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Presenting the Qur'anic Text in a Developed Mapping Technique and Reflecting the Related Theories of Linguistics

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ABSTRACT

Means of presenting the Qur'anic text enjoy everlasting efforts to develop and meet the greatness and high status the holy Qur'an maintains. Consequently, this study aims at shedding light on the virtual relationship between the general concept of the Qur'anic mapping techniques and the resulting theories of linguistics. The concept of the Qur'anic mapping is to facilitate meaning conveyance, embody concepts, and re-present the Qur'anic discourse in an understandable and comprehensible manner. Therefore, thinking of how the Qur'anic reader will absorb the new representation of the Qur'anic discourse, was the main issue in the Qur'anic mapping process. The resulting linguistic phenomena were discussed in a detailed manner. Qur'anic maps take a hybrid design of concept maps and mind maps with the original Arabic Qur'anic text and the English translation of its meanings manipulated. The current paper introduces itself as a foundation for a newer domain of research based on a decent association between Qur'anic exegesis and its topical classification, concept mapping, and the various theories of linguistics. There is also an opportunity for other studies to explore more linguistic theories not mentioned in this study.

Keywords: Qur'an; Concept Maps; Mind Maps; Linguistics.

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1. Introduction

This proposed study utilizes concept maps and mind maps to deliver the various applicable features the Qur'anic text has in its discourse, such as conceptual chaining, and exegetic and linguistic issues. Moreover, mapping is a technique much easier to track than written or verbal descriptions besides promoting deep approaches to learning (Davies, 2011). Novak defined metacognition as a scope of learning that occurs whenever there is a need for general strategies to facilitate learning or understanding (Novak, 1990). Ideally, the concern of this study falls under the realm of metacognition, considering that concept maps stand as highly powerful metacognitive learning strategies applicable to

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the broad scope of subject matters. Budd considers that concept maps only highlight the relationships of important concepts (Budd, 2004).

Furthermore, the interlinked verses and concepts in the Qur'anic text require a technique such as mind mapping or concept mapping to visualize them (Alam, Ali, Khan, Khan, & Khan, 2013). Moreover, great objectives such as Qur'anic reader's motivation, responsiveness, comprehension, and memorization can be achieved by the complementary use of a diversity of visualization formats (Eppler, 2006). The current study adopts the use of the mapping techniques to provide the reader of the Qur'an with a panoramic and crystalloid view of the thematic textures, linguistic characteristics, conceptual development and interrelatedness, translational agreement and conflicts, and exegetic enlightening.

Moreover, the mapping technique in this study presents a practical model of conceptual chaining and coherence. It makes things clearer as it develops ideas in a technical and logical way of connectivity according to the exegetic classifications of the minimal and maximal textual units of the Qur'anic texture. Linguistically, there are many apparent phenomena that became obvious only when the mapping technique has been applied to the Qur'anic discourse. Those linguistic phenomena are easily embodied in different highlighted linear levels capable of reflecting the topical classification intended by the given piece of Qur'anic texture – according to a specific exegetic thought. Interestingly, the highlighted sectors of a particular mind or concept map always reflect a strong exegetic point of view agreed upon in (Al-Mubarakpuri, 2013).

If that diversity of exegetic commentaries, interpretations, and concepts had been adopted, the mind and concept maps in this study could have appeared in various designing formats. That designing diversity is thanks to the great technical and designing flexibility afforded by the mapping software. Additionally, the topical classification that controls the division and categorization of the Qur'anic texture plays an important role in giving the shape and limits of a given Qur'anic map. On the other hand, the agreement between the Qur'anic Arabic text, the English translation of its meanings, and the exegetic commentary controlling the whole idea of the Qur'anic concept map is responsible for the general output of that comprehensive linguistic outcome. It has its own power that allows various unintentionally repeatable linguistic patterns that are related to various Qur'anic topical classifications.

2. Methodology

On the technical level, this study utilizes XMind 7 (v3.6.0.R-201511090408) software for mapping the Qur'anic text. On the textual and conceptual levels, the study depends on the topical classification and exegetic commentaries of Ibn Kathir in the book *Al-Misbah Al-Munir fi Tahdhib Tafsir Ibn Kathir Al-Mubarakpuri* (2013). On the other hand, the proposed Qur'anic maps involve a bilingual Qur'anic text; the original Qur'anic Arabic text accompanied by the English translation of its meanings known as *Sahih International* as one of the translations of the Holy Qur'an adopted by <http://quran.ksu.edu.sa/> of the Deanship of E-Transactions and Communications, King Saud University, KSA.

3. Results

3.1 Qur'anic mapping and discourse analysis

Ultimately, it is the work of a text analyst to consider two main issues; offering a comprehensive account of the intertextual and conceptual relatedness on the one hand, and of the linguistic and stylistic changes in the Qur'anic discourse on the other hand (Abdul-Raof, 2003). Those two issues are well reflected through the careful application of concept maps and meticulous adaptation of the Qur'anic text to them. Moreover, the partial linear network of connections within a single concept map always outlines an exegetic agreement or a strong exegetic opinion of a Qur'anic scholar or a group of scholars. Literally, each concept map depends on a single interpretational commentary of a Qur'anic exegete, which is considered responsible for the final outlook of the Qur'anic map and general interrelationships encompassed by that specific map.

No doubt, the Qur'anic text being the matchless word of Allah (Abdul Malek, 2000; Haleem, 2010) and unique challenging discourse, requires an equivalent comprehension of the many facts set in an unprecedented manner. According to Widdowson (2007) "A general understanding of ideas is not sufficient: there needs to be closer scrutiny. But equally, close scrutiny can be myopic and meaningless

unless it is related to the larger view". For Woods (2014) who characterizes discourse as "language plus context",

Discourse is, at the very least, language plus context – by which I mean the context that we bring with us when we use language; the context that includes our experience, assumptions and expectations; the context we change (and which is itself changed) in our relationships with others, as we both construct and negotiate our way through the social practices of the world we live in. (Woods, 2014, p. x)

Woods continues to argue that it is also the concern of discourse analysts to explore the way how meaning is being constructed throughout a given text and to accompany intertextuality with them across a set of various but related texts. Wood's argument describes what is so-called conceptual and intertextual chaining or *Munasabah* in the Holy Qur'an. Similarly, Abdul-Raof (2003) states that a Qur'anic text "enjoys two major linguistic features: (i) texture, which represents its grammatical and lexical cohesion, and (ii) consonance, which represents meaning relations that express conceptual and intertextual chaining". Therefore, discovery and analysis of conceptual and intertextual chaining "intertextuality" are the responsibility and focus of analysts, exegetes, or concept map designers. They, accordingly, have to consider the fact that texts have histories or - causes of revelation, and that creation of discourses took place at diverse times, which makes them act as a reference for each other (Woods, 2014, p. x).

As is appropriate for the Qur'anic mapping techniques, Widdowson's call for closer scrutiny that accompanies the general understanding of general ideas and a large view of any textual construction in addition to relating texts to their contexts may be exactly pointing to the unmet need for similar techniques to adopt this notion. Furthermore, gains out of text-context dependency if presented through the Qur'anic concept maps will provide the Qur'anic reader with a comprehensible hybrid work that encompasses meaning, context, analysis of textual construction, and purpose of the given Qur'anic message.

Similar to the act of the Qur'anic exegesis (*Tafsir*) as presented in the colored topical classification *Moshafs*, more useful analytic and exegetic features are offered along with the Qur'anic mapping structures. Those are, the connection between a given highlighted set of verses and their marginal exegetic explanations seem as of a great help to the Qur'anic reader, whereas embodying the same set of verses highlighted in a way or another, in a piece of concept Qur'anic map, will provide the reader with more meaningful, comprehensible, and easy-to-absorb linguistic and exegetic dose.

Paltridge (2012, p. 1) relates discourse analysis to two broad views; "textuality-oriented views of discourse analysis" that focus mostly on the text features of a language on the one hand, and "socially-oriented views of discourse analysis" that consider the role of the text in the cultural and social setting where it appears, on the other. That consideration of textuality and social and cultural aspects affecting the text to be studied again points out the key features of the Qur'anic maps for they are basically bilingual units of meaning that encompass intertextuality, exegesis, and social and cultural facts as key tools of understanding. Qur'anic maps in that concept meet Wood's understanding of the fact that context is so important and its effect on discourse interpretation is crucial (Woods, 2014, p. x). To a large extent, thinking of discourse analysis as in need of "relating text to context" whereby "we infer not only what the notice refers to, but also what its purpose is" (Widdowson, 2007, p. 5), strengthens the Qur'anic maps' notion as comprehensive tools of discourse analysis that encompass text, context, social and cultural aspects, and intertextuality.

(Figure 1) below comes up with several invaluable linguistic features of which listing of ten extracted commandments is remarkably apparent. Literally, these Qur'anic concepts are called the "ten commandments" according to (Al-Mubarakpuri, 2003b, p. 507). They are detailed in the upcoming concept map that holds the idea of relating text to its wide context. It is worth mentioning here that these verses (6:151-153) characterize the will and testament of the Messenger of Allah (Peace and blessings of Allah be upon him) as per the following hadith: 'Ibn Abbas said, "In Surah Al-An'aam, there are clear Ayat, and they are the Mother of the Book (the Qur'an)." He then recited,

(قُلْ تَعَالَوْا أَتْلُ مَا حَرَّمَ رَبِّيَ عَلَيْكُمْ أَلَّا تُشْرِكُوا بِهِ شَيْئًا)

Say, "Come, I will recite what your Lord has prohibited to you. [He commands] that you not associate anything with Him, ...)"²

Ibn Masu'ud's saying: "Whoever wishes to read the will and testament of the Messenger of Allah (Peace and blessings of Allah be upon him) on which he placed his seal, let him read these ayat,
(قُلْ تَعَالَوْا أَتْلُ مَا حَرَّمَ رَبِّيَ عَلَيْكُمْ أَلَّا تُشْرِكُوا بِهِ شَيْئًا)

(Say, "Come, I will recite what your Lord has prohibited to you. [He commands] that you not associate anything with Him, ...)
until

(لَعَلَّكُمْ تَتَّقُونَ)

(... that you may become righteous.) (6:153)³

The concept map of (6:151-153) verses below basically reflects the ten core Islamic commandments in a detailed and restricted clear way that is easy to count, easy to stop by and meditate, easy to link to the main context - the will and testament of Prophet Mohammad (peace and blessings of Allah be upon him), and ready to undergo other conceptual, analytical, and linguistic processes. For a concept map, according to Novak (1990) is "a hierarchically arranged, graphic representation of the relationships among concepts" that are already pinned in the long-term memory of an individual (Bower, Clark, Lesgold, & Winzenz, 1969).

The summarizing nodes and their concluding content work as intelligent tools of topic classifying specifically in the following concept map (Figure 1). That obviously comes in accordance with the Hadith of Prophet Mohammad (peace and blessings of Allah be upon him) cited in (Al-Mubarakpuri, 2003b, p. 504): "Who among you will give me his pledge to do three things?" He then recited the Aya, (Say, "Come, I will recite what your Lord has prohibited to you. [He commands] that you not associate anything with Him, ...) to the end.⁴

On the topical classification concept, the map below provides a logical relatedness in three main categories. The first contains a group of five commandments for using reason, the second includes the next four commandments for remembering, while the third, contains the last commandment for becoming righteous. Interestingly, the first five commandments according to Al-Mubarakpuri (2003b, p. 508) are as follows: "Shirk is forbidden", "Kindness to Parents", "Killing Children is Forbidden", Prohibition of Approaching Immoralities, and "Prohibition of Unjustified Killing" are smoothly concluded with the first of the three summarizing nodes: "This has He instructed you that you may use reason." Whereas, the second summarizing node "This has He instructed you that you may remember." was set to conclude the second four commandments: "Prohibition of Consuming the Orphan's Property", "The Command to Give Full Measure and Full Weight with Justice", "The Order for Just Testimony", and "Fulfilling the Covenant of Allah is an Obligation". Finally, the third summarizing node "This has He instructed you that you may become righteous." solely concludes the last of the ten commandments "The Command to Follow Allah's Straight Path and to Avoid All Other Paths".

This comprehensive presentation of linguistic structures, ideas, and concepts is capable of meeting Hausser's system requirements for providing a model of natural-language communication "The grammar system has to provide an explicit bidirectional surface meaning mapping. Syntactic well-formedness should be characterized by the rules which map meanings into linear surfaces, and vice versa." (Hausser, 2012, p. 4). Moreover, it solves the two fundamental problems of Roger and Abelson (1977, p. 7); "How do people map natural-language strings into a representation of their meaning? How do people encode thoughts in natural language?". Ultimately, meaning, logic, and presentation aspects in (Figure 1) collaborate to provide a unique linear linguistic representation of a self-interpreted and stand-alone Qur'anic text.

Social characteristics of discourse are reflected at the beginning of the concept map below (Figure 1) in (Say, "Come, I will recite what your Lord has prohibited to you...). Apparently, what comes forth is expected to be a detailed list of orders or commandments as it actually is.

Interestingly, the Qur'anic way of introducing the topic to be handled through the next part of the Qur'anic text is a well-known Qur'anic style that exists in many surahs. Following are some examples of that explicit style where context is easily distinguished from the onset:

2 Al-Hakim 2 :317

3 Tuhfat Al-Ahwadhi 8 :446

4 Al-Hakim 2 :318

“They ask you about wine and gambling. Say, "In them is [a] great sin and [yet, some] benefit for people. But their sin is greater than their benefit." And they ask you what they should spend. Say, "The excess [beyond needs]." Thus Allah makes clear to you the verses [of revelation] that you might give thought.” (Q. 2:219)

“They ask you, [O Muhammad], what has been made lawful for them. Say, "Lawful for you are [all] good foods ...” (Q. 5:4)

The Qur'anic discourse – according to the previous examples, is a response to actual cultural and social contexts according to Martin (1982) “The Qur’an does not “mean” something outside of sociocultural contexts” where the imperative form of the verb say is repeated in the Qur'anic text more than 300 times (Haleem, 2010, p. 3). Moreover, Prophet Muhammad (Peace and blessings of Allah be upon him) is reminded throughout the Qur'an that his role is not but a mere “messenger” who conveys the message of Allah. “You, [O Muhammad], are not but a warner.” (Q. 35:23) and “Muhammad is not but a messenger. [Other] messengers have passed on before him. So if he was to die or be killed, would you turn back on your heels [to unbelief]? And he who turns back on his heels will never harm Allah at all;

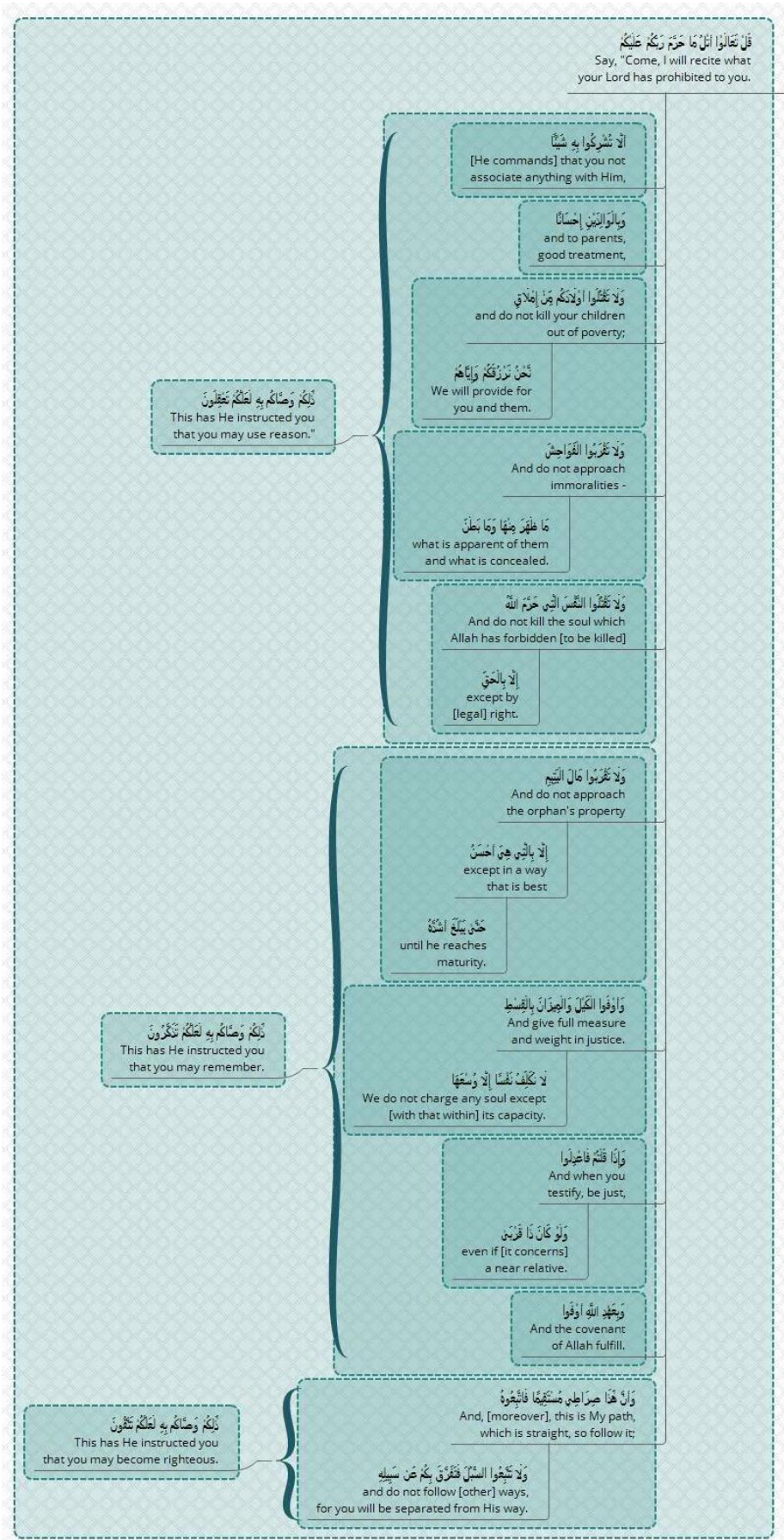


Figure 1. Conceptual Map of Surat AL-An'aam (Q. 6:151-153)

but Allah will reward the grateful.” (Q. 3:144). Remarkably, Prophet Mohammad (Peace be upon him) enjoyed only two roles; delivering the Holy Qur'an and explaining it (Haleem, 2010, p. 47).

The diversity of the linear shifts and generated nodes usually appear as new creative linguistic discourse-analysis tools to demonstrate the different levels of the Qur'anic concepts and thoughts. Although the topics of the Holy Qur'an look classified in an obvious transitional manner, but a boundary facility in Xmind software works as a powerful classifying tool capable of assuring specific topical classifications logically.

3.2 Qur'anic mapping and semantics

Essentially, the study of meaning in language is referred to as semantics (Bagha, 2011; Griffiths, 2006, p. 1). Griffiths (2006, p. x) sets clear differentiating criteria between semantics and pragmatics as “Semantics is concerned with the resources (vocabulary and a system for calculating phrase-, clause- and sentence-meanings) provided by a language, and pragmatics is concerned with how those resources are put to use in communication”. Furthermore, Sturrock (1986, p. 22) argues that the work of semantics as the extraction of meaning out of words is similar to that of semiotics as the extraction of meaning out of signs.

Interestingly, Novak and Cañas (2008) argue that concept maps being considered as graphical tools used for knowledge organization and representation are sometimes called units of meaning or semantic units. Therefore, the use of mapping techniques in re-presenting and embodying the Qur'anic concepts and meanings is not an arbitrary, accidental, or uncommon empirical use. Rather, the idea that mapping techniques are powerful tools of teaching, learning, as well as research is deeply underpinned by a considerable deal of theory and termed as solely congenial and fitting for evaluation of learning styles (Hay, 2007). The Qur'anic maps fully comply with the main objectives of a learner who focuses on understanding and memorizing the meanings as well as concepts; a target that is easily achieved through the various features they enjoy.

The unintentionally analyses taking place through the Qur'anic maps' crossing, horizontal, and vertical network of lines, nodes, summaries, and boundaries bring together the semantic resources of meaning. Moreover, the bilingual feature that decorates any given piece of the maps within this study facilitates the semantic work as the extraction of meaning from textual units or toolkit for meaning.

A quick glance at the above chart and the likes will always provoke a description of the specific nature of the horizontal or vertical linear grouping of words or phrases, which they share in a very remarkable way. In fact, the organized items play various central roles within the verse or surah levels no matter what language platform they occur in (Arabic or English). Those roles vary between main or secondary explanatory, descriptive, functional, or grammatical roles. Hence, an examining reader may find themselves counting harmonious sets of lexically and functionally balanced contrasts, similarities, ideas, explanations, etc. An example of that is the chart mentioned below of Surat Ad-Dhuha, (Figure 2) where:

Two of God's oaths by two contrasting creatures are smoothly joint in one context:

By the morning brightness and by the night when it covers with darkness,

Three good tidings following the oaths:

Your Lord has not taken leave of you [O Muhammad], nor has He detested [you].

And the Hereafter is better for you than the first [life].

And your Lord is going to give you, and you will be satisfied.

Three favors following the good tidings:

Did He not find you an orphan and give [you] refuge?

And He found you lost and guided [you],

And He found you poor and made [you] self-sufficient.

Three pieces of advice:

So as for the orphan, do not oppress [him].

And as for the petitioner, do not repel [him].

But as for the favor of your Lord, report [it].

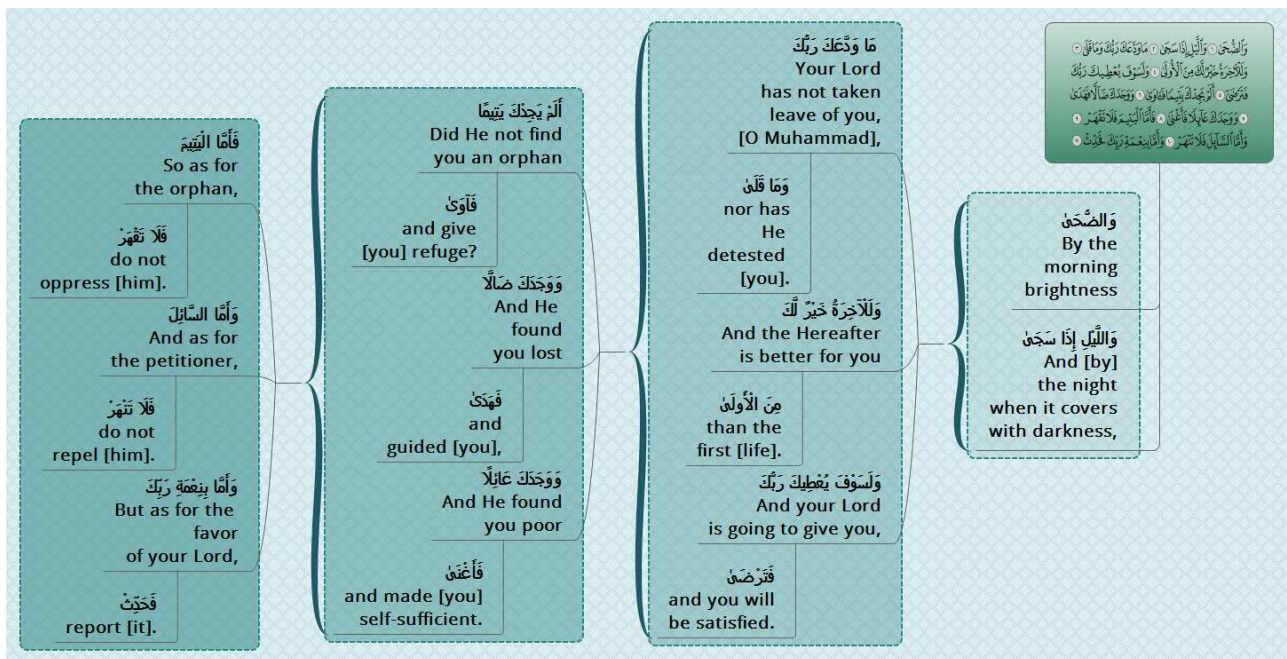


Figure 2. Conceptual Map of Surat Ad-Dhuha (Q. 93:1-11)

The issue of Qur'anic coherence has been the field of rich debates and study for many Muslim and non-Muslim scholars (Setyarahajoe & Shakarami, 2012). Although the theme, topic, or gist of a given Qur'anic text can outline its semantic structure, according to text linguistics (Abdul-Raof, 2003), the exegetic thoughts are responsible for detecting and highlighting the coherence, relatedness, consonance, and texture of the Qur'anic text.

3.3 Qur'anic mapping and semiotics

Semiotics the branch of linguistics that began to turn out to be a principal method to cultural studies in the 2nd part of the 1960s (Chandler, 1994, p. 10). It is the science of sign systems that includes linguistics and the general principles that lie beneath systems of the sign (Andersen, 1990; Saeed, 2016, p. 5). Furthermore, it has been similarly argued by John Sturrock that semiotics extracts meanings out of signs the same way semantics does with meanings out of words (Sturrock, 1986, p. 22).

Thus, symbolic modes are a repeated tendency in many cultures and can co-occur with other ways of textual production or interpretation (Eco, 1984, p. 147). Based on that assumption, mapping of the Qur'anic text is still within the boundaries of the said argument if considered as a collection of sign systems capable of conveying meanings possible to be extracted through semiotic tools the same way semantics does when it comes to extracting textual meanings. Moreover, Qur'anic concept and mind maps contain a complicated system of both bilingual textual format and a network of indicative signs and moves, the thing that puts those maps under the direct semiotic and semantic focusses.

The concept map below (Figure 3) outlines three main commands revealed from God; the first is specifically sent to the believing men through Allah's Messenger "Tell the believing men ...", while the second is specifically sent to the believing women through Allah's Messenger: "And tell the believing women ...", whereas the third addresses all believers (men and women): "And turn to Allah in repentance, all of you, O believers, ...".

The first of the three commands involves two equal sub-commands ordering men to cast down their beholdings and preserve their private parts as follows:

Tell the believing men to reduce [some] of their vision
and guard their private parts.

The second command mentions six equal sub-commands related to women on how to behave regarding their adornment as follows:

to reduce [some] of their vision
and guard their private parts
and not expose their adornment except that which [necessarily] appears thereof
and to wrap [a portion of] their headcovers over their chests

and not expose their adornment except to (their husbands and specific twelve of their kinship relatives)

and let them not stamp their feet to make known what they conceal of their adornment.

The degree of exposure of a woman's adornment is determined here by the degree of relationship each relative individual has. The chart below remarkably defines this relationship and makes the text clearer with a simple classification of the relationship and the degree of closeness. The thing that is not made clear by the translation of Sahih International, which puts all relatives in the same class of a woman's husband based on the right of being exposed to her adornment. The role of translation here is expected to highlight the functional difference between these categories of a woman's relatives based on the nature of their degree of relationship to her.

Additionally, the chart tells in brief that a woman's husband has the full right in being exposed to their wife's adornment with no limitations, the thing that is not possible to be guessed unless an appropriate explanation of the text is there. Moreover, more eleven relationship categories share exactly equal limited exposure to the same women's adornment. Those categories which appear in a clear vertical linear setting, are: their fathers, their husbands' fathers, their sons, their husbands' sons, their brothers, their brothers' sons, their sisters' sons, their women, that which their right hands possess, those male attendants having no physical desire, and children who are not yet aware of the private aspects of women.

It is obvious that every and each move of the network of lines, nodes, boundaries, and summarization tools and highlights plays some sort of crucial meaningful linguistic role within the given Qur'anic text. Moreover, the value-added features of the semiotic use of symbols here, unveil hidden meanings and make silent language elements speak in an apparent manner. Furthermore, lists of things are made clearer and countable, categories of ideas appeared in an interfering way, and summarizations of ideas were logically interrelated to their introductory thoughts.

It is more important here to mention that a well-designed subtopic classification mechanism has unintentionally taken place in each piece of Qur'anic map thanks to the application of the available semiotic tools. Therefore, the Qur'anic reader when scanning a Qur'anic map, they firstly remark an easy-to-follow system of coherence that depends on logic and function, i.e. orders that suite men are set together for men and those suite women are set together for women.

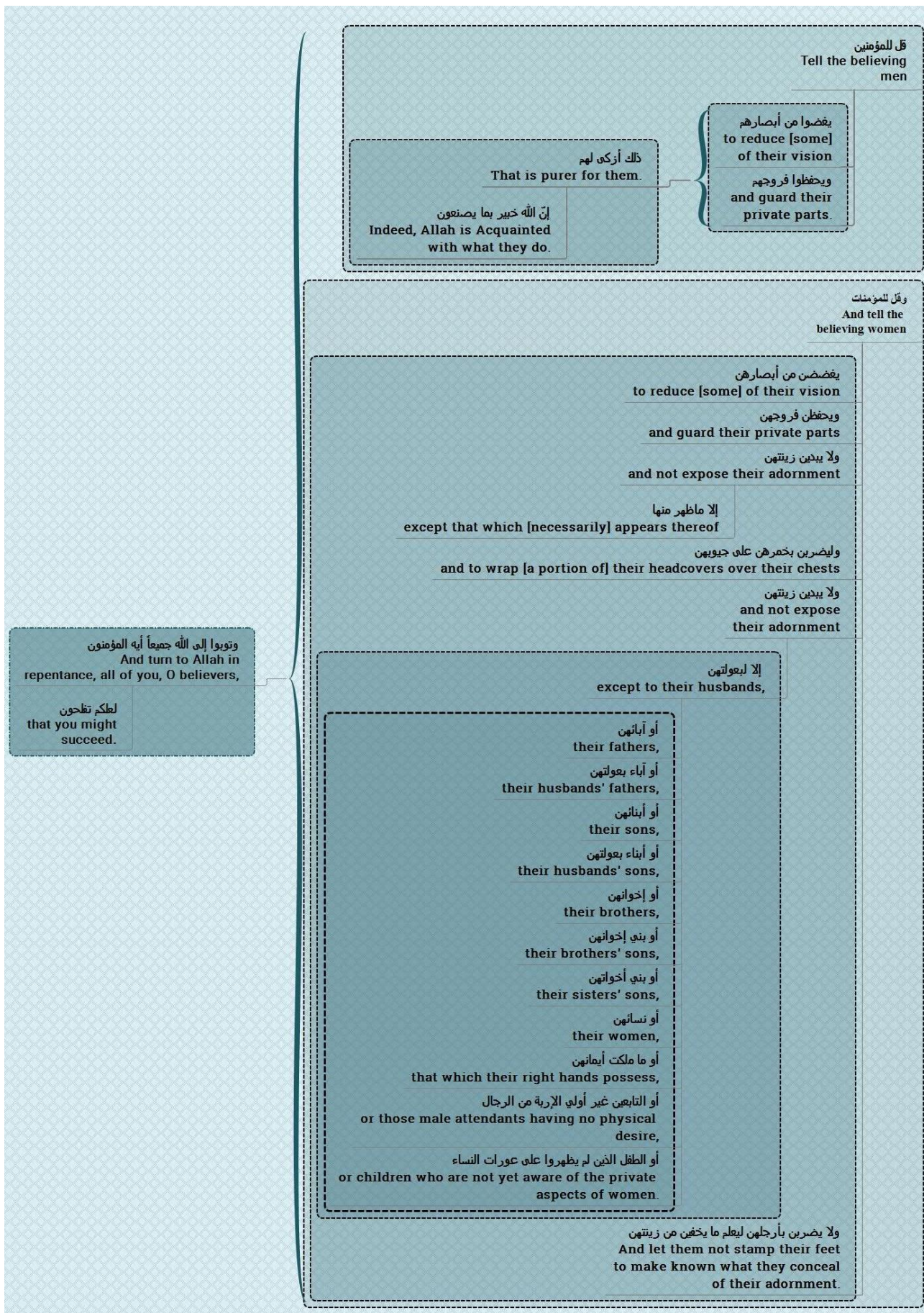


Figure 3. Conceptual Map of Ayat AL-hijab, Surat An-Noor (Q24:30-31)

3.4 Qur'anic mapping and computational linguistics

Natural language processing (NLP) that covers any technical attempt to use computer in manipulating natural language (Bird, Klein, & Loper, 2009, p. ix). Natural language processing or computational linguistics is an area of both application and research that investigates the ways computers can be used to carry out useful things through understanding and manipulating speech or texts of natural language nature (Chowdhury, 2003). Although efforts of creating meaning and knowledge predated the appearance of computer itself, they have succeeded only in providing numerous propositions for formalizing meaning (Barnbrook, Danielsson, & Mahlberg, 2005, p. 39). Moreover, computer, that is considered as a general-purpose machine capable of handling all tasks in information processing of which systems are of many practical advantages (Hausser, 1999, p. 25), did not live up to the expectations of understanding meaning. Instead, computer scientists came to readdress the meaning representation issue inventing the artificial intelligence subdomain (Barnbrook et al., 2005, p. 39). Furthermore, the main task of computational linguistics as intimately linked with linguistics and applied linguistics is to construct computer programs for processing natural language components (Bolshakov & Gelbukh, 2004, p. 17). Therefore, computational linguistics may be translated accordingly as the intelligent machinery processing of the human natural language (Safeena & Kammani, 2013).

Accordingly, the Holy Qur'an and its related sciences were under the focus of information technology researchers aiming at pushing forward the efforts being done to enhance its interpretation, memorization, and translation of its meanings (Basuhail, 2013). Additionally, those efforts have remarkably contributed a lot to the Qur'anic technological sciences; although the output was considerably huge, but the said attempts lacked quality and were not at the efficacy required for the Holy Qur'an (Al-Mosallam, 2013).

The Holy Qur'an is the source of huge collections of analyses, interpretations (Safeena & Kammani, 2013), statistics, sciences, and thoughts where technology, research, education, and artificial intelligence found a soft landing for their applications. Therefore, applications competed to acquire certain distinguishing features aiming at facilitating the hard Qur'anic processes (Al-Mosallam, 2013). Furthermore, for Rashwan, Ramadan, Safwat, Ashraf, and Mamdouh (2016) computational applications took over some of the Qur'anic tasks such as editing, revision of electronic versions, and verification which have been handled manually by committees.

Besides the designing and outlining of mere concepts and thoughts through the linear network of a given concept or mind map, a new essential role for the map designer has remarkably emerged taking a vital rank in the hierarchical structure of the exegetic process. That role is responsible for the unity, coherence, and clarification of the explanatory and translational thoughts through smooth and complicated movements and shifts of simple signs and facilities in the map structure.

The map designing process seems to involve semiotics – the study of signs – and semiology – the meaning-making study - when it comes to configuring the many shifts, signs, and moves and their explanatory role in the given map. Ultimately, that gives the map a three-dimensional explanation, considering that those designing features such as moves, signs, highlights, and meaningful coloration, serve as semiotic tools helpful in facilitating the task of the readers, memorizers, and exegetes of the Holy Qur'an. Consequently, the output maps are expected to empower the Qur'anic readers to navigate, connect, and criticize knowledge in a well-designed and logical way.

When conceptual and mind maps in this study are described as very advanced tools of linguistic and exegetic investigation, their very technical nature usually comes up with an unexpected source of invaluable linguistic readings within a given Qur'anic text. In that arena, they encompass conceptual chaining within aya or surah levels, clear and easy-to-absorb exegetic and topical classifications, meditation and visualization of new topical relationships, and apparent and organized patterns of mnemonics.

Various patterns of conceptual chaining were detected unintentionally within aya or surah levels. One remarkable pattern is the listing pattern that works as a means of listing and classifying some related topical concepts per their linguistic interrelatedness. A vivid example of those patterns is clearly reflected through the following concept map where each word or group of words at the top of a given boundary represents a key start of a standalone concept but related conceptually to the other conceptual and textual boundaries within the specific aya or surah, (Figure 4).

The first boundary starting with the node “Alif, Lam, Meem”; works as the main topic of the whole map, whereas the emerging node “This is the book”; a whole new concept describing the Holy book of Qur'an. Next descending boundary starting with “[a] guidance for those conscious of Allah –”; describes, in four other nodes (details), the sort of people who may be guided by the Holy Qur'an. Finally, the last boundary starting with “and who believe”; details the quality of faith that the people who are conscious of Allah usually have.

The sort of conceptual relatedness or chaining drawn by the linguistically and conceptually interconnected boundaries reflects the strong textual unity of the given Qur'anic text. This sort of unity is obviously distinguished when all the previously mentioned nodes are summarized by the two concluding nodes: “Those are upon [right] guidance from their Lord,” and “and it is those who are the successful.” In a visual, linguistic, and exegetic harmony.

Modeling of lexical or conceptual cohesion in similar Qur'anic texts that share relatedness from a particular exegetic and logical point of view is subject to encompassing other essential factors. Those factors must include the relationships between the entities participating in the given piece of texture (Loukachevitch, 2009).

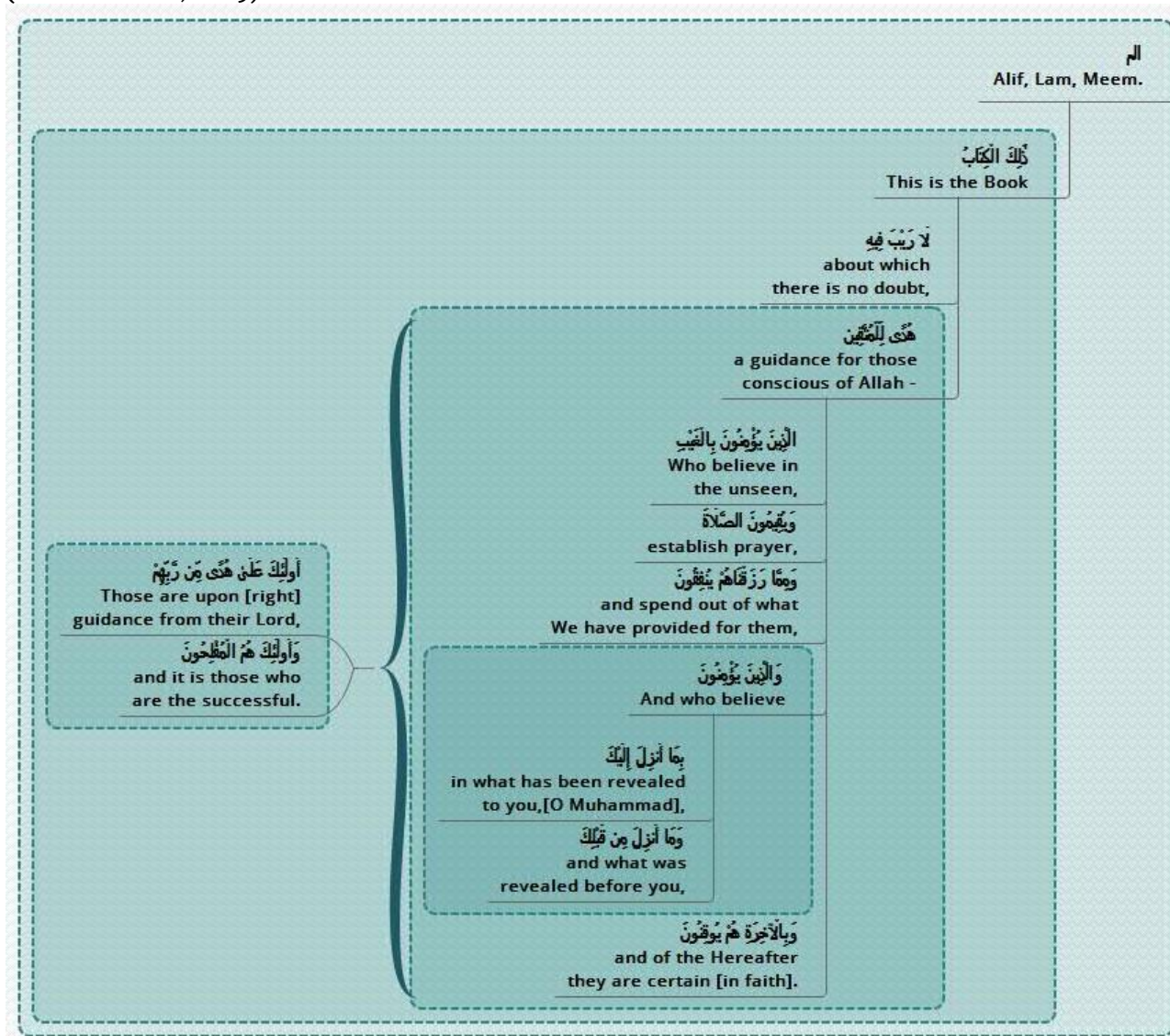


Figure 4. Conceptual Map of Surat AL-Baqarah (Q. 2:1-5)

3-5 Qur'anic mapping and psycholinguistics

Psycholinguistics is the study of the neurobiological and psychological features that enable individuals to acquire, use, and understand language (Steinberg & Sciarini, 2013). It is also the interdisciplinary field of study that links between psychology and linguistics by studying the mental processes and knowledge types that the understanding and producing of language involves (De Groot,

2011, p. 2). Moreover, it is the area of overlap between psychology (which studies human behavior) and linguistics (which studies language) to explore the ways language is learned and used (Smith, 2012, p. 233).

The study of meaning from psycholinguistic viewpoints began to attract significant interest (Von Heusinger, Maienborn, & Portner, 2012). In fact, the Qur'anic discourse provides a strong relationship between three main concepts; thoughts, culture, and language which interlock to fascinate the Qur'anic reader in an unprecedented way. That three-dimensional inter-relationship is considered by (Steinberg & Sciarini, 2013, p. 177) as central to psycholinguistics.

Likewise, Welch (1979), as cited in (Martin, 1982), divides Qur'anic studies into three areas; the study of the Qur'anic text, the Qur'anic roles in Muslims' life and thought, and the history of the Qur'anic interpretation (Tafsir). Based on that, the Qur'anic maps depend mainly on a built-in textual, exegetic, and cultural system reflected visually through a rigorous method of psycholinguistic analysis. A deep psycholinguistic representation and functioning of the Qur'anic language in mind are explored through the use of two-dimension graphical concept and mind mapping techniques.

From a psycholinguistic point of view, readers (the Qur'anic readers as an example), like any other type of readers, depend on context to anticipate and retrieve the upcoming word prior to processing the input of perception (Traxler & Gernsbacher, 2011, p. 387). Traxler and Gernsbacher went on stating that, readers, according to substantial evidence from research, are sensitive to the information provided by the contextual aspects. In fact, the Qur'anic readers follow the same mechanism during their various reading purposes. For instance, when memorizing, the context of the given piece of the Qur'an imposes a careful selection of meaning and primary understanding based on the exegetic and logical pre-knowledge of the reader.

Based on the said argument, the Qur'anic mapping technique build a new visual strategy for eye movement and sensitivity towards anticipating unambiguity within a given piece of Qur'anic text. For instance, some Qur'anic texts may be dominated by parallelism and repetition which direct the Qur'anic reader's way of thinking and anticipating of next film of words, phrases, or even sentences. In other words, sentences and utterances might be regarded as cohesively sharing the same parallel grammatical features. Yet, such unique grammatical and syntactic features through the arrangement as well as the structure of the items of a given text are well known to exist in the Qur'anic styles according to the following Qur'anic conceptual map of Surat Al-Ahzab (Q. 33:35) (Figure 5).

The reason for the revelation of this ayah promotes the sense of the Qur'anic reader who has been given all the required clues to reach the superlative anticipation. In fact, Al-Mubarakpuri (2003a, p. 685) cited the following Hadith as recorded by Imam Ahmad that

Umm Salamah, may Allah be pleased with her, the wife of the Prophet (Peace and Blessings of Allah be upon Him) said, "I said to the Prophet (Peace and Blessings of Allah be upon Him), 'Why is it that we are not mentioned in the Qur'an as men are?' Then one day without my realizing it, he was calling from the Minbar and I was combing my hair, so I tied my hair back then I went out to my chamber in my house, and I started listening out, and he was saying from the Minbar:

وَالْمُؤْمِنَاتِ وَالْمُؤْمِنِينَ وَالْمُسْلِمَاتِ وَالْمُسْلِمِينَ إِنَّ (ي: قول ت: عالى الله إن الناس أيها يا)

"O people! Verily Allah says: (Indeed, the Muslim men and Muslim women, the believing men and believing women, ...)

to the end of the ayah."⁵ . This Hadith was also recorded by An-Nasi and Ibn Jarir⁶ (Al-Mubarakpuri, 2003a, p. 685).

The role of context, syntax, and grammar here is inevitable. All of these features take part in forming an easy to follow Qur'anic pattern based on a story of revelation and a response to the social and cultural inquiries of the believing men and women around the Prophet (Peace and Blessings of Allah be upon Him). Furthermore, Umm Salamah's inquiry was about equality in mentioning and addressing women the same way men are mentioned in the Qur'an. It is expected here that the Qur'anic response would be some kind of appeasement to women regarding gender. Therefore, a list of ten couples of exactly equal syntactic, semantic, and grammatical aspects offers a highly coherent series of descriptive adjectives for both Muslim men and women. Likewise, context influences on the process of word

5 Ahmad 6 :305

6 An-Nasai in Al-Kubra 6 :431, At-Tabari 20 :270

recognition here indicate various linguistic features for all of the ten pairs of letter strings presented here in the Qur'anic map (Figure 5). These strings are interestingly orthographically, semantically, and phonologically related, for example:

((المسلمين - المسلمات)، (المؤمنين - المؤمنات)، (القانتين - القانتات)، (الصادقين - الصادقات)، (الصابرين - الصابرات)).

Strikingly, evidence regarding the principles of the word recognition system can easily be obtained from the said types of relationships between the above-mentioned list of primes and targets according to (Traxler & Gernsbacher, 2011, p. 323).



Figure 5. Conceptual Map of Surat Al-Ahzab (Q. 33:35)

3.6 Qur'anic mapping and pragmatics

Pragmatics, the field of linguistics, was first initiated by Morris, Carnap, and Peirce in the 1930s. They, Morris, Carnap, and Peirce, classified pragmatics as the branch of linguistics that addresses “the relation of signs to their users”, semantics addresses “the relation of signs to what they denote”, and syntax addresses “the formal relations of signs to one another” (Horn & Ward, 2008, p. xi).

The way pragmatics is defined as the study of linguistic phenomena considering their usage processes and properties, or in more simple words as the study of language use, does not differentiate between it and the other branches of linguistics such as conversation analysis, discourse analysis, or psycholinguistics (Verschueren, 1999, p. 1). Additionally, when defining pragmatics as meaning in context or meaning in use, the definition makes it quite general and involving the 1980s type of semantics (Thomas, 2014, p. 2). It is also defined by Liddy (2001) as the component of natural language processing that is used for understanding both the purpose and context of a given utterance. It deals with studying meaning as transferred in both spoken or written forms, and the way it is interpreted by the reader or listener (Yule, 1996, p. 3). Strikingly, none of these definitions has excluded the interpretation of both levels of meaning - abstract meaning and contextual meaning - as a common task, the thing that makes pragmatics serve many issues in the Qur'anic mapping idea which depends mainly on the idea of the interpretation of the meanings of the Holy Qur'an.

The area of distinction between semantics and pragmatics is still very narrow considering that both linguistic approaches deal with meaning in general (Griffiths, 2006, p. 1). Specifically, semantics is concerned with meanings of linguistic minimal resources such as vocabulary, phrase, clause, and sentence, whereas pragmatics is concerned with the way those resources function in communication (Griffiths, 2006, p. x). Griffiths concludes that “semantics and pragmatics are essential components that work together in a full description of meaning”. Perhaps, Yule (1996, p. 4) made the distinction between semantics and pragmatics clearer through the following comparison of definitions:

“Semantics is the study of the relationships between linguistic forms and entities in the world.”

“Pragmatics is the study of the relationships between linguistic forms and the users of those forms”

Yule concludes that humans – linguistic form producers - are only allowed into the analysis by pragmatics, although those human-specific concepts and values are hard to analyze. For instance, talking about interlocutors' intended meanings, goals, purposes, actions, and assumptions that they usually make during speech – or any other language form is only allowed within the pragmatic platform and perception.

The American Speech-Language-Hearing Association (ASHA) (2017) argue that pragmatics comprises a set of major communication skills one of which is the use of language for various purposes e.g., requesting, informing, promising, etc. It also encompasses changing language per the needs or situations of an audience or listener such as providing unfamiliar listeners with background information or addressing audiences differently according to their social or age categories (Cruz, 2015). Finally, pragmatics is found to follow rules of storytelling and conversations such as introducing topics, taking turns, staying in topic, and rephrasing.

Pragmatic uses in the Qur'anic discourse may stand in need of the sort of clarification of visual coherent the mapping techniques provide, for many previous studies highlighted the need to contribute to the re-presentation of the Qur'anic text (Al-Mosallam, 2013). For instance, storytelling and the examples of social language are subject to pragmatic rules applicable to any other form of discourse.

Furthermore, storytelling is found to follow pragmatic rules such as introducing the conversation topics, taking turns in conversation, and what is more remarkable in the Holy Qur'an is that it stays in topic all through the story it tells. What is so-called conceptual chaining or Munasabah in the Holy Qur'an proves the rephrasing or repetition of the same concepts differently in other parts of the Qur'anic text.

3.7 Qur'anic mapping and computational pragmatics

Computational pragmatics, according to Fromkin and Rodman (2003, p. 431), is the interaction between reality and language systems that many of which have a contextual and world-knowledge base. It is the study of the ways through which contextual information can effectively be utilized to communicate language production and understanding processes (Bunt, 2000). Bunt and Black (2000) state that computational pragmatics is a new subfield of computational linguistics that is concerned with inference, just like pragmatics in general. They also argue that it investigates the relations between aspects of context and linguistic phenomena, and studies linguistic phenomena with an eye on their textual explanation. Furthermore, it pays more attention to performing these tasks with regard to effective computability and the representation and analysis of the resulting information of these relationships.

In view of this, Jurafsky (2004) introduces a wider definition for computational pragmatics as the branch of linguistics that studies the relationship between utterances and context. He goes further to explain this relationship between utterances and context in more details as “indexicality” that means the relationship between utterances and discourse, action, place, environmental context, and the time in which they are being uttered. Interestingly, the way indexicality is interpreted here is similar to the way the Qur'anic discourse is analyzed; all surrounding aspects such as environmental factors, time-related factors, stories of revelation, contextual factors, people, places, etc. are found to be involved. For Bunt and Black (2000), computational pragmatics is concerned with the utterance-context relationships which are the concern of applied linguistics and sociolinguistics but from an explicit viewpoint.

Taking into account the pre-mentioned definitions of (Bunt, 2000; Bunt & Black, 2000; Fromkin & Rodman, 2003; Jurafsky, 2004) of the computational pragmatics, the Qur'anic mapping technique provides all-in-all linguistic processes that deal with the Qur'anic discourse in the following way:

1. The Qur'anic maps have been built on contextual, interpretation, and exegetic basis. They take into account the topical classification of the Qur'anic text according to the well-known exegetic reference *Al-Misbah Al-Munir fi Tahthib Tafsir Ibn Kathir Al-Mubarakpuri* (2013). Most importantly, they consider the effective use of this contextual information in communicating the Qur'anic conceptions and their understanding processes.

2. The Qur'anic maps were manually designed to clearly reflect the unseen relationships between aspects of context and the Qur'anic linguistic phenomena. They indirectly study these linguistic phenomena while considering textual interpretation.

3. The relationships between the Qur'anic aspects of context and its linguistic phenomena are paid considerable attention in the processing of the Qur'anic maps. Furthermore, the perfect designing of these maps and the representation and analysis of the resulting information are of high importance in the final map product. That importance reaches the extent that the normal Qur'anic reader will find it easy to distinguish and work out various conceptual and linguistic challenges which were previously of a shackling nature. For example, memorization of the Holy Qur'an which was a chronological problem for the Qur'anic learners according to Al-Mosallam (2013).

3.8 Conceptual chaining in the Holy Qur'an

Abdul-Raof (2003) argues that chaining which is considered as a linguistic mechanism deals with text construction, textuality, and semantic relation network. And that whatever was the length of a given text, chaining cares for the practical examination of its constructing elements or units providing a comprehensive textual analysis covering all language units from morpheme through paragraph levels. Strikingly, Setyarahajoe and Shakarami (2012) state that analysis of the Qur'anic organic unity, textual relations, or *Munasabah*, is always regarded as the *Tafsir-Linguistics* intersection.

It is of the utmost importance here that an in-depth investigation of the textual units of the Holy Qur'an proves the existence of some type of conceptual chaining, *Munasabah*, or organic unity in all language morphology levels of the Qur'anic discourse. This is obviously realized when considering that textual progression and processing are also the core concern of chaining. Nevertheless, a great deal of Muslim literature believes that the Holy Qur'anic scripture does have unity. Albeit, in some cases consecutive verses may appear as irrelative to the same conceptual unity, but a strong spiritual unity can easily be outlined within that verse sequence (Setyarahajoe & Shakarami, 2012). Equally, for Abdul-Raof (2003), the conclusion of the Qur'anic message – as a textual environment, is always so predictably distinguished involving topics such as divinity, monotheism, lordship, and legal rulings of the Islam. Ultimately, Qur'anic chaining which appears as of an intertextual and conceptual nature, promotes the text accessibility to the reader being marked as highly informative and free of redundant repetition.

3.9 Qur'anic mapping and metalinguistics

N. C. Ellis (2005) states that linguistic, cognitive, and functional theories of language argue that language has its own basic units of representation as constructions. These constructions take the structure of form-function mappings that are given artistic forms and conventions to create effects in the speech community and fixed firmly as knowledge of language in the learner's mind. Moreover, these constructions have a symbolic nature which means that they name the defining characteristics or attributes of lexical, syntactic, and morphological form as well as the pragmatic, semantic, and discourse functions accompanying it (N. C. Ellis, 2005).

It is of the utmost priority here to mention that if the text to be learned, read, comprehended, memorized is presented or represented in a mapping form, a two-way process will occur. The first part of it is the learner's ability to explain language, its linguistic features as structures and phonemes. That sort of language learning and perception is called by N. C. Ellis (2005) the explicit language learning that takes place during the learner's conscious efforts to work out meaning and construct communication.

The second part of the process is that these organizational structures will match the tacit form-function mapping within the learner's mind based on N. C. Ellis (2005) argument that "Related exemplars thus work together in implicit memory, their likenesses harmonizing into an attractor state, and it is by these means that linguistic prototypes and categories emerge". They will then work together as related examples in implicit memory, their likelihoods matching into an attractor state allowing the linguistic categories and prototypes to arise. Ultimately, implicit language learning happens during fluent comprehension and production (N. C. Ellis, 2005). In other words, tacit knowledge is then operationalized through the utilization of these linguistic features in written as well as oral forms of language (Alipour, 2014).

The term metalinguistic knowledge or metalinguistic awareness translates to the learner's conscious ability to cogitate about language and its nature using an overview that language surpasses the fact of being mere symbols and language to the possibility of going beyond meaning. In addition to the learner being aware that words are quite separated from their referents, which means that the meaning is always kept in the language user's mind. The third capacity that the learner should attain is their awareness that language is a rule-based system (Ter Kuile, Veldhuis, Van Veen, & Wicherts, 2011) with a flexible structure that can easily be manipulated which means that users are able to write or say things in many different ways (Roehr, 2008). Ultimately, Ter Kuile et al. (2011) point out that the last stage of a learner's language development is his/her acquisition of metalinguistic awareness.

Based on all previous argument regarding metalinguistics, metalinguistic awareness, and metalinguistic knowledge, presenting the Qur'anic text in a mapping format falls within the scope of providing the learners with the opportunity to utilize all their available linguistic capacities and previous experiences in exploring the linguistic realm of the Holy Qur'an. Strikingly, the Qur'anic maps approved their ability to maintain the following concepts in full:

1. That language is a rule-based system that has flexible structures capable of being manipulated in numerous various formats. For instance, the horizontal and vertical presentation of the Qur'anic text in the Qur'anic maps is an unprecedented structural format that allows the Qur'anic reader to explore it in a different objective view. Although the Qur'anic text in the Qur'anic maps has not been reworded or rephrased, but a representation mechanism has been applied to that text according to the structural characteristics of the maps (Figure 6). In fact, the rewriting process has excluded the uses of pause techniques although in many occasions those pauses might be found applicable to the current output texture of the Qur'anic text unintentionally.

2. That the Qur'anic words and their referents preserve the fact that they are separate and that meaning is kept in the Qur'anic reader's mind, based on his/her exegetic and interpretive backgrounds and experiences even if they [Qur'anic words] obviously mean something different. Remarkably, the Qur'anic mapping concept is based on an agreed-upon exegetic and interpretational methodology that the normal Qur'anic reader finds themselves in need of deep meditation and thinking in order to get in line with them and their proper explanations. Interestingly, using language above the surface structures, in an intangible way, and cogitating about it, whilst making use of it in our observations and understanding, is what Roehr (2008) calls metalinguistic ability.

3. And that language can go beyond being mere symbols of language and beyond the meaning of these aspects. In fact, in the Qur'anic maps, language structures can work as mnemonic guidelines for Qur'anic memorizers, discourse analysis objects, and boundaries of topical classification (Figure 6). Apparently, the repetition of the Arabic word (لَمَّا) which means (when), for 12 times along with its vertical lining organization in the Qur'anic map offer an easy way to memorize them and represent a logical boundary for the conditional topical classification.

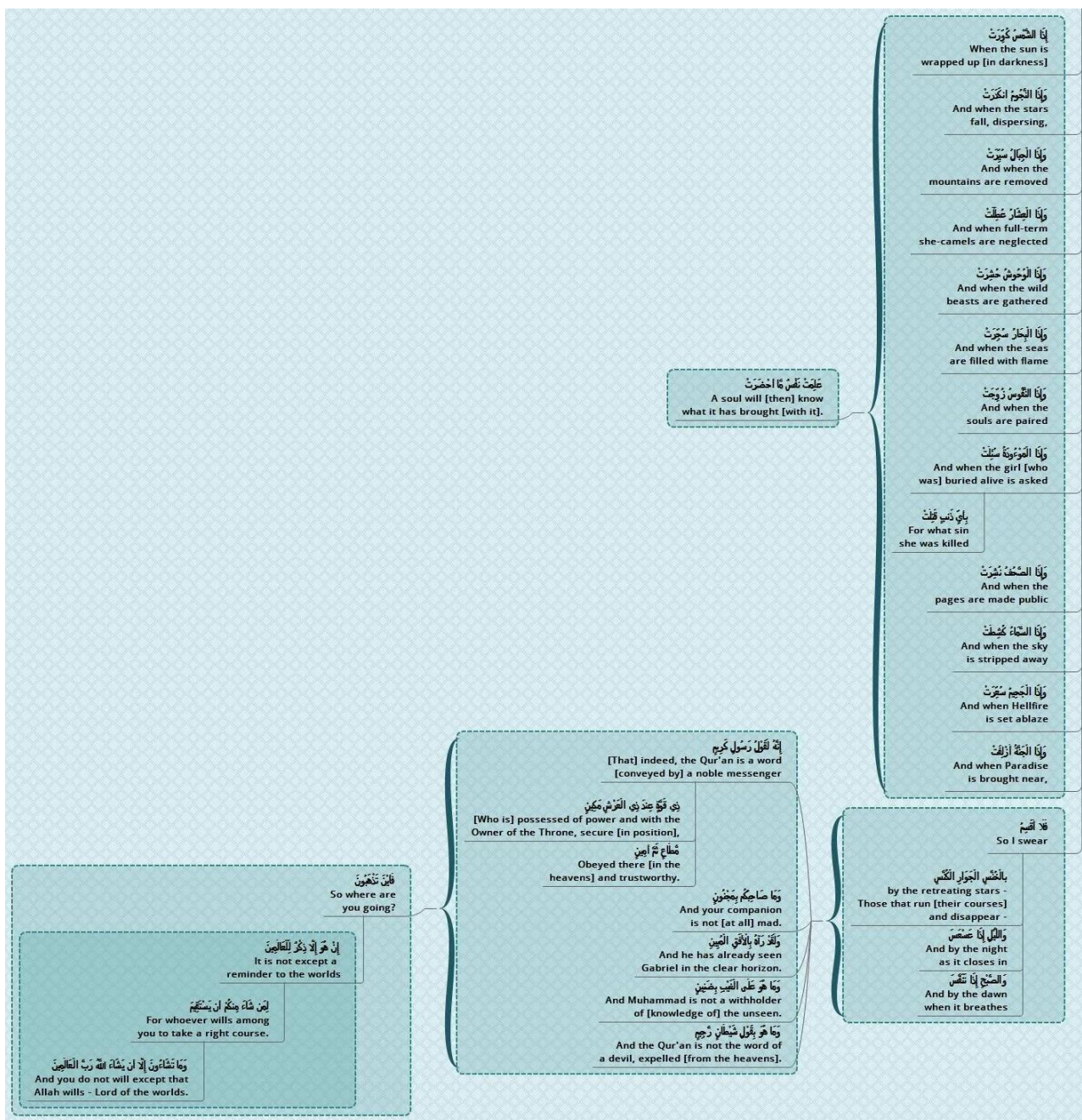


Figure 6. Conceptual Map of Surat At-Takwir (Q. 81)

Learner's linguistic knowledge is defined as his/her implicit or tacit knowledge about language (Alipour, 2014), while metalinguistic knowledge is defined in many ways based on numerous studies that have reached an agreement, to some extent, upon an acceptable definition for it. For instance, Bialystok (1988) states that a learner's metalinguistic knowledge is his/her explicit knowledge about language. In the light of that, knowledge, according to N. C. Ellis (2008) is divided into two types: implicit and explicit. Ultimately, the two types of knowledge (explicit and implicit) according to the noninterface, strong interface, and weak interface positions, share an interchangeable relationship, that is explicit knowledge can be transformed into implicit knowledge and vice versa by dint of practice, but with varying degrees based on interface position (R. Ellis, 2009, p. 21).

Designing of the Qur'anic concept maps involves numerous linguistic operations controlled by the map designer. In fact, the process of topical classification requires an outstanding bilingual [L1 and L2] metalinguistic knowledge and awareness. That is in addition to a considerable conceptual understanding of the summarizing pieces of language which the Qur'anic specific discourse preserves as an ensign that characterizes it from other sorts of discourse. Furthermore, the Qur'anic limits of translatability that include word order, literal translation problems, style, problems of semantic and

syntactic ambiguity, different exegetical analyses, and the semantic functions of the conjunctives, etc. (Abdul-Raof, 2013, p. 1). Strikingly, the map designing work is pure production of a cognitive process that – according to Bialystok (1988), “involves the operation of control”. In her sense, Bialystok describes control as a process of presenting special attention and ability when monitoring and regulating the processing of information or the solving of the metalinguistic problems.

The best thing for the Qur'anic readers is that metalinguistic research agrees – to some extent – upon an asymmetric relationship between linguistic comprehension and linguistic production because comprehension seems to be easier than production (Alipour, 2014). Interestingly, most of the metalinguistic processes required for reading, reciting, interpreting, and memorizing the Holy Qur'an from the Qur'anic maps are of a comprehensive nature. On the contrary, the rest of the metalinguistic processes of the Qur'anic text such as the designing of the concept and mind maps and the correspondence of the Arabic text with its equivalent meaning from the English translation are of a productive nature. Remarkably, the task of the map designer here is some kind of metalinguistic awareness in Bialystok's sense as the faculty to “attend to and reflect upon the properties of language” (Bialystok, 1988). Equally, metalinguistic awareness is the knowingness of “the underlying linguistic nature of language use”. In other words, it is the knowingness of the linguistic features that enables language learners to check linguistic structure and form of the meaning of utterances and the ability to produce utterances (Malakoff & Hakuta, 1991).

Metalinguistic knowledge is something that can be measured and assessed. That is to say, there are some ways to assess metalinguistic awareness or knowledge based on the various language awareness aspects. For example, it is frequently assessed through syntactical awareness tasks which require the learner to point out the linguistic features and the linguistic nature of the given piece of language (Bialystok, 1988). Furthermore, Chomsky (1975) argues that a learner's grammatical awareness interacts with his/her person matures that consist of various sorts of cognitive structures to provide language use. Chomsky believes that language use and structure influence each other and that there are significant relationships between them.

Based on this conception, the Qur'anic map readers will always find themselves in front of a Qur'anic text that is bejeweled with linguistic challenges and presented in a visual format. Their task then is to consider each and every linguistic phenomenon from a syntactical point of view, reflect on it, and name the nature of its message. Moreover, their grammatical faculty continues to be tested throughout the given Qur'anic text based on its highly grammatical nature that often calls for the learner's whole grammatical and linguistic capacity. So, careful attention should always be paid to the Qur'anic mapping and its structural texture that consists of new vertical and horizontal networks of inevitable semiotic connotations.

Metalinguistics, being defined as the branch of linguistics that studies language and its relationship to other cultural behaviors (Rocher, 1972), is found to share the same concepts of the Qur'anic exegetic movement, putting in mind that exegesis itself is considered as an interpretational reading of the social and cultural behaviors at the time, place, and context done by linguists, exegetes, translators, and stylists. It is then a reflection of daily-life incidents according to which the portions of revelation were sent down during a period of 23 years. Ultimately, it is worth reporting here that the utterance or revelation-context relationship seems to involve a range of the linguistic subfields such as applied linguistics, and sociolinguistics, semantics, and pragmatics.

Rocher (1972) calls for an agreement on a given subject's terminology, based on the fact that anthropologists and sociologists have the reputation of using terms in an interchangeable way or of not agreeing on terms. For Rocher, the need to what Jakobson (1980) calls “metalinguistic function of language” appears as crucial when a sender and/or a receiver of a piece of language are faced by their need to verify that the code they are using is the same even if that piece of language is complicated enough to involve polysemy and ambiguity (Rocher, 1972, p. 150). That special function is the key of the Qur'anic interpretation process when the interpreter's message is correctly conveyed to a receiver. The work of the Qur'anic mapping is to re-present to Qur'anic message in a clearly comprehensible visual platform. That sort of clarity brings about the main concept of metalinguistics.

Metalinguistic awareness brings about the selective qualities of the Qur'anic map designer in the sense that it translates to “the ability to attend to, and reflect upon, the properties of a language” (Davidson & Raschke, 2009). Similarly, Yelland, Pollard, and Mercuri (1993) argue that metalinguistic

awareness is referred to as the qualities that reflect the learner's aptitude to focus on progressively more complex structural aspects of language. For instance, the complex semantic, syntactic, or pragmatic structures that seem confusing for other learners.

It was early pointed out by Abdullah Yousuf Ali that, there could be no complete or faultless rendition of the meanings of the Holy Qur'an, but only an interpretation of the understood meaning can be obtainable at best (Ali, 2004). Likewise, none of the translators of the Holy Qur'an, Muslims or non-Muslims, has claimed that their translation is considered standard or equivalent of the Holy Qur'an thanks to "the unique linguistic nature of the Qur'anic discourse" (Abdul-Raof, 2013, p. 2) and that "the unique genre of the Qur'an challenges mankind" (Al-Azab & Al-Misned, 2012). Patently, Muslim scholars proclaim that translations of the Holy Qur'an are biased toward translators' personal views, the reason they should not be absolutely reliable (Khalaf & Yusoff, 1931) and mere efforts to approximate the Qur'anic meaning (Al-Azab & Al-Misned, 2012).

4. Discussion

4.1 Discourse analysis

The current study highlights how the Qur'anic maps have the capacity to reflect in its designing and careful Qur'anic text manipulation numerous – if not all – linguistic theories. In that sense, Qur'anic maps in this study highlight discourse analysis which only considers closer scrutiny of ideas, relates to the larger view rather than considering the general understanding (Widdowson, 2007), and that adopts the definition of discourse theorized by Horton et al. (1993) as language plus context. Additionally, what Widdowson (2007) and Horton et al. (1993) believe is in an agreement with Abdul-Raof (2003) in that the Qur'anic texture cohesion and Qur'anic conceptual and intertextual chaining make Qur'an as a featured discourse texture.

4.2 Semantics and semiotics

Extraction of meaning from the Qur'anic text is the main reason behind the formation of the current Qur'anic maps. Therefore, semantics, as being the study of meaning in language according to Griffiths (2006) and Bagha (2011) and as being the extraction of meaning out of words according to Sturrock (1986), is singled out from the many linguistic theories as particularly an important element in the work of the Qur'anic maps. Meaning is the work of Qur'anic exegesis and interpretation which has been thoroughly considered in the formation of the Qur'anic maps in this study with decent integration between the original Arabic Qur'anic text and the English translation of its meanings. Likely, the power of semiotics, which translates for the extraction of meaning out of signs (Sturrock, 1986), unites with the Qur'anic text to work as units of meaning in the sense of Novak and Cañas (2008) and guides the Qur'anic reader through the network of lines, nodes structures, colorful designation, summarization tools, boundaries, ... etc.

4.3 Computational linguistics

The work of computers in what is so-called natural language processing is typically reflected in the production of the Qur'anic maps presented in the current study. Furthermore, attempting to use computers in the treatment of natural language as defined by Bird, Klein, and Loper (2009) brings the formation of the Qur'anic maps, in their current style, in the field as a new domain of research. Similarly, Chowdhury (2003) fills the gap between the purpose behind the use of computers to build the Qur'anic maps and the definition of NLP and computational linguistics as an area of both application and research that focuses on the use of computers in carrying out helpful things to manipulate natural texts or speech.

4.4 Psycholinguistics

The Qur'anic maps prove their capability of encompassing numerous linguistic features that bring it closer to the theory of psycholinguistics which combines psychology and linguistics (Smith, 2012). In that sense, psycholinguistics studies the mental processes and types of knowledge required for the understanding and producing of language (De Groot, 2011; Steinberg & Sciarini, 2013). Therefore, readers of the Qur'an now find themselves in debt of gratitude to the Qur'anic maps for serving their multiple intelligences by simplifying the Qur'anic texture in absorbable bilingual pieces of language surrounded by numerous helpful technical tools and linguistic features.

4.5 Pragmatics

Pragmatics, when defined as “the study of relationships between linguistic forms and the users of those forms” (Yule, 1996) is found to be well functioning in the final output of a given Qur'anic map where the relationships between the linguistic forms – the Qur'anic text – and the producer of the linguistic forms – Allah – is clearly demonstrated and conveyed to the Qur'anic readers. The Qur'anic text within the Qur'anic maps is supported by the English translation of its meaning in a flexible bilingual manner where its textual elements are promoted with a colorful topical classification system to facilitate concepts and understanding to the readers' mind. Most importantly, the fact that the Holy Qur'an is the message of God to human beings carries the definition of pragmatics in a clear view as relationships between linguistic forms [the Qur'anic message] and the users of those forms [human beings] (Yule, 1996).

4.6 Computational pragmatics

The field of computational pragmatics according to Bunt (2000) appears as a typical match to the description of the Qur'anic maps and their final output as a means of effectively utilizing the contextual information of the Holy Qur'an to communicate language production and understanding processes – as Qur'anic maps. Moreover, it is a main function of the Qur'anic maps to investigate the relationships between aspects of a given Qur'anic context and its linguistic phenomena on the one hand, and the linguistic phenomena and their textual explanation on the other. For Bunt and Black (2000), these tasks are the concern of computational pragmatics which performs them with regard to effective computability and the representation and analysis of the resulting information of these relationships.

4.7 Metalinguistics

In addition to their correspondency with discourse analysis, semantics, semiotics, psycholinguistics, pragmatics, computational pragmatics, and computational linguistics, the Qur'anic maps are found to have metalinguistic characteristics. Likewise, linguistic, cognitive, and functional language theories claim that language has its own basic units of representation (constructions) structured as form-function mappings with artistic forms that affect speech and fix firmly as language in the learner's mind (Ellis, 2005). For Ellis (2005) those constructions characterize lexical, syntactic, and morphological forms on the one hand, and the accompanying pragmatic, semantic, and discourse functions on the other. Building on Ellis' statement and what Roehr (2008) believes that language can be produced in various ways, the Qur'anic maps prove their capacity of manipulating the Qur'anic text (language) in a developed mapping format. In this mapping format it enjoys its own linguistic characteristics besides clarity (presented in a bilingual detailed manner), long-term memory (promoting mnemonics), colorful categorization of concepts (topical classification), etc.

5. Conclusion

The Qur'anic maps introduced here in this study reflect a large set of linguistic features which are apparent to the Qur'anic learners at their first glance. Initially, learners will be faced with logical ends of meaningful textual segments capable of turning their attention to logical turns in an unprecedented way. These turns are built on conceptual bases logical enough to continue taking readers in a special experience of visual clarification of stand-alone interpretive cutouts that work in a collaborative manner with other similar units in a larger conceptual view. Relatively, for Ausubel (2012), it is not necessary for learners to acquire and retain knowledge in formal contexts in academic settings where learners and educators interact in a stereotypical way habitually for this purpose. Instead, he states that when the learning process is meaningful, the ideational outcome of it will be a semantic memory that tends to be long-term, with the emergence of new meanings.

Consequently, the study of text relations enjoys two key approaches in the field of linguistic studies; Relevance Theory and Coherence Theory. These two approaches are pragmatic in nature and consider the non-linguistic factors responsible for governing our understanding of the meaning rather than explaining text based on its mere linguistic form (El-Awa, 2006). El-Awa went on explaining that the approach to the study of coherence relations will care mainly for the formal relations that connect the parts of a text in addition to the important elements to its textuality. The coherence approach searches for cohesive ties and the way they are employed in a text that approximately determine its meaning. In this direction, the current concept maps work on reflecting both text units and the cohesive ties and go

on to make clearer the relevance relations. In fact, the Qur'anic maps bring theory into practice regarding the considerations of cohesive ties and relevance ties and re-present them in a multi-dimensional manner saturated with a set of clarification tools (colors, boundaries, lines, ... etc.). Most importantly, the maps strictly follow an interpretive topical classification that guarantees the understanding of the text within the agreed-upon topical concepts.

Finally, through their use in manipulating the Qur'anic text, the Qur'anic maps are found to involve numerous linguistic theories such as semantics, semiotics, discourse analysis, natural language processing or computational linguistics, pragmatics and computational pragmatics, psychological linguistics, and metalinguistics. Remarkably, the Qur'anic maps appear as having more room for other linguistic theories which have not been examined through this study. So, the door is open for other studies to survey other linguistic phenomena that could be read between the lines of the Qur'anic maps.

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