

A Corpus-based Grammatical Investigation towards a Computational Identification of Metaphor

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ARTICLE INFO	ABSTRACT
<p>Keywords: computational identification, corpus-based, grammatical, metaphor, the Holy Qur'an</p> <p>DOI: http://dx.doi.org/10.21093/ijeltal.v6i2.1100</p> <p>How to cite: Metwally, A.A. & Elgemei, D.M. (2022). A Corpus-based Grammatical Investigation towards a Computational Identification of Metaphor. <i>Indonesian Journal of English Language Teaching and Applied Linguistics</i>, 6(2), 227-248</p>	<p>The present study is a corpus-based grammatical investigation for the computational identification of metaphors. The aim of the study is to set a grammatical criterion for the computational identification of metaphors in the Holy Qur'an and propose a computer software input rule for the grammatical identification of metaphorical candidates. The work presented in this study draws on the cognitive theory of metaphor (Lakoff and Johnson, 1980), authentic exegeses of the Holy Qur'an, and finally and most significantly it draws on and extends techniques from computational linguistics. The corpus of the study is one surah from the Holy Qur'an, Sūrat Hūd. A methodology for the investigation of candidate metaphor grammatical structure was developed to deduce the grammatical markers of metaphor and utilize them in the computational identification of metaphors. A quantitative and qualitative interpretation of these results and how they can contribute to the computer software suggested for a computer identification of metaphor in the Holy Qur'an is made. The study ended with a theoretical framework that was applied to the corpus to find metaphors by findings specific grammatical markers.</p>

1. Introduction

The first to think of metaphor as something beyond means of embellishment was a study by Lakoff & Johnson (1980) when they identify 'the concepts we live by' at the very beginning of their book *Metaphors we live by* (1980). 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 apparently 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).

In recent linguistic studies, metaphor is conceived as “a process of mapping between two different conceptual domains – the source domain and the target domain” (Simpson, 2004, p. 108). Similarly, metaphor is defined as a ‘mapping of the structure of a source model onto a target model (Ungerer & Schmid, 1996, p. 120). Kovecses (2010) hypothesized that understanding one domain in terms of another comprises a set of fixed correspondences, called mappings, between a source and a target domain. These mappings profoundly suggest the meaning of the metaphorical linguistic expressions that develop the meaning of a particular conceptual metaphor.

Halliday (1985) introduced the concept of grammatical metaphor which imposes on the grammatical resources of language. While the lexical metaphor is concerned with lexis (i.e. words), grammatical metaphor is rooted in the grammar of the language. Specifically, Halliday (1985) used the notion of ‘grammatical metaphor’ to illustrate the process when the same semantic component is conveyed through different but relevant structures. In functional grammar, two types of grammatical metaphors are prominent. These are ideational metaphor and interpersonal metaphor (Halliday & Matthiessen, 2004). The ideational metaphor “downgrades” linguistic sequences, figures, and elements to a rank below. However, an interpersonal metaphor creates new layers of meaning by “upgrading” modal assessment, which in its “congruent” form is realized as an adjunct of a proposition (for instance, “hopefully,” “regrettably,” etc.) to the rank of a whole clause, such that the interpersonal assessment becomes a proposition in its own right (for instance, “I hope,” “I regret”)(Ezeifeke, 2015, p.3-4).

The current study draws on Lakoff & Johnson (1980) and contributes to corpus studies on metaphor in one main way. It suggests a grammatical criterion for the identification of metaphor that can be fed to a computer to create software that would computationally identify metaphor. The present study attempts to find answers to the following questions. First, what are the grammatical markers for the identification of metaphors in the Holy Qur’ān? And how these markers could be used for the computational identification of metaphor? In order to provide authentic answers to the questions of the study, the grammatical markers of metaphorical candidates will be identified; that is identify grammatical markers of lexical items that are likely to be metaphorical. Furthermore, such markers will be utilized to create computer software that can identify metaphors in the Holy Qur’ān.

To address the gap in the literature (i.e. identifying specific grammatical markers of metaphor to computationally detect metaphor in the Holy Qur’ān), the present study employs the cognitive theory of conceptual metaphor (Lakoff & Johnson, 1980) along with Halliday’s notion of grammatical metaphor (1985). Studies on metaphor in Arabic (Al-Jurjānī, 1989; Al-Sakkākī, 1973; Albustāni, 1986; Abū Libdeh, 2011) as well as studies on metaphor in English corpus and metaphor in computational linguistics (Benson et al., 1986; Biber et al., 1999; Baumer et al., 2009; Mason, 2004; Birke and Sarkar, 2006; Krishnakumaran and Dju, 2007,) are reviewed, investigated and analyzed to arrive at a grammatical criterion for metaphor identification.

The following section is a review of the literature. It is subdivided into three sections. The first consists of a review of the definition of metaphor in both Arabic and English. The following section reviews studies on metaphor. The cognitive theory of metaphor by Lakoff and

Johnson (1980) is then reviewed followed by studies of metaphor in computational linguistics.

2. Review of Literature

2.1 Definition of Metaphor

Arab rhetoricians' definitions of metaphor are either replacing one concept for another as in Al-Jurjānī (1966), or borrowing as in Ibn Qutaibah (1962), 'Akkāwī (1992), Al-Sakkākī (1937), and Al-Jahīz (1960). Al-Jahīz (1960) defines metaphor as, "to describe one thing in terms of another" (p. 153). Similarly, Ibn Qutaibah (1962) defines metaphor as, "borrowing a word and replacing it with another word if there is a relation between both words or they have a similar meaning or one causes the other, so, for example, they call rain sky because the rain comes from the sky" (p. 88). On the other hand, 'Akkāwī (1992), emphasized the meaning of borrowing in his definition of metaphor: 'to borrow something is to transfer that thing from someone to someone else so that this borrowed thing becomes a property of that from which it is borrowed' (p. 90) (Cited in 'Atīq, 1985, p. 367).

In English, Newmark (1988) defines metaphor as the "application of a word or collocation to what it does not literally denote, i.e., to describe one thing in terms of another" (p. 104). Dickins (2005: 228), similarly defines metaphor as "a figure of speech in which a word or phrase is used in a non-basic sense suggesting a likeness or analogy with another more basic sense of the same word or phrase".

2.2 Metaphor in Arabic Rhetoric and Studies on Metaphor in Arabic

Al-Sakkākī (1973, p. 373) distinguishes two major kinds of metaphor: *الاستعارة التصريحية* /*istiṣarah ṭtaṣriḥijjah*/ (i.e. explicit metaphor) and *الاستعارة التلميحية* /*istiṣarah ṭmaknijjah*/ (i.e. implicit metaphor). In the former, *الاستعارة التصريحية* /*istiṣarah ṭtaṣriḥijjah*/ (i.e. explicit metaphor) is defined as a figure of speech whose likened element is maintained but its likened-to element is ellipted, as in *احذرو سيفك بين فكيك* /*ḥḏar saifan bajna fakkajka*/ – (i.e. beware of a sword between your two jaws), where the lexical clue is *بين فكيك* /*bajna fakkajka*/ (i.e. between your two jaws). The likened element is *سيف* /*saifan*/ (i.e. sword) and the likened-to element *اللسان* /*lisa:n*/ (i.e. the tongue) is ellipted. In this metaphor, the tongue is compared to a sword in being sharp (Cited in Abū Libdeh, 2011, p. 5).

The second kind of metaphor is *الاستعارة التلميحية* /*istiṣarah ṭmaknijjah*/ (i.e. *implicit metaphor*) which is achieved through the ellipsis of the likened element from a given proposition, as in *الحروب تخرق الأخضر واليابس* /*alḥuru:b taḥriq ṭaxḏar-wal-jabis*/ (i.e. wars burn the green and the dry), where the borrowed-from, i.e. the likened, element *النار* /*nær*/ (i.e. fire) is ellipted, though the text receiver can still discern the meaning and effect as denoted in the verb *تخرق* /*taḥriq*/ (i.e. burn) that alludes to destruction, while the likened to i.e. *الحروب* /*alḥuru:b*/ (i.e. wars) is maintained. In this metaphor, wars are compared to fire in the destruction that both cause (ibid). In this example, cognitive clues and common sense enable the receivers to discern this signification (Cited in Abū Libdeh, 2011, p. 6).

In Arabic, some studies highlight the grammatical aspect of lexical items which contributes to metaphorical language (Albustānī 1986; Al-Jurjānī d. 471 or 474 H). Albustānī (1986) defines metaphor and classifies it into two types: *الاستعارة الفعلية* /*istiṣa:rah fiṣlijjah*/ (i.e. metaphor in the verb) and *الاستعارة اسمية* /*istiṣa:rah ṭismijjah*/ (metaphor in the noun). "Metaphor in the verb" exists when there is semantic inappropriateness between the verb

and the subject or the verb and the object. For example in the expression *انور ينهمر* *ʔnnu:r janhamir/* (i.e. light is falling down), the verb acts as a predicate of the noun *النور* *ʔnnu:r/* (i.e. the light) and there is semantic inappropriateness between the verb *انهمر* *janhamir/* (i.e. fall down) and its subject *الضمير المستتر هو* *ʔddami:r ʔImustatir huwa/* (i.e. implied subject 'it') which refers back to *النور* *ʔnnu:r/* (i.e. the light) since "light" cannot really "fall down like rain". This inappropriateness is a marker of the metaphoricality of the verb. In this metaphor, 'light' is compared to 'rain' and the common feature is the act of falling down. The second type of metaphor is *استعارة الالسمية* *ʔi-ʔistiʕa:rah ʔi-ʔismijjah/* "metaphor with the noun". In this type, the metaphor is a noun subject that does not have semantic relation with its verb. An example is the noun *البحر* *ʔlbaḥru/* in the following lines of Almutanabbi :

فلهم أر من شئى للبحر نحوه وال رجالاً امتت علقه ألسد

/falam ʔara man mafja ʔlbaḥru naḥwahu wa la radʕulan qa:mat tuʕa:niqahu ʔiʔusdu/

(I have not seen a man to whom the sea walks or a man lions embrace).

The relation between the verb *مشى* *mafja/* (i.e. walk) and the noun *البحر* *ʔlbaḥru/* (i.e. the sea) is semantically inappropriate. The general context indicates that metaphor is in the noun *البحر* *ʔlbaḥru/* (i.e. the sea) because the poet wants to highlight the aspect of similarity between the described person 'Saifud-dawlah' and the sea (i.e. the generosity of the described man is compared to the hugeness of the sea). Hence, in this metaphor, the 'man's' generosity (i.e. Saifud-dawlah) is compared to the sea in its hugeness.

2.3 Studies on Metaphor in English

This section reviews studies that contribute to the grammatical features of metaphor in English (Halliday, 2004; Benson et al., 1986).

Halliday (2004) alludes to the impact of word order in a grammatical structure in producing metaphorical meaning. His approach depends on the fact that grammatical structure could signal a metaphor. He refers to the concept of "grammatical metaphor" that certain grammatical structures are metaphor markers. One example is the sentences "Mary came upon a wonderful sight" and "a wonderful sight met Mary's eyes" which are metaphorical variants of "Mary saw something wonderful" where the grammatical structures of the phrasal verb 'come upon' with the noun collocate in the first sentence 'a wonderful sight' and a noun plus verb plus noun in the passive voice in the second sentence 'a wonderful sight met Mary's eyes' are metaphorical variants of the single lexical item "see". He refers to these variants as "marked clause structures" or "grammatical metaphors" because they involve "grammatical twist" or unusual grammatical structures.

Benson et al. (1986) classify collocations into "grammatical collocations" and "lexical collocations". "Grammatical collocation" is that type of collocation where a dominant word, e.g. (noun or verb) is followed by a grammatical word, typically a preposition. They argue that in this type the meanings of "the prepositions in the collocations are not predictable" (p. 43). This indicates that these grammatical structures are metaphorical. The meaning cannot be predicted from its parts and is therefore metaphorical.

A grammatical criterion could be derived from Benson et al. (1986) as follows: grammatical structures where a particle is preceded by a verb are metaphorical because of the unpredictability of the meaning. In contrast, grammatical structures in which lexical units (i.e.

nouns, adjectives, or verbs) combine with the meaning of both parts maintain literal meaning that is predictable is non-metaphorical. However, if the meaning in collocation is not literal and cannot be predicted, it is metaphorical.

2.4 The Cognitive Theory of Metaphor

Lakoff & Johnson (1980) maintain that metaphors are “the means by which human experiences are organized and conceptualized”. They believe that language whether literal or non-literal provides a way to comprehend, express, and describe reality. As such, conceptual metaphor theory takes a cognitive view of metaphor, and, when it first came on the scene in the 1980s, offered a striking new way of understanding metaphor (Cameron & Maslen, 2010, p. 42).

Lakoff & Johnson (1980) describe three types of conceptual metaphor: “orientational”, “ontological”, and “structural”. The first type, “*orientational* metaphor”, is grounded in our physical, embodied experiences; “it applies a directionality or orientation in order to frame an abstract concept”. For example, the orientational metaphors for quantity MORE IS UP and LESS IS DOWN result from accumulating objects or substances: when stacking or piling objects, results in a higher pile. The second type is “*ontological* metaphor” which categorizes or classifies abstract, subjective concepts and experiences in terms of concrete, physical ones. For example, in the metaphor MONEY IS A LIQUID, physical experiences with liquids are used to help understand and conceptualize the abstract notion of money resulting in phrases such as “he pours money into his IRA”, and “her savings are all *dried up*”, or “they *froze* my assets” where in the first the verb ‘pours’ indicates the meaning of “money pouring like a liquid”, in the second the verb “dried up” implies one of the conditions of liquid of being ‘dried up, in the third the verb “froze” indicates the change of the state of “liquid” into “solid”. As such, the class of substance liquid is being used as an ontological categorization of the concept of money. The third kind of conceptual metaphor as referred to by Lakoff and Johnson (1980) is “structural metaphor”. “*Structural* metaphors” conceptualize one set of experiences in terms of another. For example, RATIONAL ARGUMENT IS WAR uses various aspects of physical combat and war to structure our experiences of having an argument. Such metaphors are considered structural because they structure one entire set of experiences in terms of another, entailing many component mappings between the sets of experiences; the two arguers are framed as opponents attacking each other until either one is defeated or a truce is called for in physical combat. For example, one can intimidate an opponent by saying, “I’m bigger than you,” or, “I’m stronger than you” (Lakoff & M. Johnson, 1980, p. 61).

2.6 Computational Linguistic Studies on Metaphor

Most previous computational linguistic work on metaphor looks to it as an obstacle to overcome, employing computational methods of differentiating literal text from figurative, then applying special processing to that figurative text to infer its literal meaning. One exception according to Baumer et al. (2009:390) is CorMet (Mason, 2004). CorMet is a corpus-based system for discovering metaphorical mappings between concepts which is the understanding of one idea, or conceptual domain, in terms of another. It does this by finding systematic variations in domain-specific selectional preferences, which are inferred from large, dynamically mined internet corpora. Metaphors transfer structure from a source domain to a target domain, making some concepts in the target domain metaphorically equivalent to concepts in the source domain. The verbs that select for a concept in the source

domain tend to select for its metaphorical equivalent in the target domain. CorMet uses domain-specific textual corpora to extract known conceptual metaphors (Mason, 2004 pp.1-2).

Another study employing the tools and technologies of computational linguistics for figurative language identification is proposed by Birke and Sarkar (2006). They present TroFi system (Trope Finder), a system for “automatically classifying literal and nonliteral usages of verbs through nearly unsupervised word-sense disambiguation and clustering techniques” (Birke & Sarkar, 2006, p.1). They assert that TroFi is not a *metaphor* processing system. “It does not claim to interpret *metonymy* and it will not tell you what a given *idiom* means” (p.2). Rather, TroFi attempts to separate literal usages of verbs from nonliteral ones. For example, given the target verb “pour”, TroFi clusters the sentence “Custom demands that cognac be poured from a freshly opened bottle” as literal, and the sentence “Salsa and rap music pour out of the windows” as nonliteral, which, indeed, it does. As such, they address the problem of metaphor identification as a classical word sense disambiguation task. A model is learned for each verb independent of the other verbs. The problem with this approach is that it is limited and cannot handle a new verb without additional training.

Another study is syntactic processing of the relationships between parts of speech, in which Krishnakumaran and Dju (2007) examine the relationships of verbs and adjectives with nouns to find instances that violate standard expectations in WordNet (Fellbaum, 1998). For example, “he is a brave lion,” would be considered metaphorical, because ‘he’, taken to mean a ‘person,’ is not a WordNet hyponym of ‘lion’.

In the light of the aforementioned review of studies conducted on metaphor, it could be concluded that much work is still needed with regard to studying metaphor in the Holy Qur’ān. The present study attempts to identify the grammatical markers of metaphor that would help to set a grammatical criterion for the computational identification of metaphors in the Holy Qur’ān.

3. Research Methodology

This section sets down the grammatical criterion for the ‘manual’ identification of metaphor in the Holy Qur’ān. To do so, the section provides a series of the most significant markers and deduces a possible grammatical criterion that can opt as a potential linguistic marker for a candidate metaphor. This grammatical criterion is then applied to the corpus of the study. This criterion not only identifies candidate metaphors but also identifies the degree of the metaphoricity of metaphors. Metaphoricity is gradable as some metaphors are more metaphorical or primary while others are secondary (Hanks, 2006). The underlying assumption of this indicator of ‘degree of metaphoricity’ is that some metaphors have the potential of denoting metaphorical meaning stronger than others and are therefore considered of a degree of metaphoricity higher than the others.

4. Corpus of the Study

The proposed methodology is a practical application of the suggested grammatical criteria for the identification of metaphors in the Holy Qur’ān to the corpus of the study. To carry out the objectives of the study, a corpus of one Sūrah from the Holy Qur’ān, namely Sūrat Hūd, is used. The manual identification of metaphors on the Sūrah of the study is achieved through referring to authentic exegeses of the Holy Qur’ān namely Tafsīr Aṭ-Ṭabarī (2010), Az-

Zamakhshari (2007), Al-Qurṭubi (1964) and Ash-Sha'rāwī (1997) as well as Yūsuf 'Alī interpretation of the meanings of the Holy Qur'ān (1992). Then a two-step methodology is employed. First, candidate metaphors are manually identified by checking the Holy Qur'ān exegesis. Second, the suggested criterion is applied to each candidate metaphor. A candidate metaphor passing the criterion is assigned a mark along the continuum of metaphoricity. Then the marks are calculated to arrive at the degree of metaphoricity of each candidate metaphor according to the grammatical marker.

5. The Grammatical Criterion

This criterion investigates the grammatical structure as well as the grammatical category of the constituents of the candidate metaphor in question. To do so, constituents of grammatical category according to some features of verbs, nouns and adjectives are set up and a grammatical structure that is to determine whether it is Verb+Noun, Noun+Adjective, Noun+Verb, Noun+Noun, Noun+Preposition phrase/ Prepositional Phrase+Noun is also provided.

In order to arrive at a mere accurate description of the grammatical structure in which a candidate metaphor appears – a semantic description of the Noun/ Verb- is provided, that is, the thematic role and the semantic domain to which a Noun/Verb belongs. The thematic roles of nouns depend on the verb. With transitive verbs, the subject often denotes an agent, i.e. the wilful initiator of the action. Nouns are 'dummy subjects' when used as a semantically empty (or non-referential) subject, particularly in speaking about the weather, time, or distance as in *'it was not as cold as on the previous night, by the time you get back it's nine o'clock, and it was seven miles to the nearest town and I had to bus or walk everywhere'*, respectively. In non-finite clauses, there is often no subject, and the relevant participant must be supplied from the surrounding text. Where the subject is expressed in non-finite clauses, it is a noun phrase (i.e. it cannot be a clause) and always precedes the verb phrase. It is in the accusative case of pronouns as in *"Can you bear it, the thought of **him** going away?"* and the common case of nouns as in *"The retail trade is making optimistic noises about **shoppers** coming back to the High street"*. With ing-clauses, however, the subject may also be a genitive form of a noun or possessive determiner as in *"He spoke about **Sir Michael's** coming to the area"* and *"So it ended up by **his** going off with her"* (Biber, Johansson, Leech, Conrad & Finegan, 1999, pp. 123-125).

The direct object typically denotes an animate or inanimate participant affected by an action, or directly involved in the action (without being an agent or a recipient) as in *"this suggests that he is worried that those who came might rather walk the dog or paint the house than work for minimal benefit"*. In other cases, a resultant object is found where the referent is a result of the action denoted by the verb as in *"But then to be fair, I cannot recall any colleague who could paint a self-portrait with absolute honesty"*. Some verbs may take either an affected or a resultant object, e.g. paint in the above two examples, respectively. Other semantic roles of objects are locative and instrumental objects, expressing roles that are otherwise associated with adverbials, as in *"the finances of the most powerful country in the world will jump **the rails** this weekend"*, where 'the rails' is a locative object and *"He took a walk about the streets, kicking **his feet** in the sea of dry leaves on the pavement"*, where 'his feet' is an instrumental object. In some cases, the direct object does not really express a participant role, but rather a verbal notion. This is true of cognate objects, which most typically repeat the

meaning of the preceding verb as in "And she laughed **her laugh**, that shocking laugh which turned heads and caused her to blush and put a hand over her naked mouth" (Biber et al., 1999, pp. 127-128).

Although many verbs have more than one meaning, they are classified into seven major semantic domains: activity verbs, communication verbs, mental verbs, causative verbs, verbs of simple occurrence, verbs of existence or relationship, and aspectual verbs (Biber et al., 1999, p. 360).

Activity verbs primarily denote actions and events that could be associated with choice, and so take a subject with the semantic role of agent. Examples are 'bring, buy, carry, come, give, leave, move, open, run, take, and work' (Biber et al., 1999, p. 361).

Communication verbs can be considered a special subcategory of activity verbs that involve communication activities (speaking and writing). Consequently, communication verbs include asking, announcing, calling, discussing, explaining, saying, speaking, stating, suggesting, talking, telling, and writing (Biber et al., 1999, p. 362).

Mental verbs denote a wide range of activities and states experienced by humans; they do not involve physical activity and do not necessarily entail volition. Their subject often has the semantic role of the recipient. They include both cognitive meanings (e.g. think or know) and emotional meanings expressing various attitudes or desires (e.g. love, want), together with perception (e.g. taste) and receipt of communication (e.g. read, hear) (Biber et al., 1999, p. 363).

Verbs of facilitation or causation, such as allow, cause, enable, force, help, let, require, and permit indicate that some person or inanimate entity brings about a new state of affairs. These verbs often occur together with a nominalized direct object or complement clause following the verb phrase, which reports the action that was facilitated. For simplicity, these verbs are referred to as causative verbs (Biber et al., 1999, p. 364).

Verbs of simple occurrence primarily report events (typically physical events) that occur apart from any volitional activity. Often their subject has the semantic affected role. For simplicity, these verbs are referred to as occurrence verbs. They include 'become, change, happen, develop, grow, increase, and occur (Biber et al., 1999, p. 364).

Verbs of existence or relationship report a state that exists between entities. Some of the most common verbs of existence or relationship are copular verbs, such as 'be, seem, and appear'. Such copular verbs are typically followed by a subject predicative and perform a linking function so that the subject predicative directly characterizes the subject. Other verbs of existence or relationship are not copular verbs, but report a particular state of existence (e.g. exist, live, stay) or a particular relationship between entities (e.g. contain, include, involve, represent) (Biber et al., 1999, p.364).

Aspectual verbs, such as begin, continue, finish, keep, and start characterize the stage of progress of some other event or activity, typically reported in a complement clause following the verb phrase as in 'she kept running out of the room' and 'he couldn't stop talking about me' (Biber et al., 1999, p. 364).

The assumption of this criterion is: if a lexical item is used in a certain grammatical structure with a particular order producing restricted or semi-restricted collocation, the lexical item in

question is considered a metaphor, and vice versa if a candidate metaphor occurs in a certain grammatical structure with a particular order producing an open collocation it is non-metaphorical. A continuum is set up so that candidates occurring in open collocational grammatical structures score one mark, candidates of semi-restricted collocational grammatical structure score 2 marks, and candidates of restricted collocational grammatical structures score 3 marks along the continuum of metaphoricity.

In ﴿أَلَمْ يَكُنْ لَهُمْ آيَاتُنَا مَا سَبَّحُوا بِحَمْدِ رَبِّهِمْ وَكُنُوا لَهُمْ يُسْمَعُونَ وَمَا يُغْنِي عَنْهُمْ كَيْدُهُمْ وَلَئِنَّ اللَّهَ صَدُورُهُمْ﴾ (11:5) /ʔla ʔinnahum jaθnu:na şudu:r dhum lijastaxfaw minh ʔla hji:najasta Yʔu:na θjiabahum jaʔlamwu ma jusjirwu:na wama jwuʔlinu:n ʔinnahu ʔalji:mwn biðætiş-şwdwu:r/ the imperfect verb of activity *يَسْمَعُونَ* jaθnu:na/ occurs in a grammatical structure where it is followed by a direct affected object *صُدُورُهُمْ* şudu:rāhum/ producing a semi-restricted collocation. In this Qur'ānic verse, the grammatical structure in which the verb is employed contributes to its metaphoricity. When the verb occurs in grammatical structures where it precedes concrete nouns, the literal meaning, i.e. to bend, is produced. For example, when the verb *يَنِي* ana/ precedes the noun *الْأُوب* θ-θaub/ the meaning is simply 'folding up'. Also, the meaning of the verb *يَنِي* ana/ in the grammatical structure *عَنْ أَسْرِهِ* ana ʔanana farasahu/ is to bend the horse's rein to slow it down or stop it. Both of which are the basic meanings of the verb. However, in the collocation *يَنِي* ana ʔatʔfahu/, the verb acquires a figurative meaning which is 'to be arrogant' as it cooccurs with the abstract noun *عِظَة* ʔatʔfahu/. Similarly, in the collocation *يَنِي* ana şadrāhu ʔala/ the verb acquires the meaning of 'to hide' when it collocates with the abstract noun *صَدْرِهِ* şadrāhu/ followed by the preposition *عَلَى* ʔala/ producing a semi-restricted collocation. Based on the above, the verb *يَسْمَعُونَ* jaθnu:na/ scores two marks along the continuum of metaphoricity.

Looking at the candidate metaphors in ﴿لَقَدْ أَنْزَلْنَا إِلَيْنِكَ آيَاتِنَا فَاصْبِرْ لَهَا إِنَّهُ لَمِنْ آيَاتِنَا﴾ (11:9-10) /walaʔin ʔðaqa-na-alʔinsana minna raḥmatant θumma nazaʔnaha minhu ʔinnahu lajaʔwusun kafu:r/, /walaʔinʔðaqnahu naʔmæʔa baʔdaʔar-ræʔa mas-sathu lajaqu:lan-na ðahabas-saj-jiʔætu ʔan-nji ʔin-nahu lafariḥwun faxwu:r/, it is noted that the di-transitive mental verb *أَذَاقَ* ʔðaqa/ occurs in collocation with two nouns (i.e. objects); follows the patterns below: the mental verb *أَذَاقَ* ʔðaqa/ is followed by the direct object concrete noun *الْإِنْسَانَ* ʔinʔsan/ (i.e. man) and the second object (resultant) abstract noun *رَحْمَةً* raḥmatant/ in the first verse; the mental verb *أَذَاقَهُ* ʔðaqnahu/ is followed by *الْحَاءَ* ha:ʔ/ in *أَذَاقَهُ* ʔðaqnahu/ as the direct object and the second object (resultant) is the concrete noun *نَاصِيئَتَهُ* naʔmæʔa/ in the second verse producing the meaning of 'experience' which is a non-literal meaning of the verb. The verb *أَذَاقَ* ʔðaqa/ occurs in a number of grammatical structures where the verb precedes concrete nouns such as *الطَّعَامَ* ʔaʔa:m/ (i.e. food) and *الشَّرَابَ* ʔaræb/ (i.e. drink), and the literal meaning, i.e. taste is produced. However, in other grammatical structures as *ذَاقَ النَّوْمَ* ʔðaqa-naum/ (i.e. to sleep), *ذَاقَ طَعْمَ النَّجَاحِ* ʔðaqa ʔaʔm-annaʔæh/ (i.e. enjoy success), *ذَاقَ طَعْمَ التَّيَقُّنِ* ʔðaqa ʔaʔm-alʔistiqrar/ (i.e. achieve stability), *ذَاقَ طَعْمَ الْحُرِّيَّةِ* ʔðaqa ʔaʔm-malḥwurrij-ja/ (i.e. enjoy freedom), the verb is followed by abstract nouns e.g. sleep, success, stability and freedom respectively, and acquires a figurative meaning (i.e. to experience). The grammatical structure in these two verses in which the verb appears contributes to the metaphoricity of the verb. Based on this, the verb *أَذَاقَ* ʔðaqa/ in its two forms *أَذَاقَ* ʔðaqa/ and *أَذَاقَهُ* ʔðaqnahu/ is metaphorical in this criterion and is assigned two marks along the continuum of metaphoricity.

﴿قَالَ يَا قَوْمِ أَرَأَيْتُمْ إِن كُنتُمْ تُعَاسِبُونَ مِنِّي وَإِنِّي وَلِيُّ مَنِ الدُّنْيَا وَالَّذِينَ كَفَرُوا وَصَدَّقُوا هَٰؤُلَاءِ أَلَيْسَ لَكُم مِّنْ عِندِ رَبِّكُمْ عَلِيمٌ﴾ (11:28) /qɑ:lə ja qaumi ʔraʔɑjtum ʔin kuntu ʔala bajjɪnatin min rab-bji wa ʔæʔæni rahmaman min ʔindih faʔummajat ʔalajikum ʔanulzimukumuha waʔantum laha kærihu:n/, the verb of activity *ʔummajat/عجيت* occurs in a number of grammatical structures where the verb collocates with other nouns, and the literal meaning i.e. lose eyesight is produced. For example, the verb of activity *ʔamma/عصى* implies the literal meaning of “causing to lose eyesight” in *ʔamija ʔf-ʔaxs/عصى للشخص* (i.e. became blind). In other grammatical structures, the verb acquires a figurative meaning as in *ʔamma ʔiʔaql wt-tafki:r/عصى العقل والتفكير* which is the meaning of ‘blurring the mind’ and *ʔamma ʔikalæm/عصى الكلام* where the verb acquires the meaning of making speech vague and unclear. In this Qur’ānic verse, the verb is preceded by the indefinite abstract noun *rahmaman/رحمة* produces the meaning of “obscure” which is the non-literal meaning of the verb. As such, in this Qur’ānic verse the grammatical structure in which the verb is employed where it is followed by the preposition *ʔala/على* preceded by the abstract noun *rahmaman/رحمة* (i.e. mercy) acting as the object of the verb *ʔæʔæni/بتلىني* (i.e. bring). The verb denotes an abstract meaning of “obscuring mercy” and hence, the lexical item in question is considered a metaphor. Based on this, the verb *ʔummajat/عجيت* scores two marks along the continuum of metaphoricity.

﴿وَالَّذِينَ كَفَرُوا لَيُصِيبُنَّهُمْ عَذَابٌ أَلِيمٌ﴾ (11:31) /wala ʔqwu:lu lakum ʔindi xazæʔina allæhi wala ʔaʔlamwlyʔajib wala ʔqwu:lu ʔinni malak wa la ʔqu:lu lil-laði:na tazdari ʔaʔjunikum lan juʔtjijahumul-ladhu xɑɑjra ʔal-lahu ʔaʔlamw bima fi ʔanfusahum ʔinni ʔiðan laminaoð-ða:ljiimi:n/, the concrete noun *ʔaʔjunikum/أعينكم* acts as subject (agent) of the mental verb *tazdari/تزدري* producing the meaning of ‘despise’ which is a non-literal meaning of the noun. In other grammatical structures when the same concrete noun acts as a subject of other verbs, its literal meaning, i.e. eye is maintained. For example, when the noun *ʔain/عين* follows the verb *tara/ترى* (i.e. see) as its subject it denotes the meaning of ‘seeing with the eye’ as in *tara ʔaʔjunihum/ترى أعيانهم* (i.e. their eyes see). In other grammatical structures as in *saqatə min ʔainahu/سقط من عينه*, the concrete noun acquires figurative meaning such as disrespect or contempt and the opposite as in *malaʔa ʔainahu/مأله عينه* which denotes respect and appreciation. In the grammatical structure *qarrat ʔainahu/قارت عينه* the concrete noun in collocation with the verb *qarrat/قارت* denotes the figurative meaning of pleasure and content, and in *qarra ʔallahu bika ʔajnan/قار الله بك عينا* denotes a figurative meaning which is Allah bestowing His blessings on you. Other examples of grammatical structures where the noun acquires a figurative meaning different from its basic meaning (i.e. eye) are *fi ʔarfata ʔain/في طرفة عين* which means very quickly, *ʔajna nafiða/عينا نافذة* which means ‘has shrewd eyes’, *ʔala r-rɑʔsi wal ʔain/على الرأس والعين* which is a way to express that someone is most welcome, and *ʔa: bthu ʔain/صابت عينه* to say that someone was envied. In this Qur’ānic verse, the grammatical structure in which the noun is used contributes to the metaphoricity of the noun. The concrete noun *ʔaʔjunikum/أعينكم* as a subject (agent) preceded by the mental verb *tazdari/تزدري* develops the figurative meaning of ‘your eyes (i.e. you yourselves) disrespect the believers’. Therefore, the noun is considered a metaphor and the noun *ʔaʔjunikum/أعينكم* is assigned three marks along the continuum of metaphoricity.

﴿وَالَّذِينَ كَفَرُوا لَيُصِيبُنَّهُمْ عَذَابٌ أَلِيمٌ﴾ (11:34) /wala janfaʔukum nuʔhi ʔin ʔaradtu ʔn ʔnʔaħa lakum ʔin kanal-la:hu juri:da ʔn jaYwijakum huwa rabbukum waʔilajhi turʔaʔu:n/, the mental verb of emotion *jaYwijakum/يجي عليكم* is preceded by

figurative meaning of 'take away'. In this Qur'ānic verse, the imperative verb of non-action *عَيِّقْ* /qaliʕi/ preceded by the concrete noun *سَامِعٌ* /samæu/ (agent) maintains its basic meaning of 'stop'. Based on the above, the structure *عَيِّقْ أَرْضِيَالِ عَيِّ* /ʔardublaʕji/ scores two marks along the continuum of metaphoricity, but the structure *عَيِّقْ سَامِعٌ* /qaliʕi/ scores a mark.

In *﴿قَالَ مَا جَاءَ أَمْرُنَ أَنْ يَحْتَنَىٰ مُودًا وَاللَّيِّنَ عَاقِبُوا مَعَ فَبِإِذْنِهِ فَجَاءَ غَدَابٌ قَوِيظٌ﴾* (11:58) /walamma d3æʔa ʔmrna nad3ajna hu:dan wal-laði:na ʔæmænu maʕahu birahmatin minna wa nad3ainahum min ʕaðæbin Yali:Z/, the adjective of quality *قَوِيظٌ* /Yali:Z/ is preceded by the abstract deverbal noun *عَذَابٌ* /ʕaðæbin/ producing the figurative meaning of 'severe torture'. However, in other grammatical structures when the adjective of quality follows other nouns, literal meaning, (i.e. rough) is produced. For example, when the adjective *قَوِيظٌ* /Yali:Z/ follows the noun *مَعِي* /maʕji/ the meaning is 'large intestine' called such because it is 'thicker', more vascular, and has a more developed mucosal folds than the jejunum (i.e. the part of the small intestine). Also, the meaning of the adjective *قَوِيظٌ* /Yali:Z/ in the grammatical structure *سَاقٌ قَوِيظٌ* /sæqun Yali:Z/ is "thick stem" as in 'Cactus plant has a thick stem to store water'. In both structures *مَعِي قَوِيظٌ* /maʕji Yali:Z/ (i.e. large intestine) and *سَاقٌ قَوِيظٌ* /sæqun Yali:Z/ (i.e. thick stem), the adjective denotes the literal meaning of 'thick'. However, in other grammatical structures the adjective acquires a figurative meaning as in *أَمْرٌ قَوِيظٌ* /ʔmrn Yali:Z/ denoting 'difficult matter', *مَاءٌ قَوِيظٌ* /mæʔun Yali:Z/ denoting 'bitter water', *عَهْدٌ قَوِيظٌ* /ʕahdun Yali:Z/ referring to 'confirmed pledge' and *رَجُلٌ قَوِيظٌ* /radʕul Yali:Z/ describing a 'cruel man'. In this Qur'ānic verse, the grammatical structure in which the adjective of quality *قَوِيظٌ* /Yali:Z/ is employed contributes to its metaphoricity. The adjective *قَوِيظٌ* /Yali:Z/ preceded by the deverbal abstract noun *عَذَابٌ* /ʕaðæbin/ develops the figurative meaning of 'severe', and hence, the lexical item in question is considered a metaphor. Based on this, the adjective *قَوِيظٌ* /Yali:Z/ scores two marks along the continuum of metaphoricity.

In *﴿قَالَ لَوْ أَنَّ لِي بَيْتٌ مِثْلُ بَيْتِ أَبِيكَ وَمِثْلُ مَا يَأْتِيكَ مِنْ قَوْمِكَ أَوْ أَعَاوِي لَيْ رُكْنٌ شَدِيدٌ﴾* (11: 80) /qa:la law ʔanna li bikum qu-uaatun ʔau ʔæwi ʔila rukn jadi:d/, the deverbal noun *رُكْنٌ* /rukn/ preceded by the verb *أَوْيَ* /ʔæwi ʔila/ (i.e. resort to) and followed by the adjective of quality *شَدِيدٌ* /jadi:d/ produces non-literal meaning of 'seeking support'. When the concrete noun is preceded by other verbs in other grammatical structures, the literal meaning of the noun (i.e. place where two walls or other surfaces meet) is produced. When the noun *رُكْنٌ* /rukn/ is preceded by the verb *لَزَى* /ʔinzawa/ in a sentence like *لَزَى رُكْنِ الْخِيفَةِ* /ʔinzawa ʔttifli fi ruknil Yurfah/ (i.e. the child sat in the corner of the room) the meaning of the noun is literally 'corner'. The meaning of the plural noun *أَرْكَانٌ* /ʔrkænil/ in the sentence *وَضَعِي أَرْكَانَ الْبَيْتِ* /wuðifa fi ʔrkænal bajit/ denotes a literal meaning which is 'corners'. In both of the two structures, the literal meaning of the deverbal noun *رُكْنٌ* /rukn/ (i.e. corner) is the one denoted. However, the meaning of the plural form *أَرْكَانٌ* /ʔrkænil/ (i.e. corners) may differ in a grammatical structure where the action verb is preceded by a preposition as in *دَارَبَا فِي أَرْكَانِ الْمَعْمُورَةِ* /daraba fi ʔrkænil maʕmu:rah/ literally denotes to hit all corners of the earth is 'to travel everywhere in the world'. Also, the meaning of the deverbal noun *رُكْنٌ* /rukn/ in the structure *تَوَلَّى بِرُكْنَيْهِ* /tawalla biruknihi/ in (51:39) *﴿فَتَوَلَّى بِرُكْنَيْهِ وَقَالَ سَاحِرٌ أَوْ مَجْنُونٌ﴾* – (But (Pharaoh) turned back with his Chiefs, and said, "A sorcerer or one possessed!") literally denotes 'to go away with his corner' where the verb is preceded by the preposition *بِ* /baaʔ/ is "to turn back with his Chiefs". The meaning intended is non-literal and it is that he left arrogantly with his supporters. Similarly, in this Qur'ānic verse, the grammatical structure in which the noun is employed contributes to its metaphoricity. The noun *رُكْنٌ* /rukn/ preceded by the verb *أَوْيَ* /ʔæwi ʔila/

/ʔæwi ʔila/ and followed by the adjective of quality شهيدي /ʃadi:d/ develops the figurative meaning of ‘seeking support’, and the lexical item in question is considered a metaphor. On this basis, the noun ركن /rukn/ is assigned three marks.

In ﴿مَنْ وَجَدَ نَجْدًا وَكَوَمَا هِيَ مِنَ الظَّالِمِينَ بِيَدِي﴾ (11: 83) /musauwamatan ʃjinda rabbjika wama hjia minaaððaaðlimi:na bibaʃi:d/, the adjective of quality موصومة /musauwamatan/ (i.e. marked) preceded by the concrete noun حجارة /hijð3aratan/ (i.e. stones) in the previous verse produces the literal meaning of “being branded for the torture of disbelievers”. In other grammatical structures when the adjective of quality is preceded by other nouns, the literal meaning (i.e. marked) is produced. For example, when the adjective موصومة /musauwamatan/ (i.e. marked) follows the noun الخيل /xail ʔImusauwamah/ (3:14) the meaning is “horses branded”. In this Qur’ānic verse, the grammatical structure in which the adjective موصومة /musauwamatan/ occurs maintains the literal meaning of ‘stones branded for certain persons’, and the lexical item in question is not considered a metaphor. Based on the above, the adjective موصومة /musauwamatan/ is assigned a mark along the continuum of metaphoricity.

In ﴿وَلَا يَمَيِّنُ أَخَاهُ مُجِيبٌ أَيُّ أَيُّومٍ اعْبُدُوا لِلَّهِ مَا لَكُمْ مِنْ لَدُنْهِ عَزْرُهُ وَالَّذِينَ نَحْنُ بِالْكُفْرِ وَالظُّلْمِ أَلَمْ يَأْتِكُمْ أَرْكَابُ خِجْرٍ وَلِي﴾ (11:84) /waʔila madjana ʔxa:hum ʃuʃajba qaala jæ qawmji ʔiʃbudul-la:ha mælakum min ʔilæhin ʔajruh wala tanqusu:l mikjæla walmi:zæen ʔinni ʔaraakum bixajirin waʔinni ʔaxaafw ʃalikum ʃaðæba jawumin muhi:t/, the indefinite adjective of quality موصومة /muhi:t/ i.e. encompassing produces the non-literal meaning of ‘devastating’ when preceded by the deverbal noun jawumin/. However, when it is preceded by other nouns in other grammatical structures, literal meaning (i.e. encompassing) is produced. For example, in three occurrences of the adjective موصومة /muhi:t/ in the Holy Qur’ān, the meaning is “All-encompassing”. These are in ﴿إِنَّ لِلَّهِ لَمَّا يَشَأُ لِيَوْمِ هَؤُلَاءِ مِثْرًا﴾ (ʔinna-lla:ha bima jaʃmalu:næ muhiit/ (for Allah Compasseth round about all that they do) (3:120), ﴿وَيَصُدُّونَ عَنْ سَبِيلِ اللَّهِ قُلُوبَ مَآءٍ عَاطِلُونَ مُجِيطٌ﴾ (wa jaʃuddu:na ʃan sæbi:li lla:hi wal lla:hu bima jaʃmalu:næ muhiit/ (and to hinder (men) from the path of Allah. For Allah compasseth round about all that they do) (8:47) and ﴿إِنَّ رَبِّي بِمَا تَعْمَلُونَ مُجِيطٌ﴾ (ʔinna rabi bima jaʃmalu:næ muhiit/ (But verily my Lord encompasseth on all sides all that ye do!) (11:92) (Yūsuf ‘Ali, 1992). In all three occurrences, the adjective of quality is used to describe Allah’s power and knowledge as ‘all encompassing’. In other grammatical structures, the adjective acquires a figurative non-literal meaning as in this Qur’ānic verse. The adjective of quality موصومة /muhi:t/ preceded by the deverbal noun jawumin/ and the deverbal derivative noun عذاب /ʃaðæba/ develops the figurative meaning of ‘devastating’ and therefore, the lexical item in question is considered a metaphor. Based on the above, the adjective موصومة /muhi:t/ scores three marks along the continuum of metaphoricity.

In ﴿يَسْأَلُ الْغَنِيُّ يَوْمَئِذٍ زُكْرًا وَمَنْ لَمْ يَكُنْ عَلَيْهِ حَافِيَةٌ﴾ (11: 86) /baqijatulaaḥi xajrun lakum ʔin kuntum muʔmini:n wama ʔana ʃalikum biḥafi:ð/, the deverbal noun باقية /baqijatu/ followed by the Proper noun اللّٰه /llaah/ produces the non-literal meaning of “Allah’s reward”. However, in other grammatical structures when the deverbal noun is followed by other nouns, literal meaning, i.e. (the remaining part) is maintained. For example, when the noun باقية /baqijatu/ is followed by the noun المال /maal/ i.e. money the meaning is ‘the rest of, reminder of money’ and in the structure باقية الحديث /baqijatulḥadi:θ/ it denotes “the rest remainder part of the talk/conversation”. In other grammatical structures, where it co-occurs with other nouns, it acquires a figurative meaning as in the Qur’ānic verse ﴿فَلْيُؤَلِّكَ إِنَّا مِنْ لَقَرُونَ﴾ (من وللكم أولوي حين هون عن لس افي الرض أولها م من لحننا من ولهم وتبع لاني ظموا م التوولي ه وكلوا مجرين

11:116() /falaw læ kænna minal qurooni min qablikum ?ulu baqijjatin janhauna fanil fasædi fil ?ardi ?illæ qali:lam mimma?and3ajinæ minhum; wattabaçal laði:na Zalamu mæ?utrifu: fi:hi wa kænu: mud3rimi:n/ (Why were there not, among the generations before you, persons possessed of balanced good sense, prohibiting (men) from mischief in the earth - except a few among them whom We saved (from harm)? But the wrong-doers pursued the enjoyment of the good things of life which were given them, and persisted in sin), where the deverbal noun باقيّةbaqijatu/ connotes the meaning of 'to have balanced good sense'. In this Qur'ānic verse, the grammatical structure in which the noun is employed contributes to the metaphoricity of the noun. The noun باقيّةbaqijatu/ followed by the noun اللّٰهAllah/ denotes the figurative meaning of "Allah's reward" and therefore, the lexical item in question is considered a metaphor. Based on the above, the noun باقيّةbaqijatu/ scores three marks along the continuum of metaphoricity.

In ﴿قَالَ أَيُّهَا الَّذِينَ آمَنُوا لِمَ إِذْ سَأَلْتُمُوهُ إِذْ سَأَلْتُمُوهُ إِذْ سَأَلْتُمُوهُ إِذْ سَأَلْتُمُوهُ﴾ (11:87) /qa:lu jæ juʕaibu ?ʕalættuka ta?muruka ?n natrwka mæ jaʕbudu ?æbæ?una aw ?n nafʕalu fi: ?mwælina mæ nafæ?u ?innaka la?ntal ɣali:mur raʕi:d/, the deverbal noun صاليتك /ʕalættuka/ i.e. prayer followed by the verb of communication تاتأمرك/ta?muruka/ produces the non-literal meaning of 'your religion'. However, when the noun collocates with other verbs or lexical items in other grammatical structures, the literal meaning (i.e. prayer) is maintained. For example, when the deverbal noun صلاةʕalætt/ follows the activity verb أقم?qim/ i.e. perform or the abstract noun تأخيرta?xi:r/, the literal meaning is maintained so 'perform the prayer' or 'delay the prayer'. However, in this Qur'ānic verse the grammatical structure in which the noun is employed contributes to its metaphoricity where the noun طسالتك /?ʕalættuka/ is followed by the verb of communication تاتأمرك/ta?muruka/ it acquires the figurative meaning of "does your religion command you!" and therefore, the lexical item in question is considered a metaphor. Based on this, the noun طسالتك /ʕalættuka/ scores two marks along the continuum of metaphoricity.

In ﴿قَالَ أَيُّهَا الَّذِينَ آمَنُوا لِمَ إِذْ سَأَلْتُمُوهُ إِذْ سَأَلْتُمُوهُ إِذْ سَأَلْتُمُوهُ إِذْ سَأَلْتُمُوهُ﴾ (11:92) /qa:læ jæqau mi ?raḥti ?aʕaz-zwʕ alikum mina alla:hi wattaxaḍtwwmwhu waræ?kum Zihrijja ?inna rabbi bimæ taʕmalu:næ muḥi:t/, the noun of place ظرييا /Zihrijja/ preceded by the perfect activity non-volitional verb تاتختموه?itaxaḍtwwmwhu/ and the adverb of place ورأكم /waræ?kum/ produces the literal meaning of 'ignore or forget about'. In other grammatical structures when the noun of place is preceded by other verbs, the literal meaning, i.e. (behind someone's back) is produced. For example in Mu'djam Al-Ma'āni Al-Gāmi', the expression تاتختموه?itaxaḍtwwmwhu/ indicates the meaning ظرييا /Zihrijja/ literally "totally ignored". However, the noun of place ظرييا /Zihrijja/ in the structure تاتختموه?itaxaḍtwwmwhu/ where it is preceded by the verb تاتختموه?itaxaḍtwwmwhu/ and the noun تاتختموه?itaxaḍtwwmwhu/ the meaning implied is of taking as عدة/ʕuwwdah/ (i.e. tools used in battles or war). However, in this Qur'ānic verse, the noun of place ظرييا /Zihrijja/ is preceded by the verb تاتختموه?itaxaḍtwwmwhu/ and the adverb of place ورأكم /waræ?kum/ maintains the meaning of 'ignoring or forgetting about something. Based on the above, the noun ظرييا /Zihrijja/ scores a mark along the continuum of metaphoricity.

In ﴿قَالَ أَيُّهَا الَّذِينَ آمَنُوا لِمَ إِذْ سَأَلْتُمُوهُ إِذْ سَأَلْتُمُوهُ إِذْ سَأَلْتُمُوهُ إِذْ سَأَلْتُمُوهُ﴾ (11:94) /walamma d3æ? ?mrwna nad3ajina juʕajban wallaði:na ?æmanu maʕahu biraḥmatin minna wa?xaḍatilla ði:na Zalamu ʕʕaiḥatu fa?ʕbaḥu fi: dijærihim d3æθimi:n/, the activity non-volitional verb أخذت /?xaḍat/ literally 'seizing something' followed by its direct

object *اللائي نزلناهموا* /*ʔallaði:na ʔalamu/* and its inanimate subject (agent) abstract noun *الصيحة* /*ʔʕʕaiḥatu/* produces the non-literal meaning of 'destroyed'. However, when the activity non-volitional verb precedes other concrete nouns in other grammatical structures, that literal meaning is maintained. For example, when the verb *أخذ* /*ʔaxaḏa/* is followed by the concrete noun *أشياء* /*ʔiʕʕajʔ/* the meaning is 'seize or take' which is the literal meaning of the verb. In other grammatical structures, the verb acquires figurative meanings that differ from its literal meaning as in *أخفقوا بقلوبهم* /*ʔaxaḏa biqulu:bis ʕæmiʕi:n/* where the verb co-occurs with hearts literally 'to take the hearts of the listeners' (i.e. impress the listeners) or with *أدوات* /*ʔwddah/* literally 'tools' as in *أخذوا أدواتهم* /*ʔaxaḏal ʔwddah limuwadʕahatiʕ-sjiʕæb/* literally to take tool to face hardships (i.e. get ready to face difficulties), or with abstract nouns as *أخذوا رأياً* /*ʔaxaḏa biraʔji/* literally 'opinion' in *أخذوا رأي صديقهم* /*ʔaxaḏa ʕadi:qahi/* literally 'to take his friend's opinion', or with prepositions as *أخذوا فمهم* /*ʔaxaḏa ʕala famihi/* literally 'to take on his mouth' (i.e. forbid someone to speak), or *أخذوا من* /*ʔn/* as in *أخذوا من فلان* /*ʔaxaḏa ʕn fulæn/* literally 'to take from someone' (i.e. to learn from someone), or with concrete noun as *أخذوا الداء والعذاب* /*ʔaxaḏa fulænan ʔddæʔ wal ʕaðæb/* literally 'someone took disease and penalty' (i.e. he caught a disease and was tortured) and *أخذوا الله* /*ʔaxaḏa allæhu fulæne/* literally 'Allah, the Almighty took someone', (i.e. someone passed away). In all these occurrences, the verb acquires a meaning different from its basic meaning. In this Qur'ānic verse the grammatical structure in which the verb is employed contributes to its metaphoricity. The verb *أخذت* /*ʔaxaḏat/* followed by the noun phrase *اللائي نزلناهموا* /*ʔallaði:na ʔalamu/* and its subject abstract noun *الصيحة* /*ʔʕʕaiḥatu/* i.e. the heavenly blast acquires the figurative meaning of 'destroy' and therefore, the lexical item in question is considered a metaphor. Based on this, the verb *أخذت* /*ʔaxaḏat/* scores three marks along the continuum of metaphoricity.

In *الورد للمورد* (11:98) /*yaqduma qaumahu jaumal qijjæmah faʔauradahumu-nnæra wabiʔsal wirdul mauru:d/*, the deverbal noun *الورد* /*ʔal-wird/* i.e. 'water' preceded by the third person singular perfect indeclinable verb *أبى* /*ʔabiʔsa/* i.e. 'oweful' and followed by the nominative passive participle *المورد* /*ʔal-mauru:d/* i.e. 'the place which people or cattle seek for water' produces the non-literal meaning of "woeful is the Fire they are led to". However, in other grammatical structures when the noun collocates with other lexical items, the literal meaning, i.e. place to which cattle are led to drink water is produced. For example, when the deverbal derivative noun *ورد* /*wird/* i.e. water precedes the concrete noun *الماء* /*ʔal-mæʔ/* i.e. water it refers literally to 'water place'. However, in this Qur'ānic verse, the grammatical structure in which the noun is employed contributes to its metaphoricity. The deverbal noun *الورد* /*ʔal-wird/* i.e. water preceded by the indeclinable verb *أبى* /*ʔabiʔsa/* i.e. 'oweful', connotes the figurative meaning of 'being led to Fire'. Therefore the lexical item in question is considered a metaphor. Based on this, the deverbal noun *الورد* /*ʔal-wird/* scores three marks along the continuum of metaphoricity.

In *الهدى* (11:99) /*waʔutbiʕu fi haḏihi: laʕnatan wa jaumal qijjæmati biʔsa ʔr-rifdulmarfu:d/*, the deverbal noun *الهدى* /*ʔal-rifd/* i.e. gift preceded by the third person singular perfect indeclinable verb *أبى* /*ʔabiʔsa/* produces the non-literal meaning of 'woeful curse'. However, in other grammatical structures when the deverbal noun collocates with other lexical items, its literal meaning i.e. gift is maintained. For example, in the prophetic tradition *من قرأ القرآن* /*minæqṭira:bis ʕæʕati ʔn jaku:nal fjiʔu rifdæ/*, the noun *هدى* /*rifd/* implies the literal meaning of 'gift' (i.e. a sign of the Day of

Judgement is giving the spoils as gifts to people who do not deserve these spoils). However, in this Qur'ānic verse, the grammatical structure in which the noun is employed contributes to the metaphoricity of the noun. The noun *الرفد* /ʔr-rifd/ preceded by the indeclinable verb *سبى* /bi?sa/ produces a restricted collocation, as it acquires the figurative meaning of 'woeful is the gift (i.e. Fire)' and therefore, the lexical item in question is considered a metaphor. Based on the above, the noun *الرفد* /ʔr-rifd/ scores three marks along the continuum of metaphoricity.

In ﴿لَا يَكُنِ مِنَ الْبِلَادِ الْبَرْدِ﴾ (11:100) /*ḍalika min ʔnbæ?il qura naquṣṣuhu ʕalajka minha qa:ʔimun waḥaṣi:d/*, the participles *قائم* /qa:ʔimun waḥaṣi:d/ literally standing and harvested preceded by the prepositional phrase *فيها* /minha/ (i.e. of them) produces the non-literal meaning of "of the villages left without their people and others which have been wiped out". However, in other grammatical structures when the participles *قائم* /qa:ʔimun waḥaṣi:d/ collocate with other lexical items, literal meaning (i.e. standing and harvested) is produced. The active participle *قائم* /qa:ʔimun/ in the grammatical structure *قائم* /zaidun qa:ʔimun/ literally 'Zaid is standing' maintains its literal meaning. In other grammatical structures, the active participle *قائم* /qa:ʔimun/ acquires a different meaning which is figurative as in *الدين* /ddajn ʔ qa:ʔim/ which means 'unpaid debt', *الشيك* /ʔʕi:k ʔ qa:ʔim/ which means 'outstanding cheque', *قائم* /qa:ʔim ʔlbæb/ which refers to the upright part of a door frame, *قائم* /ʔsʕærji/ which is the top mast vertical line, and *قائم* /qa:ʔim ʔlmæʔ/ which refers to 'the water tank'.

With regard to the adjective participle *حريدي* /ḥaṣi:d/, it maintains its literal meaning in grammatical structures as in *حريدي* /ḥabal ḥaṣiid/ which literally refers to 'harvested crops' where there is a reference to 'harvested seeds'. However, the participle adjective *حريدي* /ḥaṣi:d/ acquires different figurative meanings in other grammatical structures as in *حريدي* /ḥaṣadahum bissif/ literally to 'harvest with a sword' which means 'to kill' (with a sword), *حريدي* /ḥaṣad ʔs-su:ʔ/ literally 'to harvest evil' which means 'to be punished for wrongdoing', and *حريدي* /ḥaṣadæʔ ʔlmædʕa:ʕa lqarjah/ literally 'the famine harvested the village' which means 'the famine swept through the village'. In this Qur'ānic verse, the grammatical structure in which the two participles are employed contributes to their metaphoricity. The active participle *قائم* /qa:ʔimun/ and the adjective participle *حريدي* /waḥaṣi:d/ preceded by the prepositional phrase *فيها* /minha/ refer figuratively to "villages left without their people" and to "those that have been wiped out". The two participles in question are candidate metaphors and based on this, the two participles *قائم* /qa:ʔimun waḥaṣi:d/ score three marks each along the continuum of metaphoricity.

In ﴿إِلَّا مَنْ رَحِمَ رَبُّكَ وَلِقَاءَ رَبِّكَ فَهَلْ عَمَلٌ بَشَرٌ﴾ (11:119) /*illa man raḥima rabuka waliḍḍalika xalaqahum wa tammāt kalimatu rabbika laʔmlaʔannæ dʕahannama minaldʕinnati wannæʕs ʔdʕmaʕi:n/*, the deverbal abstract noun *كلمة* /kalimatu/ (agent) occurs in a grammatical structure where it is preceded by the perfect verb of activity *تتم* /tammāt/ producing a figurative meaning. When the deverbal noun *كلمة* /kalimatu/ occurs in other grammatical structures where it is followed by other verbs, literal meaning, i.e. word is produced. For example, the meaning of the deverbal noun *كلمة* /kalimatu/ in the grammatical structure *كلمة* /qa:la kalimatuṅ ṭajjibah/ (i.e. he said a kind word) is 'word' where it collocates with the verb *قال* /qa:la/. However, when the deverbal noun *كلمة* /kalimatu/ follows the verb *عطي* /uʕṭi/ in the structure *كلمة* /uʕṭi lahul kalimah/ the meaning is 'to promise'. In these two examples, the word *كلمة* /kalimatu/ denotes a literal

meaning (i.e. word) in the first and a figurative meaning (i.e. a promise) in the second. In this Qur’ānic verse, the deverbal noun *كَلِمَةٌ* *kalimatu/* preceded by the perfect verb of activity *تَمَّتْ* *tammat/* develops the meaning of ‘fulfilling a promise’ which is figurative, and therefore, the lexical item in question is considered a metaphor. Based on the above, the noun *كَلِمَةٌ* *kalimatu/* scores three marks along the continuum of metaphoricity.

6. Discussion and Interpretation of Analysis

The analysis of results shows that a direct relation links the grammatical structure of a candidate metaphor to its type of collocation. If the Verb+Noun is a restricted collocation, it is found to be highly metaphorical, if it occurs in a semi-restricted collocation, it is less metaphorical than in the case of restricted collocation, and if it occurs in an open collocation, it is non-metaphorical. The suggested software should involve a program that parses the grammatical structure of the candidate metaphor. The parser should denote the semantic/ grammatical type of constituents of the metaphor. The analysis of results shows that Verb of activity + abstract noun (abstract) structure could be a marker of metaphoricity.

The following table shows the results of investigating the grammatical criterion in the corpus. The first column lists all candidate metaphors in the corpus, and the second is the grammatical criterion with its semantic/ syntactic subdivision into Verb+ Noun, Noun+Adjective, Noun+ Verb, Noun+Noun, and Noun+P.P or P.P+Noun, and the last column is of the degree of metaphoricity.

Table 1. Grammatical Criterion

No.	Candidate Metaphor	Grammatical Criterion					Degree of Metaphoricity		
		Verb + Noun	Noun + Adjective	Noun + Verb	Noun+ Noun	Noun+ P.P /P.P+ Noun	1	2	3
1	(11:5) <i>يُثَبِّتُونَ أَصْدُقَارَهُمْ</i> <i>jaṭnu:na ṣudu:rahum/</i>	imperfect verb of activity+ direct affected object						✓	
2	(11:9) <i>أَذَقْنَا رَحْمَةً لِّرَحْمَتِنَا</i> <i>raḥmatant/</i>	perfect mental verb+resultant object						✓	
3	(11:10) <i>أَذَقْنَا لَهُمْ عَذَابَ نَارِهِمْ لِمَا كَانُوا يَعْمَلُونَ</i> <i>naḥmæ?a/</i>	perfect mental verb +resultant object						✓	
4	(11:28) <i>رَحْمَةً لِّرَحْمَتِنَا</i> <i>/rahmatan faḥummajat /</i>			abstract noun+ perfect verb of activity+ preposition				✓	
5	(11:31) <i>تَزِدُّرِي بِرَحْمَتِكَ</i> <i>?aḥjunikum/</i>	mental verb + agent							✓

No.	Candidate Metaphor	Grammatical Criterion					Degree of Metaphoricity		
		Verb + Noun	Noun + Adjective	Noun + Verb	Noun+ Noun	Noun+ P.P /P.P+ Noun	1	2	3
6	للا (11:34) ?al- laahw jaYwijakum/			agent+ imperfect mental verb				✓	
7	اصنع (11:37) ?a?na? bi?a?junina/	activity verb + concrete noun						✓	
8	يا (11:44) أرضي عي / ja ?arḍubla?ji /			subject (agent)+ imperative verb of physical activity				✓	
9	(11:44) يا س ماء قل عي /ja samæ?qli?i/			subject (agent)+ imperative verb of non-action			✓		
10	(11:58) عذاب ?aḍḍabin Yali:Z/		deverbal noun + Adjective of quality					✓	
11	(11:80) ركن ?uknin ?adi:d/		deverbal noun+ adjective of quality						✓
12	(11:83) حجارة مسومة /hijḍ3ara musauwam atan /		concrete noun+ adjective of quality				✓		
13	(11:84) عذاب يوم مُحيط /aḍḍaba jawumin muḥi:t /		deverbal noun +adjective of quality						✓
14	(11:86) بقيت للا /baqijatulla ahi /				deverbal noun+ Proper noun				✓
15	(11:87) صالتك تأمرك /?saletuka ta?muruka /			deverbal noun+ communic ation verb				✓	
16	(11:92) سَخَّ مَوْه وَرَأَيْتُمْ ظَهْرِي /wattaxaḍtw mwhu	activity non- volitional verb + noun (of place)					✓		

No.	Candidate Metaphor	Grammatical Criterion					Degree of Metaphoricity		
		Verb + Noun	Noun + Adjective	Noun + Verb	Noun+ Noun	Noun+ P.P /P.P+ Noun	1	2	3
	waræʔkum Zihrijja/								
17	(11:94) أَخَذَتْ لِلصَّوْحَةِ ʔxaðat ʔa şşajhatu/	Activity non- volitional verb+ abstract noun (agent)							✓
18	(11:98) بئس الورد /biʔsal wird/	indeclinable verb + abstract noun							✓
19	(11:99) بئس الريف /biʔsa ʔr- rifd/	indeclinable verb + abstract noun							✓
20	(11:100) فِيهَا قُلُوبٌ qa:ʔimun /					preposition al phrase+ active participle			✓
21	(11:100) فِيهَا قُلُوبٌ واهاشي /minha qa:ʔimun waḥaşi:d/					preposition al phrase+ participle adjective			✓
22	(11:119) تَمَّتْ كَلِمَةٌ بِكَ /tammat kalimatu rabbika/	verb of activity+ deverbal abstract noun (agent)							✓

The analysis of data lists 22 candidate metaphors in the corpus. Of these 22 candidates, 10 are Verb+Noun, 4 are Noun+Adjective, 5 are Noun+Verb, 1 is Noun+Noun, and 2 are Noun+P.P and P.P+ Noun. (4) of the verb-based structures involve verbs of activity. (3) of these verbs of activity co-occur with abstract nouns and (1) with a concrete noun. (3) are mental verbs of sense (senses, emotions, or temptation), (2) of the 3 mental verbs co-occur with abstract nouns while (1) co-occur with a concrete noun, (2) are of indeclinable verbs (i.e. verbs that have only one form) with abstract nouns. Accordingly, the metaphorical candidates varied in their degrees of metaphoricity.

The grammatical criterion for identifying metaphor in the corpus of the study has been adapted from both English and Arabic studies. The basic assumption of this criterion is as follows: if a lexical item be it verb or a noun is used in a certain grammatical structure with a particular order producing either an open, restricted, or semi-restricted collocation, the lexical item/candidate metaphor would be considered either non-metaphorical or

metaphorical respectively. If the grammatical structure in which the candidate metaphor is used creates an open collocation, its meaning is literal, and it is not metaphorical. If, on the other hand, the grammatical structure produces a restricted or semi-restricted collocation, the meaning is metaphorical and the lexical item in question is a metaphor. This criterion is borrowed from works by Al-Jurjānī (1989), Benson et al. (1986), and Halliday (2004).

The proposed grammatical criterion investigates the candidate metaphors in the Sūrah of the study by checking the grammatical category of the candidate metaphor (i.e. type of noun, verb, adjective, or participle) in Arabic dictionaries and Arabic grammar references and its semantic-syntactic division adapted from Arabic grammar references. Following the proposed grammatical criterion, a lexical unit is metaphorical if it appears in a restricted or semi-restricted collocational structure (Al-Jurjānī, d. 471 or 474 H), if a particle is preceded by a verb producing unpredictable meaning (i.e. phrasal verb) (Benson et al., 1986), or if there is "grammatical twist" (Halliday, 2004). Halliday (2004) contributes largely to the grammatical criterion for the identification of metaphor in the corpus. He illustrated that word order could result in a metaphorical meaning in a grammatical structure. Accordingly, a grammatical structure could signal a metaphor. He refers to the concept of "grammatical metaphor" where he emphasizes, "There is a strong grammatical element in rhetorical transference". The grammatical criterion derived from this study is as follows: grammatical structures, which are produced because of "grammatical twist", are metaphorical.

7. Conclusion

This work is a valued addition to the work on corpus linguistics towards the computational linguistic research on metaphor. It suggests a rule to free the linguist from manually marking metaphors in huge corpora to find the grammatical features of metaphor, identifying them and their degrees of metaphoricity. Within the grammatical criterion, it was hypothesized that metaphors that occur in certain grammatical structures that constitute a restricted or semi-restricted collocation are more metaphorical than candidates that occur in open collocations. Following the analysis of findings and interpretations of the results of the grammatical criterion, the study proposed a software rule based on this criterion for the computational identification of metaphor in the Holy Qur'ān. Computer software for processing a corpus that could suggest potential metaphors is a contribution in order to find metaphors.

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