MEANING AS A MARKER OF METAPHORICITY TOWARDS A COMPUTATIONAL IDENTIFICATION OF METAPHOR IN THE EVER-GLORIOUS QUR’ĀN

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Received: 2022-03-07 Accepted: 2022-05-20 Published: 2022-06-28

Abstract
This work represents a novel direction for computational linguistics research on metaphor in the Ever-Glorious Qur’ān. The present study proposed a basic/non-basic meaning criterion as a marker for the computational identification of metaphor in the Ever-Glorious Qur’ān. The corpus was Sūrat Hūd, where manual identification for candidate metaphors was conducted by referring to four authentic exegeses, namely Tafsīr At-Ṭabarī (2010), Az-Zamakhshari (2007), Al-Qurṭubi (1964) and Ash-Sha’rāwi (1997) as well as Yūsuf ‘Ali interpretation of the meanings of the Ever-Glorious Qur’ān (1992). 22 metaphors were identified and classified based on the proposed semantic criterion. The data were analyzed both qualitatively and quantitatively, and candidates were classified into three categories depending on their meaning and their degree of metaphoricity. The study drew on the conceptual theory of metaphor by Lackoff & Johnson (1980), studies on metaphors in the Ever-Glorious Qur’ān, as well as computational studies of metaphor, in general, to finally arrive at a criterion that describes the meaning of metaphor towards a computational identification of metaphors in the Ever-Glorious Qur’ān. The study proposed a software input to detect metaphors by identifying their semantic features.

Keywords: Basic/non-basic meaning; metaphor; computational identification; The Ever-Glorious Qur’ān

1. Introduction
The present study is a computational identification of metaphor in the Ever-Glorious Qur’ān depending on the meaning. The study attempts to set an appropriate semantic criterion for the computational identification of metaphors in the Ever-Glorious Qur’ān and proposes computer software input for identifying metaphor candidates in the Ever-Glorious Qur’ān. This study argues that computational linguistics has a great deal to contribute to metaphor studies, particularly research on metaphor in the Ever-Glorious Qur’ān. The contribution of this study lies in one key area: suggesting a semantic criterion to be
employed as metaphor marker input that can be fed to computer software. In this area, this study presents a novel contribution, as detailed in the following sections.

The present study has two main objectives: the first is to study the semantic features of metaphorical candidates; that is identifying semantic features of lexical items that are likely to be metaphorical. The second objective is to use such features as software input to identify metaphors in the Ever-Glorious Qur'ān.

2. Literature Review

2.1 Metaphor

The definitions of metaphor by Arab rhetoricians are either borrowing as in Al-Sakākī (1937), Al-Jaḥiz (1960), Ibn Qutaibah (1962) ʿAkkāwī (1992), and Ibn Al-Muʿtaz, or replacing one concept for another as in Al-Jurjānī (1966). Al-Sakākī(1937) defines metaphor as follows: “It [metaphor] is when you mention one element of the similarity and you intend the other, claiming that the likened enters into the species of the likened to and supporting this by attributing to the likened what actually pertains to the likened to” (p. 174).

In English, the lexical item ‘metaphor’ comes originally from the Greek word ‘metaphora’ which means “to carry over” or “to transfer”. Another definition similar to that of the Arabic definition of metaphor is provided in some English dictionaries. According to Webster’s New World Dictionary of the American Language (1976), metaphor is “a figure of speech in which one thing is likened to another different thing by being spoken of as if it were that other, e.g. all the world is a stage”.

2.1.1 Metaphor in Arabic Rhetoric

The most significant contribution to Arabic rhetorical studies has emerged during the fifth Hijrah century from the prominent scholar Al-Jurjānī (1989) who has developed the theory of منظومة /ʔnnaẒm/ (i.e. word order) in the language of the Ever-Glorious Qur’ān. He refers to a number of rhetorical features such as allegory, metonymy, metaphor, simile, and assonance and claims that stylistic effectiveness and beauty are not attributed to these rhetorical features, which are represented by individual lexical items, but rather to the word order of the proposition, that includes these features (Abdul-Raof, 2006, p. 47).

Al-Jurjānī (1989) describes the function of metaphor as follows: ‘All rhetoricians have agreed that implicitness is more eloquent than explicitness, that allusion is more effective than directness, and that metaphor has an advantage and merit, and that figurative language is always more rhetorical than literal language’ (p. 27) (Cited in Abū Libdeh, 2011, p. 40-42).

2.1.2 Metaphor in the Ever-Glorious Qur’ān

Several studies have been conducted on metaphor in the Ever-Glorious Qur’ān. Shokr (2006) examines certain metaphorical concepts that pervade the Ever-Glorious Qur’ān. He demonstrates how the metaphor “life is a journey” pervades the Ever-Glorious Qur’ān and how within the same scope some related metaphors could be found, such as “the Straight Way”, “the Way of Hell” and “Companions of the Fire”, among others. The instances of the “journey” metaphor with its underlying “path” schema are analyzed using the Cognitive Theory of Metaphor as created by Lakoff and Johnson (1980) and developed later by Lakoff and Turner (1989), and others. The conclusion shows that the application of the Cognitive Theory of Metaphor reveals that this metaphor is used creatively, and it is built on dichotomy or contrast (ex. righteous path, and falsehood path).
Another relevant study is conducted by Elhindi (2008). In his study, Elhindi (2008) employs the principles of the cognitive theory of metaphor - proposed by Lakoff and Johnson (1980) - as a framework to categorize and explain the significance of metaphors in the Ever-Glorious Qur’ān. Moreover, Elhindi focuses on spatial and temporal metaphors in the Ever-Glorious Qur’ān and investigates how they are used to help in the interpretation of specific concepts. For example, the metaphor TIME IS SOMETHING MOVING TOWARDS YOU is found throughout the Ever-Glorious Qur’ān. In English, one can speak of ‘upcoming events’, while in the Ever-Glorious Qur’ān, this upcoming event is realized as a delay. An example is in (Q. 57:16) فطال عليهم الأمد فقست قلوبهم (faṭa:la ʔalajhimu ʔlamad faqasat qulu:buhum/ (i.e. and whose hearts have hardened with the passing of time). Elhindi proposes a cognitive approach to the translation of metaphors in the Ever-Glorious Qur’ān and concludes that an accurate translation has to capture both the linguistic significance and the cultural ‘mapping’ of the metaphor. Away from the translation perspective, the present study could benefit from this work of Elhindi as a work building its framework on the findings of the cognitive theory of metaphor (Lakoff & Johnson, 1980).

Mohamad (2014) investigates the metaphors of natural phenomena in the Ever-Glorious Qur’ān. He divides these metaphors into five major classifications: metaphors of rain, metaphors of mountains, metaphors of wind, metaphors of light, and metaphors of darkness. The analysis in this study is conducted within the framework of Charteris-Black’s theory of ‘Critical Metaphor Analysis’ (CMA) (2005). Based on this theory, the study assigns a metaphor for each classification of metaphors. The study ends up with a key metaphor that relates all metaphors resulting from the analysis of different classifications of these metaphors. In this way, this study employs the concept of ‘metaphor pluralism’ where the same abstract concept can be conceptualized by multiple metaphors.

In the light of the aforementioned review of studies conducted on metaphor in the Ever-Glorious Qur’ān, it could be concluded that much work is still needed about studying metaphor in the Ever-Glorious Qur’ān. The present study attempts to identify the meaning of metaphor which assists in setting a semantic criterion for the computational identification of metaphors in the Ever-Glorious Qur’ān.

2.1 3 Metaphor in English Studies and the Cognitive Theory of Metaphor (1980)

This section reviews studies on metaphor in English. Beardsley (1967) discusses the notion of the shift of intension resulting in metaphorical language. This study suggests that a shift in the use of the language results in metaphorical meaning. Due to this “shift of intension”, a lexical item acquires a metaphorical meaning different from its literal meaning. In an attempt to clarify this “shift of intension”, Beardsley identifies two features working in tandem within a metaphor. On the one hand, a metaphor produces a ‘conceptual tension’ between the concept that is expressed by the metaphorical term (i.e. figurative meaning) and the concept that is normally applied to the subject (i.e. literal meaning). Therefore, for example, there is a ‘tension’ or mismatch between representing “Juliet as a sun and as a girl” in Romeo’s quote from Shakespeare’s play. Beardsley points out that “in spite of their apparent absurdity, metaphors are generally quite intelligible and even profound”. Therefore, for example, Romeo’s metaphor seems to serve as an effective means for communicating his feelings about Juliet (such as being impressed by her), to claim that she possesses certain properties (such as being beautiful and life-giving) as the sun.

Two significant studies on metaphor in English are Newmark (1988) and Goatly (1997). They classify metaphor into six types depending on its use and meaning. According to
Newmark (1988), the six types of metaphor are “dead metaphor”, “cliché metaphor”, “stock or standard metaphor”, “recent metaphor”, “original metaphor” and “adapted metaphor”. Goatly (1997) divides metaphor into six categories of ‘degrees of conventionality’: “dead, dead and buried, sleeping, tired, active metaphors and root analogies”.

Another study, which alludes to the proposed basic/non A basic meaning criterion, is Hanks (2006). Hanks (2006) argues that in the most metaphorical cases, the secondary subject (i.e. vehicle) shares the fewest properties with the primary subject (i.e. tenor), hence, creating tension. At the other extreme, “the more shared properties there are, the weaker the metaphoricity” (p.5).

The first to think of metaphor as something beyond means of embellishment was a study by Lakoff & Johnson (1980). Lakoff & Johnson identify ‘the concepts we live by’ at the very beginning of their book Metaphors we live by (1980). They demonstrate that “metaphor is for most people a device of the poetic imagination and the rhetorical flourish - a matter of extraordinary rather than ordinary language”. However, in the cognitive theory of conceptual metaphor, metaphor is a conceptual framing wherein one set of experiences is framed in terms of another, and these framings are evidenced by systematic linguistic patterns. They find that “metaphor is pervasive in everyday life, not just in language but in thought and action” (Cameron & Maslen, 2010, p. 42).

It is argued that metaphors link two conceptual ‘domains’. A domain is an area of meaning, such as the idea associated with CLEANLINESS AND DIRT. Domains consist of sets of linked entities, attributes, processes, and relationships, which are stored together in the mind. The elements comprising a domain are lexicalized, that is, expressed in language, through lexical items and expressions (Cameron & Maslen, 2010, p. 44).

2.2 Analysis of Studies on Metaphor and the Concept of Degree of Metaphoricity

Some studies focused on metaphor being produced through semantic tension, and other studies focused on identifying varieties of metaphors. Studies that followed afterward continued to investigate how metaphors are produced. Beardsley (1967) alludes to sense relation namely “semantic inappropriateness”. Beardsley (1967) highlights the notion of the shift of intension resulting in metaphorical language. This study postulates that a shift in the use of the language results in metaphorical meaning. Due to this “shift of intension”, a lexical item acquires a metaphorical meaning different from its literal meaning. From this, a criterion that relates to intrinsic meaning is hypothesized (i.e. a lexical item that deviates from the basic meaning is considered metaphorical while that which is close to its basic meaning is non-metaphorical).

Studies by Goatly (1997) and Newmark (1998) identify several types of metaphors. The types are subdivided based on the distinction. “Dead, dead and buried, and cliché metaphors” have lost their metaphoricity while “stock metaphor” is still metaphorical, though “recent, original and adapted metaphors” or “active metaphors” are more metaphorical. The underlying assumption is that a candidate metaphor, which is “stock, recent, original or adapted”, will be considered as more metaphorical than a “cliché” metaphor. “Dead metaphor” is, however, not metaphorical. Goatly (1997) distinguishes six types of metaphor based on their “degrees of conventionality”. “Dead, dead and buried” have lost their metaphoricity, “sleeping and tired metaphors” have been worn out through overuse and excessive familiarity while “active metaphors” are metaphorical and “root analogies” are highly metaphorical.
Goatly (1997) and Newmark (1988) distinguished types of metaphor ranging from the least metaphorical to metaphorical, to highly metaphorical. From this, a continuum of metaphoricity ranging from the least metaphorical to the highly metaphorical is set down, and the further a lexical item deviates from its basic meaning, the more it is metaphorical.

Hanks (2006) classifies metaphor into “dynamic” and “conventional”. According to Hanks, “dynamic metaphor” denotes some new insight. For example, in literal contexts, ‘storm’ denotes a kind of atmospheric phenomenon; ‘torrent’, ‘mountain’, ‘lake’, and ‘oasis’ denote kinds of geographical locations. However, all these lexical items have “secondary patterns” of use which can be “classed as metaphorical [all]” as in ‘a storm of protest’ denoting expressing an objection to something firmly and emphatically, ‘a torrent of abuse’ denoting a lot of abuse directed continuously at someone, ‘a mountain of paperwork’ denoting a very large pile of paperwork, ‘a lake of blood’ denoting a big area of blood, and ‘an oasis of sanity’ denoting a calm, pleasant place in the middle of somewhere busy and unpleasant (p. 2). In these cases, the secondary subjects (i.e. vehicle) share the fewest properties with the primary subjects (i.e. tenor) creating tension hence indicating strong metaphoricity. The second type is a conventional metaphor which is the most basic way of realizing a metaphor in English (i.e. it represents a normal, though secondary, use of the words concerned). In other words, it seems that “the more shared properties there are, the weaker the metaphoricity” (p. 5).

Summarizing the tents of cognitive theory of metaphor, Jäkel (2002) claims that metaphors form “coherent cognitive models: complex structures of organized knowledge” that serve as “pragmatic simplifications of an even more complex reality”. An example is a concept of ‘communication’. ‘Communication’ is seen as the sending of ideas from one person to another through the use of language. This conceptualization, thus, entails the belief that ‘ideas’ as an object are equal to ‘language as their container’. In *Metaphor We Live by*, Lakoff and Johnson (1980) indicate: “Metaphor is one of our most important tools for trying to comprehend partially what cannot be comprehended totally: our feelings, aesthetics, moral practices, and spiritual awareness”. The majority of expressions about our subjective experiences, Lakoff argues, are metaphorical, and that without such metaphors it would be difficult to describe our subjective experiences in any meaningful way (Baumer, Sinclair, Hubin, & Tomlinson, 2009, p. 14-15).

2.3 Computational Linguistics Studies on Metaphor

While the work presented in this study draws on the cognitive theory of metaphor (Lakoff and Johnson, 1980), linguistic markers of metaphor (Goatly, 1997), exegeses of the
Ever-Glorious Qur’ān, and finally and most significantly draws on and extends techniques from computational linguistics; it is significant in this section to know how linguists identify and frame computational linguistics.

The application of computers in linguistic studies and processing can be traced back to the early days of modern computing. Alan Turing, one of the founding fathers of computer science proposed a test for a computer’s intelligence, which measures a machine’s ability to emulate human linguistic behaviour (Cameron & Maslen, 2010, p. 180).

Most previous computational approaches have treated metaphors as relatively independent and isolated anomalies that require exceptional processing (Martin 1990 & Fass, 1991). In contrast, the approach advocated here is to focus on the ubiquity of metaphor to identify potential underlying conceptual metaphors in the Ever-Glorious Qur’ān.

One of the most broadly effective computational models of metaphor identification is Martin (1990). Martin (1990) describes the Metaphor Interpretation, Denotation, and Acquisition System (MIDAS) a system that can interpret metaphorical language in questions asked by users. Martin (1990, p.xxiv) asserts that MIDAS can be used for representation, interpretation, and learning of metaphor. The first task is the explicit representation in a knowledge base of the conventional metaphors in the language in the form of explicit associations between concepts. The second task is the correct and efficient application of metaphorical knowledge to the interpretation of metaphorical language. The third is the acquisition of new metaphors when examples are encountered for which no known metaphor provides a coherent explanation.

3. Research Method

A three-step methodology is employed. The first step consists of manual identification of candidate metaphors. The manual identification of metaphors on the selected Sūrah of the study is achieved through referring to authentic exegeses of the Ever-Glorious Qur’ān; namely Tafsīr Al-Qurṭubi (1964), Ash-Sha’rāwi (1997), Az-Zamakhshari (2007), Aṭ-Ṭabarī (2010), as well as Yūsuf ‘Ali interpretation of the meanings of the Ever-Glorious Qur’ān (1992), being one of the most widely known authentic interpretations of the Ever-Glorious Qur’ān. The second step consists of applying the basic/non-basic meaning criterion to the candidate metaphor. The successful passing of the criterion by the candidate metaphor will earn it a mark on the continuum of metaphoricity. In the third step, all marks earned by each candidate metaphor will be calculated along a score from 1-3. The lower the earned score, the lower the degree of metaphoricity of the candidate metaphor in question; the higher the earned score, the higher the degree of its metaphoricity.

The present study is limited for the investigation of the semantic features of candidate metaphors in a selected Sūrah in the Ever-Glorious Qur’ān, namely Sūrat Hūd. Other perspectives and linguistic markers for metaphor identification (i.e. the culture-bound, the collocational; the grammatical; and the morphological criteria, as well as the criterion of frequency of occurrence) are not studied in the present work as they will be thoroughly investigated in other future works.

The Sūrah in the corpora, Sūrat Hūd, has been named after Prophet Hūd (peace be upon him) whose story has been related in verses 50-60. It is the 11th Sūrah of the Ever-Glorious Qur’ān, and it deals with calling people to Islam, and warning them if they do not believe in God, the Almighty.
The following Qur'ānic verse involves candidate metaphor behind the verb يثنون / jaθnu:na/ when it collocates with the noun صدورهم /ṣudu:rɑhum/.

۞ أَلا إِنَّهُمْ يَثْنُونَ صُدُورَهُمْ لِيَسْتَخْفُواْ مِنْهُ أَلا حِينَ يَسْتَغْشُونَ ثِيَابَهُمْ يَعْلَمُ مَا يُسِرُّونَ وَمَا يُعْلِنُونَ إِنَّهُ عَلِيمٌ بِذَاتِ الصُّدُورِ ۞ (Yūsuf ‘Ali, 1992, Q. 11:5).

According to Tafsīr Al-Qurṭubi (1964), this Qur’ānic verse was revealed about a man called Al-Akhnas bin Shuraiq who used to show belief and loyalty when he meets the prophet (peace be upon him) while concealing hatred towards him as well as all Muslims. This Qur’ānic verse describes the behavior of the Prophet’s (peace be upon him) enemies who sought to conceal their true feelings from the Prophet (peace be upon him) and other people. According to Az-zamakahshari (2007), Aṭ-Ṭabarī (2010), and Ash-Sha’rāwi (1997), hypocrites used to bend their backs and cover their faces when the prophet (peace be upon him) passed by them to conceal their hatred. They used to do so falsely thinking that in so doing Allah would not know the hatred they concealed in their hearts.

According to Tafsīr Aṭ-Ṭabarī (2010), Az-Zamakhshari (2007), Al-Qurṭubi (1964) and Ash-Sha’rāwi (1997), this Qur’ānic verse describes the people of Makkah, who though not very active in their antagonism against the message of the Prophet (peace be upon him), were very averse to it. Therefore, they did not like to hear it nor come face to face with the Prophet (peace be upon him). They did their very best to avoid him. But surely, even when they hid their faces or cover themselves with their garments, Allah knows what they conceal and what they reveal because He is the All-Knower of the innermost secrets of the hearts.

In this candidate metaphor, the tenor is the disbelievers ‘hiding their hatred’, the vehicle is the verb يثنون / jaθnu:na/ (i.e. to bend) in collocation with the noun صدورهم /ṣudu:rɑhum/, and the ground is the similarity between the act of ‘bending forward to hide their faces’ and ‘concealing the hatred disbelievers have in their hearts’.

The basic meaning of the candidate metaphor in أَلا إِنَّهُمْ يَثْنُونَ صُدُورَهُمْ لِيَسْتَخْفُواْ مِنْهُ أَلا حِينَ يَسْتَغْشُونَ ثِيَابَهُمْ يَعْلَمُ مَا يُسِرُّونَ وَمَا يُعْلِنُونَ إِنَّهُ عَلِيمٌ بِذَاتِ الصُّدُورِ (Q. 11:5) /ʔla ʔinnahum jaθnu:na ṣudu:r ɑhum lijastaxfaw minh ʔla ḥji:najasta Ƴ∫u:na θjiabahum jaʕlamwu ma jusjirwu:na wama jwu:ʃlinu:n ʔinnahu ʕalji:mwn biθɰiʃ-ʃwdwu:r/ is investigated. In his book Attahqīq fi kalimāt Al-Qur'ān Al-Kariim, Al-Muṣtafāwi (1416H) illustrates that the basic meaning of the triradical verb ثني /θanija/ is رد بعضه على بعض /rɑdaba ʕḍɑhu ʕala baʕḍ/ (i.e. fold something up). This meaning indicates رد-الاعتطاف /ʔl-i-ʃinʃita:f/ (i.e. folding up and detour) (p. 36-41). According to Almufradāt fi Gharīb Al-Qur’ān, Al-Muṣtafāwī (1416H) illustrates that the basic meaning of the triradical verb ثني /θanija/ is ما يعاد مرتين /mᴂ juʕᴂd marratain/ (i.e. what is repeated twice). An example is the prophetic tradition لا ثني في الصدقة /la ʔanji fiş-ʃɑɑdqah/ (i.e. Charity, i.e. Zakat is not taken twice, i.e. in a year). In this Qur’ānic verse, the verb يثنون /jaθnu:na/ refers to the act of concealment, whether apparent or hidden performed by the enemies of the Prophet (peace be upon him). The verb يثنون /jaθnu:na/ literally means placing two things next to each other. When it collocates with صدورهم /ṣudu:rɑhum/ (i.e. their hearts), it either means that the disbelievers converge and ally themselves for secret objectives and conspiracies against the prophet or that they bear grudges against him and
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attempt to conceal it. Based on this, it appears that the verb يثنون/jaθnu:na/ acquires an abstract meaning –i.e. ‘of hiding’ which is different from its basic meaning which is ‘to fold up’. As such, it is considered metaphorical and is assigned two marks along the continuum of metaphoricity.

**Candidate Metaphor (Q. 11:31)**

 ولوَ أَقُولُ لَكُمْ عِندِي خَزَائِنُ اللَّهِ وَلاَ أَعْلَمُ الْغَيْبَ وَلاَ أَقُولُ إِنِّي مَلَكٌ وَلاَ أَقُولُ لِلَّذِينَ تَزَّدَرُ أَعْيُنُكُمْ لَن يُؤْتِيَهُمُ اللَّهُ خَيْرًا اللَّهُ أَعْلَمُ بِمَا فِي أَنفُسِهِمْ إِنِّي إِذًا لَّمِنَ الظَّالِمِينَ

(I tell you not that with me are the Treasures of Allah nor do I know what is hidden nor claim I to be an angel. Nor yet do I say of those whom your eyes do despise that Allah will not give them any good - Allah knows best what is in their souls. I should if I did indeed be a wrongdoer) (Yūsuf ‘Ali, 1992, Q. 11:31).

According to Tafsīr Aṭ-Ṭabarī (2010), Az-Zamakhshari (2007), Al-Qurṭubi (1964) and Tafsīr Ash-Shā’rāwī (1997), this Qur’ānic verse shows Prophet Nūḥ (peace be upon him) addressing his people who were not willing to believe in his message. He says to them that he neither possesses the treasure houses of Allah nor knowledge of the Unseen; nor is he an angel, but he is human like them. He neither says to those whom their eyes scorn that Allah will not give them any good - Allah knows best what is in their hearts.

In this candidate metaphor, the tenor is “the concept of despising something”. The vehicle is the noun أعينكم/ʔaʕjunikum/ in collocation with the verb تزدري/tazdari/ (i.e. those whom your eyes do despise). The ground is the similarity between the concept of despising something and the assumption that “eyes” can show contempt.

This criterion investigates the basic meaning of the candidate metaphor in تزدري أعينكم/tazdari ʔaʃjunkum/ (i.e. your eyes) in Q. 11.31 /wala ʔqwːlu lakum ʕindi xaz-peeri:na allaːhi wala ʔaʃlamwYajib wala ʔqwːlu ʔinni malak wa la ʔqwːlu liːl-lagleːna tazdari ʔaʃjunikum lan juʔtijahumul-luaːhu xaːjra ʔal-lahu ʔaʃlamw bima fi ʔanfusahum ʔinni ʔiːdan laminaːdaː-jaːlijimiːn/. The basic meaning of the verb تزدري/tazdari/ (i.e. despise) is investigated as well. The basic meaning of the verb تزدري/tazdari/ as found in Mu’djam Alloghatil ‘Arabyyatil – Mu’asirah (2008) literally denotes the meaning of “disdain and humiliate” which is an action performed by human beings, not though is performed specifically by the eye. As such, the noun أعينكم/ʔaʃjunkum/ (i.e. your eyes) is personified as the actual doer or (the disbelievers themselves) “the eyes of the disbelievers” who perform this action. Based on this, a candidate metaphor is detected in this expression because أعينكم/ʔaʃjunkum/ (i.e. your eyes) is used as the performer of the action denoted by the verb تزدري/tazdari/ (i.e. disdain) not the disbelievers themselves. The meaning of the noun is non-basic and as a result the candidate metaphor is assigned three marks along the continuum of metaphoricity.

**Candidate Metaphor (Q. 11:83)**

مَسْؤُومًةً عَنْدِ رَبِّكَ وَمَا هِيَ مِنَ الظَّالِمِينَ بِبَعِيدٍ

(Misguiding you from your Lord and what is from the wrongdoers far away)

Another candidate metaphor exists in verse 83:

/uṣmawamatan ʕjinda raːbbijka wama hjia minaad-diaːlumiːna bibaːfiːd/
This Qur'ānic verse starts with the adjective مسومة /musauwamatan/ (i.e. marked) describing the noun حجارة /hijd3ara/ (i.e. stones) in the previous verse (Q. 11:82). In Q. 11:83, اناحيا AMAAANAA Namen ٓنٓنٓنٓنٓنٓنٓل ٓلٓلٓلٓلٓلٓلٓل جَعَلْنا عائِلَتها سَائِفَها وَأَمَّنَّنا عَلَيْهَا حِجَارَةٍ مِنْ سِجِّيلٍ مَنْضُودٍ /falamma d3aʔa ?amruna d3aʔalna ʕalijaha safilaha waʔmṭarna ʕaliha hijd3aratmin sid3i:jil manḍḍu:d/ (When Our Decree issued, We turned (the cities) upside down, and rained down on them brimstones hard as baked clay, spread, layer on layer). This Holy verse explains the end of the people of Prophet Lût (peace be upon him). In Tafsīr Aṭ-Ṭabarī (2010), Az-Zamakhshari (2007), Al-Qurṭubi (1964) and Tafsīr Ash-Sha’rāwī (1997), it is agreed that مسومة /musauwamatan/ means معلَّمة /muʕallamah/ (i.e. marked). Aṭ-Ṭabarī indicates that those stones were of clay as indicated in the Qur’ānic verses (Q. 51:33-34) /النُرسِلُ عَلَيْهِمْ حِجارَةً مِنْ طِينٍ. مُسَوَّمَةً عِنْدَ رَبِ كَلِلْمُسْرِفِينَ/ (When Our Decree issued, We turned (the cities) upside down, and rained down on them brimstones hard as baked clay, spread, layer on layer). This Holy verse explains the end of the people of Prophet Lût (peace be upon him). In Tafsīr Aṭ-Ṭabarī (2010), Az-Zamakhshari (2007), Al-Qurṭubi (1964) and Tafsīr Ash-Sha’rāwī (1997), it is agreed that مسومة /musauwamatan/ means معلَّمة /muʕallamah/ (i.e. marked). Aṭ-Ṭabarī indicates that those stones were of clay as indicated in the Qur’ānic verses (Q. 51:33-34) /النُرسِلُ عَلَيْهِمْ حِجارَةً مِنْ طِينٍ. مُسَوَّمَةً عِنْدَ رَبِ كَلِلْمُسْرِفِينَ/ (When Our Decree issued, We turned (the cities) upside down, and rained down on them brimstones hard as baked clay, spread, layer on layer). In Al-Qurṭubi, Al-Farra’ indicates that a group of scholars including Ibn Abbās believe that this term is not of an Arabic origin, but is borrowed from Persian. Its origin is مشجِّع /saʔal/ in Sūrat Hūd (verse 82), the ‘stones’ are described as being of حجارة /hijd3ara/ in the previous verse (Q. 11:83). Others said that it is originally Arabic. The lexical item حجارة /hijd3ara/ means a piece of baked clay, which is neither as soft as clay nor as hard as stone, and the Arabic lexical item منضود /manḍḍu:d/ means one on top of the other in succession. ‘Stones’ described as ‘marked’ indicates either that every piece of stone was meant for a particular person, or it means that those stones were different from the ones on earth’. According to Al-Qurṭubi, on each stone was inscribed the name of the person it was destined to kill (in the providence of our Lord). Ash-Sha’rāwī also explains مسومة /musauwamatan/ by the word معلَّمة /muʕallamah/ (i.e. marked) as if every piece of ‘stone’ ‘is marked for torture and directed’ to a certain person.

In this candidate metaphor, the tenor is the “stones marked for the torture of disbelievers”. The vehicle is the adjective مسومة /musauwamatan/ (i.e. marked) in collocation with the prepositional phrase بين ربك /sajma:ʔ/ and سجِّيل /sid3ji:l/. Others said that it is originally Arabic. The lexical item سجِّيل /sid3ji:l/ means a piece of baked clay, which is neither as soft as clay nor as hard as stone, and the Arabic lexical item منضود /manḍḍu:d/ means one on top of the other in succession. ‘Stones’ described as ‘marked’ indicates either that every piece of stone was meant for a particular person, or it means that those stones were different from the ones on earth’. According to Al-Qurṭubi, on each stone was inscribed the name of the person it was destined to kill (in the providence of our Lord). Ash-Sha’rāwī also explains مسومة /musauwamatan/ by the word معلَّمة /muʕallamah/ (i.e. marked) as if every piece of ‘stone’ ‘is marked for torture and directed’ to a certain person.

The basic meaning of مسومة /musauwamatan/ in مسومة عند زئيك وما هي من الطالمين (Q.11.83) /musauwamatan جُنُدَ الرَبِ/ is investigated. The basic meaning of موسم /sawama/ as found in Mukhtār Aṣaḥāḥ (Ar-Razi, 1986) is علامة تحمل على الشاة وفي الحرب أيضا /Salalah tud3al ʔalaf ʔähe wa filharbi ʔajdan/ i.e. a mark of a goat to distinguish it which is used in war to mark horses. The meaning of موسم /musauwamatan/ in Mukhtār Aṣaḥāḥ (Ar-Razi, 1986) is معلَّمة /muʕallamah/ (i.e. branded, marked). According to Almufradāt fi Gharīb Al-Qur’ān (1412), the terms السماح /Σ-sajma:/ʔand السماحة /Σ-ʔsajmija:/ʔ/ are defined as علامة /ʔʔʔʔʔʔʔلم /ʔʔʔʔʔʔʔلم/ (i.e. mark) as in Allah’s saying: مسومة في وجههم من آثر السحود /siməaʔum fi wud3ujhim min ةʔʔarıs sud3u:d/ (On their faces are their marks, (being) the traces of their prostration) (48:29). According to Tafsīr Aṭ-Ṭabarī (2010), Az-Zamakhshari (2007), Al-Qurṭubi (1964), and Ash-Sha’rāwī (1997), the noun
Meaning as a Marker of Metaphoricity Towards a Computational Identification of Metaphor in The Ever-Glorious Qur’ān, Amal Abdelsattar Metwally, Dalal Mahmoud Elgemei

3. Metaphoricity Measurement

In this paper, we propose a computational approach to identify metaphors in the Qur’ānic text. The approach is based on the basic/non-basic meaning criterion of metaphor. This criterion is built on the assumption that if a lexical item maintains its basic meaning, it is non-metaphorical. Conversely, if a lexical item deviates from its basic meaning to acquire either an abstract or figurative meaning, it is a candidate metaphor. A continuum of degrees where the lowest is the one in which a candidate metaphor maintains basic meaning, the medium where a candidate acquires an abstract meaning, and the highest where it undergoes a total semantic shift and acquires a meaning different than its basic meaning is set up. Computation along this criterion is calculated disproportionately, a candidate metaphor that deviates from the basic meaning would be assigned a high score on the continuum of metaphoricity and vice versa.

The proposed basic/non-basic meaning criterion not only identifies candidate metaphors but also identifies their degrees of metaphoricity. The underlying assumption behind this proposed semantic criterion is that metaphors differ in their degrees of metaphoricity along a continuum. Metaphors that are close to one end of the continuum are strongly active. Active metaphors are “context-dependent on the grounds they generate. In other words, they largely depend on the interaction between the vehicle and the topic referred to and their grounds will consequently be variable according to this context, and demand being active in interpreting them” (Goatly, 1997, pp. 34-35). Those, which are close to the other end, are non-active. Non-active metaphors are “sleeping” and “tired” metaphors as defined by Goalty (1997). “Sleeping metaphor” is “an everyday metaphor that is used so commonly to the extent that it is taken for granted and is no longer a metaphor” (pp. 31-32). Goatly (1997) defines “tired metaphor” as a metaphor, which “has grounds that are not so much variable so that it is difficult to distinguish them from the topic” (pp. 32-33). In between are others that are between two ends with a variety of degrees of metaphoricity depending on which end they are closer to. “Root analogies” are the most universal (i.e. metaphor found in various cultures) with the highest degree of metaphoricity followed by the active ones, which are of average degree of metaphoricity. Then follow “sleeping and tired metaphors” followed by “dead”, dead, and buried metaphors, which all lie at the “non-metaphorical” end of the continuum.
In (Q.11:5), the candidate metaphor scores two marks for denoting an abstract meaning. While the candidate metaphor in (Q.11:31) scores three marks for denoting a figurative meaning; the candidate metaphor in (Q.11:83) scores one mark for denoting the basic meaning.

The following table shows the results of investigating the basic/non-basic meaning criterion in the corpus. The first column lists all candidate metaphors, the second is the criterion investigated with its subdivision into basic/literal, abstract, and figurative/non-basic meaning and the last column is of the degree of metaphoricity scored by each candidate metaphor. Marks scored are in direct relationship to the type of meaning denoted by candidate metaphors, so candidates that maintain basic meaning are non-metaphorical and are assigned a mark along the continuum of metaphoricity; candidates that acquire an abstract meaning are of an average degree of metaphoricity and are assigned two marks, candidates that acquire figurative non-basic meaning are highly metaphorical and are assigned three marks along the continuum of metaphoricity.

<table>
<thead>
<tr>
<th>Candidate Metaphor</th>
<th>Basic and non-Basic Meaning Criterion</th>
<th>Degree of Metaphoricity</th>
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<tbody>
<tr>
<td></td>
<td>Basic Meaning</td>
<td>Abstract Meaning</td>
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<tr>
<td>Candidate metaphor no. 1   (Q.11:5)</td>
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<td>Candidate metaphor no. 2   (Q.11:9)</td>
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<td>Candidate metaphor no. 3   (Q.11:10)</td>
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<td>Candidate metaphor no. 4   (Q.11:13)</td>
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<td>Candidate metaphor no. 5   (Q.11:31)</td>
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<td>Candidate metaphor no. 6   (Q.11:34)</td>
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<td>Candidate metaphor no. 7   (Q.11:37)</td>
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<td>Candidate metaphor no. 8   (Q.11:44)</td>
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<td>Candidate metaphor no. 9   (Q.11:44)</td>
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<td>Candidate metaphor no. 10  (Q.11:58)</td>
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<td>Candidate metaphor no. 11  (Q.11:80)</td>
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<tr>
<td>Candidate metaphor no. 12  (Q.11:83)</td>
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</tbody>
</table>
Table 1. Basic/ Non-Basic Meaning Criterion for Metaphor Identification in the Ever-Glorious Qur’ān

The analysis of data lists 22 candidate metaphors in the corpus: ten of these 22 candidates deviate from basic meaning to connote figurative meaning that is totally different from basic meaning and are highly metaphorical scoring three marks. Nine candidates are found to deviate from the basic meaning to acquire abstract meaning do they undergo a change of meaning and therefore are less metaphorical scoring two marks, while only three candidates maintain their basic meaning and therefore are considered non-metaphorical along the continuum of metaphoricity of this criterion.

Based on the results of the criterion ‘basic/non-basic meaning criterion’, it is suggested that a lexicon that checks the meaning of candidate metaphors be fed to the suggested computer software. If the meaning of the candidate metaphor conforms to basic meaning, it is considered non-metaphorical. If, on the other hand, it acquires an abstract or figurative meaning, it is considered metaphorical. The analysis of the basic/non-basic meaning criterion shows that a candidate metaphor of an abstract or figurative meaning has a stronger potentiality of being metaphorical. This conforms to the assumption of the basic/
non-basic meaning criterion proposed earlier which is “metaphors are of non-basic meaning”. Hence, this asserts that lexical items of abstract or non-basic figurative meaning are markers of metaphoricity and should be integrated into software input for metaphor identification in the Ever-Glorious Qur’ān.

The above investigation clearly shows that the semantic criterion succeeded to function as a linguistic marker of metaphoricity.

5. Conclusion

The present study constitutes a significant contribution to the computational identification of metaphor. It succeeded in proposing semantic features as input for the identification of metaphor in the Ever-Glorious Qur’ān. Following the analysis of findings and interpretations of results of the proposed basic/non-basic meaning criterion, the study suggests a software rule for the computational identification of metaphor in the Ever-Glorious Qur’ān. The rules summarized the input for computationally identifying metaphor. The findings also suggest that a lexicon should be fed to the suggested computer software to check the basic meaning of candidate metaphors. Under this basic/non-basic meaning criterion, it is hypothesized that candidate lexical items that are of non-basic meaning are more metaphorical than candidates that are of basic meaning. If the meaning of the candidate metaphor conforms to basic meaning, it is considered non-metaphorical. If it acquires an abstract or figurative meaning, it is considered metaphorical with variant degrees of metaphoricity.

References


