam Web, 2014). This projects a

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metaphorical meaning of scattered movement of people on the given image of resurrection day. It seems that such a meaning of 'rash movement' is 'mapped into' or 'projected onto' the 'target source' (swift movement) in English and Arabic with different connotations. Whereas the swift and floating movements of a butterfly is associated with a positive connotative meaning related to the 'pursuit of happiness' or 'pleasure' in English, it is more associated in some particular contexts in Arabic with a negative associative meaning of 'rashness' or 'recklessness'. However, the low percentage of the responses opting for these two meanings can be attributed to the fact that they are less salient in Arabic than the other shared meanings of 'beauty' and 'swiftness of movement'. Thus, with less salient and persistent meanings in L1 the negative transfer becomes less possible. Counter to these meanings is another less salient meaning which is specific only to English. This meaning is related to having feelings of 'unease' or 'nervousness' which is manifested in the English metaphorical idiomatic expression "to have butterflies in one's stomach" as in "She always has butterflies in her stomach before a test" which illustrate "a feeling of hollowness or uneasiness caused especially by emotional or nervous tension or anxious anticipation" (The Free Dictionary). Only two participants (5%) seem to be aware of this culture-specific metaphorical meaning in English. Again, less frequency and transparency of these connotations associated with the source domain can be considered a contributing factor. The low degree of familiarity with this meaning in the target language at one hand and the nature of this meaning which is associated with behavioral characteristics rather than visual physical appearance seem to influence the comprehension and interpretation of this particular instance of butterfly metaphorical meanings.

The participants' responses on the owl metaphorical expressions present interesting results. Half of them had correctly opted for the characteristic of 'wisdom' which is not shared with Arabic interpretation of owl metaphors. In fact, such meaning is the most salient one among other owl associative connotations in English. This can explain the higher percentage of right interpretation of owl metaphor (which is culturally specific) despite its absence in Arabic when compared with the very low percentage in opting for the English restricted meaning of 'feeling unease and nervousness' connected with butterfly metaphor. The frequency and familiarity of this interpretation seem to be contributing to this difference. Besides, accessibility and transparency also play a role in this. An owl in English is most commonly associated with 'wisdom', 'intelligence' and 'quick-wit' as it is usually depicted with a mortar board hat sitting on books. Perhaps this visual imaging is more accessible and familiar to English learners than the behavioral characteristics of 'unease and nervousness' associated with the English butterfly metaphor. Still, the percentage of responses

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opting for this meaning indicate L1 interference. The complete absence of this meaning in Arabic seems to affect the participants' awareness of this meaning in English. The L1 interference, due to the culturally specific differences in the metaphorical interpretation in both English and Arabic, seems to be sharper when considering the percentage of responses (83%) regarding the associative connotation of 'pessimism' and 'bad omen'. The persistent saliency of this connotation in Arabic had affected the metaphor comprehension and interpretation. The same thing applies to the personal characteristic of 'ugliness' which is also a persistent meaning in Arabic. Only a low percentage of the responses made the right option of 'optimism'. Even the shared meaning of 'stay awake' in English and Arabic as in "he is a night owl" has somewhat a lower percentage of responses. This might be related to the fact that it is less salient in Arabic when compared to the more persistent associative meaning of 'bad omen' and 'pessimism', a thing which brings into focus the influence of the L1 and its culture on metaphorical comprehension of metaphor in English.

All in all, among the other three studied animal metaphors, this owl metaphor designates a sharper and more noticeable misunderstanding and a higher degree of negative transfer. Lack of cultural contact or closeness with this animal term in Arabic can explain this. The association of this animal item takes its root in Greek mythology where an owl is a symbol of Athens who is a goddess of foresight and knowledge (Wikipedia). It seems that this cultural context within which the associative meanings of an owl in English are derived has led to the projection or mapping of this particular meaning related to wisdom and knowledge on an owl image in English and so loading it with connotations that are completely different from the ones attached to an owl metaphor in Arabic.

Animal name	Meaning	The number & percentage of Students who opted for the meaning		Similar meanings in both English and Arabic	Culture-specific		Frequency of meaning in English		Frequency of meaning in Arabic	
					only in English	only in Arabic	more salient	less salient	more salient	less salient
owl	Wise	18	50%		×		×			
	stay awake	14	39%	×			×			×
	pessimism bad omen	30	83%			×			×	
	Ugly	16	44%			×			×	

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	Meaning	Number & %	Similar meanings	only in English	only in Arabic	more salient (Eng)	less salient (Eng)	more salient (Ar)	less salient (Ar)
	optimism	4 11%		×		×			

A note on the participants' interpretation of snake metaphor in English shows no remarkable difference from the other studied metaphors. Those similar and shared meanings of 'wickedness', 'treachery' and 'betrayal' were opted for by the majority of the participants due to their familiarity and persistence in both English and Arabic. However, those culture specific meanings of 'strong sight' and 'long life' that are only existent in Arabic have lower percentage of the responses (11% and 22% respectively). In parallel to this, the English associative meaning of temptation has also received lower percentage of the responses (22%). The association of snake with 'temptation' is only restricted to English and less salient than other connotation of 'wickedness' and 'treason'. The lack of frequency of this meaning is related to the specific religious context from which it originally was derived in the first place. In the Biblical story about the fall of Adam and Eve, Satan appeared in the shape of a serpent and tempted Adam and Eve to eat from the fruits of the forbidden "tree of knowledge" (Wikipedia). However, in Qur'an there is no mentioning of the snake in the temptation scene where Adam and Eve were tempted by Satan to disobey God and eat from fruits of the forbidden tree. Thus, this culture-specific meaning in English seem to be unknown to the majority of the participants and so might to some extent influence their understanding of some English metaphorical Expressions involving this meaning.

Animal name	Meaning	The number & percentage of Students who opted for the meaning	Similar meanings in both English and Arabic	Culture-specific		Frequency of meaning in English		Frequency of meaning in Arabic	
				only in English	only in Arabic	more salient	less salient	more salient	less salient
snake	wicked evil	32 89%	×			×		×	
	traitor (unfaithful)	24 67%	×			×		×	
	tempting (temptation)	8 22%		×			×		
	strong eyesight	8 22%			×				×

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	long life	4	11%			×				×

6. Limitations of the Study.

At the end, it is important to state some of the limitations of the study which can be taken into consideration for future research. The study dealt only with four aspects of metaphor comprehension in a foreign language, animal metaphor. Besides, not all factors that might influence the process of metaphor interpretation were considered, like the role of the level of proficiency and the role of context. In general, this area of study demands attention and further investigation in other future studies.

7. Conclusion

Despite their good knowledge of English, many of the students in the sample of the study interpreted animal metaphors in English on the base of their L1. An analysis of the data has shown that those meanings that are absent in the target language and only existent in the native language seem to persists/stick in the metaphorical processing and understanding in that language. This indicates that to some extent, though with lower degree, knowledge of L1 and its culture might influence the interpretation of some animal metaphors in English. Such L1 interference is correlated with the degree and number of similarities and differences in the interpretation of the same animal metaphor in both the native and target language. There seem to be two underlying factors affecting the degree of L1 influence on the comprehension of L2 metaphorical expressions; (1) the degree of familiarity and saliency of the metaphorical associative meaning in both the target and native language. Hence the degree of saliency of meaning in L1 might to some extent correlate with the possibility of L1 interference; the more an L1 metaphorical meaning is salient the more possible for it to interfere in metaphoric comprehension and processing in L2. The same thing applies to the degree of saliency in the target language, the less frequent or salient the meaning in the target language is the lower the chance that this meaning is known to English L2 learners. In the same vein, (2) the type or the nature of meaning associated with the animal terms in both the target and the native language can be considered a contributing factor in this respect. This is due to the interplay between underlying cognitive mechanism involved in metaphor processing and the nature and type of associative characteristics or connotations of the source domain. Those familiar and shared metaphorical meanings in both languages that are related or generated from physical appearance of the source domain are more likely to persist in metaphor interpretation than those

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related to behavioral characteristics. It seems that the image formation strategy involved in the cognitive processing of metaphor is at play in this respect. When it comes to physical visualized features L1 interference is likely to be less persistent. That is to say, metaphorical meaning associated with physical feature becomes more persistent and accessible in metaphor comprehension through visual imaging or the psychological process of image formation

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