

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”)(Ezeifeka, 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; Albustānī, 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: *الإستعارة التصريحية* /ʔiʔistiʕarah ʔttaʕriḥijjah/ (i.e. explicit metaphor) and *الإستعارة المكنية* /ʔiʔistiʕarah ʔImaknijjah/ (i.e. implicit metaphor). In the former, *الإستعارة التصريحية* /ʔiʔistiʕarah ʔttaʕriḥijjah/ (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 *احذر سيفاً بين فكّيك* /ʕḥḍar saifan bajna fakkajka/ – (i.e. beware of a sword between your two jaws), where the lexical clue is *بين فكّيك* /bajna fakkajka/ (i.e. between your two jaws). The likened element is *سيف* /saifan/ (i.e. sword) and the likened-to element *اللسان* /ʔlisa: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 *الإستعارة المكنية* /ʔiʔistiʕarah ʔImaknijjah/ (i.e. *implicit metaphor*) which is achieved through the ellipsis of the likened element from a given proposition, as in *الحروب تحرق الأخضر واليابس* /ʔalḥuru:b taḥriq ʔlaxḍar-wal-jabis/ (i.e. wars burn the green and the dry), where the borrowed-from, i.e. the likened, element *النار* /ʔnnær/ (i.e. fire) is ellipted, though the text receiver can still discern the meaning and effect as denoted in the verb *تحرق* /taḥriq/ (i.e. burn) that alludes to destruction, while the likened to i.e. *الحروب* /ʔalḥuru: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: *استعارة فعلية* /ʔistiʕa:rah fiʕlijjah/ (i.e. metaphor in the verb) and *استعارة اسمية* /ʔistiʕa:rah ʔismijjah/ (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 *النور 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 *ينهمر* /janhamir/ (i.e. fall down) and its subject *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 *الاستعارة الاسمية* /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* /ʔIbaḥru/ in the following lines of Almutanabbi :

فلم أر من مشى البحر نحوه ولا رجلاً قامت تعانقه الأسد

/falam ʔara man mafa ʔIbaḥru 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* /mafa/ (i.e. walk) and the noun *البحر* /ʔIbaḥru/ (i.e. the sea) is semantically inappropriate. The general context indicates that metaphor is in the noun *البحر* /ʔIbaḥru/ (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 ﴿أَلَا إِنَّهُمْ يَبْنُونَ صُدُورَهُمْ لِيَسْتَخْفُوا مِنْهُ أَلَا حِينَ يَسْتَغْشُونَ ثِيَابَهُمْ يَعْلَمُ مَا يُسِرُّونَ وَمَا يُعْلِنُونَ إِنَّهُ عَلِيمٌ بِذَاتِ الصُّدُورِ﴾ (11:5) /ʔla ʔinnahum jaθnu:na şudu:r dhum lijastaxfaw minh ʔla hji:najasta Yʃu:na θjiabahum jaʕlamwu ma jusjirwu:na wama jwuʕlinu:n ʔinnahu ʕalji:mwn biðætiş-şwdwu:r/ the imperfect verb of activity يَبْنُونَ /jaθnu:na/ occurs in a grammatical structure where it is followed by a direct affected object صُدُورَهُمْ /şudu:rahum/ producing a semi-restricted collocation. In this Qurʾānic 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 ثَنَى /θana/ precedes the noun الثَوْب /θa-θaub/ the meaning is simply 'folding up'. Also, the meaning of the verb ثَنَى /θana/ in the grammatical structure ثَنَى عَنَانَ فَرسه /θana ʕanana farsahu/ 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 ثَنَى عَطْفَهُ /θana ʕaṭfahu/, the verb acquires a figurative meaning which is 'to be arrogant' as it cooccurs with the abstract noun عَطْفَهُ /ʕaṭfahu/. Similarly, in the collocation ثَنَى صدره على /θana şadrhu ʕala/ the verb acquires the meaning of 'to hide' when it collocates with the abstract noun صدره /şadrhu/ followed by the preposition على /ʕala/ producing a semi-restricted collocation. Based on the above, the verb يَبْنُونَ /jaθnu:na/ scores two marks along the continuum of metaphoricity.

Looking at the candidate metaphors in ﴿وَلَقَدْ أَذَقْنَا الْإِنْسَانَ مِنَّا رَحْمَةً ثُمَّ نَزَعْنَاهَا مِنْهُ إِنَّهُ لَكَفُورٌ﴾ (11:9-10) /walaʔin ʔðaqa-na-alʔinsana minna raḥmatant θumma nazaʕnaha minhu ʔinnahu lajaʔwusun kafu:r/, /walaʔinʔðaqnahu naʕmæʔa baʕdaʔar-ræʔa mas-sathu lajaqu:lan-na ðahabas-saj-jiʔætu ʕan-nji ʔin-nahu lafariḥwun faxwu:r/, it is noted that the di-transitive mental verb أَذَقَ /ʔðaqa/ occurs in collocation with two nouns (i.e. objects); follows the patterns below: the mental verb أَذَقْنَا /ʔðaqa/ is followed by the direct object concrete noun الإنسان /alʔinsan/ (i.e. man) and the second object (resultant) abstract noun رَحْمَةً /raḥmatant/ in the first verse; the mental verb أَذَقْنَاهُ /ʔðaqnahu/ is followed by الهَاءِ /al-ha:ʔ/ in أَذَقْنَاهُ /ʔðaqnahu/ as the direct object and the second object (resultant) is the concrete noun نِعْمَاءَ /naʕmæʔa/ in the second verse producing the meaning of 'experience' which is a non-literal meaning of the verb. The verb أَذَقَ /ʔðaqa/ occurs in a number of grammatical structures where the verb precedes concrete nouns such as الطَّعَامَ /ʔṭ-ṭaʕa:m/ (i.e. food) and الشَّرَابَ /ʔʃ-faræb/ (i.e. drink), and the literal meaning, i.e. taste is produced. However, in other grammatical structures as ذاق النوم /ðaqa-naum/ (i.e. to sleep), ذاق طعم النجاح /ðaqa ʔaʕm-annaʕæh/ (i.e. enjoy success), ذاق طعم الحرية /ðaqa ʔaʕm-malḥwuriij-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 أَذَقَ /ʔðaqa/ in its two forms أَذَقْنَا /ʔðaqa/ and أَذَقْنَاهُ /ʔðaqnahu/ is metaphorical in this criterion and is assigned two marks along the continuum of metaphoricity.

﴿قَالَ يَا قَوْمِ أَرَأَيْتُمْ إِن كُنْتُ عَلَىٰ بَيِّنَةٍ مِّن رَّبِّي وَآتَانِي رَحْمَةً مِّنْ عِنْدِهِ فَعُمِّيَتْ عَلَيْكُمْ أَنُلْزِمُكُمْوهَا وَأَنْتُمْ لَهَا كَارِهُونَ﴾ (11:28) /qɑ:lə ʒɑ qɑumi ʔrɑʔɑjtum ʔin kuntu ʕala bajjɪnatin min rɑb-bʒi wɑ ʔætæni rɑħmatan min ʕindih fɑʕummajat ʕalajikum ʔanulzimukumuha wɑʔantum laha kærihu:n/, the verb of activity عَمِيَ/ʕummajat/ 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 عَمَى/ʕumma/ implies the literal meaning of “causing to lose eyesight” in عَمِيَ الشَّخْصَ/ʕamiʒa ʔʃ-faxs/ (i.e. became blind). In other grammatical structures, the verb acquires a figurative meaning as in عَمَى الْعَقْلَ وَالتَّفَكِيرَ/ʕamma ʔʕaql wt-tafki:r/ which is the meaning of ‘blurring the mind’ and عَمَى الْكَلَامَ/ʕamma ʔʕalæm/ 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 رَحْمَةً/rahmatan/ 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 عَلَى/ʕala/ preceded by the abstract noun رَحْمَةً/rahmatan/ (i.e. mercy) acting as the object of the verb آتَانِي/ʔætæni/ (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 عَمِيَ/ʕummajat/ scores two marks along the continuum of metaphoricity.

﴿وَلَا أَقُولُ لَكُمْ عِنْدِي خَزَائِنُ اللَّهِ وَلَا أَعْلَمُ الْغَيْبَ وَلَا أَقُولُ إِنِّي مَلَكٌ وَلَا أَقُولُ لِلَّذِينَ تَزْدَرِي أَعْيُنُكُمْ لَن يُؤْتِيَهُمُ اللَّهُ خَيْرًا اللَّهُ﴾ (11:31) /wala ʔqwu:lu lakum ʕindi xɑzæʔina dlæhi wala ʔaʕlamwʕajib wala ʔqwu:lu ʔinni malak wɑ la ʔqu:lu lil-laði:na tazdari ʔaʕjunikum lan juʔtjijahumul-lɑdhu xɑqjra ʔɑl-lahu ʔaʕlamw bima fi ʔanfusahum ʔinni ʔiðan laminɑdð-ða:lʒimi:n/, the concrete noun أَعْيُنُكُمْ/ʔaʕjunikum/ acts as subject (agent) of the mental verb تَزْدَرِي/tazdari/ 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 عَيْن/ʕain/ follows the verb تَرَى/tara/ (i.e. see) as its subject it denotes the meaning of ‘seeing with the eye’ as in تَرَى أَعْيُنُهُمْ/tara ʔaʕjunihum/ (i.e. their eyes see). In other grammatical structures as in سَقَطَ مِنْ عَيْنِهِ/saqatə min ʕainahu/, the concrete noun acquires figurative meaning such as disrespect or contempt and the opposite as in مَلَأَ عَيْنَهُ/malaʔa ʕainahu/ which denotes respect and appreciation. In the grammatical structure قَرَّتْ عَيْنَهُ/qarrat ʕainahu/ the concrete noun in collocation with the verb قَرَّتْ/qarrat/ denotes the figurative meaning of pleasure and content, and in أَقْرَأَ اللَّهُ بِكَ عَيْنًا/ʔarra ʔllahu bika ʕajnan/ 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 فِي طَرْفَةِ عَيْنٍ/fi ʔarfata ʕain/ which means very quickly, لَهُ عَيْنٌ نَافِذَةٌ/lahu ʕajn nafiða/ which means ‘has shrewd eyes’, عَلَى الرَّأْسِ وَالْعَيْنِ/ʕala r-rɑʔsi walʕain/ which is a way to express that someone is most welcome, and أَصَابَتْهُ عَيْنٌ/ʕsa:bthu ʕain/ 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 أَعْيُنُكُمْ/ʔaʕjunikum/ as a subject (agent) preceded by the mental verb تَزْدَرِي/tazdari/ develops the figurative meaning of ‘your eyes (i.e. you yourselves) disrespect the believers’. Therefore, the noun is considered a metaphor and the noun أَعْيُنُكُمْ/ʔaʕjunikum/ is assigned three marks along the continuum of metaphoricity.

﴿وَلَا يَنْفَعُكُمْ نُصْحِي إِنْ أَرَدْتُ أَنْ أُنْصَحَ لَكُمْ إِنْ كَانَ اللَّهُ يُرِيدُ أَنْ يُغْوِيَكُمْ هُوَ رَبُّكُمْ وَإِلَيْهِ تُرْجَعُونَ﴾ (11:34) /wala janfaʕukum nuʕhi ʔin ʔaradtu ʔn ʔnʕaħa lakum ʔin kanal-la:hu juri:da ʔn jaYwijakum huwa rabbukum wɑʔilajhi turʕaʕu:n/, the mental verb of emotion يَغْوِيكُمْ/jaYwijakum/ is preceded by

the name of 'Allah' the Almighty acting as a subject (agent) producing the meaning of 'to torture you' which is a non-literal meaning of the verb. However, in other grammatical structures when the verb is preceded by other nouns, the literal meaning (i.e. to deviate from what is good or expected) is produced. For example, when the verb غوى /Yawa/ is followed by the noun الشاب /ʔf-fa:b/ (i.e. young man), the meaning is to be seduced or 'to go astray' which is the literal meaning of the verb. In other grammatical structures, the verb acquires a meaning which is different from its basic meaning as in غوى الرضيع /Yawa ʔr-radi:ʕ/ where the verb occurs in association with the noun subject الرضيع /ʔr-radi:ʕ/ meaning 'to exceed the natural limit of drinking milk'. In this Qur'ānic verse where the mental verb of emotion يغويكم /jaYwijakum/ is preceded by the structure إن كان الله يريد أن /ʔin kanal-la:hu juri:da ʔn/ it develops the figurative meaning of 'Allah is going to torture them', and is considered a metaphor. On the basis of this, the verb يغويكم /jaYwijakum/ is assigned two marks along the continuum of metaphoricity.

In (11:37) /wʂnaʕil fulka biʔaʕjunina wa wahjina wala tuxa:ʕibnʒi fil-laʕi:na ʒalamu ʔinnahum muYraqu:n/, the noun أعيننا /ʔaʕjunina/ preceded by the preposition باء /baaʔ/ is preceded by the activity verb اصنع /ʔiʂnaʕ/ producing the meaning of "care and guidance" which is non-literal meaning of the noun. This is different from other grammatical structures when the noun follows other verbs. Examples are structures in which the concrete noun عين /ʕajn/ follows the activity verb يرى /jaɾa/ (lit. to see) as in يرى بالعين المجردة /jaɾa bilʕajin ʔImuʒar-rada/ where the literal meaning to see with a naked eye is maintained. In other grammatical structures, the noun acquires a figurative meaning as in سقط من عينه /saqatə min ʕainahu/ when someone is disrespected, ملأ عينه /malaʔa ʕainahu/ when someone is appreciated, قرت عينه /qarrat ʕainahu/ which means pleasure and content, في طرفه عين /fi ʕarfata ʕain/ which means very quickly, نافذة عين له /lahu ʕajn nafiða/ which means 'has shrewd eyes', على الرأس والعين /ʕala r-radʕsi walʕain/ to say that someone is most welcome, and أصابته عين /ʔsa:bthu ʕain/ 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 أعيننا /ʔaʕjunina/ prefixed with the preposition باء /baaʔ/ and preceded by the activity verb اصنع /ʔiʂnaʕ/ develops the meaning of our care in (making the ship) which is figurative and therefore, the lexical item in question is considered a metaphor. On this basis, this candidate metaphor is assigned two marks along the continuum of metaphoricity.

In (11:44) /wa qi:lə ja ʔardublaʕji mæʔaki wa ja samæuʔqliʕi waYi:da ʔImæʔu wa quɖial ʔmru wastauat ʕalal dʒau:dʒi waqi:la buʕdan lilqaumʒi ʔð-ðə:limi:n/, the verb of physical activity ابتلع /ʔiblaʕji/ preceded by the concrete noun أرض /ʔarɖu/ (agent) produces the meaning of 'taking water away' which is a non-literal meaning of the verb. In other grammatical structures when the verb precedes other nouns (i.e. animate objects) the structure is an open collocation and the literal meaning of the verb 'swallow' is produced. For example, when the verb بلع /balaʕa/ is used with المريض الدواء /balaʕa ʔImarʒi:ɖ ʔd-dawa:ʔ/ the meaning is to 'swallow'. But in other grammatical structures where the verb cooccurs with an abstract noun as in المر /balaʕ ʔImur/ it denotes 'accepting or willing to bitterness'. In this Qur'ānic verse, the grammatical structure in which the candidate metaphor ابتلع /ʔiblaʕji/ literally 'to swallow' is employed contributes to its metaphoricity. The verb of physical activity ابتلع /ʔiblaʕji/ preceded by the concrete noun أرض /ʔarɖu/ (agent) develops the

figurative meaning of 'take away'. In this Qur'ānic verse, the imperative verb of non-action اقلعي/ʔqliʕi/ preceded by the concrete noun سماء/samæu/ (agent) maintains its basic meaning of 'stop'. Based on the above, the structure ياأرض ابلعي/ʔa ʔaɾdublaʕji/ scores two marks along the continuum of metaphoricity, but the structure يا سماء اقلعي/ʔa samæu ʔqliʕi/ scores a mark.

In (11:58) وَلَمَّا جَاءَ أَمْرُنَا نَجَّيْنَا هُودًا وَالَّذِينَ ءَامَنُوا مَعَهُ بِرَحْمَةٍ مِنَّا وَنَجَّيْنَاهُمْ مِنْ عَذَابٍ غَلِيظٍ /walamma d3æʔa ʔmruna nad3ajna hu:dan wal-laði:na ʔæmænu maʕahu biraħmatin minna wa nad3ainahum min ʕaðæbin Yali:Z/, the adjective of quality غَلِيظٌ/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 غَلِيظٌ/Yali:Z/ follows the noun معي/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 غَلِيظٌ/Yali:Z/ in the grammatical structure ساق غَلِيظٌ/sæqun Yali:Z/ is "thick stem" as in 'Cactus plant has a thick stem to store water'. In both structures معي/maʕji Yali:Z/ (i.e. large intestine) and ساق غَلِيظٌ/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 أمر غَلِيظٌ/ʔmrun Yali:Z/ denoting 'difficult matter', ماء غَلِيظٌ/mæʔun Yali:Z/ denoting 'bitter water', عهد غَلِيظٌ/ʕahdun Yali:Z/ referring to 'confirmed pledge' and رجل غَلِيظٌ الكبد/raɖ3ul Yali:Zalqalb/ describing a 'cruel man'. In this Qur'ānic verse, the grammatical structure in which the adjective of quality غَلِيظٌ/Yali:Z/ is employed contributes to its metaphoricity. The adjective غَلِيظٌ/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 غَلِيظٌ/Yali:Z/ scores two marks along the continuum of metaphoricity.

In (11: 80) قَالُوا لَوْ أَنَّا لِي بِكُمْ قُوَّةٌ أَوْ ءَاوِي إِلَىٰ رُكْنٍ شَدِيدٍ /qa:la law ʔanna li bikum qu-uatun ʔau ʔæwi ʔila ruknin ʕadi:d/, the deverbal noun ركن/rukn/ preceded by the verb آوَى إِلَى/ʔæwi ʔila/ (i.e. resort to) and followed by the adjective of quality شَدِيدٌ/ʕadi: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 ركن/rukn/ is preceded by the verb انزوى/ʔinzawa/ in a sentence like انزوى الطفل في ركن الغرفة/ʔinzawa ʔtʔifli 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 أركان/ʔrkænil/ in the sentence وضع في أركان البيت /wuðiʕa fi: ʔrkænal bajit/ denotes a literal meaning which is 'corners'. In both of the two structures, the literal meaning of the deverbal noun ركن/rukn/ (i.e. corner) is the one denoted. However, the meaning of the plural form أركان/ʔrkænil/ (i.e. corners) may differ in a grammatical structure where the action verb is preceded by a preposition as in ضرب في أركان المعمورة /ɖaraba 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 ركن/rukn/ in the structure بركنه تولى /tawalla biruknihi/ in (51:39) فَتَوَلَّىٰ – فَتَوَلَّىٰ بِرُكْنِهِ وَقَالَ سَاحِرٌ أَوْ مَجْنُونٌ – /fatawalla biruknihi wa qa:la saħirun ʔw mad3nu:n/ (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 بَاءَ/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 ركن/rukn/ preceded by the verb آوَى إِلَى

/ʔæwi ʔila/ and followed by the adjective of quality شديد /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 ﴿مُسَوَّمَةٌ عِنْدَ رَبِّكَ وَمَا هِيَ مِنَ الظَّالِمِينَ بِبَعِيدٍ﴾ (11: 83) /musauwamatan ʃjinda rabbjika wama hjia minaaððaaɫimi:na bibaʃi:d/, the adjective of quality مسومة /musauwamatan/ (i.e. marked) preceded by the concrete noun حجارة /hijɖʒaratan/ (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 مسومة /musauwamatan/ (i.e. marked) follows the noun الخيل /ʔi-xail ʔImusauwamah/ (3:14) the meaning is "horses branded". In this Qur'ānic verse, the grammatical structure in which the adjective مسومة /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 مسومة /musauwamatan/ is assigned a mark along the continuum of metaphoricity.

﴿وَالْيَٰ مَدْيَنَ أَخَاهُمْ شُعَيْبًا قَالَ يَا قَوْمِ اعْبُدُوا اللَّهَ مَا لَكُم مِّنْ إِلَٰهٍ غَيْرُهُ وَلَا تَتَّبِعُوا الْمَلِكِيَالَ وَالْمِيزَانَ إِنِّي أَرَاكُمْ بِخَيْرٍ وَإِنِّي﴾ (11:84) /waʔila madjana ʔxa:hum ʃuʃajba qaɫla jæ qawmji ʔiʃbudul-la:ha mæɫakum min ʔilæhin Yajruh wala tanqusu:l mikjæla walmi:zæn ʔinni ʔaraakum bixajirin waʔinni ʔaxaafw ʃalikum ʃaðæba jawumin muhi:t/, the indefinite adjective of quality محيط /muhi:t/ i.e. encompassing produces the non-literal meaning of 'devastating' when preceded by the deverbal noun يوم /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 محيط /muhi:t/ in the Holy Qur'ān, the meaning is "All-encompassing". These are in ﴿إِنَّ اللَّهَ بِمَا يَعْمَلُونَ مُحِيطٌ﴾ /ʔinna-lla:ha bima jaʃmalu:næ muhiit/ (for Allah Compasseth round about all that they do) (3:120), ﴿وَاللَّهُ بِمَا يَعْمَلُونَ مُحِيطٌ﴾ /wa ʃaʃuddu: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 مُحِيطٌ﴾ /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 محيط /muhi:t/ preceded by the deverbal noun يوم /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 محيط /muhi:t/ scores three marks along the continuum of metaphoricity.

In ﴿بَقِيَّتُ اللَّهِ خَيْرٌ لَّكُمْ إِن كُنتُمْ مُؤْمِنِينَ وَمَا أَنَا عَلَيْكُمْ بِحَفِيظٍ﴾ (11: 86) /baqijatullaahi xajrun lakum ʔin kuntum muʔmini:n wama ʔana ʃalikum biħafi:ð/, the deverbal noun بقية /baqijatu/ followed by the Proper noun الله /ʔillaħ/ 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 بقية /baqijatu/ is followed by the noun المال /ʔi-mæl/ i.e. money the meaning is 'the rest of, reminder of money' and in the structure بقية الحديث /baqijatulħadi: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 ﴿فَلَوْلَا كَانَ مِنَ الْقُرُونِ﴾ (فَلَوْلَا كَانَ مِنَ الْقُرُونِ) مِنْ قَبْلِكُمْ أُولُو بَقِيَّةٍ يَنْهَوْنَ عَنِ الْفَسَادِ فِي الْأَرْضِ إِلَّا قَلِيلًا مِّمَّنْ أَنْجَيْنَا مِنْهُمْ وَاتَّبَعَ الَّذِينَ ظَلَمُوا مَا أُتْرِفُوا فِيهِ وَكَانُوا مُجْرِمِينَ

11:116) () /falaw læ kænna minal qurooni min qablikum ʔulu baqijjatin janhauna ʕanil fasædi fil ʔardi ʔillæ qali:lam mimmaʔandʒajinæ minhum; wattabaʕal laði:na ʒalamu mæʔutrifu: fi:hi wa kænnu: mudʒrimi: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 بقية/baqijatu/ 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 بقية/baqijatu/ followed by the noun الله/ʔlladh/ 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 بقية/baqijatu/ scores three marks along the continuum of metaphoricity.

In ﴿قَالُوا يَا شُعَيْبُ أَصْلَاتُكَ تَأْمُرُكَ أَنْ نَتْرَكَ مَا يَعْجُبُ آبَاؤُنَا أَوْ أَنْ نَفْعَلَ فِي أَمْوَالِنَا مَا نَشَاءُ إِنَّكَ لَأَنْتَ الْحَلِيمُ الرَّشِيدُ﴾ (11:87) /qa:lu jæ ʃuʕaibu ʔʕalæetuka taʔmuruka ʔn natrwka mæ jaʕbudu ʔæbæʔuna aw ʔn nafʕalu fi: ʔmwælina mæ nafæʔu ʔinnaka laʔntal ʕali:mur raʕi:d/, the deverbal noun صلاتك /ʕalæetuka/ i.e. prayer followed by the verb of communication تأمرک /taʔmuruka/ 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 صلاة/ʕalæet/ follows the activity verb أقم /ʔqim/ i.e. perform or the abstract noun تأخير /taʔxi: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 أصلاتك /ʔʕalæetuka/ is followed by the verb of communication تأمرک /taʔmuruka/ 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 أصلاتك /ʕalæetuka/ scores two marks along the continuum of metaphoricity.

In ﴿قَالَ يَا قَوْمِ أَرَهْطِي أَعَزُّ عَلَيْكُمْ مِنَ اللَّهِ وَاتَّخَذْتُمُوهُ وَرَاءَكُمْ ظَهْرِي إِنَّ رَبِّي بِمَا تَعْمَلُونَ مُحِيطٌ﴾ (11:92) /qa:læ jæqau mi ʔraħti ʔaʕaz-zwʕ alikum mina alla:hi wattaxaðtwwmwhu waræʔkum ʒihrijja ʔinna rabbi bimæ taʕmalu:næ muħi:t/, the noun of place ظهري/ʒihrijja/ preceded by the perfect activity non-volitional verb اتخذتموه /ʔitaxaðtwwmwhu/ and the adverb of place وراءكم /waræʔkum/ 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 جعله ظهري /dʒaʕalahu ʒihrijja/ indicates the meaning جعله نسيا منسيا /dʒaʕalahu nasjan mansjja/ literally "totally ignored". However, the noun of place ظهري/ʒihrijja/ in the structure اتخذ بغيراً /ʔittaxað baʕi:ran ʒihrijjan/ where it is preceded by the verb اتخذ /ʔittaxað/ and the noun البعير /baʕi:ran/, the meaning implied is of taking as غدة/ʕuwwdah/ (i.e. tools used in battles or war). However, in this Qur'ānic verse, the noun of place ظهري/ʒihrijja/is preceded by the verb اتخذتموه /ʔittaxaðtwwmwhu/ and the adverb of place وراءكم /waræʔkum/ maintains the meaning of 'ignoring or forgetting about something. Based on the above, the noun ظهري/ʒihrijja/ scores a mark along the continuum of metaphoricity.

In ﴿وَلَمَّا جَاءَ أَمْرُنَا نَجَّيْنَا شُعَيْبًا وَالَّذِينَ ءَامَنُوا مَعَهُ بِرَحْمَةٍ مِنَّا وَأَخَذَتِ الَّذِينَ ظَلَمُوا الصَّيْحَةَ فَأَصْبَحُوا فِي دِيَارِهِمْ جَاثِمِينَ﴾ (11:94) /walamma dʒæʔ ʔmrwna nadʒajina ʃuʕajban wallaði:na ʔæmanu maʕahu biraħmatin minna waʔxaðatilla ði:na ʒalamu ʕʕaiħatu faʔʕbaħu fi: dijærihim dʒæθimi:n/, the activity non-volitional verb أخذت /ʔxaðat/ literally 'seizing something' followed by its direct

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 بئس /biʔsa/ 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 ﴿ذَلِكَ مِنْ أَنْبَاءِ الْفُرَى نَقَصَهُ عَلَيْكَ مِنْهَا قَائِمٌ وَحَصِيدٌ﴾ (11:100) /ḏalika min ʔnbæʔil qura naquṣṣuhu ʕalaijka minha qa:ʔimun waḥaʕi:d/, the participles قائم /qa:ʔimun waḥaʕi:d/ literally standing and harvested preceded by the prepositional phrase منها /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 waḥaʕi: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 زيد 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 القائم /ddajn ʔ qa:ʔim/ which means 'unpaid debt', الشيك القائم /ʕi:k ʔ qa:ʔim/ which means 'outstanding cheque', قائم الباب /qa:ʔim ʔlbæb/ which refers to the upright part of a door frame, قائم الصاري /qa:ʔim ʔṣṣærji/ which is the top mast vertical line, and قائم الماء /qa:ʔim ʔlmæʔ/ which refers to 'the water tank'.

With regard to the adjective participle حصيد /ḥaʕi:d/, it maintains its literal meaning in grammatical structures as in حب الحصيد /ḥabul ḥaʕiid/ which literally refers to 'harvested crops' where there is a reference to 'harvested seeds'. However, the participle adjective حصيد /ḥaʕi:d/ acquires different figurative meanings in other grammatical structures as in حصدهم بالسيف /ḥṣadhum bissif/ literally to 'harvest with a sword' which means 'to kill' (with a sword), حصد السوء /ḥṣad ʔs-su:ʔ/ literally 'to harvest evil' which means 'to be punished for wrongdoing', and حصدت المجاعة القرية /ḥṣadæʔ 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 حصيد /waḥaʕi:d/ preceded by the prepositional phrase منها /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 waḥaʕi:d/ score three marks each along the continuum of metaphoricity.

In ﴿إِلَّا مَنْ رَحِمَ رَبُّكَ وَلِذَلِكَ خَلَقَهُمْ وَتَمَّتْ كَلِمَةُ رَبِّكَ لَأَمْلَأَنَّ جَهَنَّمَ مِنَ الْجِنَّةِ وَالنَّاسِ أَجْمَعِينَ﴾ (11:119) /illa man raḥima rabuka waliḏælika xalaqahum wa tammat 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 تمت /tamat/ 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 قال كلمة طيبة /qa:la kalimatuṇ ʔaijibah/ (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 يعطي /juʕʔi/ in the structure يعطى له كلمة /juʕʔi 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 كلمة/kalimatu/ preceded by the perfect verb of activity تمت/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 كلمة/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) يثنون صدورهم /jaθnu:na şudu:r ahum/	imperfect verb of activity+ direct affected object						✓	
2	(11:9) أنقنا رحمة /ʔaðɑqn a rahmatant/	perfect mental verb+resultant object						✓	
3	(11:10) أنقناه نعماء /ʔaðɑqnahu naʕmæʔa/	perfect mental verb +resultant object						✓	
4	(11:28) رحمة فعميت عليكم /rahmatan faʕummajat /			abstract noun+ perfect verb of activity+ preposition				✓	
5	(11:31) تزدري عينكم /tazdari ʔaʕjunikum/	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	(11:34) الله يا يغويكم /al-laahw jaYwijakum/			agent+ imperfect mental verb				✓	
7	(11:37) اصنع بأعيننا /ʔʂnaʂ biʔaʂjunina/	activity verb + concrete noun						✓	
8	(11:44) يا أرض ابلعي / ja ʔardublaʂji /			subject (agent)+ imperative verb of physical activity				✓	
9	(11:44) يا سماء اقلعي /ja samæʔqliʂi/			subject (agent)+ imperative verb of non-action			✓		
10	(11:58) عذاب غليظ /ʂaðæbi n Yali:ʒ/		deverbal noun + Adjective of quality					✓	
11	(11:80) ركن شديد /ruknin ʃadi:d/		deverbal noun+ adjective of quality						✓
12	(11:83) حجارة مسومة /hijɖʒara musauwam atan /		concrete noun+ adjective of quality				✓		
13	(11:84) عذاب يَوْم مُجِيط /ʂaðæba jawumin muħi:t /		deverbal noun +adjective of quality						✓
14	(11:86) بقيت الله /baqijatulla ahi /				deverbal noun+ Proper noun				✓
15	(11:87) أصلاتك تأمرُك /ʔʂalæʔtuka taʔmuruka /			deverbal noun+ communication verb				✓	
16	(11:92) اتَّخَذْتُمُوهُ وَرَأَيْكُمْ ظُهُرياً /wattaxaɖtw mwħu	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 ʒihrijja/								
17	(11:94) أَخَذَتْ الصَّيْحَةَ/ ʔxaðat ʔa ʃʃajhatu/	Activity non- volitional verb+ abstract noun (agent)							✓
18	(11:98) بئس الورد /biʔsal wird/	indeclinable verb + abstract noun							✓
19	(11:99) بئس الرفد /biʔsa ʔr- rifd/	indeclinable verb + abstract noun							✓
20	(11:100) منها قائم/minha qa:ʔimun /					preposition al phrase+ active participle			✓
21	(11:100) منها قائم وحصيد /minha qa:ʔimun waḥaʃi:d/					preposition al phrase+ participle adjective			✓
22	(11:119) تمت كلمة رَبِّكَ/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.

References

- Abū Libdeh, A. (2011). "Metaphor in Arabic Rhetoric: A Call for Innovation." *Jordan Journal of Applied Sciences* 13, no. 1 (2011): 227-242.
- Albustānī, S. (1986). *Aṣ-ṣūrah Ashi'riyyah filkitābah alfan-niyyah (alusūl wal furū')*. Beirut: Dar Alfikr Alibnani.
- Al-Jaḥīz, A. B. (1960). *Al-Bayān Wal-Tabyīn*. Cairo, Egypt: Al-Khanji.
- Al-Jurjānī, 'A. (n.d). *Asrār al-Balāghah fī 'ilm al-Bayān*, ed. Rida, M.A., Cairo: Dār al-Matbū'āt al-'Arabiyya.
- Al-Jurjānī, A. (1966). *Al-Wasata bayn al-Mutanabbi wal khusami*. Cairo, Egypt: Issa al Babi al Halabi wa shurākah.
- Al-Jurjānī, 'A. (1989). *Dalā'il Al-l'jāz*, ed. Shakir, M., Cairo: Maktabat al-Khanaji.

- Al-Qurṭubī, A. (1964). *Al-Jamī' li Ahkam al-Qur'ān Wal mubayin lima tadammanna mina Assuna w Ahkam Alfurqan* " Interpretation of the Meanings of the Qur'ān " Dar Alkutub Almasryah, 2nd ed. Cairo.
- Al-Sakkākī, Y. (1937). *Muftāh Al'ulūm* "The Key of Sciences". Matḥa'at Muṣṭafā al-Bābī al-Halabī : El-Gamaleya, ,Cairo.
- Ash-Sha'rāwī, M. (1997). *Alkhawāṭir* "The Thoughts". Dar Akhbār Alyoum: Cairo.
- 'Atīq, A. (1985). *'Ilm Albayān* "Science of Figures of Speech" Beirut. Retrieved on September 12, 2015, from <https://ia801304.us.archive.org/14/items/FP106576/106576.pdf>
- Aṭ-Ṭabarī, M. (2010). *Jamī' Albayān 'An ṭawīl āy AlQur'ān* "Collection of statements on interpretation of verses of the Qur'ān '" Dar Alḥ adeeth AlKahira.
- Baumer, E. P., Sinclair, J., Hubin, D., & Tomlinson, B. (2009, August). metaViz: visualizing computationally identified metaphors in political blogs. In *2009 International Conference on Computational Science and Engineering* (Vol. 4, pp. 389-394). IEEE.
- Benson, M., Benson, E., & Ilson, R. F. (1986). *Lexicographic description of English* (Vol. 14). John Benjamins Publishing.
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman Grammar of Spoken and Written English*. Harlow, England: Longman.
- Birke, J., & Sarkar, A. (2006). A clustering approach for nearly unsupervised recognition of nonliteral language. In *11th Conference of the European Chapter of the Association for Computational Linguistics*.
- Cameron, L., & Maslen, R. (2010). *Metaphor analysis: Research practice in applied linguistics, social sciences, and the humanities*. Equinox.
- Dickins, J. (2005). Two models for metaphor translation. *Target*, 17(2), 227-273.
- Dredi, S. (2003). Mu'djam Al-Ma'āni Al-Djāmi "The Comprehensive Lexicon" Al-Noon Letter. Retrieved on February 17, 2016, from <https://www.almāny.com/ar/dict/ar-ar/>
- Ezeifeka, C. R. (2015). Grammatical metaphor: In search of proficiency in research abstract writing, *SAGE Open*, 1-14. DOI: 10.1177/2158244015577667
- Halliday, M. A. K. (2004). *An Introduction to Functional Grammar*. London: Edward Arnold.
- Halliday, M.A. K. (1985). *Introduction to functional grammar*. London: Arnold
- Halliday, M. A. K., & Matthiessen, C. M. I. M. (2004). *An introduction to functional grammar* (3rd ed.). London, England: Hodder Arnold
- Hanks, P. (2006). Metaphoricity is gradable. *TRENDS IN LINGUISTICS STUDIES AND MONOGRAPHS*, 171, 17.
- Ibn Qutaibah, A. (1962). *Tawil Mushkil al-Quran*. Beirut, Lebanon: Dar al-Kotob al-' ilmiya.
- Khiḍr, M. (2012). Mu'djam Kalimat AlQur'ān Alkarīm "Lexicon of Qur'ānic Words". (2nd ed) Retrieved on January 8, 2017, from <http://www.al-mishkat.com/words/words-Mu'djam1.pdf>
- Kovecses, Z. (2010). *Metaphor: A practical introduction*. 2nd. Ed. Oxford University Press.
- Krishnakumaran, S., & Dju, X. (2007). Hunting Elusive Metaphors Using Lexical Resources. In *Proceedings of the Workshop on Computational Approaches to Figurative Language* (pp. 13-20).
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.
- Martin, J. H. (1990). *A Computational Model of Metaphor Interpretation*. Academic Press Professional, Inc. Retrieved on July 12, 2014, from <https://www.cs.colorado.edu/~martin/Papers/corpus-metaphor.pdf>

- Mason, Z. J. (2004). CorMet: a computational, corpus-based conventional metaphor extraction system. *Computational linguistics*, 30(1), 23-44.
- Newmark, P. (1988). *A textbook of translation* (Vol. 66). New York: Prentice-Hall.
- Omar, A. (2008). *Mu'djam Al-lugha Al'Arabiyah Almu'āṣirah* "Lexicon of Contemporary Arabic Language" Dar Alkutub, Alkahira.
- Reddy, M. (1979). The conduit metaphor. *Metaphor and Thought*, 2, 285-324. Retrieved on August 12, 2015, from <https://msu.edu/~orourke51/800Phil/Handouts/Readings/Linguistics/Reddy-TheConduitMetaphor-1979.pdf>
- Simpson, P. (2004). *Stylistics: A resource book for students*. London: Routledge
- Ungerer, F. & Schmidt, H. (1996). *An introduction to cognitive linguistics*. London and New York: Longman
- Yūsuf 'Ali, A. (1992). *The meaning of the Holy Quran*. (4th Ed.) USA, Maryland: Amana Corporation.