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Qur'anic Text: Toward a Retrieval System

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The International Institute of Islamic Thought (IIIT)

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- To provide a comprehensive Islamic outlook through elucidating the principles of Islam and relating them to relevant issues of contemporary thought.
- To regain the intellectual, cultural, and civilizational identity of the Ummah through the Islamization of the humanities and social sciences.
- To rectify the methodology of contemporary Islamic thought in order to enable it to resume its contribution to the progress of human civilization and give it meaning and direction in line with the values and objectives of Islam.

The Institute seeks to achieve its objectives by:

Holding specialized academic conferences and seminars.

Supporting and publishing selected works of scholars and researchers in universities and academic research centers in the Muslim world and the West.

Directing higher university studies toward furthering work on issues of Islamic thought and the Islamization of Knowledge.

The Institute has a number of overseas offices and academic advisors for the purpose of coordinating and promoting its various activities. The Institute has also entered into joint academic agreements with several universities and research centers.

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Appearance	Pronunciation	
Consonants		
ا	'	Pronounced as the English letter "a" in alight
ب	b	Pronounced as the English letter "b" in bite
ت	t	Pronounced as the English letter "t" in tight
ث	th	Pronounced as the English letter "th" in theft
ج	j	Pronounced as the English letter "j" in just
ح	h	No English equivalent
خ	kh	No English equivalent
د	d	Pronounced as the English letter "d" in doubt
ذ	dh	Pronounced as the English letters "dh" in that
ر	r	Pronounced as the English letter "r" in right
ز	z	Pronounced as the English letter "z" in zest
س	s	Pronounced as the English letter "s" in sight
ش	sh	Pronounced as the English letters "sh" in shout
ص	ṣ	No English equivalent
ض	ḍ	No English equivalent
ط	t	No English equivalent
ظ	ẓ	No English equivalent
ع	'	No English equivalent
غ	gh	No English equivalent
ف	f	Pronounced as the English letter "f" in fight
ق	q	No English equivalent
ك	k	Pronounced as the English letter "k" in kick
ل	l	Pronounced as the English letter "l" in light
م	m	Pronounced as the English letter "m" in might
ن	n	Pronounced as the English letter "n" in night
هـ	h	Pronounced as the English letter "h" in height
و	w	Pronounced as the English letter "w" in white
ي	y	Pronounced as the English letter "y" in yet
Short and Long Vowels		
ا	a	Pronounced as the English letter "u" in but
ي	i	Pronounced as the English letter "i" in bit
و	u	Pronounced as the English letters "u" in put
أ	ā	Pronounced as the English letter "a" in bat
ي	ī	Pronounced as the English letters "ea" in beat
و	ū	Pronounced as the English letters "oo" in boot

Chart 1: The English transliteration of the Arabic writing system.

No.	Chapters (Sūras)	No.	Chapters (Sūras)
1	<i>Sūrat al Fātihah</i> The Opening	58	<i>Sūrat al Mujādalah</i> The Disputation
2	<i>Sūrat al Baqarah</i> The Cow	59	<i>Sūrat al Hashr</i> The Mustering
3	<i>Sūrat Āl 'Imrān</i> The Family of 'Imrān	60	<i>Sūrat al Muntahinah</i> The Tested One
4	<i>Sūrat al Nisā</i> The Women	61	<i>Sūrat al Šaff</i> The Ranks
5	<i>Sūrat al Mā'idah</i> The Table	62	<i>Sūrat al Jumū'ah</i> Friday
6	<i>Sūrat al An'ām</i> The Cattle	63	<i>Sūrat al Munāfiqūn</i> The Hypocrites
7	<i>Sūrat al A'rāf</i> The Ramparts	64	<i>Sūrat al Taghābun</i> Mutual Disillusion
8	<i>Sūrat al Anfāl</i> The Spoils	65	<i>Sūrat al Talāq</i> The Divorce
9	<i>Sūrat al Tawbah</i> Repentance	66	<i>Sūrat al Tahrim</i> The Prohibition
10	<i>Sūrat Yūnus</i> Jonah	67	<i>Sūrat al Muluk</i> The Sovereignty
11	<i>Sūrat Hūd</i> Hūd	68	<i>Sūrat al Qalam</i> The Pen
12	<i>Sūrat Yūsuf</i> Joseph	69	<i>Sūrat al Hāqqah</i> The Unquestionable
13	<i>Sūrat al Ra'd</i> The Thunder	70	<i>Sūrat al Mā'arij</i> The Ascent
14	<i>Sūrat Ibrāhīm</i> Abraham	71	<i>Sūrat Nūh</i> Noah
15	<i>Sūrat al Hijr</i> Hijr	72	<i>Sūrat al Jinn</i> The Jinn
16	<i>Sūrat al Naḥl</i> The Bee	73	<i>Sūrat al Muzammil</i> The Mantled One
17	<i>Sūrat al Isrā'</i> The Night Journey	74	<i>Sūrat al Muddaththir</i> The Enshrouded One
18	<i>Sūrat al Kahf</i> The Cave	75	<i>Sūrat al Qi'yamah</i> The Resurrection
19	<i>Sūrat Maryam</i> Mary	76	<i>Sūrat al Insān</i> Mankind
20	<i>Sūrat Tā Hā</i> Tā Hā	77	<i>Sūrat al Mursalāt</i> The Sent Angels
21	<i>Sūrat al Anbiyā'</i> The Prophets	78	<i>Sūrat al Naba'</i> The Tidings
22	<i>Sūrat al Hāj</i> The Pilgrimage	79	<i>Sūrat al Nāzi'āt</i> The Pluckers
23	<i>Sūrat al Mu'minūn</i> The Believers	80	<i>Sūrat 'Abasa</i> He Scowled
24	<i>Sūrat al Nūr</i> The Light	81	<i>Sūrat al Takwīr</i> The Coiling Up
25	<i>Sūrat al Furqān</i> The Distinguisher	82	<i>Sūrat al Infiṭār</i> The Cleavage
26	<i>Sūrat al Shu'arā'</i> The Poets	83	<i>Sūrat al Mujaḥḥifīn</i> The Skimpers
27	<i>Sūrat al Naml</i> The Ant	84	<i>Sūrat al Inshiqāq</i> The Splitting Asunder
28	<i>Sūrat al Qasas</i> The Story	85	<i>Sūrat al Burūj</i> The Star Clusters
29	<i>Sūrat al 'Ankabūt</i> The Spider	86	<i>Sūrat al Tāriq</i> The Night Star
30	<i>Sūrat al Rūm</i> The Romans	87	<i>Sūrat al A'la</i> The Sublime
31	<i>Sūrat Luqmān</i> Luqmān	88	<i>Sūrat al Ghāshiyah</i> The Enveloping
32	<i>Sūrat al Sajdah</i> The Prostration	89	<i>Sūrat al Fajr</i> The Daybreak
33	<i>Sūrat al Aḥzāb</i> The Confederate Clans	90	<i>Sūrat al Balad</i> The City
34	<i>Sūrat Sabā'</i> Sheba	91	<i>Sūrat al Shams</i> The Sun
35	<i>Sūrat Fāḥir</i> The Originator	92	<i>Sūrat al Layl</i> The Night
36	<i>Sūrat Yāsīn</i> Yā Sīn	93	<i>Sūrat al Duḥā</i> The Forenoon
37	<i>Sūrat al Šafāt</i> The Rangers	94	<i>Sūrat al Sharḥ</i> The Dilatation
38	<i>Sūrat Šād</i> Šād	95	<i>Sūrat al Tin</i> The Fig
39	<i>Sūrat al Zumar</i> The Hordes	96	<i>Sūrat al 'Alaq</i> The Blood Clot
40	<i>Sūrat Ghāfir</i> The Forgiver	97	<i>Sūrat al Qadr</i> The Decree
41	<i>Sūrat Fuṣṣilat</i> Expounded	98	<i>Sūrat al Bāyyinah</i> The Elucidation
42	<i>Sūrat al Shūrā</i> The Counsel	99	<i>Sūrat al Zalzalah</i> The Earthquake
43	<i>Sūrat al Zukhruf</i> The Ornamentation	100	<i>Sūrat al 'Adiyāt</i> The War Steeds
44	<i>Sūrat al Dukhān</i> The Smoke	101	<i>Sūrat al Qārī'ah</i> The Rapping
45	<i>Sūrat al Jāthiyah</i> The Crouching Down	102	<i>Sūrat al Takwīth</i> The Multiplication
46	<i>Sūrat al Aḥqāf</i> The Sand Dunes	103	<i>Sūrat al 'Ashr</i> The Time
47	<i>Sūrat Muḥammad</i> Muhammad	104	<i>Sūrat al Humazah</i> The Traducer
48	<i>Sūrat al Fath</i> The Victory	105	<i>Sūrat al Fil</i> The Elephant
49	<i>Sūrat al Hujurat</i> The Chambers	106	<i>Sūrat Quraysh</i> Quraysh
50	<i>Sūrat Qāf</i> Qāf	107	<i>Sūrat al Mā'ūn</i> Benevolence
51	<i>Sūrat al Dhāriyat</i> The Scattering	108	<i>Sūrat al Kawthar</i> The Copious Provision
52	<i>Sūrat al Tūr</i> Mount Tūr	109	<i>Sūrat al Kāfirūn</i> The Unbelievers
53	<i>Sūrat al Najm</i> The Star	110	<i>Sūrat al Naṣr</i> The Succor
54	<i>Sūrat al Qamar</i> The Moon	111	<i>Sūrat al Masad</i> The Plaited Rope
55	<i>Sūrat al Raḥmān</i> The Most Benignant	112	<i>Sūrat al Ikhlās</i> The Pure Religion
56	<i>Sūrat al Wāqī'ah</i> The Occurrence	113	<i>Sūrat al Falaq</i> The Creation
57	<i>Sūrat al Ḥadīd</i> Iron	114	<i>Sūrat al Nās</i> Mankind

Chart 2: The names and numbers of the chapters of the Qur'an

Preface

The International Institute of Islamic Thought is pleased to present this volume on the subject of dealing at an intellectual level with the text of the Qur'an. This effort takes place within the framework of the Institute's efforts to develop new methodologies for dealing with and understanding the Qur'an. Indeed, the Institute has been quite active in encouraging the efforts of scholars in this important field and considers the subject a priority in the overall process of reforming Muslim thought.

The Institute's efforts in the field began with the commissioning and publication of Shaykh Muḥammad al Ghazālī's *Kayfa Nata'āmal ma'a al Qur'ān* (How We Deal with the Qur'an), which was followed by the Institute's publication of Fāṭimah Ismā'īl's doctoral theses *al Qur'ān wa al Nazar al 'Aqlī* (The Qur'an and Rational Inquiry). These were followed by the publication of Dr. Muḥammad Jābir Fayyād's *al Amthāl fī al Qur'ān al Karīm* (Metaphor in the Holy Quran), and Muḥyi al Dīn 'Aḏiyah's *al Kashshāf al Iqtīṣādī li Āyāt al Qur'ān al Karīm* (An Index to Verses Concerning Economics in the Qur'an). The most recent publication in the series was Dr. Tijānī 'Abd al Qādir's *Uṣūl al Fikr al Siyāsī fī al Qur'ān al Makkī* (The Fundamentals of Political Thought in the Makkan Qur'an). All of these works have appeared in the Arabic language. The Institute has also published, in English and French, a work by Dr. Ṭāhā al 'Alwānī and Dr. 'Imād Khālid entitled *The Qur'an and the Sunnah*. In English, too, the Institute has published the proceedings of a conference entitled *The Qur'anic Concept of the Human Psyche*, edited by Zafar Ishāq Anṣārī.

Nor have the efforts of the Institute stopped short at publications. In fact, the Institute has supported the efforts of several research teams and seminars on the subject. Most recently, the Institute co-sponsored a seminar on the subject with the Sudanese University of the Holy Qur'an, which was held in Sudan in January 1996. Despite the increasing attention given worldwide to Islamic studies in general, and Qur'anic studies in particular, technological advances in the organization of information about the Qur'an brought on by the widespread use of computers have highlighted the need for the development of systems for the retrieval of Qur'anic texts,

systems which go beyond the syntactical and lexical to the contextual and conceptual, thereby enabling researchers to deal with problems of terminology, non-standard recitation, and interpretation. Indeed, were it not for advances in technology and the present intellectual revival that has awakened Muslims to the possibilities of the Qur'an as a source of knowledge, methodology, thought, and culture, many of these questions would never have arisen in the first place.

The need for computer-based information systems about the Qur'an was born of the methodological requirements of contemporary Islamic thought in dealing with the texts of the Qur'an itself. The methodology required must be capable of integrating subjective interpretations of the Qur'an and its verses and chapters with critical and analytical interpretations of its themes, issues, concepts, and categorizations. Such a tool will enable Muslim scholars to move beyond the stage of partial acquisition from contexts by dealing exclusively with lexical meanings and ignoring the essential relationships that exist between different elements of the same subject.

Dr. Hānī M. 'Aṭīyah's choice of this subject for his doctoral dissertation came from his conviction that the Muslim mind desperately needs to involve the informational sciences in its studies of the classical Islamic disciplines and, at the head of these, the science of the Qur'an itself.

We ask Allah Almighty to make this effort a beneficial one and a foundation upon which a truly Islamic information science may be erected.

The International Institute of Islamic Thought

CHAPTER ONE

Introduction

1.1. Information Science: An Overview

All societies are information societies to the extent that one cannot imagine a community that has no pattern of information flow. Much of the information flow is personal communication and is therefore not confined intrinsically to speech or writing. For example, it could consist of music, pictures, sketches, colors, traffic signs and signals, highway and smoke signals, Morse code, sign language, club badges, uniforms, bodily posture, nods of the head, facial expressions, eye movements, and others. Moreover, in relation to cultural communication, the information flow deals with institutions and governments.

For any system or organization to survive, an effective flow of information is essential. This has become even more important in contemporary societies. The governments or quasi-official institutions of some societies have sought to regulate and control the information flow in pursuit of their own objectives and aims. Some provide information to specific groups, while others seek to provide it to a wider spectrum of society.

In the handling of common daily services and operations, organizations and governments use information for different purposes, such as planning, management, and decision making. The advent of computer-based data processing has made an immense flow of information available to institutions, the utilization of which can help them realize their goals. Information, therefore, is an indispensable resource for all societies and organizations. The field that has emerged to study this flow of information and its related services is known as “information science.” However, there are conflicting views about this term’s exact definition and who is entitled to be called an “information scientist.” The discus-

sion of such views is beyond the scope of this study.¹ In the context of this study, the term "information science" is defined in accordance with the definition that has been adopted by the American Society for Information Science (n.d.):

Information Science as a discipline seeks to create and structure a body of scientific, technological, and systems knowledge related to the information transfer chain ... As a discipline, Information Science investigates the properties and behavior of information, the focus that governs the transfer process, and the technology required to process information for optimum accessibility and use. Its interests include information representations in both natural and artificial systems: the use of codes for efficient message transmission, storage and recall: and the study of information processing devices and techniques such as computers and their programming systems.

It is an interdisciplinary field derived from and related to mathematics, logic, linguistics, psychology, computer technology, operations research, librarianship, the graphic arts, communications, management, and similar fields.

Information Science has both a pure science component, which inquires into the subject without regard to application, and an applied science, which develops services and products.

1.2. Information Science: An Islamic Context

Dealing with the challenges of the information age requires an in-depth understanding of and an ability to work in integrated and cooperative modes. New fields have emerged, and still others are emerg-

¹ For detailed reports and analyses, see H. Wellisch, "From Information Science to Informatics: A Terminological Investigation," *Journal of Librarianship* 4, no. 3 (1972): 157-87.

ing. While the language barrier has resulted in a delay factor, this has not stopped the production of publications from continuing to increase at an exponential rate. The end result of this process has been the realization that no single body or organization can cater to all the various information needs of a nation: what is needed is a system of co-operation between organized national centers and international information services so that each element may complement the other. Such a system is an essential part of any information policy.

This all seems to be rather elementary and self-evident. However, unfortunately, it must be said that such a system does not yet exist, for many services dealing with Islamic materials have developed in isolation from each other. In addition, the research output is often repetitive, of poor quality, and lacking in imagination. While Muslim librarians have incorporated such new disciplines as Islamic economics and Islamic anthropology, most of the Islamic legacy, which has been accumulating for fourteen centuries, has yet to be published. While there has been a recent exponential increase in the number of publications involving writings on Islam, books and articles on Islam and the Muslim world continue to be written in various languages and range, in format, from manuscripts to microfiche. Unfortunately, the fact remains that Muslim libraries and information services suffer from a lack of sufficient material resources that would allow researchers to take stock of this information explosion and of an intellectual strategy to overcome the related bibliographic deficiency. In addition, the resources of the Islamic legacy and literature that originated in Muslim lands are hopelessly dispersed, and Muslim librarians continue to waste their time and energy trying to adapt to the situation and modifying the information flow in such a manner that it will fit into the western system.

It is worth noting that library science, as developed in the West, is bound to reflect the image of western civilization and its ethos. The classification schemes, rules of cataloguing, lists of subject headings, and other library science techniques used to exploit the available material, all reflect the western way of life. A primary example of this is the restriction of "Islam" to the heading "Religion," as is the case with the

Dewey Decimal Classification scheme. Such a listing, based on a western conceptualization, violates the basic concept of Islamic principles. By listing such disciplines as “Islamic Economics” and “Islamic Anthropology” under the main headings of “Economics” and “Anthropology” in a Library of Congress Subject Headings List, a whole array of new disciplines has emerged that is not looked at in these lists. Furthermore, if the names of Muslim women are entered by their surnames, following Anglo-American cataloguing rules, Muslim researchers will be unable to find them.

Certain Muslim information scientists, as well as many Muslim thinkers, believe that as Islam has its own worldview, Islamic literature naturally has its own unique characteristics. However when innovative classification systems, bibliographical indexes, lists of subject headings, and other adaptations of these tools are adopted in ways that do not reflect properly the universality of Islam, any analysis and synthesis of Islamic material becomes impracticable. In the case of Muslim information scientists who are seeking to establish their own system, the paramount intellectual problem and the most devastating argument against the indiscriminate amassing of information stems from the attendant theory of knowledge. Knowledge, with a capital K, covers far more than a set of statements, for it is, in fact, a theory leading to an authentic classification of Knowledge. In other words, the classification of Knowledge is so fundamental to Islamic epistemology that it constitutes the first point in the dialectical relationship between facts and value.

Muslim scholars of the classical period were very well aware of the fact that information divorced from its value context is meaningless. This was so obvious to early Muslim thinkers that they propounded their own classification schemes before setting up their projects. The schemes of al Kindī (d. 252 AH / 866 CE), al Fārābī (d. 339 AH / 851 CE), al Khawārizmī (d. 380 AH / 990 CE), Ibn Sinā (d. 428 AH / 1037 CE), al Ghazālī (d. 505 AH / 1097 CE), and Ṭāsh Kubrī Zādah (d. 968 AH / 1561 CE) must be regarded as the most notable. For example, al Fārābī and Ibn Sinā divided the sciences according to whether they were theoretical (*naẓarīyah* نظرية) or practical (*ʿamalīyah* عملية). Others, such as

al Khawārizmī, divided them into Arabic sciences (*'ulūm 'Arabīyah* علوم عربية) and foreign sciences (*'ulūm a'jamīyah* علوم أعجمية), while al Ghazālī adopted the bifurcation of all knowledge into revelational sciences (*'ulūm naqliyah* علوم نقلية) and rational sciences (*'ulūm 'aqliyah* علوم عقلية).

However, Muslims had undertaken specific subject-based classification much earlier than this general classification of Knowledge. For instance, the classification of Hadith in the first, second, and third *hijrī* centuries² by Mālik (d. 179 AH / 796 CE), al Ṭayālīsī (d. 204 AH / 820 CE), Ibn Ḥanbal (d. 241 AH / 855 CE), al Bukhārī (d. 256 AH / 870 CE), Muslim (d. 261 AH / 875 CE), Abū Dāwūd (d. 275 AH / 889 CE), al Tirmidhī (d. 297 AH / 910 CE), Ibn Mājah (d. 275 AH / 889 CE), and al Nasā'ī (d. 303 AH / 916 CE). Specifically, Mālik, al Bukhārī, Muslim, Abū Dāwūd, Ibn Mājah, al Tirmidhī, and al Nasā'ī arranged their collections according to juridical subject classification, while al Ṭayālīsī and Ibn Ḥanbal classified their collections according to narrator.

With the invention of printing, the philosophic classification of Knowledge became confused with the classification of books. In the words of Hulme (1911,446-47), this is because:

Books ... are concrete aggregates of facts selected from the common stock of knowledge, and are produced under the laws of supply and demand to meet the wants of the various bodies of community. The result is a welter of cross classifications and of overlapping areas of definition for the reception of which the framework of philosophic classification is quite insufficient.³

Hulme's alternative idea of classification according to a scheme of classes and subdivisions is justified and involves the establishment of

² The term *hijrah* (*hijrī* when used as an adjective) refers to the migration of the Prophet Muḥammad from Makkah to Madinah in 622 CE. This incident marks the beginning of the Muslim era.

³ E. W. Hulme, "Principles of Book Classification," *Library Association Record*, no. 13 (1911): 446-47.

real classes of literature on particular subjects. In other words, the classification scheme is neither philosophically nor theoretically based, but empirically derived for the subjects of the publications. By any standards, bibliographical guides ought to belong to the least ideology-infected genre of academic writing. This, however, is not the case, for bibliographies present serious problems of structural, as opposed to personal, bias. For example, the first important Islamic bibliography, *al Fihrist*, was divided into ten areas of bibliographical Islamic literature: the Qur'an, grammar, history and belles-lettres, poetry, scholastic philosophy, law, philosophy and science, legends and fables, sects and creeds, and alchemy. The author, a bookseller known as Ibn al Naḍīm (d. 385 AH / 995 CE), arranged his work in chapters divided on the basis of a particular subject, its development, and its authors (whom he had either met or about whom he had heard).

The next important work after Ibn Naḍīm's *al Fihrist* belongs to al Ṭūsī (d. 460 AH / 1067 CE). This work, entitled *Fihrist Kutub al Shī'ah*, and known popularly as *Fihrist al Ṭūsī*, is based, for the most part, on the material provided by Ibn al Naḍīm, but it completes it and adds more precise details on Shī'ah works and writers. The author, born five years after the death of Ibn al Naḍīm, was a noted Muslim jurist and theologian of his period. This was one reason why he classified his *Fihrist* by the authors' names. The works of nine hundred authors, both contemporaries and predecessors of al Ṭūsī, were arranged by their authors' forename and the subjects covered included, among others, the fields of tradition, *rijāl* literature, interpretation of the Qur'an, scholastic theology, and jurisprudence.

Several centuries later, a monumental work of Islamic bibliography was compiled by Ḥājji Khaḷifah (d. 1067 AH / 1657 CE), who was also popularly known as Kateb Çelebi, the Ottoman polilister. Entitled *Kashf al Zūnūn 'an Asāmī al Kutub wa al Funūn*, the author spent about twenty years collecting the material and then compiling the resulting information according to an alphabetical listing. This work included twenty-five thousand Arabic, Persian, and Turkish works belonging to nine thousand five hundred authors which he had either seen in the pub-

lic libraries of Istanbul or in the bookshops of Ḥalab as well as those he found mentioned in other books of *ṭabaqāt*. In its arrangement, he used the title of the work as the main entry, rather than the author's forename, which was a new approach. The concept of the title as the main entry later became a well-established practice in compilation and the preparation of library catalogues and bibliographies in the Muslim world.

Ibn Kahyr al Ishbīlī (d. 1179 AH / 1765 CE), a philologist and traditionalist of Seville, compiled the celebrated *Fihrist al Kutub wa al Ta'rif*. This bibliography listed one thousand four hundred Moorish and oriental works in Arabic on Qur'anic sciences, grammar, lexicography, literature, poetry, and a list of catalogues that had preceded his own. The books listed had either been read by the author or reported to him by trusted persons.

Ḥājī Khalīfah's attempt was continued in the early twentieth century in such monumental works as Brockelmann's *Geschichte der Arabischen Literatur*, Sezgin's *Geschichte des Arabischen Schrifttums*, and Storey's *Persian Literature*. Brockelmann's work was published originally during 1898-1902 and then expanded by three supplementary volumes during 1937-1942. The first and second volumes consist of a list of surviving Arabic manuscripts from printed catalogues of collections, while the third treats modern Arabic literature since Napoleon's invasion of Egypt. Sezgin's work, which appeared in 1967, deals with Arabic manuscripts and consists of several volumes covering Qur'anic sciences, theology and history, some of the natural sciences, and poetry of the period before 430 AH. Unlike Brockelmann, who organized his material on a chronological basis, Storey arranged his according to subject. In addition, the latter work covers material in Persian and contains notes on the principal editions, translations, and criticisms of the individual writers.

Listings of Islamic literature published after the invention of the printing press appeared first in Bianchi's (1821) *Catalogue des Livres Turcs, Arabes et Persans, Impriés à Constantinople, Depuis l'Introduction de l'Imprimerie, en 1726-27, Jusqu'en 1820*, which included a chronological listing of sixty-eight Arabic, Persian, and Turkish books

printed in Istanbul during 1726-1820. This bibliography was completed by Hammer-Purgstall (1827-35) in his *Liste der Osmanischen Literature des 19ten Jahrhunderts*, which gave a chronological listing of ninety-eight works related to Ottoman literature printed in Istanbul during the period 1728-1830. Zenker's *Bibliotheca Orientalis* (1840) was a similar work that purported to provide the titles of all Arabic, Persian, and Turkish works that appeared after the invention of the printing press. Its second edition, which was published in two volumes, appeared in 1846-61 and contained classified listings with occasional annotations of 8,831 oriental language books and of translations from or into western European languages from the beginning of printing until 1957. Another book, which bore the same title as Zenker's bibliography and consisted of eight parts, was published by Friederici (1877-84), contains a complete list of books, papers, serials, and essays published during 1875-82 in England and its colonies, Germany, and France on the history, languages, religions, antiquities, literature, and geography of the East.

The first coverage of Islamic studies published in the West was presented by Schnurrer (1799) in *Bibliotheca Arabica: Actum Nunc Atque Integram*. Its second edition (1811) provided a subject classification along with detailed annotations and a chronological index of works published in Europe during 1505-1810. In fulfilling his ambition to continue Schnurrer's work, Chauvin (1892) compiled his twelve-volume *Bibliographie des Ouvrages Arabes au Relatifs aux Arabes Publiés dans l'Europe Chrétienne de 1810 à 1885*, which was published during 1892-1922. Klatt's four-volume *Literatur-Blatt für Orientalische Philologie* (1883-88) was another attempt to cover the literature on linguistics related to the Muslim world and was published in the West during 1882-86. This bibliography was continued in Müller's (1887-1911) *Orientalische Bibliographie*, which provided an annual classified listing of literature about Africa and the East between 1887-1911. Upon its termination, an attempt to fill the resulting gap of cover literature published between 1910-12 was made by Becker and Graefe. This triannual author listing of books and articles on Islam and the Muslim world was published under the section *Bibliographie* in the first three volumes of *Der Islam*.

Other distinguished works were Gebrael's *Manuale di Bibliografia Musulmana* (1916) and Pfannmüller's *Handbuch der Islam-Literatur* (1923). The latter, which provided a very detailed bibliographical essay of books and articles in oriental and western languages published up until 1923, had a great influence on the appearance of *Abstract Islamica*, which was established in 1927. The latter has appeared as a supplement to the *Revue des Études Islamiques* and provides abstracted information for European-language publications on Islam.

In 1954, the *International Bibliography for the History of Religions* was inaugurated with the assistance of UNESCO. Its mission was to provide an annual listing of books and articles on Islamic studies that had been published in western languages. This effort, however, was discontinued in 1973. Since that time, the *British Society for Middle Eastern Studies Bulletin* has published bibliographical reports and essays on a regular basis.

Pearson's *Index Islamicus*, a cumulative index first published in 1958, represents an attempt to list the periodical articles published during 1906-1955. In 1977, the *Quarterly Index Islamicus* was introduced as a recurrent series covering the growing volume of Islamic literature. Initially published by Mansell, an English publishing firm, it is now published in Amman, Jordan, by the Āl al Bayt Foundation, a subdivision of the Royal Academy for Islamic Civilization and Research. A distinguished volume by Behn (1989) sought to cover literature published during 1665-1957. An earlier work of his, the *Islamic Book Review* (1980), sought to cover all Islamic literature reviewed in the West.

Since 1970, Muslims have taken the lead in this effort to control their bibliographical destiny. In 1977, the Islamic Foundation (Leicester, UK) started publishing *The Index of Islamic Literature* as a supplement to its *Muslim World Book Review*. The *Index* provides material in English concerning works on Islam and the Muslim world that have been published in the West. In 1990, the *Index* became a joint publication of the Islamic Foundation and the International Institute of Islamic Thought (Virginia, USA). The great index *al Fihrist*, published in Beirut, started

issuing its bibliography in 1981 with the intent of covering Arabic periodicals published in the Arab world. Another work, *al Bibliografiyah al Mawdū'iyah al 'Arabīyah fī 'Ulūm al Dīn al Islāmī*, edited by 'Abd al Wahāb Abū al Nūr and published by the Arabic Organization of Education, Culture, and Science, attempts to cover as much literature on Islam as possible. Originally, the organization envisioned the publication of six volumes that would cover the fundamental aspects of Islamic sciences. However, as of this writing, only four volumes have appeared, namely, Qur'anic Sciences, Hadith Sciences, Fiqh Sciences, and Uṣūl al Fiqh Sciences. These volumes cover articles published in Arabic periodicals since the invention of the printing press until 1976. A more complete version is to be found in 'Abd al Raḥmān's (1984) four-volume *Index Arabicus*, which is published in Baghdad and covers literature published in Arabic periodicals and related to Islamic studies during 1876-1984. In 1989, a new quarterly bibliographical journal published in Nicosia, Cyprus, *al Kashāf al Islāmī*, began to cover publications in Arabic periodicals on Islamic subjects.

The production of similar, though somewhat specialized, bibliographies has been undertaken by Ali (1961), Usmani (1984), and Anees (1985) on the Qur'an; Hammadah (1965) on Sirah; Denffer on Hadith; Anees and Athar (1986) on Sirah and Hadith; Sardar (1977) on Hajj; Ah-san (1982) and Asaf (1983) on Da'wah and Islamic movements; Khan (1973) and Siddiqi (1981) on Economics; 'Atīyyah (1985) on Education; Nasr (1975-78) on Islamic Sciences, Hamraneh (1964) on Medicine and Pharmacy; Anees (1988) on Muslim Woman and Family; Manzoor (1989) and Shahjahan (1988, 1989) on Philosophy; and Sardar (1987) on Librarianship.

From the foregoing state-of-the-art review of information management for Islamic literature, it is heartening to note that, in recent years, there has emerged an increasing awareness among Muslim individuals and organizations of the need to initiate some sort of bibliographical control. However the scope and method of the resulting efforts have been very limited. The material is varied and vast, new disciplines and languages have emerged, and the publication of books and articles on

Islam has become so extensive that it is now beyond the control of individual scholars in a given discipline. Global control of Islamic material, therefore, cannot be conceived of without the help of an integrated circuit of services or multinational organizations. Two decades ago, Pearson (1975) called for a “total bibliographic control of Islamic studies.” However, his argument rests on western assumptions in dealing with Islamic bibliographies. A few years later, a similar concern was expressed by Anwar (1983), who suggested the establishment of a “World Islamic Bibliography Centre.” Unfortunately, he did not recommend a conceptual design for the realization of such a universal bibliographical control of Islamic literature.

In the past few years, Muslim scholars have paid some attention to evolving new classification schemes. Earlier, Abū al Nūr (1973) developed an original scheme based on a literary warrant of publications in Arabic. This was followed by Sardar (1979), who worked out a scheme based on a general idea taken from Ranganathan’s Colon Classification. But a review of these two schemes shows that neither can be used by all Islamic countries: Abū al Nūr initiated his scheme on the basis of the Arabic alphabet and Indian numbers, while Sardar based his on the English alphabet. Thus neither is suitable for use in the majority of Muslim countries. Sabzwari (1982, 16), who listed at least nine other proposed or currently used classification schemes in different Muslim countries and universities, concluded that “none of these could be adopted in toto by all Islamic countries.” Instead, he suggested a Universal Islamic Classification, which has not yet been subjected to a full discussion or analysis.

Therefore it is the belief of the author of this book that the basic issue in initiating a method of global control for Islamic materials, both conceptually and physically, is the need to establish a full subject index of the Hadith collections and the Qur’anic text. Unless such indexes are provided, the subject-content of the rich yet diffuse literature of the Islamic legacy will remain confused in terms of classification criteria. This argument is based on two points. First, those writing in the field of Islamic studies commonly refer to Qur’anic verses and Hadith traditions in order to justify their claims or to prove their points. This requires two

things: an author must either refer to the Qur'anic and Hadith exegeses or depend on his own understanding and interpretation. If he refers to the Qur'anic and Hadith exegeses, it is probable that he would find it difficult to locate the desired information. As traditional exegeses follow the same arrangement of both the Qur'anic text and the Hadith collections, a researcher who did not have a proper subject index to guide him through the scattered related material would have no chance of finding all of the needed material. However, if an author depends on his own understanding and interpretation, he may need to review all of the material dealing with or relating to his subject. This requires instantaneous access to secondary sources, viz, books, articles, dissertations, and reports, which the user can find in bibliographies, periodicals, dissertation indexes, and conference proceedings. Without these materials being classified in a systematic way, which would allow the author to find what he needs without inconvenience, the user will again face difficulties. In contrast, seeking access to the primary sources (i.e., the Qur'anic texts and the Hadith collections themselves), still requires an enhanced subject index in order to gather the scattered related subjects. The second argument is that the actual works of these authors, from the point of view of librarians, refer to Qur'anic and Hadith subjects and, in order to be placed on the shelves in the proper and most suitable location, they require an analytical subject classification scheme. Again without a proper classification scheme, researchers will not be able to locate the desired information easily.

Therefore, as a first step, the proposed system requires the establishment of Qur'an and Hadith retrieval systems: this means analyzing contemporary Arabic-Islamic writings together with the Islamic legacy through the combined use of two retrieval systems. Through this method, the generation of a multiuse classification scheme of literature dealing with the Qur'an and Hadith topics will become a preliminary step in the task of establishing a bibliographical framework for the global control of Arabic-Islamic literature dealing with the Qur'an and Hadith literature. Both the classification scheme and the bibliographical base are classified according to microclassification classes of resources

of the Islamic legacy and civilization in non-Arabic languages, as well as those that originated in Muslim lands, can be combined in an integration system that will form the base of a universal Islamic classification scheme and a universal Islamic bibliography. The conception of a microclassification of classical and contemporary Arabic writings will result in a framework for an integration system that, in turn, will form the base of a national Arabic classification scheme and a national Arabic bibliography. Figure 1-1 outlines the steps in this integration system and the relation between its parts.

But we must still start with the Hadith collections and the Qur'anic text. The Hadith collections (i.e., those of Malik, al Bukhari, Muslim, Abu Dawud, Ibn Majah, al Tirmidhi, al Nasa'i, al Tayalisi, and Ibn Hanbal) have certain limitations: in many cases, one who is looking for a specific Hadith must have prior knowledge of the narrator or else he must guess which chapter contains the hadith. This has been appreciated by many scholars, notably Wensinck (1983, 69) and 'Abd al Baqi (1978), both of whom initiated an index for the above-mentioned Hadith collections. Wensinck compiled a comprehensive word index, while 'Abd al Baqi compiled a detailed subject index. An analysis of these works is beyond the scope of this study and must remain an area of future investigation.

As regards the Qur'anic verses, their arrangement does not follow any chronological order and the subjects are scattered throughout the texts. Several notable works have been compiled, both manually and automatically, in order to establish both a word and a subject index. However, these works were not undertaken for the purpose of an analytical subject classification, but for their own purposes. An analysis of these works will be made in the following section.

1.3. Early and Modern Qur'anic Indexes

For Muslims, the Qur'an is the very word of God revealed to the Prophet Muhammad through the archangel Gabriel, as were the earlier revelations sent to the prophets David, Moses, and Jesus. The Qur'an plays an important role in the lives of all Muslims. Only the Arabic text

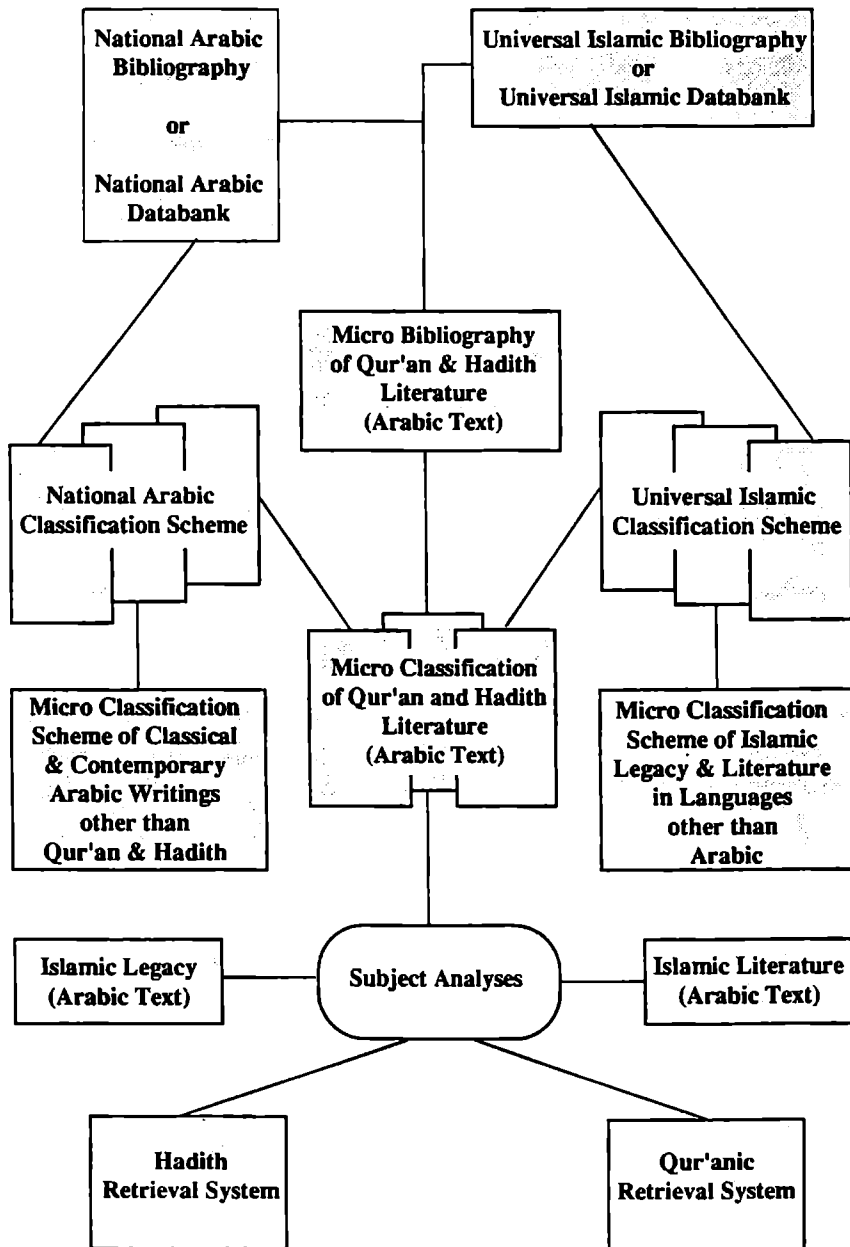


Figure 1.1: A chart representing the proposed integrated system for both conceptual and physical control of Islamic literature.

is considered authoritative and appropriate for recitation and revealing the word of God. Moreover the Qur'an itself, while reaffirming the truth of all previous revelations, comprises all truth for mankind. In furthering this aim, it seeks to create faith in God through the revelation of His signs and provides for the material, moral, and spiritual welfare of mankind. Through such a promotion of human welfare in every sphere, it expounds and explains all that is (or may be) needed by mankind for the complete fulfilment of human life. In the case of devotion, it explains the five pillars of Islam (submission to God, prayers, fasting, alms-giving, and pilgrimage). On sociological matters, it deals with such institutions as marriage, divorce, inheritance, and the care of orphans and widows. On the individual level, the Qur'an teaches good conduct, discusses Islamic ethics, and lays down rules for the conduct of interrelationships among the members of society. On the educational level, it informs people of what happened to their predecessors, some of whom were evil and some of whom were good, and provides examples of how to live properly by relating the lives of the prophets and the messengers. Finally on the spiritual level, the Qur'an is a constant reminder that life in this world is short and that each individual will have to account for his deeds in the hereafter.

In comparison to other religious scriptures, the Qur'an is a book of medium size. Divided into 114 chapters, arranged roughly according to length, the Qur'an is a mosaic of revealed verses uttered by the Prophet Muhammad at different places over a period of twenty-three years. The arrangement of the verses does not follow any chronological order, and the subjects, though scattered throughout the text, still show a unique kind of unity and homogeneity. In view of the absence of mass printing facilities at that time, the customary method for safeguarding the revelation and the tradition was for many people to commit it to memory. In that sense, the scattering of subjects over the Qur'anic text was not an obstacle to the verses' retrieval. The amount of information that can be passed on in this way, however, is limited. When it was discovered how to record information of various kinds in a relatively permanent form, a development that could be regarded as finding a substitute for human

memory, society began to advance. As a result, instead of having to rely on an individual's memory for the desired information, we now have the printed copy of the Qur'an. Instead of a natural memory, we now have an artificial memory: the index.

As a matter of fact, the term "index" originally comes from a Latin word that means "he who, or that which, points the way." In the sixteenth century, it became fully Anglicized and acquired its current literary sense (Knight 1980, 17). Literally, the term "index" means "that which shows, indicates, manifests, or discloses a token or indication" (Webster's 2d ed.). In more technical terms, an index is

a systematic guide to items contained in or concepts derived from a collection. These items or derived concepts are represented by entries arranged in a known or stated searchable order, such as alphabetical, chronological or numerical. (Rothman 1974, 286)

In the broader sense of the word, four eras have to be considered when dealing with Qur'anic indexes. The first is that of the polymath,⁴ which represents the time when the sum total of human knowledge was sufficiently small enough for one person to comprehend it all. Throughout history, generations of Muslim scholars have devoted themselves to interpreting the Qur'anic text. However, for interpretation depends upon the meanings behind the actual words, this led to the use of linguistic and related disciplines. Undoubtedly, this was due to the tremendous need felt by Muslims to know Qur'anic Arabic, which became the official language of established Islamic states. Consequently, the study of Arabic grammar was intimately linked with Qur'anic analysis and especially with the science of *al qirā'āt* (القرآيات readings). By the end of the first century AH / eighth century CE, grammarians organized large-scale linguistic surveys to collect as much linguistic data as possible. They

⁴ This term has been borrowed from Foskett *The Subject Approach to Information*, 4th ed. (London: Bingley, 1982), 3.

then refined and systematized the earlier generation's methods of analysis. From these surveys, they were able to delineate the exact linguistic structure and its effect on the communicators of the language in their efforts to capture its various representations, all of which had to be taken into account while formalizing the structure of the Arabic language.⁵

As a consequence of these formalizations, attempts to compile the contents of the Qur'an were subjected to further analysis. This, in turn, gave rise to the study of a variety of issues, among them readings and modes of recitations, taken up by Ibn al Jazrī (d. 833 AH / 1430 CE) and al Dānī (d. 444 AH / 1052 CE); synonyms and homographs by al Damaghānī (d. 478 AH / 1085 CE) and al Tha'alībī (d. 429 AH / 1038 CE); abrogation and abrogated verses by Ibn al Bārīzī (d. 738 AH / 1337 CE) and Ibn Du'āmāh (d. 117 AH / 735 CE); ambiguities by al Asfahānī (d. 502 AH / 1109 CE) and Ibn 'Abd al Salām (d. 660 AH / 1262 CE); the circumstances surrounding the revelation of an individual verses(s) by al Suyūfī (d. 911 AH / 1505 CE) and al Wāḥidī (d. 468 AH / 1076 CE); metaphors by Abū 'Ubaydah (d. 209 AH / 824 CE); similes by Ibn Nāqiyā (d. 485 AH / 1092 CE); repetitions by al Asādabādī (d. 415 AH / 1024 CE) and al Karamānī (d. c. 500 AH / 1107 CE); and norms of reading styles by Ibn al Anbārī (d. 328 AH / 940 CE).

This vast literature of specialized exegesis has served as a crude form of thematic accession to the Qur'anic sciences (*'ulūm al Qur'ān* علوم القرآن) as well as a systematic expression of the Qur'an's relevance to issues of everyday life. This could, of course, be of purely historical significance, but from the technical point of view, it may also be regarded as a first attempt at indexing.

The second era, according to Foskett (1982), was the problem-oriented era, which, in effect, started with the development of printing. The new technology associated with writing and illustrating instruments advanced considerably during this period, which lasted until well into this century. This era was characterized by the need to solve particular

⁵ See, for example, 'Abd al Raḥmān Muḥammad Ibn Khaldūn, *Muqadimat Ibn Khaldūn*, 4th ed. (Beirut: Dār al Qalam, 1981), 437-40.

problems, using whatever disciplines might be necessary, regardless of whether they belonged together or not. This could probably be referred to as the beginning of word indexing.

The first attempt by a Muslim to compile a Qur'anic index was the work of al Wirdārī (d. 1054 AH / 1637 CE).⁶ His work, known as *Tartīb Zibā*, indexed all of the key words in the Qur'an with reference to their verse and surah numbers. The significant words, as they appear in the Qur'an, were arranged alphabetically by their first letter.

As a distinguished work of its time, such scholars as al Nabulsi (d. 1062 AH / 1645 CE),⁷ al Naqshabandī (d. 1227 AH / 1810 CE),⁸ and al Walī (d. c. 13th century AH / 19th century CE)⁹ have attempted to re-compile it in different styles. Works similar to al Wirdārī's index have been compiled by Kāzīm (1859) and Shāh (1906).

The first European attempt to index the Qur'an was undertaken by the German orientalist Gustav Flügel who, in 1812, published his *Concordantic Corani Arabicus*. This is one of the most concise and comprehensive Qur'anic concordances ever compiled by an European. Flügel arranged the words alphabetically according to their roots, a decision that resulted in one noticeable disadvantage: as he followed no systematic criterion and did not adopt any well-known arrangement, many words are rendered incorrectly in terms of their original roots. A further problem is that he used a self-designed verse numbering system, which he derived from a special copy of the Qur'an prepared by him specifically for his concordance. The end result was confusion, for a researcher who used the accepted version of the Qur'an was confronted with unfamiliar verse numbers. Works that are similar to Flügel's concordance are those of Qaṣṭamūnī (1905), al Maqdisī (1906), and Yakin

⁶ al Ḥāfiẓ Maḥmūd ibn al Mulā Darwish al Widārī, *Tartīb Zibā* (Saudi Arabia: Imām Muḥammad ibn Sa'ūd Islamic University, n.d.), ms. no. 3609.

⁷ Ismā'il ibn 'Abd al Ghānī ibn Ismā'il al Nabulsi, *'Unwān al Āyāt* (Saudi Arabia: Imām Muḥammad ibn Sa'ūd Islamic University, n.d.), ms. no. 2989.

⁸ Muḥammad Najīb ibn al Ḥājj 'Umar al Naqshabandī, *Tashīl al Tartīb* (Saudi Arabia: Imām Muḥammad ibn Sa'ūd Islamic University, n.d.), ms. no. 6017.

⁹ al Ḥāfiẓ Muṣṭafā ibn Sulaymān, *Tahẓīb al Tartīb fī Fahrasāt Āyāt al Qur'ān* (Saudi Arabia: King Saud University, n.d.), ms. no. 2903.

(1984). The latter has tended to arrange his work by abjad, as opposed to alphabetic, order.¹⁰

'Abd al Bāqī (1945), who translated Flügel's concordance into Arabic, included notations concerning the errors found in the original work. He also revised the verse numbers and adopted the system used in the structured copy of the Qur'an printed by the King Fu'ād press. 'Abd al Bāqī's concordance became, and remains until our own day, one of the most common, widespread, and admired works in the Muslim world. However, it also contains some notable disadvantages related to the use of the root. First, an intellectual effort has to be made to reduce the words to their roots. Second, words may be reduced to an incorrect original root. Third, since the concordance is constructed on the basis of three radical roots, confusion may occur when dealing with words having two, four, and five radical roots. Fourth, the reduction of words to their root forms is extended to names, which are abstract and thus can be misplaced.

Other works that are similar to 'Abd al Bāqī's concordance have been produced by al Ibiyārī and Marzūq (1953-69) and Barakat (1957), both of which follow 'Abd al Bāqī's arrangement. Al Ibiyārī and Marzūq's work, however, is part of a five-volume encyclopedia of the Qur'an. In addition, al Miṣrī (1941), Majma' al Lughah al 'Arabiyah (1953-69), and Ibrāhīm (1961) have produced Qur'anic concordances in which the lexical meaning accompanies the words. The latter, having recognized 'Abd al Bāqī's weakness of reducing names to roots, provides them in alphabetical order and without derivation(s). One English-language work that is similar to 'Abd al Bāqī's is that of Kassis (1983), which has the distinctive characteristic of being divided into two parts. Part one consists of a list of brief Qur'anic citations in which the name of God occurs. It is arranged in transliterated Arabic alphabetic order according to the key Arabic term with which the holy name is associated. A similar list of citations covers the occurrences in the Qur'an of all other words

¹⁰ The difference between abjad and alphabetic order is discussed in chapter 3, section 3.5A.

except common words (i.e., prepositions and articles). Part two consists of an index of all English words, except common words that occur in Arberry's translation of the Qur'an, arranged as in the first part.

Other attempts, which feature a back index of the copy of the Qur'an, are provided by al Ḥimṣī (1984) and Ramyār (1964). Less similar, yet following the same approach are the works by Nāẓim (1867), al Nikhābī (1920), al Dimashqī (1927), Naṣṣār (1965), al Shāfi'ī (1972), Hāshim (1979), al Bindāq (1981), and 'Aḫīyah (1984). These works attempted to list the Qur'anic verses alphabetically rather than simply compiling the words. However, the approaches are not as far removed from a word methodology as to deter one from calling them Qur'anic word indexes.

Turning to the multilingual Qur'anic dictionaries, both Penrice (1985) and Nadawi (1983) have supplied Arabic-English Qur'anic dictionaries. Penrice, basing his work on Flügel's, locates each word under its verbal root. Where none exists, the word is placed alphabetically. The vowel of the aorist is given where it is known. One major drawback, which Penrice points out in his preface, is his failure to notice the variant readings of disputed passages or the numerous interpretations of the same passages, which abound in the commentaries. The dictionary of al Nadawi, is no different, although it does cover this gap. In the preface, the author lists the titles of the commentaries that he used and also provides supplemented indexes for the roots of the words used. Similar works have been undertaken in Urdu (Maudūdī 1979), Indonesian (Syamsu 1977), and in a Turkish-English-Arabic-Persian glossary (Eckmann 1976).

The third era, referred to by Foskett (1982) as the discipline-oriented era, is characterized by the division of knowledge into more or less watertight compartments or disciplines, a process that has resulted in an increasing specialization and a development of disciplines in their own right. Based on this development, works on selected Qur'anic topics have been published in the English language by Kherie (1979), Afzalur Rahman (1981), and Sherif (1985). Attempts to list relevant verses under specific headings have been undertaken by Afzalur Rahman (1983) and

Khan (1987). However, the first comprehensive subject headings of the Qur'an was introduced by the French orientalist La Beaume, in his work *La Koran Analyse*, who divided his work into eighteen broad major subject headings and then subdivided them further into three hundred fifty items. The work was translated into Arabic by 'Abd al Bāqī under the name *Tafṣīl Āyāt al Qur'ān al Ḥakīm*. During the translation process, 'Abd al Bāqī (1969) added a further one hundred items from Montet's French translation of the Qur'an. Works similar to 'Abd al Bāqī's were produced by Muhannā (1983), Barakāt (1985), and Muḥammad (1984). Muhannā divided his work into eighty-seven subjects, Barakāt divided his into twenty-four broad subject headings, and Muḥammad into twenty-nine broad headings.

Other attempts to produce a back index of the copy of the Qur'an have been undertaken by al Ḥimṣī (1984), who divided his work into fifteen broad headings, and Ramyār (1964), who divided his into thirteen. In his index, Ramyār also listed all of the unknown persons mentioned in the Qur'an separately at the end.

Finally, Fānī and Khorramshāhī (1986) compiled an exhaustive and comprehensive Persian-Arabic subject index. This work, which is based on an alphabetic arrangement of subjects, is not divided into broad subjects but rather indicates the entries directly in alphabetical order. The index includes seven thousand entries, together with cross-references. Also, variant readings, the circumstances surrounding the individual revelations, and different interpretations are taken into consideration in the number indicated by the authors in the preface. Although this effort is without a doubt the most successful and advanced Qur'anic subject index, it has three main disadvantages. First, the entries are arranged alphabetically and not under broad headings. Thus the user has to guess the word before searching for it, a process that reduces his recall of subjects to his ability to recall particular words. Second, the reference to the verse and chapter numbers alone without the Qur'anic text requires the user to refer to a copy of the Qur'an before finding his material. Though this ultimately reduces the size of the index, it creates the irritation of doubling the effort. Third, the fact that the two authors are Shi'ites

means that their Shī'ite thought is reflected on several occasions in the index as, for example, referring to the claim that some verses were revealed in the cause of Fāṭimah and 'Alī (see the index under Fāṭimah and 'Alī).

Despite the fact that they could be regarded as unique attempts in the area of Qur'anic word and subject retrieval, all of them, with the exception of the work of Fānī and Khorramshāhī (1986), have some important deficiencies. First, the division of the subjects does not reflect the actual range of the Qur'an's contents, but is rather arbitrary in nature. This is reflected in the variety of divisions found in these works. For instance, eighteen broad headings are used in La Beaume, fifteen in Rāmyār (n.d.), and twenty-nine in Muḥammad (1984). Second, the selection of broad headings does not follow any consistent criterion, as can be seen by the appearance of some specific topics alongside their general headings. For instance, *al akhlāq al dhamīmah* الأهلأق الذميمة (immorality) and *al nifāq* النفاق (hypocrisy) by Barakāt. Third, these indexes depend on only one popular reading in the Islamic world: "the reading of Ḥafṣ," as is shown clearly by al Ḥimṣī. This eliminates other possible interpretations of the verses that could have resulted from different readings. Fourth, the surrounding circumstances of the individual revelations are not taken into consideration, even though they could highlight some historical interpretations of the verses. Fifth, the works do not say whether the placement of verses was decided upon by the compiler or whether it was the result of consulting specific commentaries. Sixth, cross-referencing is poor and the lack of control vocabulary (i.e. plural-singular, derived nouns, synonyms) is apparent in the selection of the key words. It is evident, however, that the authors of the above-mentioned works did not commit themselves to establishing an analytical subject classification. Rather, they were doing it for their own satisfaction alone.

Considerable effort has been made to accommodate contemporary technology to the Qur'an in order to produce a screen presentation of the Qur'anic text and to facilitate easy search and retrieval. Among such

undertakings are *Salsabeel*,¹¹ *al Qur'ān al Karīm* (Zerosoft),¹² *the Alim*,¹³ *al Qur'ān al Karīm* (al 'Alamīyah),¹⁴ and *al Qur'ān al Karīm* (Apple Mac)¹⁵. *Salsabeel* is essentially a software word index that provides whole word matching. However, it does not retain the Qur'anic calligraphy or display the essential diacritical marks. Similarly, *al Qur'ān al Karīm* (Zerosoft) provides the Qur'anic text in Arabic along with its English translation. Yet the search strategy is applied only to Arabic text and is either by whole word matching or through a menu selection. Opposite to this, *the Alim* software presents the Qur'anic text in Arabic, but the searching is applied only to its English database. This software provides whole word matching, string matching, and synonym searching via Boolean operators. The more advanced *al Qur'ān al Karīm* (al 'Alamīyah) maintains the diacritical marks and original calligraphy of the Qur'an. The search strategy is by whole words and string matching and roots, vowelled and unvowelled. It also provides for searching through subjects along with some other features that help the user in the field of Qur'anic studies. Finally, *al Qur'ān al Karīm* (Apple Mac) is quite similar to that of al 'Alamīyah, though it is directed to serve Mac users.

However, now that we are in the fourth era, the mission-oriented era (Foskett 1982) in which demands for information can span a whole range of disciplines, the old barriers between disciplines have been removed, even if shadow boundaries among specialized fields have been retained. This process (i.e. analyzing the Qur'an with the intent of establishing an analytical subject classification system), therefore, emphasizes that the distinction between word and subject indexing is worth defining. Specifically, in a word index, the indexer is tied inextricably to the text's

¹¹ Applied Microsystem Technology, *Salsabeel: An Electronic Index of Qur'an*, (London: 1987).

¹² Zerosoft, *al Qur'ān al Karīm: A Qur'anic Concordance* (1990).

¹³ Advent Technologies, *The Alim: An Islamic Literature Database* (Texas: 1992).

¹⁴ al 'Alamīyah, *al Qur'ān al Karīm: An Electronic Library of Qur'an* (Kuwait: 1988).

¹⁵ Apple Mac, *al Qur'ān al Karīm with Tafsīr al Jalāllin: An Electronic Library of Qur'an* (Cairo: 1993).

words, regardless of their meanings: if the word appears in the text, it is selected; if it does not appear, it is not selected. In that sense, word indexing requires little skill in the field of indexing and can be done by an indexer who has had no subject-matter training. Although word indexing leads to the dispersal of related subjects, since the words' meanings are not taken into account, it is this type of indexing that is performed effectively by the computer.

In contrast, an indexer who is engaged in a process of subject indexing appeals frequently to the words' meanings and then makes a careful selection of the terminology used in the subject enquiry in order to avoid a dispersion of related subjects under different headings. This type of indexing, therefore, requires a great deal of subject-matter training and necessitates a thorough competence in indexing as well. In terms of machine searching, it has had little success and still requires a great deal of work.

In the present study, the process of indexing concentrates not simply on selecting words or keywords in the text, but on the study, emphasis, organization, and expansion of the text's contents. It requires the indexer to abstract those subjects that are apparent in the text, as well as those that are hidden. He must also convert the words into single-word form or into combinations of words that best express the ideas. As such an index has not lent itself to machine searching in the past, a number of researchers are now actively examining its potential. In the context of this study, this is the form of index that will be referred to as a retrieval system.

1.4. A Qur'anic Retrieval System

A Qur'anic retrieval system, as explored in this study, is a system designed to augment human knowledge and to aid human activity by storing items from the Qur'anic text that need to be processed, searched, retrieved, or disseminated to various users. To compile a Qur'anic retrieval system, two main factors should be considered: the abstraction of hidden allusions to the subject from the Qur'anic text, and the ability to identify them by words even if the text mentions them in a different

phraseology. In the construction process, two complementary features are involved: various interpretations applied to a verse(s) by different commentators, and the form and organization of the headings that are likely to describe the verses in the retrieval system. From the indexing point of view, the difference in interpretations could lead to placing such verses under different headings. On the other hand, the retrieval system's efficiency would be affected seriously if the compiler did not use the headings in a strictly controlled way in order to provide the user with easy access to the system. In many cases where the criteria for verse placement and heading selection are not specified in the construction of the retrieval system, the user may feel that the information sought is not provided when it is, in reality, located somewhere else. This is probably the most important aspect of subject indication.

In terms of its general form (i.e., for the purpose of a library catalogue) Cutter (1949, 66-75), who followed an empirical approach to the basic problems of subject indication, provided four rules to be used for governing the formation of classes by literary warrant: polytopical books must all be entered under a distinct subject heading, each work must be entered under its subject-heading and not under the class heading that includes that subject, each work must be entered under the word that best defines its subject, whether it occurs in the title or not, and the preferred heading in the case of synonyms is the one that is most familiar to the class of people who consult the library. According to Lancaster (1972, 15) Cutter's work represents an attempt to devise a generalized set of codes for the construction of alphabetical subject headings that would serve as a starting point for the pattern of vocabulary control, namely, a controlled list of index terms, which was dominant in subject catalogues in libraries for many years.

As the subject matter of publications tends to be complex, Lancaster (*ibid.*, 23) claims that the vocabulary of the compound subject headings suggested for library cataloguing is not adequate for the more exhaustive technique of subject indication, that is for a "thesaurus." Originally, the term "thesaurus" came from the Greek concept of storehouse or treasury (Vickery 1960, 181). Subsequently, it came to be used in connection

with the construction of an English dictionary, such as *Roget's Thesaurus of English Words and Phrases*. *Roget's Thesaurus*, first published in 1852, arranged the words according to the ideas expressed in order to provide the user with a number of alternative words for a similar concept that might provide an equally appropriate word for that concept. Arabic works that are of a similar nature to *Roget's* began to appear in the third century AH, viz., al Sākit's (d. 244 AH / 858 CE; 1877) *Tahdhīb al Alfāz*; Ibn Qutaybah's (d. 276 AH / 889 CE; n.d.) *Adab al Kātib*; al Hamdānī's (d. 320 AH / 932 CE; 1885) *al Alfāz al Kitābiyah*; Ibn Qudāmāh's (d. 337 AH / 948 CE; 1932) *Jawāhir al Alfāz*; al Rumānī's (d. 384 AH / 994 CE; 1988) *al Alfāz al Mutarādifah al Mutaqāribat al Ma'nā*; and Aḥmad Ibn Fāris' (d. 395 AH / 1005 CE; 1970) *Mutakhayyir al Alfāz* were all compiled in an attempt to provide the writer with a list of synonyms from which to select.

Given this function, these types of works cannot be regarded as a thesaurus for information retrieval from the information scientist's point of view (Lancaster 1972, 25). The most distinctive function of the information retrieval thesaurus is to control synonyms, homographs, generic levels of meanings, and spurious relations between terms. According to Joyce and Needham (1958, 194), investigators at the Cambridge Language Research Unit in England began to discuss the applicability of the thesaurus concept to information retrieval in 1956. According to Vickery (1960, 181), the first time the word "thesaurus" was used in connection with information retrieval was in 1957. Nowadays, the thesaurus is used more widely than the list of subject headings. It has become so popular that Schreider (1965, 222) defines information as "the degree of change of the thesaurus."

In principle, subject heading lists and thesauri are similar in that both consist of alphabetically arranged terms with accompanying cross-references. Also, some specialists use the terms "subject headings list" and "thesaurus" interchangeably because of their evident similarity of design. Foskett (1982, 440-41) expresses this similarity thus:

The only difference between a thesaurus and a list of subject headings is that the former normally excludes headings for composite subjects; with some examples, even this is not true, and one is forced to the conclusion that the name is intended to signify a distinction which does not exist. Many lists of subject headings have left much to be desired, and thesaurus constructors have perhaps endeavored to persuade us (and themselves) that their lists were free from fault.

Yet the fact remains that traditional subject heading lists, such as that used by the Library of Congress, are meant to deal with human knowledge in its entirety, while most, if not all, modern thesauri treat only a subset of this knowledge, namely, a particular discipline or field of study. In the context of this study, subject heading lists and thesauri will be considered equal in terms of their similarity in design for the purpose of analyzing their weaknesses and strengths in relation to Qur'anic vocabularies.

The foregoing considerations make it plain that, in principle, a great deal can be gained from using vocabulary control devices. In practice, it may emerge that accuracy and consistency are difficult to maintain. Not only must indexers be intimately aware of the available indexing vocabularies and practices, but they should also be familiar with collection characteristics and possess a high degree of sophisticated training and experience. More often than not, however, resulting index entries are incomplete or lack specificity. They are also time-consuming and expensive. By far the most common alternative technique is to use little or no vocabulary control, namely, to use an automatic natural language database.

In an automatic natural language database, the entire text of the document collection has to be fed into a machine-readable form. Normally, this would be kept in a special storage memory under code numbers. A special program is then prepared to locate the items of information on request by means of a program-searching strategy. An automatic natural language database can serve as a successful replacement of a manual system due to the potential advantages of using the language of discourse. In addition, it pro-

vides just the right kind of expression to denote each particular concept and may be carried out more rapidly, and more cheaply, than indexing based on a controlled vocabulary. However, a critical problem in constructing an automatic natural language database is textual accuracy. This has led investigators into the field of computational linguistics in an attempt to impose various rigorous linguistic controls on natural language systems. In dealing with various linguistic levels, one must consider the morphological level at which individual words can be recognized and formed as well as the syntactic and semantic levels in which the sentence's grammatical structure can be identified and interpreted. It is important, therefore, to be aware of the automatic methods currently used to process natural language texts, although the full scope of language understanding may not be needed in information retrieval. In the context of this study, the various levels of linguistic methods as well as the commonly used grammatical theories will be tested in relation to the Qur'anic text. Also the main features of the Arabic language will be analyzed in relation to current software programs.

1.5. Methodological Approach

The present study attempts to relate the ideological value content presented in the Qur'anic text to the empirical facts established in the mission-oriented era. The study is neither philosophical nor empirical, but is rather based fundamentally on an analysis of, and suggested solutions to, those problems that are likely to confront the compiler in his analysis of the issues faced by scholars seeking access to the scriptures as well as those problems that are likely to face compilers seeking to construct a retrieval system in relation to the Arabic language, both in terms of a manual and an automatic system (Figure 1-2). Also, there is an attempt to determine guidelines for compilers on the basis of recommendations and principles based on a discussion and analysis of the problems presented. However, as the fruits of this work are intended to be taken as the initiation of an analytical subject indication of the Qur'anic text, examples are provided on the basis of natural science and social science disciplines.

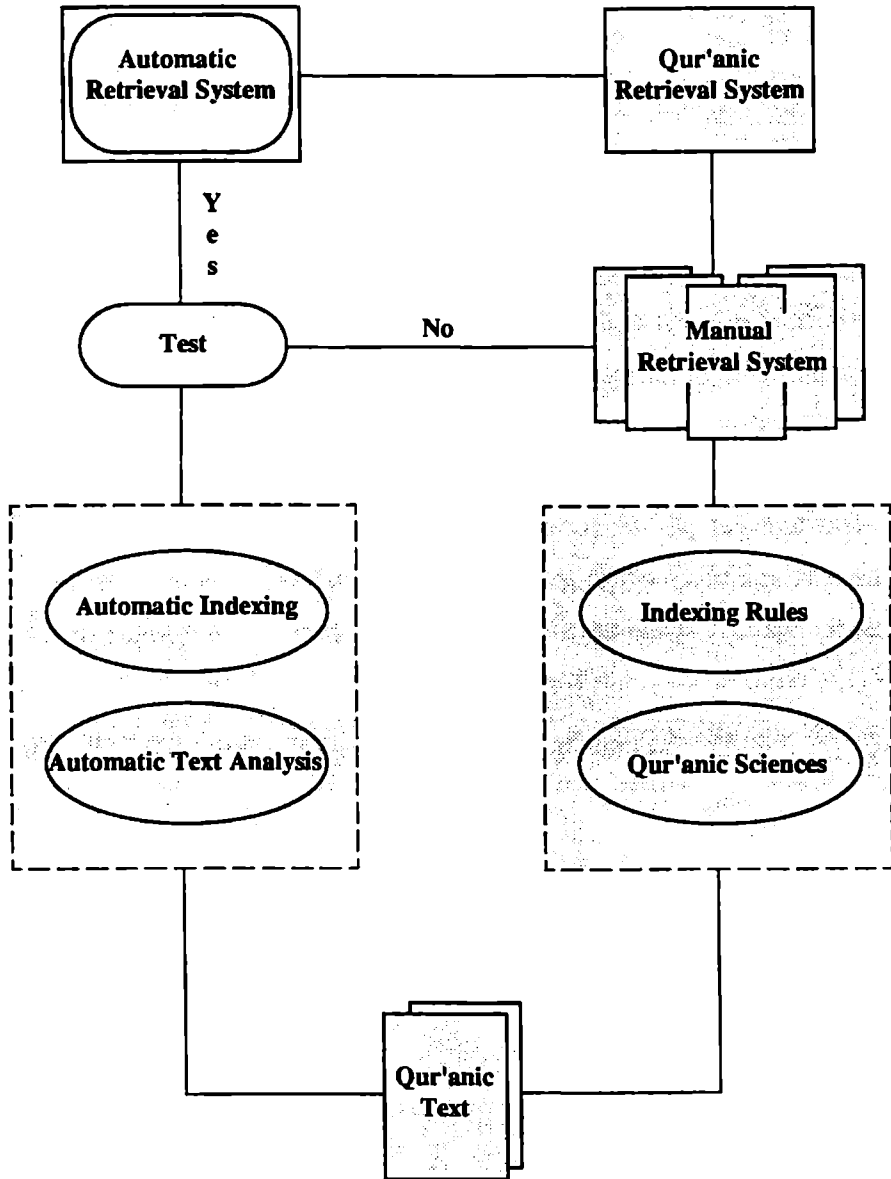


Figure 1-2: The chart represents the steps that have been taken through this study to initiate a Qur'anic retrieval system.

In this study, it is not practical to conduct experimental work on all aspects. Thus the choice has been narrowed to accepting such appropriate prerecommendations as principles of interpretation, norms of the Arabic language, suggestions of information retrieval specialists, and preestablished design rules of computer specialists. In practice, of course, many design decisions will be taken in line with these recommendations. Preliminary decisions about system requirements and constraints will color the development process and, therefore, may influence strongly the design of the retrieval system under construction. Simply knowing, in formal terms, what the system will look like is not enough, for the design guidelines will also determine the type of people needed for the work and how they will perform it. Finally, examples are proposed as a useful intellectual exercise to encourage compilers to check whether all significant points have been taken into consideration during the analysis.

The following chapters are organized in such a way as to confront the problems and the solutions encountered in attempts to design a Qur'anic retrieval system.

The second chapter highlights the major philological, historical, and theological considerations, as indicated by various interpretations, and tests the impact of these opinions on the retrieval system's performance. The third chapter analyzes the function of vocabulary control as applied to Qur'anic terminology and measures, through the use of known experiments, the variables that control the compiler's judgement in selecting the terms. The fourth chapter examines treatments in the computational analysis area that have a bearing on the Qur'anic style of calligraphy and structure. It also focuses on the function of the man-machine interface in the interests of user satisfaction and the content representation of Qur'anic software. The fifth chapter presents the guidelines and recommendations of the Qur'anic retrieval system. Finally, the sixth chapter applies examples for the Qur'anic retrieval system as suggested in the natural and social sciences.

CHAPTER TWO

The Natural Language Problems in Qur'anic Statements

2.1. Overview

In any attempt to construct a Qur'anic retrieval system, the compiler will be faced with a number of different interpretations as to the understanding of a particular word, verse, or passage. From the compiler's point of view, as far as indexing is concerned, all of these differences are covered by one question: which interpretation should be considered? Ignoring such differences in the Qur'anic retrieval system could result in its failure, for it may happen that the user is searching within the framework of a certain idea for information that the compiler has presented elsewhere. To overcome this obstacle, the compiler needs an operational criterion by which different interpretations can be judged. A clear statement of what system is being followed should accompany the verse citations. More important, however, is his provision of the qualifications of the interpreters whose commentaries he has consulted.

Three perspectives are used to describe the problems encountered in this chapter. The first deals with those philological aspects of a verse or a passage that serve to elucidate its literal meaning and/or practical application. The second presents the historical context of a verse or a statement, which helps us to understand its implication, explanation, or application to a certain situation. The third highlights the theological views or controversies that a particular word, verse, or passage has raised among commentators. The complementary nature of these three perspectives provides an integrated approach to the exegetical analysis that forms the basic source for the compiler in constructing a Qur'anic retrieval system.

2.2. Philological Aspects

By definition, all Qur'anic statements are divine revelations. Therefore, it is not surprising that early scholars found it very difficult to frame the necessary rules for explaining the problems of language that crept in over time. In terms of lexical and grammatical structure, their studies have led to a number of different opinions, a development that will affect the retrieval system's performance as applied within its relation to the user's need and the compiler's provision. The following are examples that highlight the problems that are likely to face compilers of a Qur'anic retrieval system.

A. Ambiguous Expressions

Ambiguity means that a word or sentence may have more than one meaning. There are several Qur'anic verses that have no universally accepted interpretation. For example:

O Prophet, when believing women come to you, swearing allegiance that they will not ascribe anything to God; neither will they steal, nor commit adultery, nor slay their children, **nor bring any calumny that they forge between their hands and their legs**, nor disobey you in a good turn; then seal a pledge with them, and ask God's forgiveness for them, for God is Forgiving, Merciful. (60:12)

﴿يَا أَيُّهَا النَّبِيُّ إِذَا جَاءَكَ
الْمُؤْمِنَاتُ يُبَايِعْنَكَ عَلَىٰ أَنْ
لَا يُشْرِكْنَ بِاللَّهِ شَيْئًا وَلَا يَسْرِقْنَ
وَلَا يَزْنِينَ وَلَا يَقْتُلْنَ أَوْلَادَهُنَّ وَلَا يَأْتِينَ
بِهَتَانٍ بَيْنَ يَدَيْهِنَّ
وَأَرْجُلِهِنَّ وَلَا يَعْتَصِبْنَ فِي مَعْرُوفٍ
فَبَايِعُهُنَّ وَاسْتَفِرِّ لِهِنَّ اللَّهُ إِنَّ اللَّهَ
غَفُورٌ رَحِيمٌ﴾ (الصف: ١٢)

The phrase *wa lā ya'tīna bi-buhtānin yaftārīnahu bayna aydihinna wa arjulihinna* (ولا يأتين بهتان بفتريته بين أيديهن وأرجلهن) (bring any calumny that they forge between their hands and their legs) is ambiguous and open to two different interpretations. As al Qurṭubī (d. 971 AH / 1563 CE) (1954,

17:72-74) has pointed out, according to one view the phrase generally refers to adultery or those [women] who beget illegitimate children (by deceiving their husbands). According to the other view, it refers to bewitching and bewitching-related acts.

If the compiler adopts the first view, the underlined phrase would be placed under the heading *al zinā* الزنا (adultery). If he agrees with the second view, however, the phrase would be placed under the heading *al sihr* السحر (bewitching). The placement of the phrase under both headings, taking the two meanings as valid, is also a possible solution, though it has to be determined by the compiler's policy of structuring the retrieval system. This is why the compiler should provide the user with information about the criteria followed in selecting the exegesis and the criteria used to adopt specific opinions.

Another problem related to expressions in the Qur'an is the existence of Arabic dialects. Qur'anic scholars believe that in its linguistic style, the Qur'an (as a miracle) contains more than forty Arab tribal dialects and vocabularies (al Suyūfī 1987, 1:287). The existence of these vocabularies in the commentaries reflects different shades of meaning that have been given to a single word or verse and could affect the retrieval system's performance if the compiler does not take into account variant meanings. For example:

Man is indeed to his Lord *kanūd*.
And surely he is a witness to that.
And truly for the love of good
things he is emphatic. (100: 6-8)

﴿إِنَّ الْإِنْسَانَ لِرَبِّهِ لَكَنُودٌ وَإِنَّهُ
عَلَىٰ ذَٰلِكَ لَشَهِيدٌ وَإِنَّهُ لِحُبِّ الْخَيْرِ
لَشَدِيدٌ﴾ (العاديات ٦-٨)

According to al Zamakhsharī (d. 538 AH / 1143 CE, 1972, 3:278), the word *kanūd* كنود has distinct shades of meaning in the vocabularies of three different Arab tribes: that of *al kufr bi al ni'mah* بالكفر بالنعمة (to be ungrateful) in the Muḍar and Rabī'ah tribal dialects; that of *al āsī* العاصي (disobedient) in the Kindah tribal dialect; and that of *bakhīl* بخيل (avaricious) in the Banū Mālik tribal dialect. Al Qurṭubī (1954, 20:160 62) asserts that the Ḥaḍramawt tribe also referred to the word *kanūd* كنود

the meaning of *al 'āṣī* العاصي , while al Suyūfī (1987,1:284) confirms that the Kinanah tribe gave the meaning of *al kufr* الكفر to the word *kanūd* كنود .

Regardless of the tribal dialect, commentators offer the compiler three potential headings: *kufr al insān bi al ni'mah* كفر الإنسان بالنعمة (man's ingratitude), *'iṣyān al insān* عصيان الإنسان (man's disobedience), and *bukhl al insān* بخل الإنسان (man's avariciousness). The compiler's choice should follow a particular procedure and be so indicated in the retrieval system. If he decides to choose one, he should justify his reason(s) for doing so. For instance, he might adopt the Quraysh dialect, as it is the official language of the Qur'an (i.e., by referring to the word *kanūd* كنود itself and not to any of its meanings). In this case, the verse will be placed under the heading *kanūd al insān* كنود الإنسان (man's ungratefulness). If the compiler wants to include the other meanings in the system, the heading must be supported by a footnote that provides the user with information related to other possible meanings.

Another important problem facing the compiler of a retrieval system is that a great many Qur'anic statements use pronouns as linkages to preceding or previously mentioned nouns or names that are included or omitted from the same verse or other verses in the same chapter. Differences in interpretation, however, occur due to the pronominal co-referential (مرجع الضمير *marja' al ḍamīr*), when one or more pronoun(s) refer(s) to two or three nouns in the text and gives a completely different meaning, depending on the noun to which it refers (Ibid., 1:397-98). Take, for example, the verse cited above:

Man is indeed to his Lord ingrate.
And surely *hu* is a witness to that.
And truly for the love of good things *hu* is emphatic. (100: 6-8)

﴿إِنَّ الْإِنْسَانَ لِرَبِّهِ لَكَّوْدٌ وَإِنَّهُ
عَلَىٰ ذَٰلِكَ لَشَّهِيدٌ وَإِنَّهُ لِحُبِّ الْخَيْرِ
لَشَدِيدٌ﴾ (العاديات ٦-٨)

The connecting pronoun *hu* هـ in the above verse, which in Arabic refers to a masculine pronoun, could be interpreted in two different ways: either it refers back to Man or to Lord. According to al Zamakh-

shaṛī (1972, 4:277), it refers to Man, which means that “man is witness on himself.” However he also states that, in general, all pronouns should refer back to the first noun (that is *al insān* الإنسان Man), as referring one pronoun to the first noun and one to the second noun is contrary to the norm and is inconsistent with the eloquence of the Qur’an (ibid., 2:536). Such an interpretation would result in a new interpretation: “Man is indeed to his Lord ingrate. And surely he is a witness to that.” On the other hand, in his *al Itqān*, al Suyūfī (1987, 1:399) preserves al Zamakhsharī’s rule of referring all pronouns to one noun, though he rejects the idea that all pronouns should refer to the first noun. Instead, he refers all of the pronouns to the nearest noun (that is, *rabb* رب Lord). Thus the verse is read “Man is indeed to his Lord ingrate. And surely He is a witness to that.” However, al Suyūfī (ibid., 1:399) ignores this rule in cases that he regards as exceptions. For instance: “Hence, do not dispute concerning them except from outward disputation, nor seek opinion of them from any one of them.”¹⁶

He states that the first and the second pronouns *hum* هم (them) refer to the companions of the Cave, while the third pronoun *hum* هم (them) refers to the Jews. On the other hand, al Qurṭubī (1954, 20:160), who pointed out that the first pronoun in verse 100:6-8 can be interpreted in two different ways, replies that all commentators believe that the second pronoun *hu* ← refers to Man.

If the compiler deals with pronouns of the type underlined in the above verses (100:6-8), the phrase will be interpreted according to the noun to which that the pronoun refers, viz., to *al insān* الإنسان or to *rabb* رب. If the compiler follows al Zamakhsharī’s rule, and thus chooses the pronoun with reference to *al insān* الإنسان, then the verse should be placed under the heading *shahādat al insān alā nafsih* شهادة الإنسان على نفسه (Man’s witness on himself). He may also follow this rule throughout his treatment of the Qur’anic verses and state this policy in the retrieval system. If, however, the compiler prefers to use al Suyūfī’s rule and thus chooses the pronoun with reference to *rabb* رب, he should place the verse

¹⁶ See verse (18:22).

under *shahādat Allāh alā al insān* شهادة الله على الإنسان (Lord's witness on Man). He may also follow and state this policy throughout the work, while drawing attention to the exceptions that are found. However, if he prefers to have a free hand and follow al Qurṭubī's views by choosing the pronoun that best expresses the meaning of the verse in its context, then he must be knowledgeable in Arabic and fully aware of its linguistic norms. In addition, he should justify his choice or include other possible interpretations in a footnote. Otherwise, the two views should be taken into consideration and placed under the two headings: *shahādat al insān 'alā nafsih* شهادة الإنسان على نفسه and *shahādat Allāh 'alā al insān* شهادة الله على الإنسان

Another similar difference of opinion among commentators is based on the fact that the Qur'an contains many stories (*qaṣaṣ* فَصَص) that serve to remind its audience of earlier prophets and their struggles. In many of these *qaṣaṣ* فَصَص, there is a conversation between two or three persons in which the person being addressed cannot be identified. This situation is known among Qur'anic scholars as *al mawṣūl lafẓan al mafṣūl ma'nān* الموصول لفظًا المفصول معنًا (ibid., 20:195). From the compiler's point of view, this situation, which results in different interpretations, could lead to placing a statement under different headings. For example:

And the King said "Bring him to me." And when the envoy came to him, he said "Return to your Lord and ask of him 'What of the women who cut their hands?' Surely my Lord is Cognizant of their artifice." He said, "What was your business when you solicited Joseph [Yūsuf] against his will?" They said, "God forbid! We know no evil of him." The wife of al 'Azīz said, "Now the truth has transpired. I solicited him against

﴿ وَقَالَ الْمَلِكُ ائْتُونِي بِهِ فَلَمَّا
جَاءَهُ الرَّسُولُ قَالَ ارْجِعْ إِلَىٰ رَبِّكَ
فَأَسْأَلْهُ مَا بَالُ النِّسْوَةِ اللَّاتِي قَطَّعْنَ
أَيْدِيَهُنَّ إِنَّ رَبِّي بِكَيْدِهِنَّ عَلِيمٌ قَالَ
مَا خَطْبُكُمْ إِذْ رَأَوْتَنَّ يُوسُفَ عَن
نَفْسِهِ قُلْنَ حَاشَ لِلَّهِ مَا عَلِمْنَا عَلَيْهِ
مِنْ سُوءٍ قَالَتْ امْرَأَةُ الْعَزِيزِ الْآنَ
حَصْحَصَ الْحَقُّ أَنَا رَأَوْتُهُ عَن

his will; truly he is one of the veracious! So that he may know that I did not betray him in secret; truly God guides not the contrivance of the betrayers.” (12: 50-52)

نَفْسِهِ وَإِنَّهُ لَمِنَ الصَّادِقِينَ،
ذَلِكَ لِيَعْلَمَ أَنِّي لَمْ أَخُنْهُ بِالْغَيْبِ
وَأَنَّ اللَّهَ لَا يَهْدِي كَيْدَ
الْخَائِبِينَ ﴿يوسف ٥٠-٥٢﴾

The phrase *dhālika liya'lama annī lam akhunhu bi al ghayb wa anna Allāh lā yahdī kayda al kha'inīn* كَيْدَ الَّذِي لَا يَهْدِي كَيْدَ الْخَائِبِينَ (So that he may know that I did not betray him in secret; truly God guides not the contrivance of the betrayers) has given rise to three interpretations. According to Ibn Kathīr (1981, 2:449), it is a continuation of the speech of al 'Azīz's wife in conformity with her speech *alāna ḥaṣḥaṣa al ḥaqq* الْآنَ حَصْحَصَ الْحَقُّ (Now the truth has transpired). Al Zamakhsharī (1972, 2:327) claims Yūsuf is speaking in defense of his fidelity to al 'Azīz, while al Qurṭubī (1954, 9:209), representing another view, attributes it to al 'Azīz, who is asserting that he has neither been false to Yūsuf nor declined to reward him for his truthfulness.

On the basis of these views, the compiler faces three interpretations: he can place the phrase under three different headings: *amānat al 'Azīz* أمانة العزيز (al 'Azīz's truthfulness), *amānat imra'at al 'Azīz* أمانة امرأة العزيز (truthfulness of al 'Azīz's wife), and *amānat Yūsuf* أمانة يوسف (Yūsuf's truthfulness). In choosing among these views, the compiler has to decide who is being addressed in this statement. The criterion for adopting one specific view should be justified, clarified, and acknowledged in the retrieval system. Otherwise the three interpretations should be taken into consideration. Each interpretation should present the verse under its related headings with a reference to the other two headings in a footnote.

B. Dis/continuous Statements

In constructing a Qur'anic retrieval system, the compiler's main concern is to place the relevant information under the proper heading. As far as the Qur'anic verses are concerned, the relevant information is not

limited to one verse, for it could very well be part of a single verse or extended to as many verses as indicated by the statement's lexical meaning or syntax. However, abstracting the relevant information from the text could lead to a complete distortion of the Qur'anic statement if the norms of the reading are not followed. One common situation is a continuous/discontinuous statement, which is fully related to the reading's norms rather than to differences in interpretation. This situation, known to Qur'anic scholars as *al waqf wa al ibtidā'* الوقف والإبتداء (al Suyūṭī 1987, 1:180), is essentially linked to the norms of *tilāwah* تلاوة (recitations), which determine where to start and where to end the Qur'anic statement. It is not necessarily determined by the end of the verses, since it is inseparable from the *tilāwah* تلاوة marks. Ignoring these marks would result in a serious misinterpretation of the Qur'anic statement and may lead to a complete failure of representation in the retrieval system. For example:

Hence, woe betide those who pray; who are inadvertent of their prayers. (107: 4-5)

﴿فَوَيْلٌ لِلْمُصَلِّينَ الَّذِينَ هُمْ عَنْ صَلَاتِهِمْ سَاهُونَ﴾ (الماعون ٤-٥)

In the above two verses, the semicolon represents the end of the fourth verse. But according to the rules of *tilāwah* تلاوة and for the sake of completing the meaning of the Qur'anic statements in these two verses, the two should be read as one statement. Reciting them separately produces a statement meaning that "God is warning those who perform the prayer," which is false. On the other hand, if the compiler intends to place such a verse under the heading *al ṣalāh* الصلاة (prayer), which is more likely in terms of the verse's context, the system will produce incorrect and irrelevant information.

Knowledge of *al waqf wa al ibtidā'* الوقف والإبتداء is, therefore, extremely important for the compiler, as the success of his proposed retrieval system depends entirely on providing the user with correct information. If he intends to establish a Qur'anic retrieval system, he

must take special note of the recitation markings and show complete familiarity with the Qur'anic method of structuring the statements.

C. Variant Readings

Variant readings, known among Muslim scholars as *al qirā'āt* القراءات³, refer to the acceptable ways of reciting the Qur'an orally as well as to the punctuation of its written text (al Zurqānī 1943, 1:405) These readings are of special interest to philologists and grammarians due to their interest in lexical richness and dialectical phenomena ('Umar and Makram 1982-1985, 1:za). As far as interpretation is concerned, different readings could lead to different explanations of a single word or phrase that has a specific meaning or a juridical application. If the criterion for selecting the reading is not provided in the retrieval system, this could result in placing the verses under different headings depending on the mode of recitation followed. For example:

O you who believe, approach not the prayer when you are drunken, till you know what you are saying; nor when you are defiled, unless you are traversing a way, until you have washed yourselves. And if you are sick or on a journey, or if any one of you comes from the privy, or you have *lāmastum/lamastum* women, and you can find no water, then have recourse to clean dust and wipe your faces and your hands with it. Surely God is Clement, Forgiving. (4: 43)

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَقْرَبُوا
الصَّلَاةَ وَأَنْتُمْ سُكَارَى حَتَّى تَعْلَمُوا
مَا تَقُولُونَ وَلَا جُنُبًا إِلَّا عَابِرِي
سَبِيلٍ حَتَّى تَغْتَسِلُوا، وَإِنْ كُنْتُمْ
مَرْضَى أَوْ عَلَى سَفَرٍ أَوْ جَاءَ أَحَدٌ
مِنْكُمْ مِنَ الْغَائِطِ أَوْ لَمَسْتُمُ النِّسَاءَ
فَلَمْ تَجِدُوا مَاءً فَتَيَمَّمُوا صَعِيدًا
طَيِّبًا فَامْسَحُوا بِوُجُوهِكُمْ
وَأَيْدِيكُمْ، إِنَّ اللَّهَ كَانَ غَفُورًا
غَفُورًا﴾ (النساء ٤٣)

In the above verse, while *lāmastum* لامستم denotes intercourse, *lamastum* لمستم means touching the skin (al Qurṭubī 1954, 5:223-28). In

view of the above, the compiler is faced with two possible headings: *al mulāmasah* الملامسة (intercourse) and *al lams* اللمس (touching), the lexical meaning of the expression. Thus, depending upon the reading style adopted, the verse in question could be placed under either heading.

Muslim scholars have selected seven of the prevailing recitation styles received from reliable sources¹⁷ as the best transmitted and most approved.¹⁸ Three complementary, but less considered, styles are also approved.¹⁹ The compiler must specify clearly his criterion for selecting a particular style, or else he will have to consider all possible interpretations. The corresponding recitation styles should be indicated in a footnote.

The view advanced here is that the agency undertaking the project has to choose one of the authorized readings that is widespread in the Muslim world. The selection criteria should be linguistic and grammatical correctness according to the norms of the Arabic language, consistency with the Qur'an's literal message, agreement with the written text of 'Uthmān, reliability of the transmission chain back to the Prophet and the correct historical events, and the support of the majority of Muslim scholars. The readings that are maintained and approved by Muslim scholars are:

One: The style transmitted by 'Uthmān ibn Sa'īd (197 AH / 812 CE) —Warsh—which is widespread in northern Sudan, Algeria, Morocco, Mauritania, Eritrea, and West Africa.

¹⁷ These are the readings of Nāfi' ibn 'Abd al Raḥmān (d. 169 AH / 785 CE); 'Abd Allāh ibn Kathīr (d. 120 AH / 737 CE); Ibn 'Āmir Abū 'Umrān 'Abd Allāh (d. 118 AH / 736 CE); 'Āṣim ibn Abī al Najjūd (d. 127 AH / 744 CE); Abū 'Imārah Ḥamzah (d. 156 AH / 772 CE); and Abū 'Abd al Ḥasan al Kasā'ī (d. 189 AH / 804 CE); see 'Umar and Makram, *Mu'jam al Qirā'āt*, 1982-1985, 1:79-81.

¹⁸ These are the readings that are correct according to Arabic grammar, agreement with the written text of 'Uthmān, and can be traced back to the Prophet Muhammad. See al Zurqānī, *Manāhil al 'Irfān*, 1943, 1:417.

¹⁹ These are the readings of Abū Ja'far ibn al Qa'qā' (d. 130 AH / 748 CE), Abū Muḥammad Ya'qūb (d. 205 AH / 820 CE), and Abū Muḥammad Khalaf (d. 229 AH / 844 CE). See 'Umar and Makram, *Mu'jam al Qirā'āt*, 1982-1985, 1:91-93.

Two: The style transmitted by ‘Isā ibn Mīnā (205 AH / 821 CE)—Qālūn—which is widespread in Tunisia and Libya.

Three: The style transmitted by Ḥafṣ ibn ‘Umar (246 AH / 860 CE), which is widespread in most of Sudan.

Four: The style transmitted by Ḥafṣ ibn Sulaymān (180 AH / 796 CE), which is widespread in almost all other parts of the Muslim world.

Adopting one recitation style, however, will limit the problem to one of difference in pronunciation rather than one of interpretation, since the differences in these styles are only in pronunciation. The compiler has to accept all such differences and present each verse under its heading with a footnote reference to the other styles. This footnote should indicate that the verse includes different opinions depending on the recitation of a word(s).

2.3. Historical Aspects

Historical information from the prophetic traditions and biblical stories shed light on the surrounding circumstances of individual revelations and related information that could act as a constraint in applying the understanding of certain Qur’anic verses. Contradictory reports could, however, create a problem for the compiler who has to adopt a single view to make his decision. The following are examples of the problems that he could face when dealing with historical contexts.

A. Occasions of Revelation

Various verses of the Qur’an were revealed in the context of particular events and circumstances, a situation known among Qur’anic scholars as *asbāb al nuzūl* أسباب النزول (occasions of revelation) (al Wāḥidī 1983, 4). Such information, when related to specific verses, enables one to shed light on their implications and immediate meanings. For instance, consider the following example:

Unto God belong the east and the west. Thereafter, whichever direction you turn, there is the face of God, for He is All-Embracing, All-Knowing. (2:115)

﴿وَاللَّهُ الْمَشْرِقُ وَالْمَغْرِبُ فَأَيْنَمَا تُوَلُّوا فَثَمَّ وَجْهَ اللَّهِ إِنَّ اللَّهَ وَاسِعٌ عَلِيمٌ﴾ (البقرة ١١٥)

If the compiler here refers only to the verse's semantic content, he may conclude that it instructs Muslims to face any direction when performing their prayer. However, it is known that Muslims must face the Ka'bah for their prayer to be valid. If this particular verse's surrounding circumstances are not taken into account, the compiler may place the verse under the heading *ittijāh al ṣalāh* إتيجه الصلاة (direction of praying), which would be incorrect and supply irrelevant information. After the surrounding circumstances have been taken into account, however, one learns that the verse was revealed in relation to a group of Muslims travellers who, on a gloomy dark night, were unable to determine the direction of the Ka'bah when it was time to pray (ibid., 20)

However, there are different occasions of revelation that respond to particular situations. These were either revealed as different verses in response to a particular incident or as different views on a single verse. Such incidents and views sometimes give rise to a difference of opinion among the commentators. For the compiler, it is again a matter of placing the verse under the proper heading. For example:

The only reward of those who fight God and His messenger, and roam in the land corrupting shall be to be slain, or crucified, or to have their hands and feet alternately cut off, or to be banished from the land. That for them will be an ignominy in this world, and in the hereafter they shall have a great torment, save those who are

﴿إِنَّمَا جَزَاءُ الَّذِينَ يُحَارِبُونَ اللَّهَ وَرَسُولَهُ وَيَسْعَوْنَ فِي الْأَرْضِ فَسَادًا أَنْ يُقَتَّلُوا أَوْ يُصَلَّبُوا أَوْ تُقَطَّعَ أَيْدِيهِمْ وَأَرْجُلُهُمْ مِنْ خِلَافٍ أَوْ يُنْفَوْا مِنَ الْأَرْضِ ذَلِكَ لَهُمْ خِزْيٌ فِي الدُّنْيَا وَلَهُمْ فِي الْآخِرَةِ عَذَابٌ عَظِيمٌ إِلَّا

contrite before you overpower them. Hence, know you that God is Forgiving, Merciful. (5:33-34)

الَّذِينَ تَابُوا مِن قَبْلِ أَنْ تَقْدِرُوا
عَلَيْهِمْ فَاعْلَمُوا أَنَّ اللَّهَ غَفُورٌ
رَّحِيمٌ ﴿المائدة: ٣٣-٣٤﴾

In relation to the above verses, al Qurṭubī (1954, 6:148-50) provides three Hadiths, each of which represents an occasion to which the verse applied and one view narrated by the jurists. The three views related to the occasions of revelation are *al mushrikīn* (المشركين) (polytheists), *al murtaddīn* (المرتدين) (apostates) such as the clan of 'Urayna, and the *ahl al kitāb* (أهل الكتاب) (People of the Book). On the other hand al Qurṭubī, who refers to the jurists, asserts that this verse is a reference to God's law to all Muslim transgressors and that it is tantamount to violating a territory.

Considering al Qurṭubī's views about the occasions of revelation, the compiler is provided with three possible headings under which the verse can be placed: *al mushrikīn* (المشركين), *al murtaddīn* (المرتدين), and *ahl al kitāb* (أهل الكتاب). If he agrees with al Qurṭubī's opinion that the verse refers to all Muslim transgressors, then he has to place the verse under the heading *al ifṣād fī al arḍ* (الإفساد في الأرض) (corruption in the land). If he takes into consideration the surrounding circumstances of the revelation, the choice between the first three headings (i.e., the three different reports) should be on the basis of authentication. Al Zurqānī (1943, 1:109-113) provides criteria for evaluating the reports concerning the occasion of revelation:

One: Authenticate the correct statement if there are two contradictory narrations.

Two: Validate the more likely statement if both have equal claims to truth.

Three: Accept the two, since both are equally valid.

Four: Interpret the two as identical, since they repeat the same statement.

If the compiler wishes to choose between the occasion of revelation and the jurists' opinions, then he has to provide the other interpretation in the footnote so that the user can refer to the other views.

B. General and Specific Statements

The Qur'an includes many verses in the form of general statements with a very wide range of application. These verses refer to all human beings or to Muslims regardless of time and place. However, certain verses are restricted, in the sense that they address only a certain class of people or are intended for specific circumstances. Qur'anic scholars used to refer to such general and specific statements as *al 'āmm wa al khāṣṣ* العام والخاص. (al Suyūṭī 1987, 2:32). As the purpose of a Qur'anic subject retrieval system is to provide the user with precise information, the compiler should use a great deal of caution when deciding where to place a general and specific statement. For example:

Divorced women shall wait by themselves three menstrual courses ... (2:228)

وَالْمُطَلَّاتُ يَرْتَضْنَ بِأَنفُسِهِنَّ ثَلَاثَةَ قُرُوءٍ... ﴿البقرة: ٢٢٨﴾

O you who believe, if you marry believing women, and you divorce them before you touch them, you shall have no waiting period to reckon on them ... (33:49)

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا إِذَا نَكَحْتُمُ الْمُؤْمِنَاتِ ثُمَّ طَلَقْتُمُوهُنَّ مِنْ قَبْلِ أَنْ تَمْسُوهُنَّ فَمَا لَكُمْ عَلَيْهِنَّ مِنْ عِدَّةٍ تَعْدُوهُنَّ...﴾ (الأحزاب: ٤٩)

And those of your women who despaired of menstruating, if you are in doubt, (during the waiting period) then their waiting period shall be three months; and those too who have not menstruated as yet ... (65:4)

﴿وَاللَّاتِي يَسْنَنَ مِنَ الْمَحِيضِ مِنْ نِسَائِكُمْ إِنْ رْتَبْتُمْ فَعِدَّتُهُنَّ ثَلَاثَةَ أَشْهُرٍ وَاللَّاتِي لَمْ يَحِيضْنَ...﴾ (الطلاق: ٤)

... And those who are pregnant, their term is when they deliver their burden ... (65:4)

﴿... وَأُولَاتِ الْأَحْمَالِ أَجَلُهُنَّ أَنْ يَضَعْنَ حَمْلَهُنَّ...﴾ (الطلاق: ٤)

Verse 2:228 is a general statement that addresses all divorced women and serves to establish how long a divorced woman must wait before she can remarry: three menstrual courses. However, verses 33:49 and 65:4 contain three exceptions: women who are divorced before consummating their marriage (they are not entitled to a waiting period), women who are divorced during pregnancy (their waiting period when the baby is born), and women who are divorced and who are uncertain about their menstruation period (they must wait for three months).

In the above case, if the compiler attempts to provide a heading for these three verses, he should make them general enough so that they can include these three cases. For instance, he might select *al talāq wa al 'iddah* الطلاق والعدة (divorce and waiting period) without going into too much detail. If he wants to be more specific, each verse should be placed under a distinct heading that reflects precisely their contents. For instance, *al 'iddah bi hisāb 'adad al ḥayḍāt* العدة بحساب عدد الحيضات (waiting period calculated by menstrual courses) as indicated in verse 2:228, *lā 'iddah 'alā al iṭlāq* لا عدة على الإطلاق (no waiting period) as indicated in verse 33:49, *al 'iddah bi hisāb al wilādah* العدة بحساب الولادة (waiting period considered by delivering a baby) as indicated in verse 65:4, and *al 'iddah bi hisāb al ashhur* العدة بحساب الأشهر (waiting period calculated by months) as indicated in verse 65:4. This is how each general and specific statement should be treated.

In the case of indeterminate verses, the compiler should consider a general heading instead of a specific one. For example:

O you who believe, requital for bloodshedding is decreed for you; **the free man for the free man, the slave for the slave, and the female for the female.** But he

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا كُتِبَ عَلَيْكُمُ الْقِصَاصُ فِي الْقَتْلِ الْحُرِّ بِالْحُرِّ وَالْعَبْدُ بِالْعَبْدِ وَالْأُنثَى بِالْأُنثَى فَمَنْ

who is pardoned by one's (slain) brother, will pay something of blood fine. This is to be carried out in kindness and dealt with in equity. This is an alleviation and mercy from your Lord. But he who transgresses after that will have a grievous torment. (2:178)

غَفِيَ لَهُ مِنْ أَخِيهِ شَيْءٌ فَابْتِغِ
بِالْمَعْرُوفِ وَأَدَاءٌ إِلَيْهِ بِإِحْسَانٍ ذَلِكَ
تَخْفِيفٌ مِنْ رَبِّكُمْ وَرَحْمَةٌ فَمَنْ
اعْتَدَى بِعَدْوٍ ذَلِكَ فَلَهُ عَذَابٌ
أَلِيمٌ ﴿البقرة: ١٧٨﴾

And We decreed for them therein: a life for a life, an eye for an eye, a nose for a nose, an ear for an ear, a tooth for a tooth, and for wounds retaliation. But whoever foregoes it as a charity, that shall be an expiation for him. And whoever judges not by what God has sent down, such as they are the iniquitous. (5:45)

﴿وَكُنَّا عَلَيْهِمْ فِيهَا أَنْ النَّفْسَ
بِالنَّفْسِ وَالْعَيْنَ بِالْعَيْنِ وَالْأَنْفَ
بِالْأَنْفِ وَالْأُذُنَ بِالْأُذُنِ وَالسِّنَّ
بِالسِّنِّ وَالْجُرُوحَ قِصَاصٌ، فَمَنْ
تَصَدَّقَ بِهِ فَهُوَ كَفَّارَةٌ لَهُ وَمَنْ لَمْ
يَحْكَمْ بِمَا أَنْزَلَ اللَّهُ فَأُولَئِكَ هُمُ
الظَّالِمُونَ﴾ ﴿المائدة: ٤٥﴾

Al Wāhidi (1983, 26) asserts that verse 2:178 refers to a specific occasion of revelation: identifying the two Jewish tribes (the Qurayzah and the al Naḍir), who used to exact revenge by slaying a free man for a slave. Ibn Kathīr (1969, 1:215) appeals to the principle of abrogation.²⁰ in which case verse 2:178 is abrogated by verse 5:45, as indicated by the phrase “a soul by a soul” without any classification. Al Qurṭubi (1954, 2:246-47), however, provides another view: verse 2:178 is very specific in revealing that it is an explanation of the generality of verse 5:45.

²⁰ The principle of abrogation emerged in the Qur'an because of verse 2:106 and 16:101 and the unexplained and apparent contradiction of certain verses in relation to other verses or to approved Hadiths. Muslim scholars have differed in their opinions about the genuine existence and extent of abrogation in the Qur'an. In many cases this is due to the mixing of general and specific statements with unexplained ones or to extending the application of the Hadith.

When he comes across such a verse, the compiler should consider the general case by placing the verse under a general heading, for instance *al qatl* القتل (slaying), and explain the circumstances of the revelation in a footnote in connection with the verse to represent the other view. This treatment should be consistent throughout the compilation process, and no attempt should be made to indicate that one view is superior to another.

C. Judaica

The exegetical transmissions from the Prophet, which was passed down by the Companions and their successors, cover all of the Qur'anic verses that require explanation. After the death of the Prophet, scholars of the followers tried to bridge this gulf by relying on their knowledge of the language and the historical circumstances reported in the prophetic traditions. Certain scholars, who were more inquisitive than others, wished to know the details of the various stories surrounding a well-known person, place, or event that was mentioned only indirectly in the Qur'an. In their search for answers, they consulted Muslim converts (the People of the Book), with the result that stories from *isrā'iliyyāt* إسرائيليات (Judaica) found their way into exegeses (Ibn Khaldūn 1981, 439-40). Such information has to be considered while the retrieval system is being compiled. Therefore, the compiler must watch out for contro-versies resulting from different reports. For example, consider:

Have you not known of the people of the Children of Israel after Moses, when they said to a prophet of theirs, "Set up for us a king, that we fight for the cause of God." He said, "Might it be that, if fighting is decreed for you, you will not fight?" They said, "Why should we not fight in the cause of God, when we were

﴿أَلَمْ تَرَ إِلَى الْمَلَأِينَ مِن بَنِي إِسْرَائِيلَ
مِن بَعْدِ مُوسَى إِذْ قَالُوا لَنَبِيٍّ لَّهُمْ
ابْعَثْ لَنَا مَلِكًا نَقَاتِلَ فِي سَبِيلِ
اللَّهِ قَالَ هَلْ عَسَيْتُمْ إِن كُنتُمْ
عَلَيْكُمْ الْقِتَالُ أَلَّا تُقَاتِلُوا قَالُوا وَمَا نَا
أَلَّا نُقَاتِلَ فِي سَبِيلِ اللَّهِ وَقَدْ

expelled from our habitations and left our children?" But when fighting was decreed for them, they turned away except a few. Surely God is Cognizant of the iniquitous. (2:246)

أَخْرَجْنَا مِنْ دِيَارِنَا وَأَبْنَائِنَا فَلَمَّا
كُتِبَ عَلَيْهِمُ الْقِتَالُ تَوَلَّوْا إِلَّا قَلِيلًا
مِنْهُمْ وَاللَّهُ عَلِيمٌ بِالظَّالِمِينَ ﴿٢٤٦﴾
(البقرة: ٢٤٦)

In this verse, it is not clear whether the prophet referred to is one of those who are mentioned in the Qur'an. Many disputes about this prophet's name have arisen as a result. Al Ṭabarī (1954, 5:291-92), who based his opinion on different authorities, concludes that he was a prophet named *Sham'un* شمعون (Shamun), whose mother had prayed to God for a son. When her prayer was answered, she named her son Shamun, meaning "God has heard my prayer." Al Ṭabarī also relates that the prophet's name was *Usha'* يوشع (Joshua), a word based on a literal reading of the phrase "after Moses." Al Suyūfī (1987, 2:316), who has a full chapter in his *Itqān* on the unknown persons in the Qur'an (*al mubhamāt* المبهمات), states that the prophet's name was *Sham'un* شمعون, *Yusha'* يوشع, and *Ismā'il* إسماعيل (Ishmael), while al Qurṭubī (195 , 3:243-44) states that he was *Sham'un* شمعون, *Ismā'il* إسماعيل, and *Sam'un* سمعون (Samun).

In such a case, the compiler is presented with four possible headings under which the verse could be placed was *Sham'un* شمعون, *Sam'un* سمعون, *Ismā'il* إسماعيل, and *Yusha'* يوشع. The criterion used when accepting or rejecting any of these names should be determined by the compiler's consultation of the authentic Hadith. If such information is not provided, consideration should be given to Ibn Taymīyah's (d. 728 AH / 1328 CE, 1979, 56-) classification: (a) those known to be false and (b) those which are not known to be either true or false. As for (a), Ibn Taymīyah states that all should be rejected. As for (b), he asserts that it is very important that one neither believe nor deny them. His last statement is based on the Prophet's saying: "If the People of the Book tell you something, do not accept it as true or reject it as false, for they may tell you

something true and you may reject it as false, or they may tell you something which is false and you may accept it as true.”

When it comes to indexing such a statement, its validity is related to the significance the compiler wishes to attach to such details. These details could be of great importance for compilers in the field of history but may not make much difference in other fields. In the case of the former, the authenticity of the reports should be provided in a footnote to eliminate any doubt about the sources. Otherwise, it is recommended that such details be avoided. Following such a policy will prevent the compiler from providing dubious information.

2.4. Theological Aspects

Throughout the centuries of Muslim scholarship, different opinions have been introduced into the field of exegesis. As each opinion reflects the intellectual efforts of Muslims in different branches of thought, there could be seven or more different opinions on the interpretation of a single Qur’anic word or phrase. These differences can be found not only among the authorities of different sects, but also among those within the same sect. The compiler must, therefore, be aware of the fact that a commentator, when dealing with one or more verses, might reveal or try to impose his own doctrine. In such cases, the compiler must have developed his set of criteria in order to determine what to choose and what to leave out.

A. The Sects

The sects and related schools concentrated their attention on interpreting those verses that strengthened their views on the foundation of the Qur’anic words. Anything contrary to these doctrines was explained away through allegorical or rhetorical manipulation of the main word in the verse. For example, Mu’tazili commentaries reflect the influence of the sect’s doctrines when it comes to interpreting those

Qur'anic verses that support their beliefs (al Dhahabī 1967, 1:372).²¹ For example:

Say: “I take refuge with the Lord of the creation, *min sharr mā khalaq*, and from the evil of the complete darkness when it enshrouds, and from the evil of those who inspire complexities and from the evil of an envier when he envies.” (113:1-5)

﴿قُلْ أَعُوذُ بِرَبِّ الْفَلَقِ، مِنْ شَرِّ مَا خَلَقَ، وَمِنْ شَرِّ غَاسِقٍ إِذَا وَقَبَ، وَمِنْ شَرِّ النَّفَّاثَاتِ فِي الْعُقَدِ، وَمِنْ شَرِّ حَاسِدٍ إِذَا حَسَدَ﴾ (الفلق: ١-٥)

Traditional Sunni commentators interpret the phrase *min sharr mā khalaq* literally: “from every evil of what God created.” This could be Satan, Hell, or any evil thing (al Qurṭubī 1954, 20:256; Ibn Kathīr 1969, 4:613). Al Zamakhsharī (1972, 4:300), a Mu'tazilī commentator, believes that it is not worthy of God's justice and rationality to create evil and therefore interprets this phrase as meaning “from His creatures' evil behavior” or, as he states, *min sharr khalqih* من شر خلقه. He states further that this is normally when intelligent creatures engage in such evil acts as corruption, sin, and mutual harm and that it includes whatever unintelligent creatures do (i.e., when animals bite) as well as

²¹ Mu'tazilī is the name of the great theological school that created the speculative dogmatics of Islam. Its adherents' name, taken from the Arabic *mu'tazilah*, was derived from a schism that took place in the circle of al Ḥasan al Baṣrī over the intermediate state between belief and unbelief. Wāṣil ibn 'Aṭā' and 'Amr ibn 'Ubayd are said to have separated (Arabic *i'tazalā*) from the circle in order to establish an independent school. Mu'tazilī theology and related theological schools are summed up under five principles: 1) The absolute unity of God, which involves the creation of the Qur'an and the impossibility of seeing God physically either in this world or in the hereafter; 2) God only creates what is just and, as a rational God, does only what is good for man; 3) People who commit major sins occupy an intermediate state between belief and unbelief; 4) Those who commit a major sin and die before repentance will suffer eternal punishment in hell; and 5) Drawing a sword for enjoining good and forbidding evil is a necessary duty if evil cannot be removed in any other way. See al Dhahabī, *al Tafṣīr*, 1967, 1:368-71.

the ability that God placed in things that can cause harm, such as fire or poison.

By comparing the above two interpretations, the compiler is likely to place the verse under the heading *al makhlūqāt al sharīrah* المخلوقات الشريرة (evil creatures), if he decides to adopt al Zamakhsharī's view. However, if he chooses the traditional Sunni interpretation, this passage will be placed under the heading *al shar-khalquh* الشر - خلقه (God's evil creation).

If the compiler wishes to refer to al Zamakhsharī's views that differ from traditional commentators, he is likely to provide references to other views in a footnote and to indicate in the acknowledgement the criteria used for selecting a certain type of exegesis. Ibn Taymīyah (1979, 82) was highly critical of Mu'tazilī commentaries and paid special attention to that of al Zamakhsharī, which he considered to be an attempt to force the Qur'an to accept unfamiliar meanings. Although competent Muslim scholars recognize that al Zamakhsharī was a master of the rhetorical and stylistic language of the Qur'an, they also warn those Muslims who are seeking linguistic interpretations of the dangers of al Zamakhsharī's unorthodox commentary (al Dhahabī 1967, 1:435-43).

Another difference in opinions can also be seen when dealing with Shi'i commentators,²² who use Qur'anic verses to prove their theological doctrine concerning the privileged and exalted status of 'Alī and the Prophet's intention to appoint him as his successor. They also mention statements on the authority of their Imams to derive interpretations of the Qur'anic verses to their liking (ibid., 2:12). For example:

And when His Lord tried Abraham
with words which he fulfilled,

﴿وَإِذَا ابْتَلَىٰ إِبْرَاهِيمَ رَبُّهُ بِكَلِمَاتٍ

²² The Shi'is is the general name for a large group of very different Muslim sects. The name Shi'i [Arabic *shi'ah*] more precisely *shu'at 'Alī*, means the party of 'Alī. Their fundamental article is that the imamate is an essential base of Islamic belief and is not an issue to be left to a public decision. The Prophet is the one responsible to fill the imamate office, and 'Alī ibn Abī Ṭālib is his legitimate successor (caliph). See Muḥammad ibn 'Abd al Karīm al Shahrastānī, *al Milal wa al Niḥal*, 1976, 146.

He said “I have made you an *Imam* for the people.” He said, “And of my descendants?” He said, “My covenant shall not extend to the iniquitous.” (2:124)

فَأَتَمَّنْ قَالَ إِنِّي جَاعِلُكَ لِلنَّاسِ
إِمَامًا قَالَ وَمَنْ ذُرِّيَّتِي قَالَ لَا يَبْتَاعُ
عَهْدِي الظَّالِمِينَ ﴿البقرة: ١٢٤﴾

Sunni commentators refer to the statement *fa'atammahun* فَأَتَمَّنْ (which he fulfilled) as “the missions that God appointed Abraham to fulfil” (al Qurṭubī 1954, 2:97; Ibn Kathīr 1969, 1:170). Al Ṭabarī (1954, 3:15), who is more cautious, prefers not to specify the *kalimāt* كلمات (words) with which God tested Abraham. He argues that there is not mention of these words in the Qur'an and that there is not an accepted prophetic hadith concerning this matter. However, both al Ṭabarī (ibid., 3:18) and al Qurṭubī (1954, 2:107) explain the statement *innī jā'iluka li al nās imāmā* إِنِّي جَاعِلُكَ لِلنَّاسِ إِمَامًا (I have made you an Imam for the people) as “I shall make you a leader of those who shall come after you of the people who have faith in me and my messengers.”

Shi'i tradition, as presented by al Ṭabarsī (d. 538 AH / 1143 CE), teaches the doctrine of the Imāmate and uses this particular verse to prove that there is emphatic support for their position. Al Ṭabarsī (1961, 1:454-56) appeals to the authority of al Mufaḍḍal ibn 'Umar al Ju'fi, who asked Ja'far al Ṣādiq about the *kalimāt* كلمات. The latter said: “These were the words that Adam received from his Lord, and He turned toward him. This is what Adam said: ‘My Lord, I beg you, for the sake of Muhammad, Fātimah, 'Alī, Ḥasan, and Ḥusayn to turn toward me, and He turned toward him, for truly He is the Relenting, the Merciful.’”²³ Al Mufaḍḍal further asked: “O son of the prophet of God, what does He mean by His saying, *fa'atammahun* فَأَتَمَّنْ (which he fulfilled)?” He answered: “He enumerated them [the imams] till the one who shall be raised by God: twelve imams, nine of whom are of the descendants of Ḥusayn.” Al Ṭabarsī asserts further that God made Abraham an imam

²³ See verse (2:37).

after He had made him a prophet. Thus the station of an imam is higher than that of a prophet, but lower than that of an apostle.

Based on the above interpretation, the compiler would place the verse, for instance, under the heading *Adam* آدم, because the phrase refers to what was revealed to Adam. It could also be placed under the heading *al Qā'im* القائم, the twelfth imam, since the concept of imamate is considered in the interpretations. On the other hand, if the compiler is referring to the Sunni view, the whole verse would be placed under the heading *Ibrāhīm* إبراهيم (Abraham).

The criterion for selecting the headings should reflect the obvious lexical meaning. However, in choosing a criterion for selecting the commentaries, an initial operational study should be made. A recent study by Ayoub (1984), an Arab scholar of Shi'i background, presented the understanding of the Qur'an offered by significant interpreters of different schools of thought. Ayoub is quite clear about what he is seeking to accomplish, for the book's explanatory notes seem not to reflect his own understanding of the Qur'anic verses but rather to crystallize the main trends in Islamic thought, as expressed in some major commentaries, from the classical period to the present era. His role is that of a scholar/reporter. To achieve this, he selected the first two chapters and applied the test to them. In this examination, Ayoub reports those trends in Qur'anic interpretation that depend primarily on traditional sources from the Prophet. The Shi'i commentators selected to represent the classical Shi'i view are al Qummī (d. 320 AH / 939 CE) and al Ṭabarsī, and Ṭabaṭābā'ī represents the modern Shi'i school.

Another, and more interesting, difference in interpretation would arise if the compiler were also to refer to Khariji commentaries.²⁴ As

²⁴ Kharijis are members of the earliest Muslim sect. They never had a true uniform body of doctrines, though their teachings seem to hold the views of a number of independent subsects. The name Khariji [pl. *khawārij*] was linked with the proposal presented to 'Alī ibn Abī Ṭalīb by Mu'awiyah ibn Abī Sufyān during the battle of Ṣiffīn to settle the differences, arising from the murder of 'Uthmān ibn 'Affān, by referring it to two arbitrators who judge according to the Qur'an. A portion of 'Alī's army vigorously protested against the establishment of a human tribunal above the word of God. They departed ("went out" [Arabic *Kharajū*]) to form a rebel camp, to which the sect

followers of this sect interpret the Qur'an in light of their doctrine, anything contrary to this doctrine is explained away by allegorical or rhetorical manipulation of the main word in the verses. For example:

And if two parties of the believers fight one another, reconcile between them. But if one of them becomes aggressive against the other, then fight the one that is aggressive till it reverts to God's behest. Then, if it reverts, reconcile between them with equity and be just, for truly God loves the just. Surely the believers are brethren; so reconcile between, and venerate God, that perhaps you have mercy. (49:9-10)

﴿وَإِنْ طَائِفَتَانِ مِنَ الْمُؤْمِنِينَ
اِقْتَلُوا فَأَصْلِحُوا بَيْنَهُمَا فَإِن بَغَتْ
إِحْدَاهُمَا عَلَى الْأُخْرَى فَقَاتِلُوا الَّتِي
تَبْغِي حَتَّى تَبْغِيَ إِلَى أَمْرِ اللَّهِ فَإِن
فَاءَتْ فَأَصْلِحُوا بَيْنَهُمَا بِالْعَدْلِ
وَاقْسِطُوا إِنَّ اللَّهَ يُحِبُّ الْمُقْسِطِينَ،
إِنَّمَا الْمُؤْمِنُونَ إِخْوَةٌ فَأَصْلِحُوا بَيْنَ
أَخَوَيْكُمْ وَأَقْبُوا اللَّهَ لَعَلَّكُمْ
تُرْحَمُونَ﴾ (الحجرات: ٩-١٠)

Traditional Sunni commentators refer to the statement *wa in ṭā'ifatān min al-mū'minīn iqtatalū* (if two parties of the believers fight one another) as a clear indication from God that Muslims could fight each other and still be called believers (Ibn Kathīr 1969, 4:225; al Qurṭubī 1954, 16:317). However, they understand *fa'aṣliḥū baynahumā* (reconcile between them) as referring to those who are trying to reconcile the two parties and to make sure that they will not ask for retaliation or blood-money.

Khawārij owes its name. Their most common article of faith is the free vote of the community to appoint the caliph. This includes the right of every believer who is morally and religiously irreproachable to become caliph (the qualification of being a member of the Quraysh tribe by birth is not required), and the believers' duty to proclaim illegitimate and depose a caliph who has deviated from the path of God. A related belief is the absolute rejection of the doctrine of justification by faith without works. This serves to treat those who commit a major sin as unbelievers. See al Dhahabī, *al Tafsīr*, 1967, 2:300-302.

A Khārijī commentator by the name of Iṭfish (d. 1332 AH / 1914 CE; n.d., 12:517), in accordance with the fundamental Khārijī view that rejects the arbitration between 'Alī ibn Abī Ṭālib and Mu'āwiyah ibn Abī Sufyān, writes that it refers to appointing arbitrators from both sides to vote for the caliph instead of blood-shedding. In his commentary, he interprets the above verse by claiming that reconciliation is justified by advice and calling for God's judgment and not human agreement. Iṭfish further justifies his interpretation that both parties are no longer considered believers by saying that the believers mentioned in the verse refers to the state they held before aggression.

On the other hand, the phrase *innamā al mū'minūna ikhwah fa'aṣliḥū bayna akhawaykum* إِنَّمَا الْمُؤْمِنُونَ إِخْوَةٌ فَأَصْلِحُوا بَيْنَ أَخَوَيْكُمْ (Surely the believers are brethren; so reconcile between them) refers to their state before the fighting started. Iṭfish bases his argument on the Prophet's statement that no person claiming to be a believer commits adultery or drinks alcohol. Note that Iṭfish distinguishes between believers only in name and those committed to their beliefs.

The compiler, faced with the above interpretation, is entitled to place the verse under the heading *al ihtikām ilā Allāh* الإحتكام إلى الله (calling for God's judgment) if he accepts Iṭfish's understanding. If the Sunni interpretation is accepted, however, the compiler will use the heading *al iṣlāḥ* الإصلاح (calling for reconciliation). Certainly it depends on the compiler whether the Khārijī view is acceptable or not, though he has to provide, in any case, a justification for his choice or provide a footnote related to the verse in question. According to al Dhahabī (1967, 2:320), the most important Khārijī source is the commentary of Iṭfish.

Another common difference of opinion among commentators results from adopting a mystical, as opposed to a lexical, approach. The Sufis interpret the Qur'an on the basis of the exegete's transcendental intuition.²⁵ Such a commentary is characterized by the esoteric expression of

²⁵ Sufi is the name given to the Sunni orders that concentrate on the inner dimension of worship. Each order is subdivided into groups that are usually named after the founder of the order. The word Sufi (Arabic *sufiyah*) appeared for the first time in relation to the wearing of *sūf* (a cloak of white wool). Later on, the term was applied to the

hidden meanings and the central themes of the spiritual aspects of human life and the vanity of the world. Sufi commentaries have been recognized as representing the mystical approach, which is a manifestation of the spiritual aspect of the Qur'an's teaching (al Zurqānī 1943, 1:546-47). For example:

God, there is no god but He, the Living, the Eternal Sustainer. Neither slumber takes Him, nor sleep. His is what is in the heavens and what is in the earth. Who is it that intercedes with Him save by His leave? He knows what lies before them and what is behind them. And they grasp naught of his knowledge, but of what He wills. His *kursīy* embraces the heavens and the earth and it tires Him not to uphold them both. (2:255)

اللَّهُ لَا إِلَهَ إِلَّا هُوَ الْحَيُّ الْقَيُّومُ
لَا تَأْخُذُهُ سِنَّةٌ وَلَا نَوْمٌ لَهُ مَا فِي
السَّمَاوَاتِ وَمَا فِي الْأَرْضِ مَنْ ذَا
الَّذِي يَشْفَعُ عِنْدَهُ إِلَّا بِإِذْنِهِ، يَعْلَمُ مَا
بَيْنَ أَيْدِيهِمْ وَمَا خَلْفَهُمْ وَلَا يُحِيطُونَ
بِشَيْءٍ مِنْ عِلْمِهِ إِلَّا بِمَا شَاءَ، وَسِعَ
كُرْسِيُّهُ السَّمَاوَاتِ وَالْأَرْضَ وَلَا
يَئُودُهُ حِفْظُهُمَا، وَهُوَ الْعَلِيُّ
الْعَظِيمُ ﴿ (البقرة: ٢٥٥)

Such Sunni commentators as al Qurṭubī interpret the word *kursīy* كرسى as an actual object that contains both the heavens and the earth, as the place of the footstool of God, and that it has a squeaking sound like that of a new saddle. Ibn 'Arabī (d. 638 AH / 1241 CE, 1978, 1:143), a Sufi commentator, interprets the word *kursīy* كرسى as *ilm* العلم (knowledge) and asserts that “the *kursīy* is the locus of knowledge, as the heart is the locus of knowledge”. He interprets the phrase *wa lā ya 'ūduhu ḥifẓuhumā* وَلَا يَأُودُهُ حِفْظُهُمَا (and it tires Him not to uphold them both) to mean “their preservation does not burden Him, because they may have no existence without Him. Rather the realm of the ideal form is His inner dimension, and the realm of forms is His outer dimension.” The com-

whole body of Muslim mystics as the term is used today. See al Dhahabī, *al Tafsīr*, 1967, 2:337.

piler faced with the above two interpretations will place the verse under the heading *'arsh al Raḥmān* عرش الرحمن (God's throne) if the traditionalist view is followed, but under *al 'ilm* العلم (knowledge) if Ibn 'Arabī's view is adopted.

As a matter of fact it is difficult to consider any mystical approach in constructing any retrieval system, as such an approach is based on esoteric interpretations of the hidden meaning, which can hardly be guessed by the user. Any attempt to use a hidden meaning as opposed to the lexical one could lead to a failure in recall, as the lexical meaning is the main key to the user, the final beneficiary. Al Zurqānī (1943, 1:549) offers three rules for accepting the mystical interpretation: it should not contradict the apparent meaning of the style of the Qur'an, it should not claim exclusive authority in enfolding the true meanings of the Qur'an, and it should provide legitimate proof for itself.

To conclude, the majority of Sunni Muslim scholars have been highly critical of commentaries representing a specific school of thought or a mystical point of view. The difference in methodology was classified as: *tafsīr bi al ma'thūr* تفسير بالمأثور,²⁶ *tafsīr bi al ra'y* تفسير بالرأي,²⁷ and *tafsīr ishārī* تفسير إشاري.²⁸ A wide variety of *tafsīr bi al ra'y* have been offered, each of which is considered a symbol that represents one school of thought or one specific theme. They are grouped into two types, according to their authenticity: *tafsīr maḥmūd* تفسير محمود²⁹ and *tafsīr madhmūm* تفسير مذموم.³⁰ Regardless of this trend, the intention is to consider the different schools of thought, since their opinions in connection

²⁶ These are explanations of the Qur'an that can be traced back to source materials: the Qur'an, the Prophet, and the Companions who were best known for their knowledge of interpretations. Such commentary is regarded as a continuation of the transmission chain of the Companions and their followers.

²⁷ These are explanations of the Qur'an which are based on sound opinion.

²⁸ These are interpretations in which an explanation of any passage or verse is an interpretation that transcends its outer meaning. It is found, mainly in Sufi commentaries.

²⁹ These are explanations that agree with the sources of interpretation, i.e., Islamic law, historical evidence, and the rules of the Arabic language.

³⁰ These are explanations that are given without a proper knowledge of the sources of interpretation.

with the compilation of the retrieval system are more liable to be considered as differences in interpretation than as schools of thought.

As the Qur'an has many levels of meaning, those which stem from the basic attitude of Sunni commentators cannot be taken as the only ones that are useful for understanding the Qur'anic message. The compiler is not obliged to follow the above grouping of exegeses and may even reject some of them in their entirety. Alternatively, he should develop his own criteria for accepting and rejecting an interpretation of a single word, verse, or passage based on the type of system adopted. Specifically, this should fulfil the essential qualifications of interpretation. These are the qualifications of commentators suggested by al Suyūfī: the commentator must have sound faith, strictly observe the precepts of Islam, and avoid erroneous views and spurious traditions; he must have a good intention in undertaking this task (i.e., acquiring wealth or prestige should not be his objective); and he must be an authority in the Arabic language, since linguistic ability is the main tool used to understand the Qur'anic text. Al Suyūfī (1987, 2:397-99) states that if an individual intends to explain the Qur'an by his own judgement, he must have knowledge of at least fifteen important exegetical sciences: language, philology, grammar, derivation, lexical meanings, rhetoric, metaphor, variant readings, foundations of religion, foundations of jurisprudence, occasions of revelation and stories, abrogator and abrogated, jurisprudence, hadith, and talent.

B. The Modernists

The term "modernist" has been employed in this context to refer to a type of Qur'anic interpretation that has as its main concern the understanding of the Qur'an in such a way as to fulfil the requirements of modern society rather than to simply deal with theological and mystical disputes. The modernist view is that many traditional interpretations have lost their validity due to changes in social and scientific conditions (al Dhahabī 1967, 2:495-504). The modernist attempt to reconcile Qur'anic statements with the needs of modern society and science has

been rejected by supporters of the traditional philological and juridical interpretation of the Qur'an, who fear that its verses might be taken to legitimize modern western science and thereby lose their eloquence and style. Their views are based on the belief that the Qur'an should be understood by Arabs in the way it was understood by the early Muslims.

One type of modernists who must be considered by the compiler of a scientific Qur'anic retrieval system are individuals who seek to prove that all sciences have been mentioned or hinted at in the Qur'an (ibid., 2:485-94) The adherents of *al tafsīr al 'ilmī* التفسير العلمي (scientific interpretation), who dominate among the foreign philosophical and scientific influence in the Muslim world, want to draw the attention of the orientalisks to the fact that the Qur'an hinted at specific modern sciences fourteen centuries ago. Among them is Maurice Bucaille, who presents various verses to prove that there is incontrovertible evidence to support his view that the Qur'an clearly mentions ideas only recently confirmed by contemporary science. For instance, in the case of the verses:

And it is He who created the night and the day, and the sun and the moon, each swimming in an orbit. (21:33)

﴿وَهُوَ الَّذِي خَلَقَ اللَّيْلَ وَالنَّهَارَ
وَالشَّمْسَ وَالْقَمَرَ كُلٌّ فِي فَلَكٍ
يَسْبَحُونَ﴾ (الأنبياء: ٣٣)

It is not for the sun to overtake the moon, nor can the night outstrip the day. And each, in its orbit, is swimming. (36:40)

﴿لَا الشَّمْسُ يَنْبَغِي لَهَا أَنْ تُدْرِكَ
الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ وَكُلٌّ
فِي فَلَكٍ يَسْبَحُونَ﴾ (يس: ٤٠)

Bucaille's (1982, 166) interpretation is:

Here an essential fact is clearly stated: the existence of the Sun's and Moon's orbits, plus a reference is made to the travelling of these bodies in space with their own motion.

A negative fact also emerges from a reading of these verses: it is shown that the Sun moves in an orbit, but no indication is given as to what this orbit might be in relation to the Earth. At the time of the Qur'anic Revelation, it was thought that the Sun moved while the Earth stood still.^[31] This was the system of geocentrism that had held sway since the time of Ptolemy, Second century B.C., and was to continue to do so until Copernicus in the sixteenth century CE. Although people supported this concept at the time of Muhammad, it does not appear anywhere in the Qur'an, either here or elsewhere.

In relation to this view, Denffer (1985, 157-58), a conservative supporter of the eloquence and style of the Qur'an, makes his point in rejecting Bucaille's attempt in these words:

But it is precisely this point which led to the great Copernican controversy only a few centuries ago and previously it was staunchly asserted that the sun revolves around the earth! What guarantee is there that no new perspective in science will completely alter our present view? This is the best example to show that we should not accept scientific facts as absolute truths. They are rather what we presently know about them.

The effort of al Bannā represents an "intermediate" stage. He attempts to elicit the Qur'anic position on scientific discoveries by dividing them into two categories: those theories that have been verified and hence become self-evident facts, and those theories or assertions that have yet to be verified. The first category is consistent with what the Qur'an has revealed: the formation of clouds, the development of an embryo, and the fertilization of plants by the wind, for example. It is

³¹ al Qurtubī's remark on verse (13:3) is that it refutes the claim that the earth is shaped like a ball. He further adds that both Muslims and the People of the Book consider the earth as flat and stationary. Its movement is only due to earthquakes. See al Qurtubī, *al Jāmi'*, 1954, 9:280.

unfair, however, argues al Bannā (1979, 21-22), to compare the second category with their counterparts in the Qur'an (i.e., the origin of man, the truth and reality of life and being, and the beginning of the cosmos), since the Qur'anic statements are true by nature and therefore need no verification.

In conclusion, the Qur'an has always appeared as a book of many levels. In former times, commentators were only able to distinguish apparent meanings of the verses, which led them to draw conclusions on the basis of the knowledge available at the time in question. Therefore it is appropriate to say that for previous commentators, only certain verses of the Qur'an, whose exact meaning could only be defined by their understanding of the lexical meanings as well as the scientific knowledge of their time, have unavoidably resulted in wrong interpretations. However, as linguistic knowledge was an essential tool for commentators who sought to discover the deep structure of Qur'anic statements, it was the available contemporary knowledge that had an effect on the unwarranted interpretations of the early commentators. The Qur'an is a book that has an absolutely fundamental religious objective, but it only requires interpreters to grasp the meanings of its words in the space-time horizon. However, for scientific tasks, the total context should be studied and no appeals should be made to metaphysical statements, as they do not meet the normal situations. This also goes for such other fields of study as history, philosophy, and so on.

2.5. Conclusion

Many verses were revealed in the form of commands, prohibitions, reports of earlier prophets and their people, parables, and admonitions. Hence their meanings are clear and liable to only one interpretation. Other verses, which are general in application, should be interpreted according to their lexical meanings and informed by their juridical significance as well as historical context so that they can be understood fully. No attempt should be made to impose any inner or outer dimension on the literal sense of these verses. Moreover, the Prophet's life,

sayings, and actions have served as examples for Muslims of all times, and his character should be considered in all practical interpretations of the Qur'an.

CHAPTER THREE

Information Retrieval Problems in Qur'anic Vocabularies

3.1. Overview

The previous chapter has concluded the overall discussion of the general theoretical indexing problems that arise from differences of opinion among commentators regarding the interpretation of various verses of the Qur'an. Dealing successfully with such problems is very important to the compiler of a Qur'anic retrieval system, as one of his major goals is to reduce the element of subjectivity in understanding the text so that he can match the users' needs as closely as possible. However, this discussion has been concluded without seriously considering the criteria that lead the indexer to select word sequences with a particular meaning to represent the subject in mind. In other words, despite the fact that a correct understanding of the Qur'anic verses is very important, since it deals with the text of the Qur'an itself, placing a relevant subject under an imprecise heading will result either in a failure to recall the relevant verses or in the retrieval of irrelevant verses. To close this loophole, a vocabulary control of the headings used to describe these verses is needed. In a controlled language, a heading could also be referred to as an index term, descriptor, or keyword (Lancaster 1972, 115). The preferred norm is to choose a noun to serve as a heading.

This chapter studies vocabulary control as applied to the Arabic language and applies the main ideas in this area to Qur'anic terminology. The issues covered in this chapter are: the ambiguous meanings of certain words, the choice of word forms, the existence of synonyms, methods of organizing and displaying the descriptors, and the relationship among them.

3.2. Homographs

Homographs, as defined in this study, refer to words or phrases with more than one meaning. Indexing homographs raises as to which meaning is intended by the word. The existence of homographs in the Qur'an was recognized at an early date by Muslim scholars. Al Damaghānī (1983) for instance, compiled a whole book of Qur'anic homographs in order to show that a single word can have several meanings. To cite just one example, the word 'ayn عین could refer to *nab' mā'* نبع ماء (a spring of water), *nahr* نهر (a river), 'ayn عین (an eye), *nazar* نظر (seeing), or *ri'āyah* رعاية (care).

Another form of homograph is the artificial one caused by the absence of vowel signs from the Arabic alphabet³². For instance, the word *dyn* دين could be read as *dayn* دَيْن (debt) or *dīn* دِين (religion). Such artificial homographs do not appear in the modern printed copies of the Qur'an, all of which contain the vowel signs.

In the above two cases, unless the compiler provides the user with the exact intended meaning of the word, the user may recall irrelevant verses. For the purpose of indexing, homographs may be treated on two different levels: those related to natural homographs and those related to artificial homographs. Homographs have been qualified by contemporary Arab librarians and information scientists in different ways. For instance, 'Abd al Hādī (1981, 93) has suggested two ways: in relation to natural homographs, first, by adding a qualifier in order to make its meaning more specific, and second, by providing a distinguisher in brackets in front of the homographic word to clarify its meaning. Applying 'Abd al Hādī's first method to the term 'ayn عین this would appear as '*ayn al ibṣār* عین الإبصار (eye), or '*ayn mā'* عین ماء (spring of water), whereas his second method would result in '*ayn (baṣar)* عین (بصر) to denote the meaning "eye" or '*ayn (mā')* عین (ماء) to denote the meaning "spring of water." As for artificial homographs, Aman (1968, 289)

³² Originally, Arabic had no vowel signs. To indicate long and short vowels, early Arab grammarians used the three consonants that come nearest to them in sound: *alif* for *ā*, *yā'* for *ī* and *wāw* for *ū*. Later on short vowels *َ* for *a*, *ِ* for *i*, and *ُ* for *u* were derived from *alif*, *yā'*, and *wāw* respectively.

suggests the use of a clearer equivalent word. For example, a term such as *dyn* دين, which could refer to either *dayn* دَيْن or *dīn* دِين, will be replaced by an unambiguous term that indicates the same meaning, i.e., *qard* قرض (loan) or *diyānah* ديانة (religion).

When dealing with homographs, it may be preferable to keep the distinction between artificial and natural homographs. In the case of the former, vowels should be provided to clarify the meaning. Moreover, it is not necessary to discount the role of the vowel signs or to treat them as natural homographs. Aman's use of a clearer equivalent word is also not necessary, for the correct vowel signs can be provided easily in the printed material. Moreover, replacing one word with another is not always easy, for sometimes there is no exact equivalent for the word being replaced. For instance, Aman's use of *dayn* دَيْن as equivalent to *qard* قرض is not strictly accurate. If his suggestion is accepted, the word *dyn* دين, which refers to religion, should be read as *dīn* دِين, and the word *dyn* دين, which refers to debt, should be read as *dayn* دَيْن. For the treatment of natural homographs, 'Abd al Hadi's second criterion is more practical (i.e. providing a distinguisher between brackets), since adding the qualifier, as required in the first method, requires searching for a suitable specifier and, perhaps, engaging in some grammatical treatment of the phrase in order to fulfil the rules of Arabic grammar. Regardless of which method the compiler faces, he should be aware of all natural and artificial homographs and be systematic when clarifying ambiguous words and providing this information to the user.

3.3. Forms of Terms

With regard to the use of natural language, where the distinction between singular and plural forms is based on the particular context, compilers of information retrieval systems are usually obliged to choose between singular and plural forms in order to limit the choice of possible subject headings. According to Aitchison and Gilchrist (1987, 14), compilers working in French and German prefer the singular, with only a limited number of exceptions, while those working in English tend to

express terms according to rules set out in the manuals. In deciding on the use of singular and plural forms in a Qur'anic retrieval system, the question is whether and when to choose between singular, plural and dual forms? This question should be answered by means of an analysis based on two approaches: empirical, in which terms are extracted from the Qur'an during a primary state of indexing, and by committee, in which terms are suggested by experts in the field (Lancaster 1972, 29-32).

In connection with the empirical approach, a survey by al Suyūfī (1987, 1:409) shows that a word like *ard* أرض (earth) appears in the Qur'an only in its singular form. He argues that this is presumably because its plural *ardūn* أرضون (earths) is very difficult to pronounce. He further adds that, unlike the word *samā'* سماء (sky), whose singular and plural *samāwāt* سماوات are used, the word *ard* أرض always appears in the singular, even if it refers to a plural meaning. In such a case, al Suyūfī notes that the Qur'anic statement takes the form of "God is He who created seven heavens, and of the earth their like" *الله الَّذِي خَلَقَ سَبْعَ سَمَاوَاتٍ وَمِنَ الْأَرْضِ مِثْلَهُنَّ*. On the other hand, al Suyūfī (ibid., 410) provides examples of nouns appearing only in the plural form, such as the word *albāb* أبواب (sensible), and says that this is because the singular form *labīb* لبيب is very difficult to pronounce.

In the case of an irregular plural,³³ the Qur'an follows the norms of the Arabic language and therefore contains different forms of irregular plurals: the form that expresses the sense on numbers, and the form that deals with different concepts. The first form has two subcategories: *jam' al qillah* جمع القلة (plural of small quantity), which signifies a number not less than three and not more than ten, and *jam' al kathrah* جمع الكثرة (plural of large quantity), which signifies a number not less than three but more than ten (Ḥasan 1974, 4:627). In the Qur'an, an example of *jam' al qillah* جمع القلة may be found in the word *ashhur* أشهر (lunar

³³ Arabic has two forms to indicate the plural: a regular plural whose formation results from the addition of the case endings *-ūn* ون, *-īn* ين, or *-āt* ات for the feminine, added to the singular form of the word, and an irregular plural whose formation changes the internal form of the singular by adding or omitting letters.

months), as mentioned in verse 2:197: “Pilgrimage is in the months already known ...” ³⁴الْحَجُّ أَشْهُرٌ مَّعْلُومَاتٌ and an example of *jam' al kathrah* جمع الكثرة in the word *shuhūr* شهور, as mentioned in verse 9:36: “The number of months, with God, is twelve in the Ordinance of God ...” إِنَّ عِدَّةَ الشُّهُورِ عِنْدَ اللَّهِ اثْنَا عَشَرَ شَهْرًا فِي كِتَابِ اللَّهِ. However, where the irregular plural denotes two different concepts, as al Suyūfī argues, the difference between the concepts is very slight but observable. For instance, the Qur'an uses the word *abrār* أبرار (pious) in connection with mankind and the word *bararah* بررة in relation to angels as well as the word *ikhwah* إخوة to indicate spiritual brotherhood and the word *ikhwān* إخوان to indicate friendship (ibid., 9:411).

Empirically, there are three types of duals in the Qur'an. The first type consists of a dual whose singular and plural forms are provided,³⁵ such as *al mashriqayn* المشرقين (two sunrises). Its singular form *al mashriq* المشرق and its plural *al mashāriq* المشارق also appear in the Qur'an. The second type, which designates two different objects, is used as a substantive and denotes a quality that the two have in common, such as *al thaqalān* الثقلان (two weights). In this context, the term *al thaqalān* الثقلان signifies the two worlds of *al ins* الإنس (mankind) and *al jinn* الجن.³⁶ According to al Zamakhsharī (1958, 4:47), the term 'two weights' is used because both mankind and jinn share the same quality: heaviness

³⁴ The reference here is to the three months of Shawwāl, Dhū al Ḥijjah, and Dhū al Qī'dah (al Qurṭubī, *al Jāmi'*, 1954, 2:405).

³⁵ The dual is commonly used to signify two individuals of a class or a pair of things. It is formed by adding *-ān* ان or *-ayn* ين for the masculine and *-tān* تان or *-tayn* تين for the feminine, to the singular. There may or may not be a slight change in the word ending as a result.

³⁶ The word *jinn* جن (sing. *jān* جان) has the root meaning of *janna* جنّ to be covered or hidden. According to the Qur'an *jinn* جن is one of the nations created by God. They have some distinctive features, among them power, speed, and the ability to be visible in different shapes. They are divided into two types: believers and unbelievers. The latter are classified, according to their power and their rejection of the right guidance, into three classes: *shaytān* شيطان (rebels against the divine law and representing the power of evil), *mārid* مارد (the wicked jinn that are more crafty than *shaytān* شيطان), and *'ifrit* عفریت (a large powerful *jinn* جن reputed to be wicked and more powerful than the *mārid* مارد). See 'Umar Sulaymān al Ashqar, *'Alam al Jinn wa al Shayāfīn*, 7-8.

on earth. The third type designates two different objects that are associated constantly with each other due to their natural connection or opposition. In such a case, the dual may be named from either one, such as *al baḥrān* البحرين (two seas). In this context the dual *baḥrān* بحران may designate both *al baḥr* البحر (sea) and *al nahr* النهر (river) (ibid., 4:45).

From the above review of the norms of Qur'anic terminology, it may be concluded that the compiler who wishes to use Qur'anic norms as subject headings is faced with the three forms of words: those that appear only in the singular, dual, or plural; those that appear in the singular, dual, and plural; and those that appear only in the singular and plural.

If the compiler intends to adopt the committee approach rather than the empirical, he will find two different views regarding the use of singular, dual, or plural forms. First, 'Abd al Hādī (1981, 88-89) suggests using the singular form to represent *naw'* نوع (kind), as in *al amānah* الأمانة (trusteeship); to represent *'ilm* علم (a scientific discipline), as in *al iqtisād* الاقتصاد (economics); and to represent *ism jins* إسم جنس (a mass noun), as in *al kitāb* الكتاب (book). He also suggests limiting the use of the dual to nouns that cannot be denoted by either singular or plural forms and using the plural form in all other cases if possible. On the other hand, al Ashqar (1972, 40) suggests using the singular, rather than the plural, as a heading. 'Abd al Hādī's suggestion is based on the ground that the plural is more formal than either the singular or the dual forms and that it is more suitable for subdivisions. Al Ashqar bases his system on the following factors: both the dual and the plural are derived from the singular, the plural may have several forms in use, and the singular is more restricted than other forms.

Lancaster (1986, 27), who emphasizes the empirical approach, states that it would be unwise to rely solely on the committee approach due to the structure of the vocabulary and because controlled vocabulary devices are essentially practical tools. He summarizes the disadvantages of the committee approach as follows: the subject specialist may not be fully familiar with the literature and/or with the user's requirements, it complicates the task of indexing and searching by distinguishing terms

that have no value for retrieval purposes, and it inflates the importance of a particular specialization and causes an imbalance in the vocabulary system.

Lancaster's verdict has been indicated experimentally at different levels. Barhydt, who conducted a test to judge the performance of non-users, systems specialists, and experts as compared to ordinary users, found that the experts and the retrieval specialists were in fairly overall agreement as regards their judgment of relevance in comparison with those of the users. However, none of them reached the ideal evaluation of the user.³⁷ Rees and Schultz note that the highest agreement on relevance was among specialists and that lower levels of agreement appeared as the level of specialization decreased.³⁸ In terms of human consistency, Resnick and Savage found that there was a difference in consistency when the same work was judged at fairly widely separated points in time.³⁹ O'Connor concluded that rational discourse was

³⁷ Barhydt defines the three persons as: user (the individual posing the question), expert (a non-user subject specialist considered to be the user's peer), and system specialist (a non-user, non-subject specialist with considerable system experience but only moderate subject knowledge). In the experiment, thirty-seven questions were submitted by members of a pilot user group of educational researchers to an experimental retrieval system in education media. The expert and the system specialist were given copies of the questions submitted in writing by the user as well as any additional information, whether relevant or irrelevant, that the user provided and asked to indicate for each response. See G. C. Barhydt, "The Effectiveness of Non-User Relevance Assessments," *Journal of Documentation* 23, no. 2 (1967): 146-49.

³⁸ Rees and Schultz divided 184 judges into six groups according to their educational and practical experience in relation to the research project and the documents judged. The six groups consisted of twenty-nine medical scientists, thirty medical experts (both researchers and non-researchers) with MDs, twenty-five residents with MDs, twenty-nine medical students, and sixty-one medical librarians. The groups judged sixteen documents relating to the three stages of a research project dealing with the transport of sugar in the intestine. See A. M. Rees and D. G. Schultz, *A Field Experimental Approach to the Study of Relevance Assessments in Relation to Document Searching* (Cleveland: 1967).

³⁹ Resnick and Savage randomly selected thirty-four documents from the normal flow of IBM's internal publications to be judged as either relevant or irrelevant. The judges, technical personnel from IBM's Advanced Systems Development Division, were divided into four groups in relation to their interests; fourteen people judged full texts, eight judged citations, twelve abstracts, and twelve index terms. A month later,

important for solving differences arising from textual nature, background knowledge, and error of interpretation.⁴⁰ This shows the difficulties that must be considered by the compiler who wants to concentrate on the committee approach.

A comparison of the two approaches reveals that, the empirical approach is preferable, and it is therefore recommended to the compiler. One reason for this preference is that the compiler who uses the committee approach will have to find some way to avoid the difficulties that arise from the criteria for selecting the terms. Should he follow 'Abd al Hadī's criterion (using the singular rather than the plural) or that of al Ashqar (using the plural rather than the singular). He must also justify his choice in the retrieval system. In addition, he may have to make decisions on the basis of other considerations that have not been discussed. For instance, should the different types of irregular plurals be considered as having one meaning or two different meanings; should verses that include the words *ikhwah* or *ikhwān* be placed under the heading إخوان or إخوة; and what selection criterion should be used if the distinction is not considered? If the word is in the dual form, the compiler must provide the methodological justification for placing the verses under a heading that designates two different objects, such as *al thaqalān* الثقلان and *al baḥrayn* البحرين. In this case, the compiler must decide whether all of the verses that indicate *al ins* الإنس and *al jinn* الجن

the experiment was repeated with the same groups over the same sets and instructions. See A. Resnick, and T. R. Savage, "The Consistency of Human Judgments of Relevance," *American Documentation* 15, no. 2 (1964): 93-95.

⁴⁰ O'Connor supplied eighty-two documents and thirty questions, all of which were in the field of documentation. These were then judged independently by two experts in the same field. After independent judgment, the two judges compared their judgments and, in the case of disagreements, tried to resolve differences through rational discourse. Initially, there were thirty-two independent agreements and forty-eight disagreements. After discussion, thirty-four of the disagreements were resolved. The remaining fourteen (one judge judged a document as an answer to a question, while the other did not) were resolved separately agreeing that the document was not an answer. Thus, all forty-eight disagreements were completely resolved by logical procedures. See J. O'Connor, "Some Independent Agreements and Resolved Disagreements about Answer-Providing Documents," *American Documentation* 20, no. 4 (1969): 311-19.

should be placed under the heading *al thaqalān* الثقلان or under two different headings indicated by *al ins* الإنس and *al jinn* الجن. Similar questions must also be answered in the case of the heading *al baḥrayn* البحرين: should verses indicating *al baḥr* البحر and *al nahr* النهر be placed under the heading *al baḥrayn* البحرين or under two different headings, namely, *al biḥār* البحار and *al anḥār* الأنهار .

Adopting the empirical approach will eliminate many problems in developing a Qur'anic control of terminology. For instance, the criterion of choice between singular and plural results in three categories: words that appear only in their singular, dual, or plural forms; words that appear in their singular, dual, and plural forms; and words that appear only in their singular and plural forms. Words that belong to the first category should be presented as they appear in the Qur'an (i.e., without reference to their dual or plural forms). As the purpose of such words is to indicate specific meanings within the verses, they are more likely to be maintained as headings used to describe the same verses. Thus the word *arḍ* أرض is given in its singular form, the word *al thaqalān* الثقلان is given in its dual form, and the word *albāb* أبواب is given in its plural form.

For words that appear in the two irregular plural forms, decisions can be taken on the basis of the primary distinction between those differing in meaning and those differing in number. In the case of words that belong in the first category, it is recommended that they be given distinct headings, since each plural form refers to a distinct concept. For instance, *ikhwah* إخوة refers to blood brotherhood, while *ikhwān* إخوان refers to friendship. Those irregular plurals that differ in number, however, have to be treated on two levels. If they appear in the alphabetic index, both should be used. But if they appear in the classified index, which represents the verses, they should be treated as synonyms. When deciding upon a heading, the one that appears most frequently in the Qur'an should be chosen. For example, when deciding between *ashhur* أشهر and شهر, the first term should be chosen, as it appears six times, while the latter appears only once.

For words that appear in their singular, dual, and plural forms, it is recommended that all of them be placed in the alphabetic index and that the *ism al jins* إسم الجنس (a mass noun) be used to describe the verse. For instance, *al shurūq* الشروق should be used instead of the singular *al mashriq* المشرق, the dual *al mashriqayn* المشرقين, or the plural *al mashāriq* المشارق. If the word has no mass noun form, the plural form should be used, for this form might be very helpful in ensuring that the meanings of certain homographic words are not ambiguous. For instance, if the plural form *a'yun* أعين is used instead of *'uyūn* عيون, the homographic situation will disappear, as *a'yun* أعين refers to eyes. If *'uyūn* عيون is used, the meaning will be "springs of water." Using the plural form in such instances will eliminate the problem of homographs. The plural form is also preferred over the dual, as the former is more familiar to the user than the latter. This also eliminates the need to change the grammatical form of the end case of nouns in the dual form.

Following these recommendations, the compiler should decide whether to use the empirical approach, the committee approach, or a combination of both approaches, as dictated by the situation faced. In any case, the compiler must be consistent while devising his compilation process.

3.4. Synonyms

In natural language, synonyms are terms that indicate the same meaning. In indexing, synonyms refer to terms whose meanings are the same in a wide range of contexts and that can be used virtually interchangeably.⁴¹ Such words present a problem to the compiler, who has to limit his choice to only one term to represent the subject in order to avoid locating the subject in numerous places.

Arabic synonyms can be found in the forms of nouns, verbs, articles, and adjectives. A great number of these words, according to the famous linguist Ḥasan (1974, 4:168), which appear to be synonyms are not, in

⁴¹ British Standards Institutions, *Guidelines for the Establishment and Development of Monolingual Thesauri*, BS 5723 (1979): 9.

reality, for each one refers to a particular meaning that differs slightly from the others. Originally there were two different views on the existence of synonyms in Arabic: Bint al Shāṭi' (1964, 185-86), a contemporary Arab scholar, asserts that synonyms are evidence of the richness of the language and, on the other hand, that each term has only one meaning (i.e., each supposed synonym is, in fact, regarded as adjective to one term) and that opinions about the existence or non-existence of synonyms have not been conclusively settled. However, she also maintains without any hesitation, that the Qur'an, which represents the Arabic language in its most elevated purity and originality, does not support the idea of synonyms. Any attempt to replace a Qur'anic word by another lessens the effect, beauty, and essence of the Qur'an. Moreover, she gives examples of some words that are treated in the natural language as synonyms, but which are used differently in the Qur'an. For instance, the words '*unuq* عنق and *raqabah* رقبة have the same lexical meaning: neck. In the Qur'an, however, '*unuq* عنق is used to express the same lexical meaning of "neck," while *raqabah* رقبة is used metaphorically to refer to a slave.

Interchangeable words, however, must be treated by the compiler in such a way that will limit the number of choices used to present the same subject. This issue is technical rather than linguistic. In that sense, synonyms in the Qur'an will be classified in two categories: true synonyms that are used interchangeably, and quasi-synonyms that are used with precise meanings and distinct concepts.

Typical examples of true synonyms are *al ka'bah* الكعبة, *al bayt* البيت (the House), *al bayt al ḥarām* البيت الحرام (the inviolable House), and *al bayt al 'aīq* البيت العتيق (the ancient house), all of which refer to the house of God built by Abraham. Another distinct type of true synonyms are the words *kibr* كبر, *istikbār* إستكبار, and *kibriyā'* كبرياء, all of which are derived from the same root *KBR*, with the root meaning of "big" and the literal meaning of "to become big, puffed up, or big with pride."

Regarding quasi-synonyms, al Suyūfī (1987, 1:413) devotes a section to words that are considered as synonyms even though they really are not الألفاظ التي يظن بها الترادف وليست منه and gives examples of some words

that are distinguished in terms of their Qur'anic usage but not among the linguists. Among these are *al khawf* الخوف and *al khashyah* الخشية, both of which have the lexical meaning of "fear" or "fright," though in the Qur'an they have distinct meanings. He asserts further that *al khashyah* الخشية is more intense than *al khawf* الخوف. Moreover, *al khashyah* الخشية indicates a fear of a strong and high authority, such as God's, while *al khawf* الخوف indicates weakness, such as a person who might be afraid of even trivial things.

Again, the compiler is faced with the question of which term to choose so that the subject can be found easily by the user. As a matter of fact, the selection criterion is divided between two approaches: one that tends to follow systematic steps in an attempt to eliminate nonpreferred terms, and one that rejects the idea of selection and seeks to provide all terms. Those who follow the former, who tend to use only one term as the preferred one, are influenced by Cutter, who was the first to devise coded rules for library catalogues. In advancing his criteria for the selection of preferred terms, he suggests that the choice should favor the heading that is less ambiguous in meaning, most familiar to those who will undertake the work, and that comes first in the alphabet. Applying this criteria to the above examples, the term *al ka'bah* الكعبة will be selected, for the term *al bayt* البيت is ambiguous,⁴² while the terms *al bayt al ḥarām* البيت الحرام and *al bayt al 'atīq* البيت العتيق are less familiar than the term *al ka'bah* الكعبة. In the case of the three terms *al ka'bah* الكعبة, *al bayt al ḥarām* البيت الحرام, and *al bayt al 'atīq* البيت العتيق, the words are familiar to the user and thus, according to Cutter's third rule, the term *al bayt al ḥarām* البيت الحرام will be the preferred one, since it comes first in the alphabet.

As far as quasi-synonyms are concerned, Cutter states that a clear distinction should be drawn as to whether there is a real difference

⁴² According to al Tha'ālībī, *al Ashbāh*, 98-100, the term *bayt* بيت as it appears in the Qur'an has nine different meanings: *al bayt* البيت (house), *al masjid* المسجد (mosque), *safīnat Nūḥ* سفينة نوح (Noah's ship), *al ka'bah* الكعبة (the Ka'bah), *al khaymah* الخيمة (tent), *al sijn* السجن (jail), *'ish al nahl* عش النحل (beehive), *al kahf* الكهف (cave), and *al khān* الحان (shops).

between the two terms or not. If there is, they should be treated as two different terms (i.e., both should appear as index terms). If there is not, they should be considered true synonyms and treated according to the above selection criteria. Therefore, if the two terms *al khawf* الخوف and *al khashyah* الخشية are considered synonyms, then one of them should be selected to represent the other. If this is not the case, both of them should appear in the index. The choice depends on how sophisticated the retrieval system needs to be in using the terms.

In contrast to the above view, Rickert (1968, 10) does not believe in the use of preferred synonyms: any synonym may be used. To avoid confusion, they are linked together by an OR indicator. His view is that “it would be presumptuous to suggest preferred terms where a number of disciplines and professions are using the same thesaurus, each having its own set of preferred terms for nearly identical concepts.”⁴³ By following this method, complications arising from choosing preferred terms are avoided. All terms are available and tidily linked. Applying this treatment to such terms as *al ka'bah* الكعبة, *al bayt* البيت, *al bayt al ḥarām* البيت الحرام, and *al bayt al 'atīq* البيت العتيق, the display of the terms will look like this:

<i>al ka'bah</i>	الكعبة
OR <i>al bayt</i>	أو البيت
OR <i>al bayt al ḥarām</i>	أو البيت الحرام
OR <i>al bayt al 'atīq</i>	أو البيت العتيق

Through this presentation, the term *al ka'bah* الكعبة will appear again under *al bayt* البيت, *al bayt al ḥarām* البيت الحرام, and *al bayt al 'atīq* البيت العتيق. The same will be true for the other three terms as well. This treatment could also be applied to the other examples of synonyms that

⁴³ J. E. Rickert (comp.), *Urban Thesaurus*, (Ohio: Kent State University, Center for Urban Regionalism, 1968), 10.

have been presented, such as *kibr* كبر, *kibriyā'* كبرياء, and *istikbār* إستكبار. The use of such a method also means that Rickert made no distinction between quasi-synonyms and true synonyms, since all terms are provided in the display (i.e., the quasi-synonym terms are provided in the retrieval system).

Comparing Cutter's view with that of Rickert, it may be concluded that the problem of synonyms is scattered through the alphabet and, hence, reducing the recall efficiency is solved by the method adopted in the *Urban Thesaurus*. This means that Cutter's traditional treatment in selecting a preferred term is considered inadequate, since all terms can be provided, linked without scattering, and displayed in the retrieval system. Moreover, the demarcation line between two terms, whether they are synonyms or not, is also solved. One great disadvantage of the *Urban Thesaurus* method, however, is the frequent repetition of terms, which increases the size of the retrieval system and demands more accuracy during the compilation process. If the compiler follows one of these two methods, he should consider all of these factors during the compilation process and state this policy as an acknowledgment in the retrieval system.

3.5. Organization of Terms

The terms selected for headings in the controlled vocabulary must be organized in a way that is useful to both the compiler and the searcher. The function of organizing the headings is to provide the user with a simple method of searching and easy access to the system through a logical sequence. However, there are two ways of writing the heading form: single-word headings or compound headings, each of which is entitled to a specific method of organizing the terms within the retrieval system; these now will be discussed.

A. Single-word Headings

The simplest and most common sequence for arranging single-word headings is their dictionary order. In Arabic, two methods are followed

to arrange words: written word form and radical root. If the compiler has to use written word form (ignoring the affix), he has to consider two orders of arranging the letters: alphabetical order and abjad order. In alphabetical order, letters are arranged according to their graphical form: *tā'* ت and *thā'* ث come after *bā'* ب, and *hā'* ح and *khā'* خ come after *jīm* ج. Similarly, *dhāl* ذ comes after *dāl* د, and so on. Only *mīm* م, *nūn* ن, *hā'* ه, *wāw* و, and *yā'* ي, which are placed at the end, do not follow this graphical arrangement. The most common sequence, however, which is used in the most Arab countries, is as follows:

أ ب ت ث ج ح خ د ذ ر ز س ش ص ض ط ظ ع غ ف ق ك ل م ن ه و ي

A different arrangement, but keeping the same homogeneity of the letters is found in the countries of North Africa, which follow another sequence:

أ ب ت ث ج ح خ د ذ ر ز ط ظ ك ل م ن ص ض ع غ ف ق س ش ه و ي

In abjad order, letters are arranged as follows:

أ ب ج د ه و ز ح ط ي ك ل م ن س ع ف ص ق ر ش ت ث خ ذ ض ظ غ

A different arrangement, again, is followed in North African countries, viz.:

أ ب ج د ه و ز ح ط ي ك ل م ن ص ع ف ض ق ر س ت ث خ ذ ظ غ ش

The compiler should acknowledge which sequence he is following so that the user will not become confused. Moreover, he must also deal with the sequencing of vowel signs: *sukūn* ْ, *fathah* َ, *dammah* ُ, and *kasrah* ِ raise another problem: what should the compiler do when two or more words share the same root, adopt the same spelling, but have different meanings (indicated by the vowel positions on the letters)? Which comes first? For example, the word *hjr* حجر, without vowel signs, is open to different interpretations: *hujar* حُجْر (rooms), *hijr* حِجْر (barrier), *hajar* حَجْر (stone). A search through various Qur'anic dictionaries shows that these three words have been arranged as *hijr* حِجْر,

ḥujar حُجَرَ, and *ḥajar* حَجَرَ ('Abd al Bāqī, 1984, 193); as *ḥijr* حِجْر, *ḥajar* حَجَرَ, and *ḥujar* حُجَرَ (al Nadawī 1933, 123-24); and as *ḥajar* حَجَرَ, *ḥujar* حُجَرَ, and *ḥijr* حِجْر (Majma' 1970, 125-26). Unless the compiler explains his methodological treatment for sequencing the vowel signs, such types of words could follow any arrangement.

A related issue is where to place the *hamzah* ء. This character has no fixed position: it can be written alone, on an *alif* أ, on a *yā'* ئ, or on a *wāw* و. A word like *al r'uūf* الرعوف (compassionate), where the *hamzah* stands alone ء, could also be written as *al ra'uūf* الرزوف, where the *hamzah* is written on the *wāw* و. The problems facing the compiler are whether the *hamzah* is a separate or a complementary letter and what is its position in the alphabetical sequence? In cases where a *hamzah* on an *alif* ا is followed by another *hamzah* on an *alif* (alif *mamdūdah* آ), should the compiler treat them as one *alif* or two? This applies equally to the *shaddah* ّ, which is considered a vowel sign (it could also be treated as a doubling of letters). If the compiler is not aware of these and other differences in the Arabic writing system, confusion in the alphabetical sequencing of letters could occur. This, in turn, would make it impossible, or nearly so, for the user to retrieve any information at all.

Treatment for the above cases have been partially covered by Arab librarians and information scientists. 'Abd al Hādī (1981, 138-39) suggests a criterion for arranging the *hamzah* and the *alif*: in general, a separated *hamzah* should precede an *alif*, and wherever a *hamzah* is attached to another letter, it should be considered as a part of this letter. He also asserts that an *alif mamdūdah* should be treated as a double *alif*. On the other hand, al Ashqar (1970, 58-75) suggests that the vowel signs should follow this sequence: *sukūn* ْ, *fathah* َ, *kasrah* ِ, and *ḍammah* ُ. He justifies this sequences on the grounds that a *sukūn* has the meaning of silence and should come first, then a *fathah*, which is phonetically lighter than a *kasrah*, and similarly for a *kasrah*, which is phonetically lighter than a *ḍammah*. If one follows al Ashqar's method, the three words discussed above should be arranged as *ḥajar* حَجَرَ, *ḥijr* حِجْر, and *ḥujar* حُجَرَ.

If the compiler intends to arrange the system according to written word form and to follow these guidelines, he should explain the relevant rules so that the researcher will be able to use the system. If the compiler intends to arrange the words according to the radical roots, he must take the following disadvantages into consideration: first, the researcher would have to make a mental effort to reduce the natural form of the word to its root. In many cases, this could lead to a breakdown if the researcher is not expert in Arabic grammar, for certain letters have to be converted to others. For instance, if the user is searching for the word *mā'* ماء (water), he will look under the root *m-w-h* م-و-ح, as the letter *ā* آ is converted to the letter *w* و, and the letter *'* ء is converted to the letter *h* ه. To deal with this problem successfully, the compiler has to list in the retrieval system all of the abnormal cases of letters that have to be converted to others. Second, lexicons do not always agree upon the original root of certain words: the word *al ān* الآن has been reduced by some to the root *a-w-n* ا-و-ن (Majma' 1970, 35) and by others to the root *a-y-n* ا-ي-ن (Ibrahim 1968, 54). The compiler has to provide the user with such relevant information and explain how he treats them in the system. Third, in early Arab dictionaries the roots are arranged according to the opinions of different schools,⁴⁴ which means that the compiler has to indicate the school he follows and/or provide details of his methodological way of searching through the system. Fourth, the form of words that have different possible derivations could be reduced

⁴⁴ In an attempt to standardize Arabic's structure, Abū Maṣṣūr Muḥammad al Azharī (d. 370 AH / 862 CE), in his *Tahdhīb al Lughah*, divides the language structure according to these letters into two, three, four, and five radical roots. Following a methodology based on alphabetical order in his *Ṣiḥāḥ*, Ismā'īl ibn Ḥammād al Jawharī (d. 393 AH / 1004 CE), divided the roots into twenty-eight sections arranged according to their final radical. By means of a more specific division, each section is further divided into sub-sections in which the roots are positioned according to their first radical. Al Jawharī's *Ṣiḥāḥ* has been repositioned in terms of its root arrangements by Abū al Ma'ālī ibn Tamīm al Barmakī (d. c. 400 AH / 992 CE), who based his arrangement on the first radical in the sections and sub-sections. Al Barmakī's arrangement was adopted by al Zamakhsharī in *Asās al Balāghah*, Jamāl al Dīn ibn Muḥammad ibn Manẓūr (d. 711 AH / 1311 CE) in *Lisān al 'Arab*, and al Fayrūzabādī in *al Qamūs al Muḥīṭ*.

incorrectly to an original root. For instance, the word *hūdan* هوداً, is reduced to the root *h-w-d* ه-و-د in one dictionary, while the word *yahūd* يهود, which appears in the same dictionary, is reduced to the root *y-h-d* ي-ه-د, although both should be derived from the same root ('Abd al Bāqī 1984, 739, 775). Fifth, early dictionary compilers grouped Arabic roots into four types: two-radical, three-radical, four-radical, and five-radical roots. Most Arabic vocabularies are based upon three-radical roots,⁴⁵ with the results that dictionary compilers that are based on this system have left the two-, four-, and five-radical roots in an undistinguishable position. The compiler should provide an explanation concerning how such words have been dealt with in his system. Sixth, the reduction of words to their roots is not valid for all words. Some words are abstracts (those which are neither derived from others nor have others derived from them). Such words are, specifically, proper nouns: *al marjān* المرجان (corals) and such names as *Allāh* الله (God). These words should either be indicated in a list that explains their position in the system or be placed in a supplementary part of the system. Seventh, despite all of these weaknesses, the arrangement method still requires two alphabetical arrangements: one for the roots and another for the words that are derived from those roots. There is a real need for the compiler to deal with the problems relating to alphabetical arrangement and the suggested solutions.

Based on the above review for written word pattern, it may be concluded that following the alphabetical sequence of letters is much easier for the compiler to handle and much more efficient for the user. On the one hand, such a method does not require the compiler to be aware of all of the complexities resulting from the root sequences. On the other hand, the user does not need a great deal of expertise in Arabic grammar to reduce the word to its original root. Moreover, experience

⁴⁵ After studying several extensive Arabic dictionaries, al Tayyān and Mir'alam reported that the percentage coverage of two, three, four, and five radical roots was 1.33, 63.43, 32.95, 2.29 respectively. See M. H. al Tayyān and Y. Mir'alam, "Qā'idat Mu'tayāt li al Jdhūr al 'Arabīyah," *Second Conference on Arabic Computational Linguistics* (Kuwait: 1989), 104-24.

shows that the root sequence is only effective in the construction of word dictionaries rather than in a subject retrieval system ('Abd al Hādī 1981, 136). This is because dictionary makers seek to gather all related words under one heading, which means that the use of the radical roots is the most suitable method. As a subject retrieval system is mainly organized in such a way that the user can have easy access to its information, he does not need to have prior knowledge of Arabic grammatical rules.

In adopting an alphabetic sequence, a retrieval system should primarily be based on what is familiar to the user: it should use the alphabetic sequence known to the user in the relevant country (i.e., the North African alphabetical sequence should be used in the North African countries). If the system is intended for public use and there is no control over its geographical spread, then the alphabetical sequence used in the majority of Arab countries should be adopted. This decision should be noted in the acknowledgements so that the user will be aware of potential differences. In dealing with vowel signs, a similar acknowledgement should be made along with the compiler's justification for his choice. Until now, only al Ashqar has justified his method of dealing with vowel signs in an index. His justification is completely valid and could be used for the sequencing of vowel signs. However, there is no reason for analyzing a *shaddah* ّ, into its original vowels, whether ّ + َ = َ, ّ + ُ = ُ, or ّ + ِ = ِ, or for any letter that has a *shaddah* to be treated as a double letter. In Arabic grammar, a *shaddah* ّ is considered as a vowel and, therefore, should be placed after the *ḍammah*. This makes the full sequence of the vowel signs َ, ُ, ِ, ّ, َ, ُ, ِ, ّ, ّ, ّ, and ّ. Immediately after this sequence comes the *alif mamdūdah* ّ, which should be considered as a single letter and as coming before the ّ. For instance, Adam آدم comes before Ahmad أحمد. Finally, the *hamzah* should be treated according to its position: a separated *hamzah* ء should come before the *alif mamdūdah* ّ. Wherever it is attached to another letter, it should be considered as part of that letter and precede that letter when it does not have a *hamzah*. For example, a *hamzah* on a *wāw* و should precede a *wāw* و; a *hamzah* on an *alif* ا should precede an *alif* ا; and a *hamzah* on a *yā'* ي should precede

a *yā'* ي. This is due to the fact that a *hamzah* was originally considered the first element of an alphabetical sequence.

B. Compound Headings

Compound headings include two words or more in their formation. These headings do not have to be retained in the Qur'anic text, but are needed by the compiler for the appropriate placement of verses. These headings could be devised by the compiler or borrowed from the terminology used in such disciplines as psychology, economics, and physics. They are based on the committee approach and thus are not susceptible to the empirical approach. 'Abd al Hādī (ibid., 83-92), who asserts that such headings serve to describe complex subjects that cannot be expressed by a single-word heading, classifies them into five groups: (a) an adjective preceded by a noun: for example, *al taghayyur al ijtīmā'ī* التغيير الإجتماعي (social change), (b) a noun preceded by another noun: for example, *'ilm al ijtīmā'* علم الاجتماع (social science), (c) a noun connected with another by a preposition: for example *al mar'ah fī al Qur'ān* المرأة في القرآن (woman in the Qur'an), (d) a noun connected with another by a conjunction: for example, *al 'ādāt wa al taqālīd* العادات والتقاليد (customs and traditions), and (e) a phrase or sentence: for example, *khazn wa istirjā' al ma'lūmāt* تخزين وإسترجاع المعلومات (information storage and retrieval). He recognizes, moreover, several possible ways in which these headings could be treated. In the cases of (a) and (c), he states that the heading in question should be filed as it is read. Furthermore, there is no need to invert the heading by introducing the significant term first, since this is the natural form of the Arabic sentence. In the cases of (b) and (e), he states that the norm is to file it as it is read. However, when the social sciences are being considered, inversion of the significant word is applicable, for the significant term *al ijtīmā'* الاجتماع, is better treated as *al ijtīmā'-'ilm* الاجتماع - علم. Finally, in the case of (d), 'Abd al Hādī argues that the relevant headings should be treated according to their most common and familiar form to the projected

users. For example, *al 'ādāt wa al taqālīd* العادات والتقاليد, not *al taqālīd wa al 'ādāt* (التقاليد والعادات).

This raises another concern: the arrangement of letters within a compound heading make the root sequencing method inadequate, as this only reduces the compound heading to the roots of a single word. Using an alphabetic arrangement with a compound heading raises a new issue: should headings be arranged in a word-by-word or a letter-by-letter sequence. In the former, words indicated in a heading are distinguished as individual words, while the latter method brings all words together (i.e., the spaces between the words are ignored) and treats the whole heading as one word. For example, two compound headings, viz; *umm Mūsā* أم موسى and *imra'at Mūsā* امرأة موسى, arranged word-by-word will be displayed as:

<i>umm Mūsā</i>	أم موسى
<i>imra'at Mūsā</i>	إمرأة موسى

This is because the word *umm* أم has to come before the word *imra'at* امرأة. On the other hand, if the two words are arranged letter-by-letter, the two headings will appear as:

<i>imra'at Mūsā</i>	إمرأة موسى
<i>umm Mūsā</i>	أم موسى

This is because if there are no spaces between the words, the letter ر comes before the letter م.

In arranging the letters within the headings, Aman (1968, 278-79) states that the definite article *al* ال (the) should be neglected in the letter order and that all prepositions and conjunction articles should be considered in alphabetical order within the heading.

At the present time, there is no precise agreement as to which form of heading is acceptable, for this depends on the subject under discussion. Therefore only an estimation as to the preferred form can be given. Applying Aman's remarks to this work, it may be concluded that

the user's familiarity with two-word headings is greater than the other forms, since both lists are constructed on a practical basis for the purpose of library use.⁴⁶ Regarding Qur'anic statements, many verses convey two or more concepts, such as *'iddat al mar'ah al hāmil* عدة المرأة الحامل (waiting period of a pregnant woman). The two-word headings, however, are less specific. Take the example of the phrase *'iddat al hāmil* عدة الحامل (the waiting period of a pregnant woman). If the conjunction *wa* و were added, it could provide a regular pattern over a number of verses: *al 'iddah wa al ḥaml* العدة والحمل (waiting period and pregnancy). The latter is preferable because of its familiarity to users, its simplicity of structure, and its ability to lead to homogeneity across the work. Moreover, this type of heading could be given as *al 'iddah wa al ḥaml* العدة والحامل, if the intention is to specify the concept *al 'iddah* العدة or as *al ḥaml wa al 'iddah* الحمل والعدة, if the intention is to specify the concept of *al ḥaml* الحمل.

If a letter-by-letter arrangement were employed, the result would be a scattering of subjects throughout the alphabetical list, since irrelevant terms may interfere if a heading's first word were connected with a suffix. On the other hand, the use of two-word headings combined with *wa* و is consistent with the word-by-word arrangement. In that respect, the definite article *al* ال should be ignored (unless it is part of a name) while the conjunction *wa* و should be considered. Regardless of the view adopted, the compiler must acknowledge his choice in the system by giving an example in order, to clarify for the user the methodology that has been followed.

⁴⁶ In his survey of the Egyptian Publication Bulletin (EPB), Aman found that headings with the conjunction *wa* (و) comprise 33 percent of the three-word headings, 46 percent of four-word headings, and 7 percent of two-word headings. He also found that among the two-word headings, which represent 30 percent of all headings in the list, nouns plus adjectives total 55 percent and nouns plus nouns total 35 percent. On the other hand, following his survey of the Jordanian subject headings list, he asserted that of the two-word headings found in the list (39 percent), 75 percent combine a noun plus adjective, while the conjunction *wa* (و) is found in only about 17 percent of the items. Based on these percentages, Aman remarks that a common characteristic of the two lists is the large number of two-word headings. See Aman, *Analysis of Terminology*, 152-54.

3.6. The Structure and Display of Terms

The problems discussed so far show how headings may be selected, clarified, and organized. But, how are these headings to be displayed and how are the relationships among them to be shown? Devising an answer for these questions involves listing and organizing related subjects within the Qur'anic verses in a manner that best expresses the needs of the user. In the initial stage of designing the Qur'anic retrieval system, it is impractical to collate all of these relations, for the process itself is a part of the retrieval system's construction. Moreover, in many cases the relationships among Qur'anic subjects are conceptual and could reveal as many relations as the user desires. Therefore, it is more practical to establish broad categories of common semantic relations that can serve as models for relations that will be produced in the practical stage and to show how such relations can be linked by the compiler.

As a first step, one of the distinctive broad categories of semantic relationships that can be found in the Qur'an is the relationship between superordinate terms, which represent a whole class, and subordinate terms, which represent a part of that class. These relations describe, for instance, bodily organs, i.e., *al ra's* الرأس (head) and *al sha'r* الشعر (hair); places, i.e., *Makkah* مكة (Mecca) and *al ka'bah* الكعبة (the Ka'bah); activities, i.e., *al hajj* الحج (pilgrimage) and *al ṭawāf* الطواف (circumambulation); and objects, i.e., *al aṣnām* الأصنام (idols) and *al lāt* اللات (name of idol).

Another broad category of semantics with a similar relationship is that which describes the relation between families and members of these families. For instance, among the race of angels *al malā'ikah* الملائكة (angels) and the *ḥamalāt al 'arsh* حملة العرش (holders of the throne); among the race of *jinn* الجن and *'ifrīt* عفريت; among the human race *al insān* الإنسان (human beings) and *al rajul* الرجل (man); in the animal kingdom *al ḥayawān* الحيوان (animals) and *al an'ām* الأنعام (cattle); and in the plant kingdom *al nabāt* النبات (plant) and *al najm* النجم (shrub).

Finally there is the associated category, which describes relations that are neither whole—part nor family—member, but which are related

conceptually: concepts related as to their origin, i.e., *al mā'* الماء (water) and *al maṭār* المطر (rain); by casual dependence, i.e., *al ṭalāq* الطلاق (divorce) and *al 'iddah* العدة (waiting period); an action and its counter-agent, i.e., *al zinā* الزنا (adultery) and *al jald* الجلد (flogging); and a concept and its opposite, i.e., *al ḥalāl* الحلال (lawful) and *al ḥarām* الحرام (forbidden).

All of these categories reveal different types of relationships. As a result, the compiler could place a verse that indicates a specific subject under its general heading, under the heading that expresses it specifically, or under two associated headings that are linked conceptually. For the compiler to make a proper choice, he must have a profound understanding of the terms involved, their meanings and their relationships, the problems of term selection, and how they should be organized and displayed. In many cases, a dramatic increase in the number of terms can cause confusion if the display is not described accurately. Despite these difficulties, there is a general tendency among thesauri compilers to relate these concepts and to provide them for the user. Their approaches to displaying and relating the terms in question differ, but most thesauri compilers now offer different ways of bringing terms together under the conventional alphabetical display in order to avoid deficiencies that may arise from some of these methods. The following are examples of the various displays commonly used in information retrieval. The advantages and disadvantages are assessed and tested in terms of their usefulness to Arabic and Qur'anic terminology.

The most acceptable display is the alphabetical, where terms are arranged in a dictionary order. This conventional form of alphabetical display was established in 1967 with the publication of *Thesaurus of Engineering and Scientific Terms (TEST)*.⁴⁷ In TEST, (see Figure 3-1), looking under the term "Abortion," the user will be provided with two other terms expressing a superordinate term: "Pregnancy complications" and a subordinate term: "Septic abortion." He will also find all related

⁴⁷ Office of Naval Research, Project LEX. *Thesaurus of Engineering and Scientific Terms* (New York: Engineering Joint Council, 1967).

Irregularities			
<i>Use of a more specific term is recommended: consult the terms listed below</i>			
Congenital abnormalities			
Gravity anomalies			
Growth anomalies			
Magnetic abnormalities			
Visual defects			
Abnormal psychology	0510		
BT	Psychology		
RT	Adjustment (psychology)		
	Anxiety		
	Behavior therapy		
	Clinical psychology		
	Criminal psychology		
	Diagnosis		
	Experimental psychology		
	Guilt		
	Hate		
	Hypnosis		
	Intelligence tests		
	Military psychology		
-	Nervous system disorders		
	Neurology		
	Physiological psychology		
	Projective tests		
	Psychiatric tests		
	Psychiatry		
	Psychopathology		
-	Psychoses		
-	Social psychology		
	Stress (psychology)		
-	Therapy		
Abnormal reflexes	0510	0616	
BT	Reflexes		
ABO Incompatibility	0605	0616	
BT	Blood diseases		
	Blood group disorders		
RT	Rh incompatibility		
A-bombs			
USE	Fission weapons		
Abort			
USE	Failure		
Abortion	0605		
BT	Pregnancy complications		
NT	Septic abortion		
RT	Brucella abortus		
	Brucella suis		
-	Endocrine diseases		
Abrasion	1113		
RT	Abrasive blasting		
	Abrasives		
	Chipping		
-	Cleaning		

Figure 3-1: An alphabetic display specimen from TEST.

terms in this area (i.e. the area which the thesaurus of TEST is serving) which are listed alphabetically as "Brucella abortus," "Brucella suis," and "Endocrine diseases." The thesaurus indicates these relations by using special abbreviations given as prefixes to the terms, viz, NT (Narrower Term), BT (Broader Term), and RT (Related Terms). BT and NT are two designators that describe the hierarchical relationship between super- and subordinate terms, while RT is used to link headings that are related conceptually to the term "Abortion." These conventions are followed by most of the thesauri⁴⁸ and have been adopted in the establishment of standards (ANSI 1980). TEST also provides a cross-reference for synonyms via the employment of USE designator. In Figure 3-1, the term "Abort" is not preferred by TEST compilers, who offer the term "Failure." The user, however, should be directed by this USE designator to the term "Failure" under its alphabetical order in the display. The reciprocal case should also be taken care of by a UF designator in order to reverse the function.

Since the conventional alphabetical thesauri provide one hierarchical level between broad and narrower headings, some compilers, such as those who prepared the Medical Subject Headings list (MeSH) (see Figure 3-2), give superordinate and subordinate terms at more than one level in the main alphabetic display (NLM 1971). For instance, they indicate (see Figure 3-2) that the term "extremities" is the significant heading. This is followed by two terms at the first hierarchical level: "arm" and "leg." Under "arm," five terms are given to present a second hierarchical level: elbow, forearm, hand, shoulder, and wrist. Under "hand," another hierarchical level follows, namely, "fingers," under which appears another hierarchical level, namely, "thumb." The significant advantage of the hierarchical display is that it provides the user with a high degree of specificity for the headings and that the number of its hierarchical levels is unlimited. In addition, the hierarchical display

⁴⁸ Others prefer to use other conventions, See for example, American Institute of Chemical Engineers, *Chemical Engineering Thesaurus* (New York: American Institute of Chemical Engineers, 1961).

BODY REGIONS (NON MESH)	A1
ABDOMEN	A1.47
INGUINAL CANAL	A1.47.365
GROIN	A1.47.412
PERITONEUM	A1.47.596
MESENTERY	A1.47.596.225
MESOCOLON	A1.47.596.451.535
OMENTUM	A1.47.596.573
PERITONEAL CAVITY	A1.47.681
RETROPERITONEAL SPACE	A1.47.849
UMBILICUS	A1.133
AXILLA	A1.176
BACK	A1.176.519
LUMBOSACRAL REGION	A1.176.780
SACROCOCCYGEAL REGION	A1.236
BREAST	A1.236.500
NIPPLES	A1.258
BUTTOCKS	A1.378
EXTREMITIES	A1.378
ARM	A1.378.209
ELBOW	A1.378.209.235
FOREARM	A1.378.209.350
HAND	A1.378.209.455
FINGERS	A1.378.209.455.430
THUMB	A1.378.209.455.430.705
SHOULDER	A1.378.209.749
WRIST	A1.378.209.906
LEG	A1.378.592
ANKLE	A1.378.592.116
FOOT	A1.378.592.350
HEEL	A1.378.592.350.377
TOES	A1.378.592.350.792
HALLUX	A1.378.592.350.792.456
HIP	A1.378.592.467
KNEE	A1.378.592.586
THIGH	A1.378.592.867
HEAD	A1.456
EAR	A1.456.313
FACE	A1.456.505
CHEEK	A1.456.505.173
CHIN	A1.456.505.259
EYE	A1.456.505.420
EYEBROWS	A1.456.505.420.338
EYELIDS	A1.456.505.420.504
EYELASHES	A1.456.505.420.504.420
FOREHEAD	A1.456.505.580
MOUTH	A1.456.505.631
LIP	A1.456.505.631.515
NOSE	A1.456.505.733
NECK	A1.598
PELVIS	A1.673

Figure 3-2: A hierarchical display specimen from MeSH.

has no BT or NT indicators, which means that headings that are not given class membership assignments do not appear in the display. Therefore, only those that represent the heads of families appear.

One great advantage of this display is that the hierarchical levels can be displayed even within the alphabetic display, although some thesauri compilers do not agree on such combinations and tend to provide a graphical section that is complementary to the alphabetical one. For instance, al Yāsīn et al. (n.d.), who use a tree structure display, present the broadest headings at the head of the display. Narrower headings are printed in subordinate positions, the relationship between them is indicated by vertical connecting lines, and horizontal lines show those headings that are at the same hierarchical level. For instance, in figure 3-3 the broadest heading is *al malā'ikah* الملائكة (angels), while the narrower subordinate headings are divided into five headings: أ, ب, ج, د, and هـ. This is essentially a replacement for the hierarchical relationships among terms.

According to Rolling (1965), the advantage of this display is that every concept is defined by a spot in the two-dimensional plane and is represented by one single term. Problems relating to synonyms are avoided, and ambiguity resulting from homographs is avoided by glancing through the graph to the other terms listed in the subject heading. Especially helpful is the fact that the graphic display is fully used without the aid of an alphabetical list or complicated scope notes and cross-references. However, a great disadvantage is that it needs a large amount of space for representation, which hardly makes the thesaurus handy for the user. This disadvantage could be disregarded or dealt with depending on the actual use of the thesaurus.

The facet display has been structured in such a way as to reduce the load of related headings in an alphabetical sequence. This system, which is used in the *Information Retrieval Thesaurus of Education Terms* (IRTET) of Barhydt, Schmidt, and Chang (1968), groups related headings in a facet section that is separate from, but complementary to, the alphabetic section. The alphabetic section lists headings in dictionary order and contains an abbreviation RT to direct the user to the

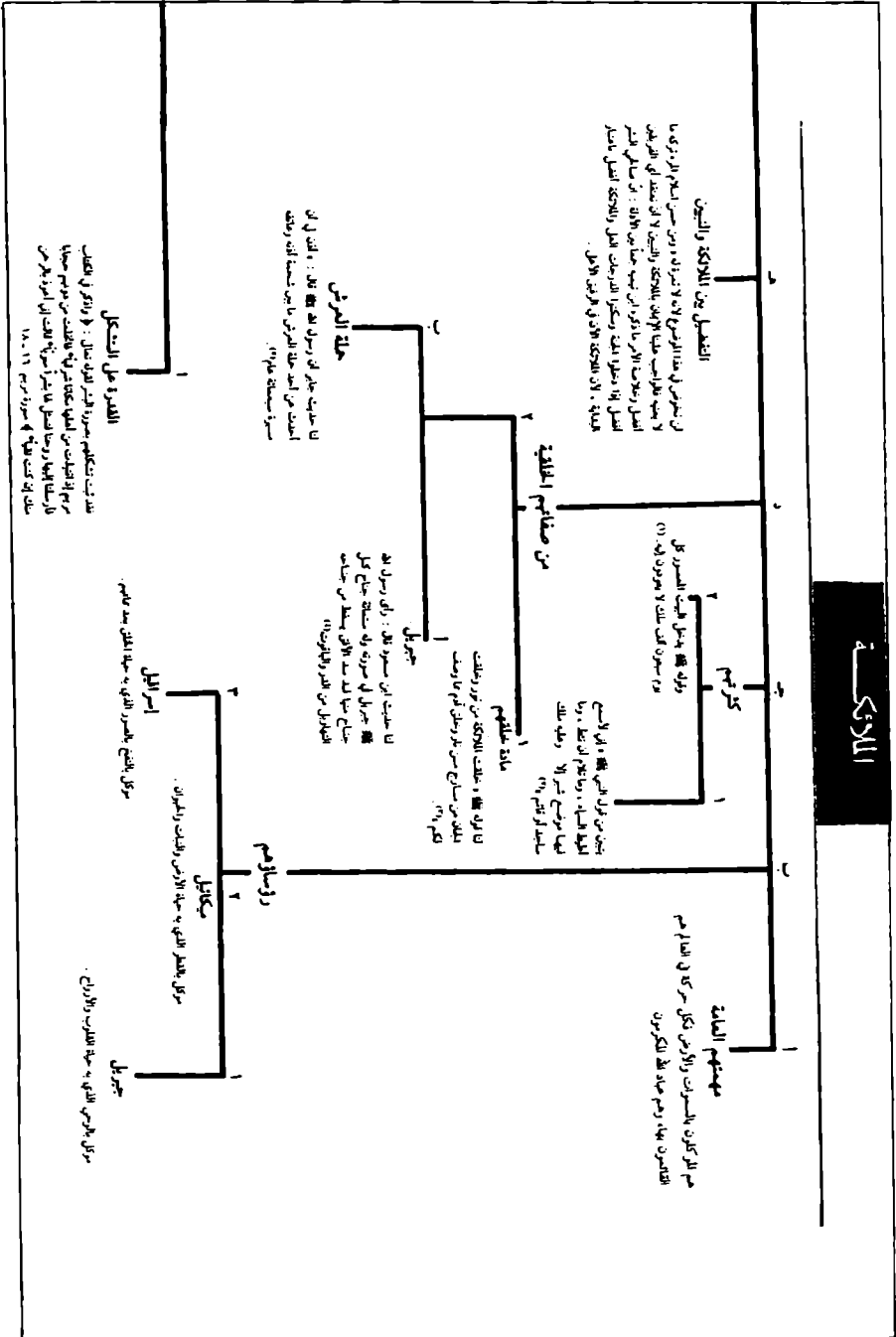


Figure 3-3: a tree structure display specimen from *al-jadawi al-jani ah fa' al-tilam al-nafi ah*.

facet section via a serial number. Under the corresponding serial number in the facet section, the user will find all of the related terms sublisted in a subfacet based on inner relationship. Within each subfacet, terms are grouped according to another closer inner relationship. For example, If the user is searching for the term SOCIAL CONSCIOUSNESS (see Figure 3-4), he first refers to the alphabetic section. Under the term SOCIAL CONSCIOUSNESS, he will find the indicator RT and the accompanying serial number 7007. In the facet section under 7007, all related terms are listed within groups indicating their conceptual relationships, including the term SOCIAL CONSCIOUSNESS itself. This method allows the compiler of IRTET to reduce the load and repetition in the alphabetic section, for under each term all related terms within these groups have to be listed.

Some compilers, among them, the compiler of the *Thesaurus of ERIC Descriptors*, seek to achieve further reduction by replacing the alphabetic section completely with another type of display, viz, Key-Word-In-Context (KWIC). This display is based on the alphabetic arrangement of significant headings, which appear in the middle, while the rest of the text is shifted to the right and left sides (see Figure 3-5). For example, if the user is looking for the heading WORKING WOMEN, the display provides him with two ways to find the heading: searching alphabetically under the term WOMEN or WORKING.

In the words of the compilers, the advantage of this display is that the 'natural' features of language are exploited, every word of every descriptor is alphabetized separately, and the full descriptor appears in context each time a word is entered in its alphabetical position (U. S. Office 1969, 19) As a result, the KWIC display solves the problem of inverting the significant word: each heading is entered in its natural form. Moreover, this display uses word-by-word sequences and makes no allowances for letter-by-letter sequences. Despite these advantages, this display cannot deal effectively with Arabic headings due to the use of Arabic conjunctions, prepositions, and definite articles, which are considered parts of the word and which interrupt the alphabetical order. For instance, when searching for the word Allāh الله (God), the user will be faced with words such as bi-Allāh بالله, ta-Allāh تالله,

SOCIAL ABILITY		FACET	7
RT	6001	SUB-FACET	7007
INTERPERSONAL RELATIONS		ATTENTION	
SOCIABILITY		AWARENESS	
SOCIAL APTITUDE		CONCENTRATION	
SOCIAL INTERACTION		CONSCIOUSNESS	
SOCIAL ACCEPTABILITY		SOCIAL CONSCIOUSNESS	
RT	12001	ALERTNESS	
ANTISOCIAL BEHAVIOR		ORIENTATION	
SOCIAL INTERACTION@		READINESS	
SOCIAL PRESSURES@		READING READINESS	
SOCIAL ADAPTION		SET	
USE SOCIAL ADJUSTMENT		CONFUSION	
SOCIAL ADJUSTMENT		DISORIENTATION	
UF	MALADJUSTMENT	INDECISION	
SOCIAL ADAPTION		BACKGR	
RT	202	EXPERIENCE	
SOCIABILITY		VICARIOUS EXPERIENCE	
FAMILIARITY			
SOCIAL APTITUDE			
RT	6002	FACET	7
INTERPERSONAL RELATIONS@		SUB-FACET	7008
PERSONALITY		AFFECT TOLERANCE	
SOCIABILITY@		EMOTIONAL MATURITY	
SOCIAL INTERACTION@		EMOTIONAL STABILITY	
SOCIAL BEHAVIOR		MENTAL CONTROL	
USE SOCIAL INTERACTION		EMOTIONAL DISTURBANCE	
SOCIAL CHANGE		MENTAL ILLNESS	
SN	SOCIAL CONDITIONS	PERSONALITY DISORDER	
RT	2021	PERSONALITY PATTERN DISTURBANCE	
CULTURAL VALUES@		PERSONALITY TRAIT DISTURBANCE	
SOCIAL CLIMATE@		SOCIOPATHIC PERSONALITY DISORDER	
SOCIAL TREND@		AFFECTIVE PSYCHOSIS	
URBANIZATION@		MANIC DEPRESSIVE PSYCHOSIS	
SOCIAL CLASS		MENTAL DISORDER	
SN	*	NEUROSIS	
RT	12001	PARANOIA	
SOCIAL CLIMATE		PSYCHOSIS	
SN	*	PSYCHOTIC DEPRESSIVE REACTION	
RT	12003	SCHIZOPHRENIA	
SOCIAL CHANGE			
SOCIAL CONFLICT		FACET	8
USE CONFLICT		SUB-FACET	8001
SOCIAL CONSCIOUSNESS		ADDICTION	
RT	7007	CHRONIC ILLNESS	
SOCIALIZATION@		DISABILITY	

Figure 3-4: An alphabetic - facet display specimen from IRTET.

	CITY	WIDE PROGRAMS WILDLIFE MANAGEMENT WINDOWLESS ROOMS WITHDRAWAL WITHDRAWAL TENDENCIES (PSYCHOLOGY) WOLOF WOMEN PROFESSORS WOMEN TEACHERS
	WORKING	WOMEN WOMENS EDUCATION WOODWORKING WORD FREQUENCY WORD LISTS WORD RECOGNITION WORD STUDY SKILLS
	FUNCTION	WORDS WORK ATTITUDES WORK ENVIRONMENT WORK EXPERIENCE WORK EXPERIENCE PROGRAMS WORK LIFE EXPECTANCY WORK
	SHEET METAL	WORK SIMPLIFICATION
	SOCIAL	WORK
	STUDENT PERSONNEL	WORK WORK STUDY PROGRAMS
	VERTICAL	WORK SURFACES WORKBOOKS
	MIGRANT	WORKER PROJECT
	NURSERY	WORKERS (HORTICULTURE)
	CHILD CARE	WORKERS
	CLERICAL	WORKERS
	ENTRY	WORKERS
	FOOD SERVICE	WORKERS
	FOREIGN	WORKERS
	INTERSTATE	WORKERS
	MIGRANT	WORKERS
	SALES	WORKERS
	SCHOOL SOCIAL	WORKERS
	SEMISKILLED	WORKERS
	SERVICE	WORKERS
	SHEET METAL	WORKERS
	SKILLED	WORKERS
	SOCIAL	WORKERS
	UNSKILLED	WORKERS WORKING HOURS WORKING OCCUPATIONS WORKING PARENTS WORKING WOMEN WORKINGMANS COMPENSATION WORKSHEETS WORKSHOPS
	METAL	WORKSHOPS
	DRAMA	WORKSHOPS
	PARENT	WORKSHOPS
	PRESCHOOL	WORKSHOPS
	SHELTERED	WORKSHOPS

Figure 3-5: A KWIC display specimen from ERIC Thesaurus.

wa-Allāh الله , *fa-Allāh* فَاالله , where the prepositions *b* ب , *t* ت , *w* و , and *f* ف are connected to the word *Allāh* الله . Unless the compiler ignores these prepositions in the alphabetical order, the user will have trouble locating the information for which he is searching.

Another approach, which is similar to KWIC and which solves the problem of conjunctions and prepositions in headings, is the Key-Word-Out-of-Context (KWOC) display. As used in *al Mu'jam al Mufahras li Alfāz al Qur'ān al Karīm* (see Figure 3-6), each significant term is placed at the top of the heading. As a result, removing the affixes does not interrupt the natural form of the heading, except in the case of the definite article, where one has to decide whether it is a part of the word or not. For instance, the word *zulzilāt* زُلْزِلَاتُ (has earthquake) has been abstracted from a complete verse in the Qur'an and shifted to the right as a significant term, while the rest of the verse retains its natural form.⁴⁹ The same verse appears under the significance word *zilzālāhā* زِلْزَالَهَا (its earthquake), while the word has been abstracted from the verse and placed on the right as a significant term. Similarly this verse will appear elsewhere in the display under the word *al arḍ* الأرض (the earth), which is also mentioned in the verse. Using this method allows the researcher to find this particular verse by locating any of the words found in the verse. However, there are certain issues the compiler has to deal with if he wishes to adopt such a display: the method to be used for arranging the alphabet (roots or written form) and the vowel signs. These issues must be explained clearly to the user in the system. The KWOC display uses the root sequences to arrange the headings. Moreover, one important consideration that should be taken into account by the compiler is that both the KWIC and KWOC displays do not distinguish synonyms. In other words, all terms are given once when they occur in the display as significant terms and no preferences are considered.

Reviewing the above relationships and their displays, it may be concluded that great emphasis is laid on determining the subject that is

⁴⁹ The display places the word on the right instead of on the left, for Arabic is written from right to left.

الزكاة - نازلها		(زك و - أرض)		الأرض	
الآية	رقبها السورة ورقبها	الآية	رقبها السورة ورقبها	الآية	رقبها السورة ورقبها
الزكاة: ربنا: أيتها الصلاة وآياتها الزكاة وأجروا الزكاة من أموالكم ما أنتم بمؤمنين	٢٤ السورة ٥٦	الأرض: خالدين فيها ما دامت السموات والأرض إلا ما شاء الله	١١	١١	١١
وما أتيتهم من زكاة ربي ومن جاهدناهم فارتكبهم بغضنا	٢٧	فمن الجنة خالدين فيها ما دامت السموات والأرض	١١	١١	١١
والذين يقبضون الصلاة يريدون الزكاة هم الأكثرهم بؤساً	٣٠	ولو أن قرأنا سيرت من الجبال بارتطفت بالأرض	١٣	١٣	١٣
والذين يقبضون الصلاة يريدون الزكاة هم الأكثرهم بؤساً	٣١	يوم تبدل الأرض غير الأرض والسموات	١٤	١٤	١٤
وأرض الصلاة وآياتها الزكاة وأطعن الله ورسوله	٣٣	تسبح له السموات السبع والأرض ومن فيهن	١٤	١٤	١٤
الذين لا يؤمنون الزكاة وهم الأكثرهم بؤساً	٤١	تكاد السموات يقطرن من خشق الأرض	١٥	١٥	١٥
فإنهم يخطئون وأب الله عليكم الصلاة وآياتها الزكاة	٥٨	إن تر أن الله أنزل من السماء ماء فنصب الأرض نخسرة	٢٢	٢٢	٢٢
وأبوا الصلاة وآياتها الزكاة وأعرضوا الله فرساحاً	٧٣	ولو أتبع الحق أهوامهم لفسدت السموات والأرض	٢٣	٢٣	٢٣
ويقبضوا الصلاة يريدون الزكاة وذلك دين القيمة	٩٨	قل لمن الأرض ومن فيها إن كنتم تعلمون	٢٣	٢٣	٢٣
		ومن آياته إن نعوم السماء والأرض بأمره	٢٥	٢٥	٢٥
		وآية لهم الأرض الميتة أحييناها وأخرجنا منها نباتاً	٣٢	٣٢	٣٢
		سبحان الذي خلق الأزواج كلها مما تنبت الأرض	٣٦	٣٦	٣٦
		لقد أنعمنا عليك هذه الدنيا حصة وأرضاً وناجياً	٣٩	٣٩	٣٩
		والأرض جميعاً قبضته يوم القيامة والسموات مطويات	٣٩	٣٩	٣٩
		وألحقتنا الأرض نورا وبها وضع الكتاب يومئذ	٣٩	٣٩	٣٩
		فما يكتم عليهم السمع والأبصار وما كانوا يحسنون	٤٩	٤٩	٤٩
		له طعنا ما ننقض الأرض منهم بعهدة كتاب خطيب	٥٠	٥٠	٥٠
		يوم ننقض الأرض منهم سرها ذلك حشر طعنا	٥١	٥١	٥١
		إذا رحبت الأرض رجوا	٥٦	٥٦	٥٦
		وحلت الأرض والجبال عسكاً ذكراً واحدة	٦٩	٦٩	٦٩
		يوم نربط الأرض والجبال كأنها كتف مبهلا	٧٣	٧٣	٧٣
		وإذا الأرض مدت	٨١	٨١	٨١
		كلا إذا دكت الأرض ذكراً	٨٩	٨٩	٨٩
		إذا زلزلت الأرض زلزالاً	٩٩	٩٩	٩٩
		وأخرجت الأرض أتخالا	٩٩	٩٩	٩٩
		الأرض: الذي جعل لكم الأرض فراشا والسماء بناء	٢	٢	٢
		قال إنه يقول إنها ذرية لأذول نبي الأرض	٢	٢	٢
		وما أنزلنا من السماء ماء فأجاءها الأرض بما رحبت	٢	٢	٢
		وسع كسبه السموات والأرض ولا يشوده خطيبها	٢	٢	٢
		يا قوم ادعوا الأرض القديمة التي كذب الله لكم	٥	٥	٥
		الهدى الذي خلق السموات والأرض ورسول الطلقات	٦	٦	٦
		وهو الذي خلق السموات والأرض بالحق	٦	٦	٦
		لقد جهت وجهي للذي خلق السموات والأرض حنيفاً	٦	٦	٦
		إن وبكم أضعاف خلق السموات والأرض منة أيام	٧	٧	٧
		أر لم يهد للذين يرفون الأرض من بعد أهلها	٧	٧	٧
		لأن موسى لقومه استخبرنا أصحابنا إن الأرض	٧	٧	٧
		أنا خسرنا في كتابها يوم خلق السموات والأرض	٩	٩	٩
		إن وبكم أضعاف خلق السموات والأرض منة أيام	١٠	١٠	١٠
		الزكاة: ربنا: أيتها الصلاة وآياتها الزكاة وأجروا الزكاة من أموالكم ما أنتم بمؤمنين	٢٤	٢٤	٢٤
		والذين يقبضون الصلاة يريدون الزكاة هم الأكثرهم بؤساً	٣٠	٣٠	٣٠
		والذين يقبضون الصلاة يريدون الزكاة هم الأكثرهم بؤساً	٣١	٣١	٣١
		وأرض الصلاة وآياتها الزكاة وأطعن الله ورسوله	٣٣	٣٣	٣٣
		الذين لا يؤمنون الزكاة وهم الأكثرهم بؤساً	٤١	٤١	٤١
		فإنهم يخطئون وأب الله عليكم الصلاة وآياتها الزكاة	٥٨	٥٨	٥٨
		وأبوا الصلاة وآياتها الزكاة وأعرضوا الله فرساحاً	٧٣	٧٣	٧٣
		ويقبضوا الصلاة يريدون الزكاة وذلك دين القيمة	٩٨	٩٨	٩٨
		زُيِّلَتْ: إذا زلزلت الأرض زلزالاً	٩٩	٩٩	٩٩
		زُيِّلُوا: سبهم البساء والضراء وزلزلوا	٢	٢	٢
		هناك أجبل الثمنون وزلزلوا	٢٣	٢٣	٢٣
		زُيِّلُوا: زلزالاً شديداً	٣٣	٣٣	٣٣
		زُيِّلُوا: إذا زلزلت الأرض زلزالاً	٩٩	٩٩	٩٩
		زُيِّلُوا: بأبها الناس أضرها وبكم إن زلزلت الساعة	٩٩	٩٩	٩٩
		أُتِّلُوا: وأما زكاة ثم الآخرين	٢٩	٢٩	٢٩
		أُتِّلُوا: وأزلت الجنة ثنتين	٢٩	٢٩	٢٩
		وأزلت الجنة ثنتين غير بيده	٥٠	٥٠	٥٠
		وإذا الجنة أزلت	٨١	٨١	٨١
		زُفِّتْ: طها وأره زافة سينت وجوه الذين كفروا	٦٧	٦٧	٦٧
		زُفِّتْ: أيام الصلاة طرق النار وزلزالاً من الجبل	١١	١١	١١
		زُفِّتْ: زلزالاً لا أولادكم بالي تخزيكم	٣١	٣١	٣١
		ونفرا له ذاك وراد له عسكاً فرفق وحسن آت	٣٨	٣٨	٣٨
		وإن له عسكاً فرفق وحسن آت	٣٨	٣٨	٣٨
		ما يسعهم إلا لغير يومنا بل الله زلفى	٣٩	٣٩	٣٩
		أُتِّلُوا: وإن يكاد الذين كفروا ليرفونك	٦٨	٦٨	٦٨
		لما حسوا الذكر	٦٨	٦٨	٦٨
		زُفِّتْ: ويرسل عليها سبحانه من السماء نضج مبيداً	١٨	١٨	١٨
		زُفِّتْ: إن زلزالاً من بعد ما جادتكم حيات فأعلموا أن الله	٢	٢	٢
		عزبكم	٢	٢	٢
		مُتِّلْ: ولا تفلحوا أيمانكم دولا حتى يتم زلزال بعد يومنا	١٦	١٦	١٦
		فأرسلنا فأرسلنا الجبال حث طائرهما مما كانا فيه	٢	٢	٢

Figure 3-6: a KWOC display specimen from *al-mu'jam al-mufahras li-alfāz al-Qur'ān al-karīm*.

to be served within the Qur'an. If the subject contains a large number of terms that express a relationship between a whole—part or a class—member, then the hierarchical display is appropriate. On the other hand, if the subject area includes a number of terms that show an association relationship, then the facet display could be more effective. Deciding whether to use the hierarchy display or the tree-structure display depends on whether the compiler intends to use the alphabetic section as part of the display or not. This necessitates the use of the hierarchical display either within the alphabetic section or as complementary to it. Moreover, the decision of whether to use the KWIC/KWOC display or the alphabetic display depends heavily on the purpose of the retrieval system: does it seek to facilitate a control of vocabulary with regard to synonyms or not? The KWIC/KWOC display does not distinguish between synonyms and provides all terms as significant terms in the display.

In considering any of these relationships and the ensuing displays, it must be pointed out that the equation for any retrieval system is this: the higher the specificity, the more likely it is that the user will be able to retrieve more relevant verses. Conversely, if a system permits the user to achieve a high level of recall, the user will achieve less specificity and less relevant verses. In the case of whole—part and class—member relationships, there is some confusion over the nature of broad categories. For example, in some cases whole—part relationships are classified as whole—part associative relationships and treated as related terms.⁵⁰ As for associated terms, Atchison and Gilchrist (1987, 44, 48) assert that there is always a risk that the thesaurus compilers may overload the thesaurus with valueless relationships, a practice that may impair precision performance without improving recall to any significant degree, and that the compiler needs to establish only the relationship that falls into the broad category of related terms.

Combining these two views, it can be stated that only related terms that express a meaningful and close relationship need to be considered.

⁵⁰ The TEST thesaurus treats whole—part relationships as terms that are associatively related. See Office of Naval Research, *Thesaurus*, 678.

Furthermore, there is no need for making any distinction in treatment between the whole—part, class—member, or associated terms. Applying this conclusion to the above displays, it may be suggested that the facet display, in the capacity of a complementary alphabetic section, is the most suitable method to meet the user's needs, while the conventional alphabetic display is preferable to KWIC and KWOC displays, if user familiarity is the main consideration.

3.7. Conclusion

During the process of constructing an indexing system, it must be decided, primarily, who is to be served and what is the most useful display for the subject field. In addition, all term indicators need to be selected carefully so that the user will be able to locate the specific information that is relevant for him at that time. Obviously, this means that the designer has to devise a planning scheme based on the type of information requested in order to provide the most suitable solution to the problem. In genuine developmental work, the designer has to conduct experiments on the basis of practical problems.

CHAPTER FOUR

Information Technology Problems in Qur'anic Style

4.1. Overview

In the previous two chapters, Qur'anic language has been studied in terms of its effect on the efficiency of the design of a manual retrieval system. For some time, it has been recognized that the ability to assign and retrieve data manually from an entire text is extremely desirable from the point of view of time and cost. Some computer scientists, therefore, have turned their attention to the seemingly difficult problem of assigning and retrieving data from free-text searching via computer technology. However, serious problems are encountered when the natural language and the machine processing language interact. Consequently, the role of linguistics in computer technology has become increasingly important. As the design and operation of large-scale information systems has become a cause of concern to an ever-increasing segment of the user world, experts in the field have undertaken the study of man—machine interface, which is defined as the process of designing an interaction system between the user and the computer that will make the computer system efficient, and easy to use, and do exactly what users expect it to do.

This chapter analyzes whether or not the Qur'an's terminology and verses can be processed and retrieved by a computer. The analysis applied in this chapter involves linguistic theories that have been employed for language processing by Arab programming compilers, includes pioneer experiments that have been used for indexing, and evaluates the technical searching strategies used by various Qur'anic software systems.

4.2. Automatic Search Analysis

Underlying the search for the possibility of the Qur'an being processed by the computer is the need to investigate modern computational linguistic theories. These may be categorized as morphological analysis (i.e., dictionary look up), syntactical analysis (i.e., phrase-structure grammar and transformation-generating grammar), and semantical analysis (i.e., case grammar). All of these theories have been used by Arab programming compilers. As Arab compilers (with the exception of al 'Alamīyah software) apply these theories only to modern Arabic, they are of limited relevance to this chapter.

A. Morphological Analysis

Morphological analysis is a process that identifies words in terms of their elementary construction regardless of their position in the text. (Salton 1989, 379). In the case of linguistic processing, morphological analysis is concerned with the processing of individual word forms and of recognizable portions of specific words. In other words, the whole word is reduced to its stem and all affixes are removed. This process is done through what is known as a dictionary look-up. To consult a dictionary look-up, the operation starts by separating text words into individual word items. Input words are then matched with dictionary entries. The program scans the input buffer and searches only for those words that might be included in that part of the dictionary being consulted at that particular moment. All data found in the dictionary are returned to the input array, which is then processed with reference to the second part of the dictionary. This continues until the complete dictionary has been matched to the present input. When all of the words in the text have been processed, an assembly routine collects all of the entries by constructing a chained list (Salton 1968, 86). These are the normal stages in processing a dictionary look-up in any natural language being searched by a computer. However, when dealing with the Arabic language, a number of spelling rules are incorporated into four types of

dictionary look-up, viz, suffix, prefix, root, and pattern, to cover the principal morphological analysis and generation process.

In the Arabic language analysis process, when a given word is provided for computer searching, the program divides the word into a matching stem plus a longer suffix or prefix. Take the example of *āmannā* آمنّا (we believed), which will be divided as نا + أمن + أ. The prefix أ will be matched with the prefix dictionary, the suffix نا with the suffix dictionary, and the stem أمن will be checked in the root dictionary. The generation process, on the other hand, starts by attaching all possible forms of the prefixes and suffixes *amannā* آمنّا, *īmān* إيمان (faith), *mū'minūn* مؤمنون (believers), and so on. Finally, the program matches all of the generated words with the Qur'anic data and supplies the corresponding verses.

Although this process looks simple and straightforward, in practice it turns out to be complex and, in many cases, ineffective. First of all, reducing input words to their roots can cause the generating process to form mistaken words. For instance, the word *āmannā* آمنّا, if written without vowel signs, could be understood as a result of consulting the pattern dictionary look-up as *amn* أمن, which could lead to the generation of such words as *aymān* أيمان (oaths), *amānah* أمانة (truthfulness), and *amn* أمن (security). The result of such a search would be the retrieval of verses that are not needed by the user. Second, following this method requires the derivation of rules that must be adhered to carefully in order to distinguish those letters that form suffixes and prefixes. For instance, the prefix *al* ال (the) in *al Qur'ān* القرآن (the Qur'an) should be distinguished from the actual *al* ال in *Allah* الله (God). Similarly, reducing words to their stems should be conducted in such a way that creating another unrequired stem is avoided. For instance the suffix *ta* ت in *bint* بنت (girl) should be distinguished as an original part of the word so the word is not reduced to *bin* بن (son of), which is also a valid reduction.

Morphological analysis, which is very important as a preliminary elementary process designed to distinguish individual words within the text, is not sufficient to eliminate ambiguity that may result from taking the word out of context. For example,

Say: He is God, **one**. God, the eternal Refuge. He begets not, nor has He begotten, and neither is there **any** equal to Him (112:1-4)

﴿قُلْ هُوَ اللَّهُ أَحَدٌ، اللَّهُ الصَّمَدُ، لَمْ يَلِدْ وَلَمْ يُولَدْ، وَلَمْ يَكُنْ لَهُ كُفُوًا أَحَدٌ﴾ (الإخلاص: ١-٤)

In the above verse, the word *aḥad* أحد in the first phrase refers to the number one—the unity of God. On the morphological level, however, this cannot be distinguished from the word *aḥad* أحد in the fourth phrase, which means someone or anybody. The analysis therefore requires a contextual recognition of the word being searched for, which is the task of syntactical analysis.

B. Syntactical Analysis

Syntactical analysis seeks to check a sentence's structure to remove any ambiguity by bringing into play the factor of word position and the resulting relations independent of meaning. Or, to put it another way, it is concerned with the well-formedness of utterances and sentence structures (Salton 1989, 386). Syntactical text analysis breaks complete utterances down into simpler phrases and identifies the structural relations of the sentence components.

Several different kinds of grammars have been used in natural language programs in an attempt to parse⁵¹ the input sentences to help determine their meanings. Probably the most important contribution in the field of computational linguistics is the theory of Generating Grammar, which was introduced by Noam Chomsky (1957). This theory is based on Chomsky's beliefs that human language is finite and that learning a language is not only a matter of hearing and memorizing words, and phrases, but of developing an innate knowledge of the structure of language with which all human beings are born. Chomsky attempted to delineate these inherent language structures by developing a

⁵¹ Parsing is the use of grammatical rules and other sources of knowledge to determine the functions of the words in the input sentence in order to create a more complicated data structure for computational analysis and generation.

series of generative grammars, which is defined in his *Syntactic Structures* as “a rules system formalized with mathematical precision that generates, without drawing upon any information that is not represented explicitly in the system, the grammatical sentences of the language that it describes and assigns to each sentence a structural description, or grammatical analysis” (ibid., 57).

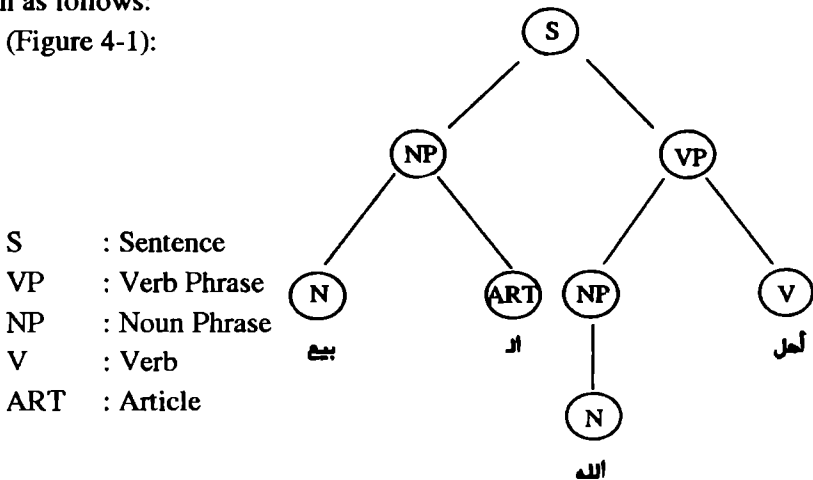
A typical type of generative grammar that describes the infinite state of language is Phrase Structure Grammar (PSG). An important property of PSG in natural language programs is that it analyses sentences into their elementary components and thereby represents them by structure. Take, for example, the Qur’anic phrase:

And yet God has permitted
trade and forbidden usury.
(2:275)

﴿... وَأَحَلَّ اللَّهُ الْبَيْعَ وَحَرَّمَ
الرِّبَا...﴾ (البقرة: ٢٧٥)

The underlined phrase can be presented in Chomsky’s tree structure form as follows:

(Figure 4-1):



The analysis in this process, which is in line with Salton’s (1989, 391), starts by scanning the sentence from right to left, as that is the order in which Arabic sentences are written. When the analyzer reaches the first verb, it will be identified in the dictionary as the verb *aḥalla* أحل

(has permitted), followed by the noun *Allah* الله (God) to generate the verb phrase (*aḥalla Allah* أحل الله). The scanning will continue by combining the noun phrase *al bay'* البيع (trade) with the verb phrase (أحل الله) to generate the final sentence (أحل الله البيع). When the final sentence is formed and all of the input words are properly accounted for, a complete analysis that is correct according to the grammar being used will be obtained. However, the representative sentence of the tree structure will be recognized by the analyser as:

Sentence ----- noun phrase + verb phrase
 verb phrase ----- verb + noun phrase
 noun phrase ----- noun + determiner
 verb ----- *aḥalla* أحل
 noun ----- *Allah* الله , *al bay'* البيع

In that sense, the PSG distinguishes the noun in the sentence as either *al bay'* البيع or *Allah* الله. This is in itself a major disadvantage, for this indistinct position makes it possible for the PSG to generate various inappropriate sentences: *aḥalla Allah al bay'* أحل الله البيع (God has permitted trafficking), *aḥalla al bay' Allah* أحل البيع الله (trade has permitted God), *aḥalla al bay' al bay'* أحل البيع البيع (trade has permitted trade), or *aḥalla Allah Allah* أحل الله الله (God has permitted God). Moreover, this grammar does not account for all aspects of the natural language. For example, it contains no reference to conjunctions and therefore cannot produce such compound sentence elements as *wa ḥarrama al ribā* وحرم الربا (and forbidden usury).

To deal with word order and compound sentences, Chomsky (1965) developed another complex type of grammar known as transformational generative grammar (TG). This type of grammar requires two components to produce an acceptable sentence: the base component and the transformation component. The base component generates the sentence's so-called deep structure, which is not normally used in speech or writing (i.e., a passive voice sentence). The transformation component operates the basic component and generates the sentence's surface structure,

structure, which reflects its actual use in speech or writing (i.e., an active voice sentence).

In advancing this theory, Chomsky assumes that each sentence has a 'deep' structure underlying the 'surface' structure that actually would be used in speech or writing. This deep structure can experience a variety of transformations of form on its way to the surface while retaining the essential meaning of the sentence. He summarizes the generation of the sentence as follows: "Sentence generation begins from a PSG and selection of words from a lexicon to form the base of the grammar; their output is the deep structure. A scheme of transformational rules maps out the movement from deep structures to surface structures, and together they form the syntactic components of the sentence" (ibid.). In other words, surface and deep structures are interrelated by an intricate series of transformations, and the location of the semantic component makes them capable of relating verses with the same meaning and derived from the same deep structure. Following Chomsky's pattern, the surface and deep structure of two Qur'anic verses can be represented as: (Figure 4-2):

He has only forbidden you dead
meat (2:173)

﴿ إِنَّمَا حَرَّمَ عَلَيْكُمُ الْمَيْتَةَ
... ﴾ (البقرة: ١٧٣)

Forbidden to you are dead meat ...
(5:3)

﴿ حُرِّمَتْ عَلَيْكُمُ الْمَيْتَةُ
... ﴾ (المائدة: ٣)

During the transformation process, the sequence of processes includes ellipses and word order. These are applied to the deep structure in order to produce a proper surface structure. Through these transformations, verses can change from the passive voice into the active voice. In the case of the two verses above, the transformation can be shown as:

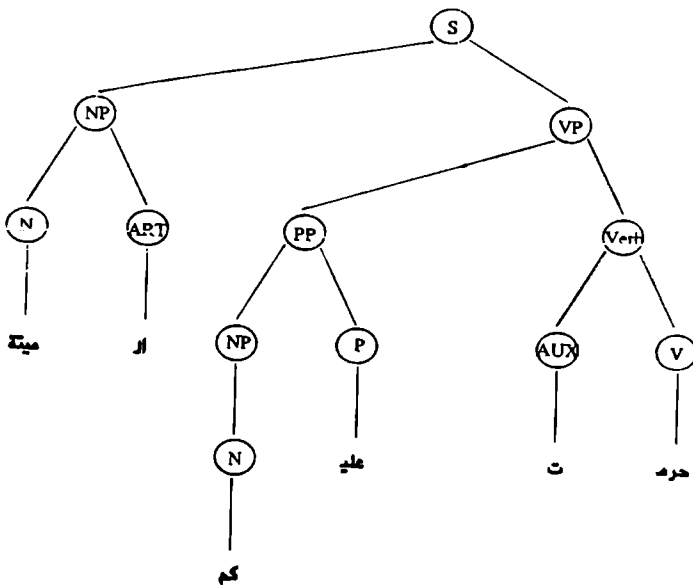


Figure 4-2a: deep structure of the Qur'anic statement (2:173)

- S : Sentence
- VP : Verb Phrase
- NP : Noun Phrase
- PP : Preposition Phrase
- V : Verb
- N : Noun
- ART : Article
- AUX : Auxiliary

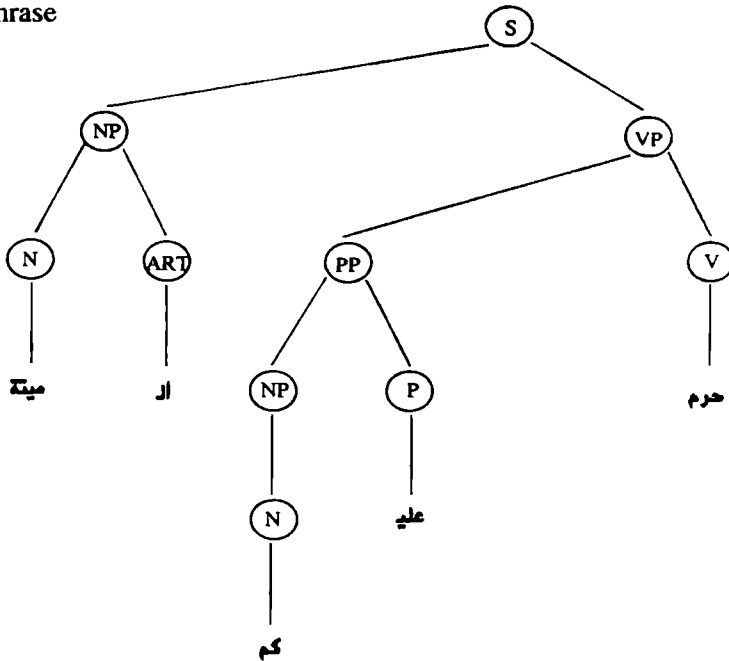


Figure 4-2b: Surface structure of the Qur'anic statement 5:3.

Operation	Transformation Process	
Original	<i>hurrimat 'alaykum al maytah</i>	حُرِّمَتْ عَلَيْكُمُ الْمَيْتَةَ
Phrase maker	<i>hurimat 'alaykum al maytah</i>	حُرِّمَتْ عَلَيْكُمُ الْمَيْتَةَ
Active transformation	<i>haramat 'alaykum al maytah</i>	حُرِّمَتْ عَلَيْكُمُ الْمَيْتَةَ
Subject-verb agreement	<i>harama 'alaykum al maytah</i>	حَرَّمَ عَلَيْكُمُ الْمَيْتَةَ
Final	<i>harrama 'alaykm al maytah</i>	حَرَّمَ عَلَيْكُمُ الْمَيْتَةَ

The final phrase marker is then checked to see whether it is derivable according to the base rules of transformational grammar. If it is, it is accepted as a correct generalized marker. If it is not, it is discarded. The major disadvantage of TG is that it does not provide a basis for identifying similar verses that have a different structure orientation. For example consider:

... With plentiful fruits for you,
from which you eat. (23:19)

﴿... لَكُمْ فِيهَا فَوَاكِهُ كَثِيرَةٌ
وَمِنْهَا تَأْكُلُونَ﴾ (المؤمنون: ١٩)

... And with many benefits for
you, from which you eat. (23:21)

﴿... وَلَكُمْ فِيهَا مَنَافِعُ كَثِيرَةٌ
وَمِنْهَا تَأْكُلُونَ﴾ (المؤمنون: ٢١)

The failure of transformation grammar to explain differences and similarities in the above two cases demands a type of grammar that can deal with the problems of phrase synonyms recognition. The lack of semantic analysis makes it impossible for this method to recognize parallel meanings. Moreover, as a general rule, the syntactic approach alone cannot be extended outside the boundaries of a single case. Furthermore, it is not always easy to figure out what type of knowledge may be needed for particular semantic interpretations. The best way to overcome this type of failure is to establish a specialized type of grammar that includes all of the necessary syntactical and semantic information appropriate to the exact case.

C. Semantic Analysis

Semantic analysis is the stage of addressing the correctness of the sentence's meaning by attaching an agreed-upon meaning to the words (Salton 1989, 398). In principle, syntactic analysis accompanies the generation of semantically implausible output. Of the various models for syntactic/semantic representation, the Case Grammar (CG) of Fillmore appears to have the most explicit mechanism for relating formal language to natural language sentences. In his paper "A Case for Case," Fillmore (1968, 21) postulates that: "The sentence in its basic structure consists of a verb and one or more noun phrases, each associated with the verb in a particular case relationship." According to him, a sentence is made up of a preposition and a tenseless set of relationships involving verbs and nouns, all of which are separated from what might be called the modality constituent. This latter includes such modalities on the sentence-as-a-whole as negation, tense, mood, and aspect.

Fillmore names the mechanism for identifying the specific cases that allow for any particular verb as case frame. The case frame for each verb indicates the relationships that are required in any sentence in which the verb appears and those relationships that are optional. Specifically, Fillmore's (Ibid., 24-25) notions include the following:

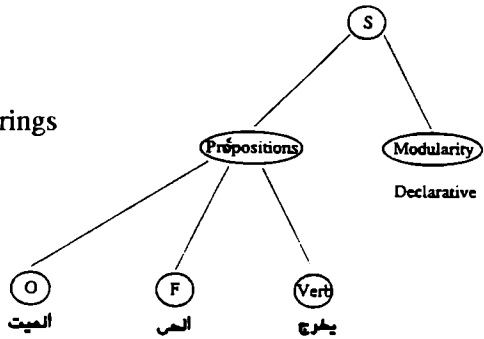
Case identifiers	Case definitions
AGENTIVE (A)	The case of the instigator of an action.
INSTRUMENTAL (I)	The case of the physical cause of an action.
DATIVE (D)	The case of the animate being affected by an action.
FACTITIVE (F)	The case of the object or being resulting from the action.
LOCATIVE (L)	The case of the location of the action.
OBJECTIVE (O)	The case of the final state or place of the action.

However, taking for example the following Qur'anic verse, Fillmore's notion will appear thus (Figure 4-3):

[He] brings forth the living from the dead and [He] brings forth the dead from the living. (30:19)

﴿يُخْرِجُ الْحَيَّ مِنَ الْمَيِّتِ وَيُخْرِجُ الْمَيِّتَ مِنَ الْحَيِّ...﴾ (الروم: ١٩)

[(O)(F).....] verb
 [(the living) (the dead).....] brings
 F: *al hayy* الحي (the living)
 O: *al mayit* الميت (the dead)



When the analysis is operative, according to Salton (1989, 402) the CG compares the expectations embodied in case frames and fills the slots with the appropriate sentence units. This process uses case identifiers and refers to special marks accompanying case definitions (i.e., prepositions and conjunctions). The deep structure is established by a tree, in which noun phrases are dominated by states indicating their role relations, and the operation of a standard set of transformational rules to produce the appropriate surface structure.

Applying this method, the CG identifies the verb *yukhrij* يُخْرِجُ (brings), compares the case identifiers embodied in the case frames, which is the preposition *min* من (from), and then fills the slots with the appropriate verse units. For instance, *al hayy* الحي (the living) will be placed in the FACTITIVE slot and *al mayit* الميت (the dead) will be placed in the OBJECTIVE slot. The CG will recognize the absence of the subject *Allah* الله (God) because of the emptiness of the AGENTIVE slot.

The major disadvantage of this method is that the above verse will be recognized by CG only if the first part is entered. If either part has been entered and analyzed, CG will insist that *al hayy* الحي be treated as FACTITIVE and *al mayit* الميت as OBJECTIVE, and will reject the interchange that took place in the second part of the verse). As a result of this

weakness, the CG cannot deal with linguistic problems that require interpretation for semantically ambiguous statements.

To overcome this type of complexity Katz and Fodor (1963) have developed techniques for dealing with semantic problems within the framework of transformation grammar. In their article "The Structure of a Semantic Theory," they propose two components for a semantic theory: a dictionary and a set of projection rules. The dictionary will provide a phonological description, a syntactic or grammatical portion, for every lexical item (or word) in the language. Lexical entries in a dictionary or lexicon contain two primary parts: the grammatical portion and the semantic portion. The former provides grammatical markers, to identify possible grammatical uses of the word, while the latter includes those semantic markers and distinguishers used to distinguish the various senses of each grammatical use of the word in order to remove any ambiguity associated with the word. To follow this theory, let us take for example, the Qur'anic verse:

al najm and the trees bow themselves (55:6) ﴿وَالنَّجْمُ وَالشَّجَرُ يَسْجُدَانِ﴾
(الرحمن : ٦)

According to al Qurtubī (1954, 17:153-54), the word *al najm* النجم has two lexical meanings: star, which goes directly to the word's lexical meaning and hence provides the general meaning of the verse: both the star and the trees are meant to demonstrate that near and far things prostrate themselves to the greatness of God. Another meaning of the word *al najm* النجم is stemless plant (shrub), which accords with the word sequence and meaning in the phrase as well as the rest of the chapter. This means both of the meanings (i.e., star and shrub) attached to this word, by means of interpretation, will be provided. The dictionary entry for the word *al najm* النجم would include markers to allow for clearing up of potential ambiguity. This process of applying projection rules to the verse and its semantic markers results in different interpretations of the meaning based on all possible combinations of semantic markers. Thus

the two words *al najm* النجم and *al shajar* الشجر will give the following possible combinations of markers:

- (1) *al shajar* (1) + *al najm* (1), where *al najm* means star; and
- (2) *al shajar* (1) + *al najm* (2), where *al najm* means shrub

By checking the verb and the combinations in the dictionary, grammatical rules eliminate the first option, for the word *al shajar* الشجر requires *al najm* النجم to be interpreted as shrub. For grammatical rules to justify the first meaning of *al najm* النجم as star, combinations such as the following are required: *al najm wa al shams* النجم والشمس (the star and the sun), *al najm wa al qamar* النجم والقمر (the star and the moon), or any physical object of a similar nature.

Of course, this is not the case in every situation involving semantic markers that can distinguish among such combinations. In many cases, the semantic meanings require an outside knowledge that could be beyond the capability of Katz and Fodor's semantic grammar. For instance, in the following two verses the word *hudā* هدى, with the literal meaning of right guidance, has been used metaphorically in both positions:

Say: "God's guidance is that real guidance." (2:120)

﴿... قُلْ إِنَّ هُدَى اللَّهِ هُوَ
الهُدَى...﴾ (البقرة: ١٢٠)

Say: "Guidance is God's guidance." (3:73)

﴿... قُلْ إِنَّ الْهُدَى هُدَى اللَّهِ
﴿...﴾ (آل عمران: ٧٣)

According to al Karamānī (1978, 50) the word *hudā* هدى in the first verse refers to the direction of the Ka'bah, as implied by the context and the occasion of revelation, while in the second verse it refers to the religion of Islam. As a matter of fact, the word *hudā* هدى has appeared in its metaphorical use in the Qur'an in fourteen occurrences, as reported by al Tha'ālibī ((1984, 270-72) and in sixteen occurrences as reported by al Damaghānī (1983, 473-76). Abdus Sattar (1978), who reviewed the

commentators' interpretations of this word, reported thirty-three different meanings. which are given below:⁵²

<i>al tawfiq</i>	التوفيق	(consistence)	as in (1:5)
<i>al ṣawāb</i>	الصواب	(right)	as in (2:5)
<i>al istiḥṣār</i>	الإستحصار	(endowment with reason)	as in (2:16)
<i>al rasūl</i>	الرسول	(messenger)	as in (2:38)
<i>al kitāb</i>	الكتاب	(God's book)	as in (2:38)
<i>al qiblah</i>	القبلة	(direction of praying)	as in (2:120)
<i>ba'that al nabīy</i>	بعثة النبي	(sending the Prophet)	as in (2:159)
<i>al tathbūt</i>	التثبيت	(confirmation)	as in (2:213)
<i>inqitā' al ḥujjah</i>	إنقطاع الحجة	(separation from evidence)	as in (2:258)
<i>al Islām</i>	الإسلام	(religion)	as in (3:73)
<i>al ta'īm</i>	التعليم	(teaching)	as in (4:26)
<i>al faḍl</i>	الفضل	(superiority)	as in (4:51)
<i>al ma'rifah</i>	المعرفة	(knowledge)	as in (6:97)
<i>al Sunnah</i>	السنة	(the Prophet's example)	as in (6:90)
<i>al dalālah 'alā al na'im</i>	الدلالة على النعيم	(guidance to Paradise)	as in (10:9)
<i>al iṣlāh</i>	الإصلاح	(correction)	as in (12:52)
<i>al da'wah</i>	الدعوة	(invitation)	as in (13:7)
<i>al imān</i>	الإيمان	(faith)	as in (19:76)
<i>al dalīl</i>	الدليل	(sign)	as in (20:10)
<i>al ilhām</i>	الإلهام	(inspiration)	as in (20:50)
<i>al mawt 'alā al Islām</i>	الموت على الإسلام	(death on Islam)	as in (20:82)
<i>al ḥifz</i>	الحفظ	(protection)	as in (22:54)
<i>al irshād</i>	الإرشاد	(direction)	as in (28:22)
<i>al ta'rīf</i>	التعريف	(determination)	as in (28:56)
<i>al taqḍīm</i>	التقديم	(sending forward)	as in (37:23)
<i>al Tawrah</i>	التوراة	(the Torah)	as in (40:53)
<i>amr Muḥammad</i>	أمر محمد	(Muhammad's mission)	as in (47:32)
<i>al Qur'an</i>	القرآن	(the Qur'an)	as in (53:23)
<i>al tawḥīd</i>	التوحيد	(monotheism)	as in (61:9)
<i>al istirjā'</i>	الإسترجاع	(reclamation)	as in (64:11)
<i>al bayān</i>	البيان	(explanation)	as in (76:3)
<i>al thawāb</i>	الثواب	(reward)	as in (92:12)
<i>al idhkār</i>	الإذكار	(reminding)	as in (93:7)

⁵² Abdus Sattar asserts that the interpretations of the word *hudā* have been collected from different sources in which it is not necessary for each meaning recorded above to be accepted by all Qur'anic scholars. He also claimed that if any meaning at first glance is seen to be apparently unreasonable, reference to the authentic sources in accordance with the context may make it reasonable.

In this case, the lexicon has to be supplied with all of the above meanings and their verse numbers in order to provide the states in the networks with the required semantic data. However, grammatical rules alone cannot prevent the appearance of ambiguous meanings arising from the metaphorical homographic usage of a given word, as indicated in the Qur'an, without additional external knowledge. The system designed to deal with this kind of difficulty should be supplied, initially, with all of the necessary syntactic and semantic information and also connected with a database so that it can retrieve the desired specialized knowledge within a given narrow subject specialization. This is normally referred to as discourse analysis.

D. Knowledge-based Analysis

A knowledge-based analysis is an integration of syntactic and semantic analysis with a specific body of knowledge that allows the user to deal with more sophisticated aspects of language and discourse. A basic function of this method of analysis is to classify the concepts of interest and to specify certain relationships between the entities by supplying facts and relations located in the database. The most influential declarative knowledge-based representation schemes are known as Semantic Networks and Frame Models.

The basic functional unit of Semantic Networks (SNs) is a structure consisting of two points, or nodes, linked by an arc. Each node represents a particular concept, and each arc represents a relation between pairs of concepts. Such pairs of related concepts may be thought of as representing a simple fact. Nodes are labelled with the name of the relevant relation. Any node may be linked to any number of other nodes, which gives rise to the formation of a network of facts. For example, take the following four Qur'anic verses:

And We created man of clay, of
moulded mud. (15:26)

﴿وَلَقَدْ خَلَقْنَا الْإِنْسَانَ مِنْ صَلْصَالٍ
مِنْ حَمَلٍ مَسْنُونٍ﴾ (الحجر: ٢٦)

And We created man and know what his own self murmurs within him. (50:16)

﴿وَلَقَدْ خَلَقْنَا الْإِنْسَانَ وَنَعْلَمُ مَا تُوَسَّسُ بِهِ نَفْسُهُ...﴾ (ق:١٦)

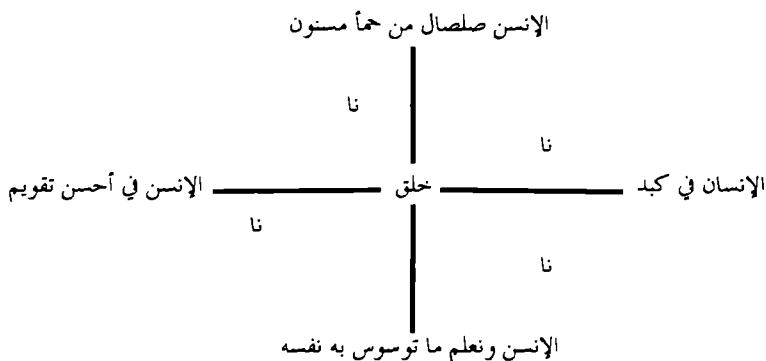
We created man in drudgery. (90:4)

﴿لَقَدْ خَلَقْنَا الْإِنْسَانَ فِي كَبَدٍ﴾ (البلد:٤)

We created man in the best shape. (95:4)

﴿لَقَدْ خَلَقْنَا الْإِنْسَانَ فِي أَحْسَنِ تَقْوِيمٍ﴾ (التين:٤)

These verses will be presented in the verb node *khalaq* خلق (created) in a network as follows (Figure 4-4):



A great disadvantage of this method is the kind of knowledge representation that needs to be located in the nodes. For instance, a distinction must be made between a general statement, such as

Divorced women shall wait by themselves three menstrual courses. (2:228)

﴿وَالْمُطَلَّقاتُ يَتَرَبَّصْنَ بِأَنْفُسِهِنَّ ثَلَاثَةَ قُرُوءٍ...﴾ (البقرة: ٢٢٨)

which concerns all women who are divorced and hence indicates all the members of a class, and a specific statement, such as

O you who believe, if you marry believing women, and you divorce them before you touch them, you shall have no waiting period to reckon on them. (33:49)

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا إِذَا نَكَحْتُمُ
الْمُؤْمِنَاتِ ثُمَّ طَلَقْتُمُوهُنَّ مِنْ قَبْلِ أَنْ
تَمْسُوهُنَّ فَمَا لَكُمْ عَلَيْهِنَّ مِنْ عِدَّةٍ
تَعْتَدُونَهَا...﴾ (الأحراب: ٤٩)

which refers to a specific class of women: those who are divorced and who have not been touched.

Compare the distinction between an attributive statement such as

And the bearing and the weaning of him is thirty months. (46:15)

﴿... وَحَمْلُهُ وَفِصَالُهُ ثَلَاثُونَ
شَهْرًا...﴾ (الأحقاف: ١٥)

which calculates the period for both the bearing and the weaning, and a referential statement, such as

Mothers are to suckle their children for two complete years, for whoever so desires to complete suckling. (2:233)

﴿والوالداتُ يُرِضِعْنَ أَوْلَادَهُنَّ
حَوْلَيْنِ كَامِلَيْنِ لِمَنْ أَرَادَ أَنْ يُتِمَّ
الرِّضَاعَةَ...﴾ (البقرة: ٢٣٣)

which calculates only the period of weaning. However, through the process of interpretation it may be concluded that the minimum period for pregnancy is six months.

A distinction should also be drawn between a reference to a general address, such as

O Prophet, when you divorce women, divorce them after their period, and count the period ... (65:1)

﴿يَا أَيُّهَا النَّبِيُّ إِذَا طَلَقْتُمُ النِّسَاءَ
فَطَلَقُوهُنَّ لِعَدَّتِهِنَّ وَأَحْصُوا
العِدَّةَ...﴾ (الطلاق: ١)

which is addressed to all Muslims through the Prophet, and a reference to a particular address, such as

O Prophet, why do you prohibit that which God has made lawful to you, seeking the contentment of your wives ... (66:1)

﴿يَا أَيُّهَا النَّبِيُّ لِمَ تُحَرِّمُ مَا أَحَلَّ اللَّهُ لَكَ تَبْتَغِي مَرْضَاةَ أَزْوَاجِكَ...﴾ (التحریم: ١)

which is addressed only to the Prophet.

To interpret knowledge-based data clearly, distinctions must be drawn within the different states of the networks. This, in turn, requires introducing more flexible networks to deal with a greater variety of data structures. Known as Frame Models (FMs), this type of structure describes a particular concept by listing elements of importance in the particular context and provides information that could be relevant to that concept (Minsky 1975). For instance, with reference to the Qur'anic data, the frame *al nikāḥ* النكاح (marriage) describes the conditions, viz. *'adad al ṭalāqāt* عدد الطلاقات (numbers of divorce), *al 'iddah* العدة (waiting period), the participants viz. *al zawj* الزوج (husband), *al zawjah* الزوجة (wife), *al walīy* الولي (wife's representative), *al shuhūd* الشهود (witnesses), the activities, viz. *al ṣadāq* الصداق (dowry), *al 'aqd* العقد (contract), and any other special related data that could be attached to the concept of marriage. In that sense, the frame *al nikāḥ* النكاح will assume the role of the head concept instead of the verb, as would happen in Fillmore's Case Grammar.

Later on, the frame will be related to each of the other frames, through different forms, to constitute conceptual frame networks. This means that the frame *al nikāḥ* النكاح will be connected with the frames of *al ṭalāq* الطلاق, *al 'iddah* العدة, and other frames containing concepts that are functioning as head frames. Unfortunately, because information describing particular events and situations is not always available, many

slot positions will be filled only when the corresponding information becomes available. For instance, the absence of the word *nikāḥ* النكاح in the verse

Prohibited to you are your mother, and your daughters, and your sisters. (4:23)

﴿ حُرِّمَتْ عَلَيْكُمْ أُمَّهَاتُكُمْ وَبَنَاتُكُمْ وَأَخَوَاتُكُمْ ... ﴾ (النساء: ٢٣)

will make it impossible for this verse to be related to the frame *al nikāḥ* النكاح. As a result, it will not be linked in the network with the marriage conditions for persons who are forbidden to be married. Such a situation can also arise with verses containing synonyms in place of the exact word found in the database. One example of this is found with the word *al ajr* الأجر (dowry), which is used in the Qur'an to refer to *al ṣadāq* الصداق. This also requires that a distinction be made between homographs, since *al ajr* الأجر is used in the Qur'an to represent such meanings as salary or deeds. Specific problems may also arise when deciding if a given piece of information should fill a slot in an existing frame, should be represented by a separate frame, or by a subframe of another frame.

Therefore, we may conclude that human experts are of limited help in constructing an extended knowledge-based analysis that can reflect the richness of the human background and the metaphor of the natural language notion as amplified in the Qur'anic style. The Qur'an functions in a complex world and is undisturbed by the blindness and limited intelligence of a man-made machine. In that sense, deep knowledge cannot be transferred to an automatic system, for any statement, whatever its simplicity, should be considered in its context as well as against the background of the time of communication.

Although the limits of the rules that express the natural language can be transferred successfully to a mathematical formula and hence to a machine, the machine will always fail to reflect the metaphor inherent in the deep structure of the statement. This view may be supported by three

kinds of philosophical evidence. First, what the computer in principle can/cannot do: In principle it is impossible to design an artificial system that also possesses self-consciousness. A self-conscious system understands what it is doing and does not simply react to meaningless rules (Searle 1980). Second, parallelism/non-parallelism between human thinking and computer ability: The systems that simulate human thinkers would have to be equipped with an enormous amount of knowledge in order to cope with the specific human knowledge that people actually know and use (Wærn 1989, 186). Third, when term and subject indexing are performed manually by trained subject experts, the terms and phrases usually require an intellectual effort that is able to permit reasonably unambiguous interpretations.

At present, all automatic text-generation systems are based on extracting relevant parts from stored knowledge-based data. The problems that have been dealt with in the above section in the area of intelligent systems thus remain open questions.

4.3. Automatic Indexing

Thus far, the analysis described above has not involved indexing, by which is meant the selection of a set of terms that represents implicitly the subject matter of the document. Indexing is often done manually, which is why the documentary system shows a certain amount of inconsistency (i.e., judgements regarding relevance influence manual indexing) in the quality of the service offered. For the purpose of this study, this section will be limited to the automatic generation of the index language of single descriptors (i.e., adjectives, nouns, and adverbs) and automatic phrase generation (i.e., noun—noun and noun—adjective types).

The fundamental rationale used for indexing the terms automatically has been similar in all experiments, although the theoretical approaches differ slightly among themselves. The sound foundation of this method

is that the content of a document is specifiable for retrieval purposes by a word list through the elimination of those function words (i.e., pronouns, articles, and conjunctions) that are characterized by a high frequency of occurrence in the text, provided that the frequency of occurrence of the remaining words is likely to indicate the subject matter of the text in question (Lancaster 1972, 153).

The earliest proposals for automatic indexing, which were made by Luhn (1958) and Baxendale (1958), will be referred to as the statistical approach⁵³ and consist of the following suggested techniques: the significance of a word is to be a function of its frequency within the documentation in such a way that common words (i.e., pronouns, prepositions, articles, conjunctive adverbs, copula, auxiliary verbs, and quantitative adjectives) and least-frequency words are not to be considered significant; only words lying in the frequency range above least frequent are to be considered⁵⁴. However, testing Luhn's and Baxendale's techniques on the following Qur'anic verses will highlight the validity of such an assumption for the Qur'anic text. Take, for example, the following verses:

Say: "I take refuge with the Lord of the creation, from the evil of what He has created, and from the evil of the complete darkness when it enshrouds, and from the

﴿قُلْ أَعُوذُ بِرَبِّ الْفَلَقِ، مِنْ شَرِّ مَا خَلَقَ، وَمِنْ شَرِّ غَاسِقٍ إِذَا وَقَبَ، وَمِنْ شَرِّ النَّفَّاثَاتِ

⁵³ Although Luhn's attempt was actually directed towards creating an automatic abstract, the principle he used was almost the same as for those used in automatic indexing. See H. P. Luhn, "The Automatic Creation of Literature Abstracts," *IBM Journal Res. Dev.* 2, no. 2 (1958): 159-65; P. B. Baxendale, "Machine-Made Index for Technical Literature: An Experiment," *IBM Journal Res. Dev.* 2, no. 4 (1958): 354-61.

⁵⁴ Luhn calculated the significant factor S_i by squaring the number p_i of significant words in the cluster i and dividing this square by the total number q_i of words in cluster i : $S_i = p_i^2 / q_i$. On the other hand, Baxendale says that n (the number chosen to yield an index with the desired number of entries) should be equal to 0.5 per cent of the number of words in the document.

evil of those (women) blow into knots, and from the evil of an envier when he envies.” (113:1-5)

فِي الْعُقَدِ، وَمِنْ شَرِّ حَاسِدٍ
إِذَا حَسَدَ ﴿الْفَلَق: ١-٥﴾

Applying Luhn's and Baxendale's steps to the above verses, the first action is to remove all of the common words: *إنا، في، ما، و، من، أعوذ، and قل*. Second, the remaining text words have to be stored in alphabetical order and the frequency of each recorded. This is considered in the following table:

word occurrence		frequency	
<i>ḥasad, ḥāsīd</i>	حسد، حاسد	(envier, envies)	2
<i>khalaq</i>	خلق	(created)	1
<i>rabb</i>	رب	(Lord)	1
<i>sharr</i>	شر	(evil)	4
<i>'uqad</i>	عقد	(knots)	1
<i>ghāsiq</i>	غاسق	(darkness)	1
<i>falaq</i>	فلق	(creation)	1
<i>naffāthāt</i>	نفثت	(blow)	1
<i>waqab</i>	وقب	(enshrouds)	1

Third, the most frequently occurring words are selected to act as index terms for the document. Applying Luhn's significant factor to the above frequency numbers identifies the word *sharr* شر (evil) as the correct index term for these verses (Baxendale's criterion is less helpful here, because it is based mainly on larger documents). Finally, the selected word is stored with the document identification in order to represent its content and to provide a surrogate that can be searched for in response to a subject request.

Another experiment, which is similar in principle but different in approach to Luhn's and Baxendale's, is that of Oswald et al. (1959). In contrast to Luhn and Baxendale, Oswald and his colleague employ a jux-

taposition of significant words as the basic unit to automatically generate indexes that include groups of words as well as single words. In effect, they combine the notion of significance as a function of word frequency and the notion of significance as a function of word groupings. In principle, Oswald's strategy is to exclude all words with an essentially syntactic function (i.e., articles, prepositions, and conjunctions) as well as qualifiers of little semantic importance (i.e., good and very), so that only the significant words will remain. The frequency of the retained words is counted, including every juxtaposition of two or more words that forms a significant word group. Words with a frequency occurrence that exceeds a certain threshold will be exhibited as phrase heads.

This use of phrase heads and co-occurrences of remaining words in the verse will result in the formation of various two-word phrases. To illustrate these criteria, the technique will be examined in relation to the following Qur'anic verses:

When the earth quakes with a mighty quaking, and the earth casts forth its burdens, and man says, "What ails it?" On that day, it will make known its tidings, that your Lord has revealed to it. On that day, people will issue forth in concourses to behold their deeds. So, whoever has done an atom's weight of good, will behold it. And whoever has done an atom's weight of evil, will behold it. (99:1-8)

﴿إِذَا زُلْزِلَتِ الْأَرْضُ زُلْزَالَهَا،
وَأُخْرِجَتِ الْأَرْضُ أَثْقَالَهَا، وَقَالَ
الْإِنْسَانُ مَا لَهَا، يَوْمَئِذٍ تُحَدِّثُ
أَخْبَارَهَا، بِأَنَّ رَبَّكَ أَوْحَى لَهَا،
يَوْمَئِذٍ يَصْدُرُ النَّاسُ أَشْتَاتًا لِيُرَوْا
أَعْمَالَهُمْ، فَمَنْ يَعْمَلْ مِثْقَالَ ذَرَّةٍ
خَيْرًا يَرَهُ، وَمَنْ يَعْمَلْ مِثْقَالَ ذَرَّةٍ
شَرًّا يَرَهُ﴾ (الزلزلة: ١-٨)

Applying Oswald's method, the following common words will be removed: *ت، و، ال، من، ان، ما، و، ال، ت* and *إنا* have to be eliminated. The remaining text words are stored in alphabetical order, and the frequency of each is recorded. This is set out in the following table:

word occurrence		frequency	
<i>athqāl[ahā]</i>	أثقالها	(burdens[her])	1
<i>akhbār[ahā]</i>	أخبارها	(tidings[her])	1
<i>arḍ</i>	أرض	(earth)	2
<i>a'māl[ahum]</i>	أعمالهم	(deeds[their])	1
<i>insān</i>	إنسان	(man)	1
<i>khayr</i>	خير	(good deeds)	1
<i>rabb[ak]</i>	ربك	(Lord[your])	1
<i>zulzilat, zilzāl[ahā]</i>	زلازلت، زلزالها	(quakes, quaking[her])	2
<i>sharr</i>	شر	(evil deeds)	1
<i>mithqāl dharrah</i>	مئقال ذرة	(an atom's weight)	2
<i>nās</i>	ناس	(people)	1
<i>yawma' izin</i>	يومئذ	(in that day)	2

According to Oswald's assumption, the index heading of *mithqāl dharrah* مئقال ذرة should be selected for use, as it has the highest frequency and is also the index phrase.

However, it seems that the characterization of term frequency is of little use for the purpose of actual Qur'anic indexing for the following six reasons. First, it should be noted that any frequency measure breaks down when dealing with very low frequencies. All methods are assumed to select any word that meets the threshold frequency, but in fact they miss several significant terms. Second, as the frequency approach attempts to use only the occurrences of word spellings and their relative distances in the document environment, the words in question, regardless of their spelling, could be homographic (i.e., *yawma' idhin* يومئذ, which refers to the Day of Judgment), synonyms (i.e., *al insān* الإنسان and *al nās* الناس, both of which refer to mankind but are distinguished as two different terms), or connected pronouns (i.e., *hā* ها, which refers to the earth). This eliminates the possibility of accurate term statistics and, in many cases, it generates terms that are either too specific or too broad to

be useful for indexing purposes. Third, the occurrence of high frequency terms may attract other words that may not be ideal index terms, like *mithqāl dharrah* منقال ذرة. Fourth, the elimination of inseparable function words or connected pronouns can hardly be recognized by the computer program. Fifth, the process, which is dependent only on term frequency and term co-occurrences and in the absence of syntactic criteria, will generate a meaningless combination and valueless phrase for retrieval purposes. In other words, the probability of having a meaningful useful phrase that expresses the subject matter adequately is very limited. This calls for a real linguistic sentence analysis, which has been discussed above. Sixth, when examined in relation to the selected verses of the Qur'an, the theory requires their manual isolation to enable the related verses to share a single concept. Furthermore, the specificity of the index terms and the cross-references provided between terms present a complexity that cannot be solved without the contribution of human labor. Therefore, in terms of cost-effectiveness, automatic phrase-formation is not worth the effort.

As a result of this limitation (i.e., a computer's inability to act as human intelligence), the other alternative is to use the computer as a tool. This means that the users call for the specific knowledge thought to be required in a particular situation and then retrieve it from the database, which should store the information exactly as it will be requested and not as free-text searching. This, in turn, means that for the database to interact with the user, it must be stored in such a manner that it can be retrieved by the machine's conventional searching devices.

4.4. Conventional Searching Devices

In automatic text processing, the computer reduces information from a sequence of letters and spaces into machine readable form and then conducts special programs to process sentences through its database. A database is a complex pattern of programs and data used for storing and retrieving large amounts of information. For the purpose of the present study, a database will be defined as a collection of data that can be

accessed only at the active request of the user. As a first step toward the establishment of a Qur'anic database system, the entire text of the Qur'an has to be fed into the computer's internal storage memory. The second step is to recognize and identify individual text words. The computer program reads the word requested, carries out the matching process, and identifies the word (or word part).

One important searching consideration that should be taken into account is whether the Qur'anic text will be compiled in the database by its orthographic script or fed in by the modern Arabic writing system. After the Prophet Muhammad's death, the Qur'an in its written form was compiled in strict observance of the orthography of the 'Uthmanic copy. A comparison of Qur'ans written in the traditional and in the modern form will reveal many differences. For example:

1. The letter *hamzah* on *wāw* و as in الرزوف , is replaced by a separated *hamzah* ء thus العروف.
2. The end case of the letter *tā'* *marbutah* ة as in إمرة is replaced by *tā'* *maftūḥah* ت thus إمرأت.
3. The letters *wāw alif* وا , which present the plural pronoun as attached to the verb, as in باعوا , are replaced by the letter *wāw* و thus باعو.
4. The double letters *lām* لل , as in الليل , are condensed to a single letter ل thus اليل.
5. The double letters *yā'* يي , as in النبيين , is condensed to a single letter ي thus النبيين.
6. The letter *ṣād* ص , in such cases as بصطة , is replaced by the letter *sīn* س thus بسطة.
7. The letter *alif* ا , in such cases as الصلاة , is replaced by the letter *wāw* و thus الصلوة.
8. The letter *alif* ا is often written on top of a letter, as in الملكة , instead of after it thus الملائكة.

In fact, software compilers do consider these two different approaches when they are putting the Qur'anic text into the computer as a database. The 'Uthmanic script has been adopted by the al 'Alamiyyah

software compilers, and the modern Arabic writing system has been adopted by the *Salsabeel* software compilers. Each approach has its advantages and disadvantages, and both are linked by the searching facility, time consumption, and cost-effectiveness. With regard to the 'Uthmanic script, which is the natural form of the Qur'an as it is printed today and which fully satisfies the Muslim user, the user has to search through the Qur'anic style of writing, which is a difficult process. If the Qur'an has been transcribed into the database according to the modern Arabic writing system, which does not fully satisfy the Muslim user, the searching process will follow the modern Arabic writing system, which is an easy process.

To solve this problem, all searching system devices must be considered, as their capability is more important than user satisfaction. In general, any free-text searching process is based on a comparison of the individual characters of the word entry with the words in the stored texts. For instance, asking the computer to search for the word CLASSIFYING will cause it to locate all occurrences of the word CLASSIFYING, but not of CLASSIFICATION. This is due to the fact, that all text searching systems suffer from the inflexibility inherent in exact character-matching. One way of overcoming this limitation, and which is provided by all computer searching devices, is the truncation process. This involves for searching for a word by its stem. A convenient form of truncation approach is performed by using the strings *, which are used to denote an unlimited number of arbitrary characters.⁵⁵ In order to search for those complete words that have the same stem as the word CLASSIFY, the user has to truncate the stem to CLASSIF. As a result, the process will be operated as CLASSIF*, and the computer will locate CLASSIFYING, CLASSIFICATION, CLASSIFIER, and CLASSIFIED. Forward truncation can also be used as well as back truncation, for example *CLASSIF*, which will locate, in addition to the above, RECLASSIFICATION. The truncation process is a very convenient device in computer searching, but it should

⁵⁵ There are other symbols to be used to indicate truncation such as # and ?. This depends implicitly on the program being used.

be used with great care when reducing the word to its stem. For instance, reducing the word CLASSIFICATION into CLASS instead of CLASSIF will result in retrieving such unrequired terms as CLASSROOM, CLASSICAL, and CLASSICISM, etc. Moreover, applying the truncation process on a simple word like *KBR كبر *, (ignoring the vowel signs) will match MTKBR متكبر , MSTKBR مستكبر , and, KBRYA' كبرياء .

An important advantage of truncation in Arabic is that many words in the text can be retrieved. But, an equally important disadvantage is that when it is applied to Arabic, this method matches words that do not suffer from internal disruption, such as MTKBR متكبر and KBRYA' كبرياء , but does not match those that do, such as ISTKBAR استكبار. The reason for this is that Arabic language infixes disrupt the sequence of the word form's radicals and reduce the efficiency of the truncation device, which is devised to retrieve the various forms of English language prefixes and suffixes. As a matter of fact, the real difficulty of Arabic lies in the richness of its prefixes, suffixes, and infixes. This internal inflection of Arabic words is the main reason for the low efficiency of the Arabic language when it is called upon to interact with self-determined computer retrieval systems.

This fact has been admitted by al 'Alamiyyah software compilers who state that string matching is inoperable in the case of the Arabic language due to the inflectional nature of most of its vocabulary (Nabil 1989) However, al 'Alamiyyah software provides for searching by natural forms (with or without affix) as well as by roots. Searching through the word's natural form has disadvantages. For example, such a procedure places too great a burden on the searchers, as they have to guess at the matching term in the machine format.⁵⁶ Searching by root has the disadvantage of matching unrequired words due to the absence of the vowel signs. For example, searching through the Qur'anic database for an unvocalized three radical root such as MLK ملك results in matching five different words viz, MILK مِلْك (landed property), MULK مُلْك (supreme

⁵⁶ This disadvantage is clearly also found in *Salsabeel* software, which uses only whole word matching system.

authority), *MALIK* مَلِك (king), *MALAK* مَلَك (angel), and *MALAKA* مَلَكَ (to lay hands upon, or to own). If the searcher is looking for only one of these words in the database, he will receive all of these words each time he conducts a search. Although the use of vowel signs in Arabic print seems to be optional and only necessary in cases of possible misunderstanding, they should be used without exception in computer free-text searching. This is extremely important in the case of the Qur'an, for vowel signs are an essential part of it, a fact noted by Bathurst (1971), who states that the "Arabic language in normal print is required to be interpreted rather than read. This is due to the absence of the short vowels and the existence of the prefixed and infix letters in Arabic words."

Thus far, it has been assumed that the searcher is looking for a single word. In practice, however, he would normally think of more than one word to describe the subject in which he is interested. The conventional way for the computer to handle synonyms is through the use of logical operators, known as Boolean operators, AND, OR, and NOT. For instance, if he is looking for verses containing the word *insān* إنسان (man), the search should be compiled as:

**ins* إنس.* AND **nās* ناس.*

However, for searching all of the words related to *insān* إنسان, this formula should be extended as follows:

(**ins* إنس * AND **nās* ناس *) NOT (*musta' nisīn* مستأنسين OR *tasta' nis* تستأنس)

Searching by means of the Boolean strategy meets with success only if the specified item is matched exactly by the requested one. Obviously, this depends upon the user's ability to think of all possible words that might represent a single concept, which is an inefficient and impractical

burden. The Boolean strategy of searching is used by the Alim software,⁵⁷ which notes these limitations.

From the above discussion, it is clear that the major problem actually lies in the relevant information that the user of the system expects to find by direct means and the real data available in the database. The basic failures of the approaches discussed earlier should be considered in terms of the strengths and weaknesses of the man—machine dialogue. In general the searching techniques discussed above could result in three forms of dialogue: Form-Fill-In, Question-Answer, and Menu-Selection. In the first one, the computer presents the user with blank captions, which he is to fill in, on the display. This style is quick to use and easy to learn, but the possibility of typing errors is a major disadvantage. Hammond et al. (1980) found that about one-third of the errors in computer systems were the result of typing mistakes and that one-half of these were due to using the correct key with the wrong shift key.

In the second style, the computer asks a series of questions followed by a sequence of responses given by the user, which leads either to further questions or to the data requested. This style is also easy to use, easy to learn, and easy to program. Once it has been structured, however, it becomes inflexible (Watts 1984, 62). Furthermore, experience shows that it has a negative psychological effect on the user, since it is the computer that is raising the questions. Both of these styles still have to cope with problems resulting from truncation, root searching, and Boolean operators.

In the menu-selection dialogue style, the user must select an option (either by pointing at it or typing in the applicable code) from the option list provided by the computer. This procedure leads to further menus or to the information required. Galitz (1989, 117) states that menu screens are effective because they utilize the more powerful human capability of

⁵⁷ The Alim software essentially deals with English text, the English translation of the meaning of the Qur'an of both Yūṣuf 'Alī and Marmaduke Pickthall. However, its use of transliteration for many Islamic words justifies its inclusion in this study.

recognition rather than the weaker one of recall. Another advantage is that working with menus reminds users of available options and information of which they may not be aware or may have forgotten. The main disadvantages are that this style is slow when used in large systems and that there is a limited choice per menu.

Technically, Shneiderman (1987) identifies three basic menu types that can be found on screens: a single menu (a single menu confined to one screen), a linear sequence menu (a series of choices passed on to two or more screens to complete and present one choice at time), and a multipath menu (provides a path of choices through a network's tree structure. Galitz (1989, 179) offers the following seven types of single menus: binary choice (presents a pair of choices i.e., Y/N), multiple item (provides more than two choices), extended (a lengthy list of options that extends beyond one screen), pop-up (applied through a windowing technique), permanent (a permanently displayed menu on the screen), multiple selection (a list of alternative options allowing for more than one choice), and embedded (a selection from choices within the data itself).

Several studies have been conducted on the multipath menu style to determine how many items should be placed on one menu and how many levels it should include. Regarding the former, Lee and MacGregor (1985) show that four to eight choices per menu screen is the best option, while Paap and Roske-Hofstrand (1986) have concluded that a menu containing up to sixty-four items, if organized into logical groups, could be suitable. A study by Dray et al. (1981) found that one level was the easiest to learn, while Kiger (1984) has concluded that a lower number of levels (2 to 3) and an intermediate number of choices (4 to 8) results in faster, more accurate performance as compared to those styles having fewer or greater numbers of levels and choices. Elsewhere, in a study conducted to compare the efficiency of selecting menu items by numeric codes versus mnemonic codes, Perlman (1984) found that the former were searched about twice as fast as the latter, whereas Shinar and Stern (1987) have demonstrated that mnemonically coded menus can be searched significantly faster than menus with numeric codes.

Nevertheless, the menu-selection dialogue style is very adequate for use on the Arabic language. The reason for choosing the menu selection as a screen display was based on five important advantages. First, menu selection eliminates problems caused by the nature of Arabic language in the sense that the system saves the searcher from retrieving his request through exact matching, stem, truncation, root searching, or Boolean algebra, which have their own defects. Second, it reduces the number of keystrokes and hence the typing mistakes. Third, it gives the user a positive psychological frame-work, since he is the one who is in control of the system. Fourth, menu selection makes it unnecessary for the researcher to guess the exact term that matches the computer's memory. Fifth, it suits all types of users, the naive as well as the expert. Sixth, and this is the most important fact and will be dealt with below, is that it covers the unfortunate present situation of the non-standardization among computer keyboard manufactures and Arabic software compilers. To discuss this problem in detail, a quick look at computer information exchange is necessary.

First of all, to use a computer for the exchange of information requires that communication take place through the activity of programming languages. At the most basic level of programming languages, instructions are given to a computer via machine codes. These codes are a series of binary numbers programmed in combinations of 0s and 1s. By these codes, the machine language can be interpreted directly and without translation by a computer's inner circuit. However, as the circuit of each computer model is unique and as each computer has to have its unique machine language, a machine language program written for one computer cannot be processed by another unless the computers have identical circuits (i.e., compatible). Even the machine languages of two different computer models in the same computer family are not compatible. Computer hardware has essentially been designed for handling Indo-European languages (mainly English). For the English language, the problem of compatibility is solved by adopting the rules for the standard code, known as ASCII (see Figure 4-5), while the problem has yet to be solved for inflectional languages, such as Arabic.

In principle, Arabic has no fundamental difficulty in dealing with machine codes, which present each letter in a sequence of 0s and 1s in order to retrieve and display the requested information. The problems of compatibility between different Arabization systems, as well as important works and researches on the standardization of Arabic character sets and the different type codes associated with them, have been discussed. One result of these efforts has been the ASMO standard, issued by the *Arab Standardization and Metrological Organization*, which consists of a character set standard referred to as ASMO 449. It has been devised for 7-bits (Figure 4-6) and has been adopted by the *International Standard Organization* (ISO) under the serial number 9036 (Figure 4-7).

Unfortunately, such major manufacturers as IBM-PC, APPLE IIe, and MACINTOSH PLUS, who offer an Arabic keyboard facility, use this character set with major changes (Figure 4-8). For the user who is working on a single software program, the retrieval of information will be very difficult, since the position of characters on the keyboard has not been standardized. In addition, software compilers themselves are not committed to the use of either ASMO or ISO codes, and so they seek to meet the needs of the software when designing their programs. Take, for example, two well-known Qur'anic software programs: *Salsabeel* and *al Qur'ān al Karīm* (Figure 4-9). The location of the characters and the vowel signs is not unified. As a result, arbitrary software codes with arbitrary keyboard character locations make it harder for the user to identify a character even if it has already been found. Unless there are joint efforts to solve this problem, it will have an effect on the future stability of Arabic computers. The choice, therefore, for this study is to use the menu-selection style, as it is the only way to avoid the need to retrieve information through non-standardized keyboard codes.

ASCII Character	Binary
0	0011 0000
1	0011 0001
2	0011 0010
3	0011 0011
4	0011 0100
5	0011 0101
6	0011 0110
7	0011 0111
8	0011 1000
9	0011 1001
A	0100 0001
B	0100 0010
C	0100 0011
D	0100 0100
E	0100 0101
F	0100 0110
G	0100 0111
H	0100 1000
I	0100 1001
J	0100 1010
K	0100 1011
L	0100 1100
M	0100 1101
N	0100 1110
O	0100 1111
P	0101 0000
Q	0101 0001
R	0101 0010
S	0101 0011
T	0101 0100
U	0101 0101
V	0101 0110
W	0101 0111
X	0101 1000
Y	0101 1001
Z	0101 1010

Figure 4-5: the American Standard Code for Information Exchange (ASCII).

DECIMAL		128	144	160	176	192	208	224	240
HEX		80	90	A0	B0	C0	D0	E0	F0
0	00	Ç	SAB	ASP	.	@	ذ		
1	01	ü	SLB	!	١	ء	ر	ف	
2	02	é		"	٢	آ	ز	ق	
3	03	â	ô	#	٣	إ	س	ك	
4	04	ä	ö	\$	٤	ؤ	ش	ل	
5	05	à	ò	%	٥	إ	ص	م	
6	06	á	ó	&	٦	ع	ض	ن	
7	07	ç	ù	'	٧	ا	ط	م	
8	08	ê		)	٨	ب	ظ	و	
9	09	ë		(	٩	ة	ع	ى	
10	0A	è		*	:	ت	غ	ي	
11	0B	ï		+		ث]	}	
12	0C	î			>	ع	\	:	
13	0D	ì		-	=	ع	[{	
14	0E	SAS	SAB		<	غ	^	~	
15	0F	SLS	f	/	٩	ر	-		

Figure 4-6: The Arabic 7-bit coded character set for information exchange (ASMO-449+).

				b7	0	0	0	0	1	1	1	1
				b6	0	0	1	1	0	0	1	1
				b5	0	1	0	1	0	1	0	1
					0	1	2	3	4	5	6	7
b4	b3	b2	b1									
0	0	0	0	0	NUL	DLE	SP	0	@	ز	—	/
0	0	0	1	1	SOH	DC1	!	1	ء	ر	ف	ء
0	0	1	0	2	STX	DC2	"	2	آ	ز	ق	ء
0	0	1	1	3	ETX	DC3	#	3	أ	س	ك	
0	1	0	0	4	EOT	DC4		4	ؤ	ش	ل	
0	1	0	1	5	ENQ	NAK	%	5	إ	ص	م	
0	1	1	0	6	ACK	SYN	&	6	ئ	ض	ن	
0	1	1	1	7	BEL	ETB	'	7	ا	ط	ظ	
1	0	0	0	8	BS	CAN	)	8	ب	ظ	و	
1	0	0	1	9	HT	EM	(	9	ة	ع	ى	
1	0	1	0	10	LF	SUB	*	:	ت	غ	ي	
1	0	1	1	11	VT	ESC	+	؛	ث]	')
1	1	0	0	12	FF	IS4		>	ج	\	"	|
1	1	0	1	13	CR	IS3	-	=	ح	['	{
1	1	1	0	14	SO	IS2	.	<	خ	^	'	-
1	1	1	1	15	SI	IS1	/	ء	ر	—	'	DEL

Figure 4-7: The Arabic 7-bit coded character set for information exchange (SIO 9036).

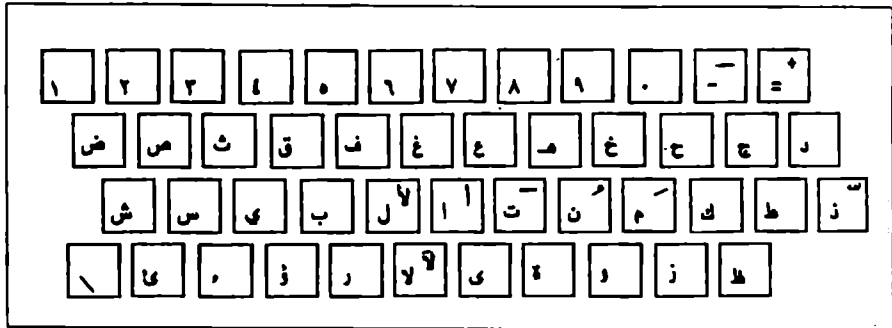


Figure 4-8a: The distribution of Arabic letters on IBM-PC keyboard.

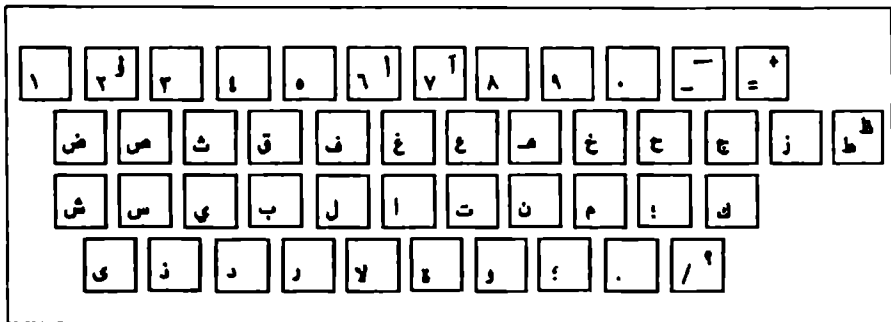


Figure 4-8b: The distribution of Arabic letters on APPLE IIe keyboard.

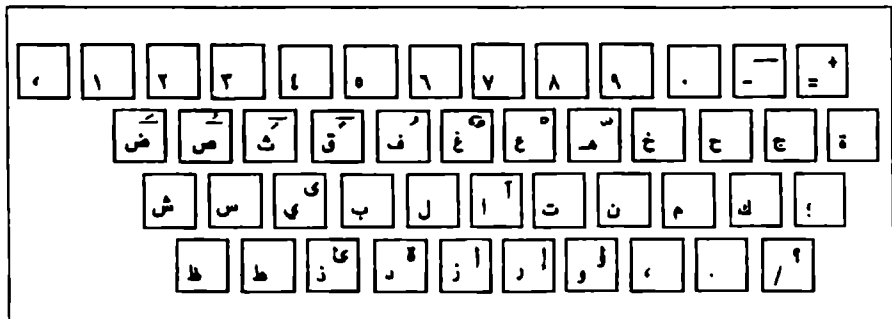


Figure 4-8c: The distribution of Arabic letters on MACINTOSH PLUS key-board.

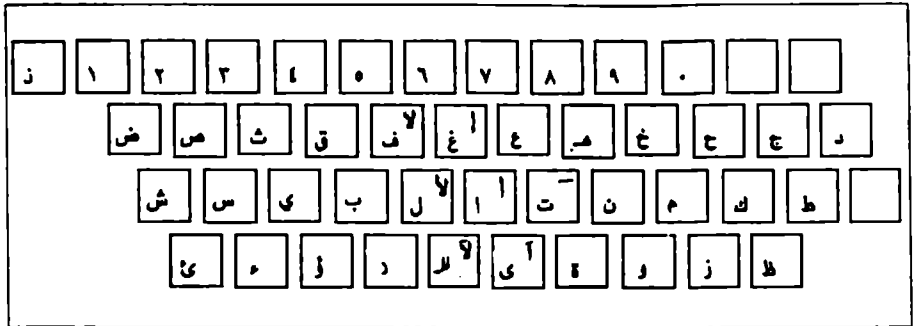


Figure 4-9a: The distribution of Arabic letters on the keyboard according to Salsabeel Qur'anic software.

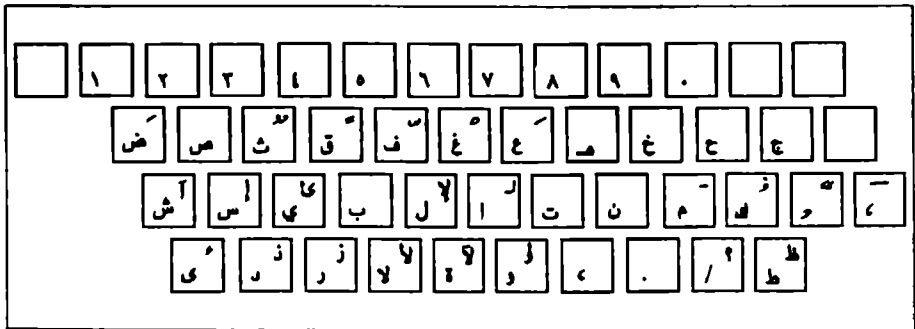


Figure 4-9b: The distribution of Arabic letters on the keyboard according to al Qur'an al Karim software.

4.5. Conclusion

The ideas presented in this chapter suggest that it is impossible for present-day machine free-text searching to replace the human brain. Natural language theories that have been used to analyze and generate Arabic texts from a database are complex, and the techniques for designing them remain inadequate. Many researchers are working on various aspects of these theories with the aims of developing more complete grammars, lexicons, and knowledge representation schemes and of improving efficiency by finding better searching strategies. To date, their efforts have met with only very limited success.

CHAPTER FIVE

The Plan, Construction, and Design of the Qur'anic Retrieval System

5.1. Overview

In the previous chapters, problems involved in transferring the Qur'anic text into a form that allows vocabulary control manual searching and free-text automatic searching have been discussed. Solutions were suggested and recommended by various systems. The success of a retrieval system depends on well-constructed instructions and rules. Obviously, careful thought and preparation at the outset is necessary for the development of a successful system. This involves a process of identifying the right subjects from the entire text of the scripture and selecting and organizing the indexing rules. After that has been done, it is then necessary to introduce the terms and their interrelationships that are to be displayed in a proper format so that the system's users can access the desired information without difficulty.

This chapter presents system design guidelines derived directly from the recommendations and studies reviewed in earlier chapters. These are listed in a structured manner in order to produce an activity to be considered in its own right, with examples in the required places. Systematic arrangements are provided in an attempt to assist the user in organizing the information that is relevant to a particular design problem.

5.2. Abstract Forms and Index Cards

As these are the major tools in the processes of indexing and abstracting, they have been placed in a separate section. It is most likely that the information files will be contained in forms and on cards. The most popular size for forms is the usual A4 page-weight paper, which will be used for the abstracting forms. The most suitable card size for the

transferral of indexing terms is the 5X3, which is commonly used in most offices and is the least expensive for cabinets.

A. Abstracting Forms

The precise purpose of the forms is to identify the original document and to direct readers to the exact position of the content (Figure 5-1). Basically, it consists of the following categories:

1. Form Identification Number

The identification number, which is a combination of letters and numerals, is a unique number that identifies the particular work with the service. The letters refer to the initials of the reader's team work, while the numerals refer to the form number. For example:



2. Subject Term

Searching for subject matter requires a suggested initial subject-term. The suggested subject-term is the one usually found in the majority of Qur'anic verses and/or promoted by specialists. The subject-term should be run across the top of the form in order to allow the user to determine at a glance the nature of the target scanning subject. There will usually be one subject-term for each form in the user's system. Although there is no preferred grammatical form (i.e., singular-plural) for the use of the subject-form, the general norm is that it should be available in the noun form.

3. Judgement Conditions

At the initial stage of reading, many individuals will find it highly desirable to take a precise decision. After seeking confirmation in the potentially pertinent document, the user should mark in one of the

File No. :		Subject-term :	
Relevant :		Partially relevant :	
Matter of doubt :			
Qur'anic Verse :			
Title :		Issue No. :	
Author(s) :		Publisher :	
Abstract :			
Title :		Issue No. :	
Author(s) :		Publisher :	
Abstract :			
Title :		Issue No. :	
Author(s) :		Publisher :	
Abstract :			
Descriptive note :			
Proof-reader :		Checker :	
Date :		Date :	

Figure 5-1: An abstract file sample.

judgment boxes his initial decision as to whether they are relevant, irrelevant, or still a matter of doubt. Initial decisions should be marked as (*) in the left-hand-side box. Later on, when the revision process takes place, final decisions can be marked by (✓) in the right-hand-side box.

4. The Qur'anic Verse

The Qur'anic verse is the essential part of the abstracting process, for the card is (and should be) based on the verse in question. The verse should be written clearly, accurately, and provided with vowel signs within the relevant part. There is no need for the whole verse to be mentioned, unless its other aspects are relevant to the topic. The verse should be written between two quotation marks and followed by the chapter and the verse number. For example:

And not so much as the single weight of an atom in the earth or in the heaven is hidden from your Lord, neither anything smaller than that nor greater, but in a lucid Book. (10:61)

﴿... وَمَا يَعْزُبُ عَنْ رَبِّكَ
مِن مِّثْقَالِ ذَرَّةٍ فِي الْأَرْضِ
وَلَا فِي السَّمَاءِ وَلَا أَصْغَرَ مِنْ
ذَلِكَ وَلَا أَكْبَرَ إِلَّا فِي كِتَابٍ
مُبِينٍ﴾ (يونس: ٦١)

5. Abstract

The obvious feature of the abstract is that it is shorter than the original document. It should be brief, clear, and accurate. As a result of methodological differences, there are two types of abstracts: informative and indicative. The informative abstract is essentially a condensation of the document's information. It contains the principal ideas, methods, and data but omits excessive and detailed explanation. The indicative abstract contains generalized statements on the document's content and is characterized primarily by the absence of qualitative and quantitative data. It is often little more than a narrative listing of the principal subjects. For the purpose of this study, the indicative abstract is more practical. For example:

The word *dharrah* is a reference to the red ant or to dust seen in the sunlight. The whole verse (10:61) means that God never treats mankind unjustly by any means, even by the weight of the smallest thing ever conceived.

تعني كلمة ذرة النملة الحمراء أو الهباء الذي يُرى في ضوء الشمس. وعليه يعني مضمون الآية (١٠:٦١) بأن الله لا يقاضي بظلم أي إنسان حتى ولو كان مقدار وزن أصغر شيء يمكن تصوره

6. Title

The title of the original document is intended to provide the indexers and the checkers with a guide to the subject content. In some cases authors change the title in different editions. The advantage of the title's existence is to help to avoid misleading the user if the author has more than one work. The title must be typed in full, accurately and clearly as printed in the document. For example:

al Jāmi' li 'Aḥkām al Qur'ān الجامع لأحكام القرآن

7. Publisher

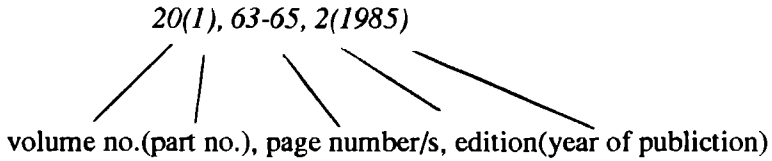
It is absolutely necessary to indicate the name of the publisher in order to avoid possible confusion arising from different editions of the same document that have been printed by different publishers. Such confusion could give rise to giving mislocating information concerning volume and page numbers. The publisher's name should be typed in full, as accurately and clearly as possible, followed by a comma and the place of publication. Symbols employed by publishers to indicate their trademarks should be avoided. For example:

Dār al Kutub al 'Ilmiyah, Beirut دار الكتب العلمية ، بيروت

8. Document Issue Number

The document issue number is the access that directs the indexers and the checkers to the abstract content in the original document. It is a series of numbers that begins with the volume number, which is then

followed by the part number in brackets, page number(s), the edition, and ends with the year of publication in brackets. For example:



9. Author(s)

The author's name is an important datum in the reading form. Ignoring it could result in losing the information if the title of the document is not known or if it is mixed with another document(s) having the same title. In some cases the author's name, instead of the title, is capitalized. Users tend to rely on the author's name and might face considerable difficulty if they have to rely on the title alone. In order to avoid even the possibility of confusion, which results in time being wasted by the abstract user, the author's name should be given in full. Initials are not allowed. In the case of a multi-author work, only the name of the first author should be specified. The names of the other authors is to be replaced with *et al.* Titles such as doctor, professor, and *shaykh* must be omitted. For committees, only the name of the chairman needs to be provided, for the others can be covered by the phrase *et al.*, as above. The name of the author must be written with the last name first, followed by the other names in order to avoid confusion in the author index. For example:

al Qurṭubī, Muḥammad ibn Aḥmad

القرطبي، محمد بن أحمد

10. Descriptive Note

The fact that the readers are subject specialist-experts will ensure that their services will include comments or notes. The role of the descriptive note is to represent the abstractor's notes, comments, ideas, criticism, and his evaluations. For example:

The implication of the word *dharrah* has been misused by most contemporary authors, who rely on referring to the word *dharrah* as an atom. This seems to be a great misunderstanding of the origin of the lexical meaning as well as the historical fact of the word. Lexically, the word means "the red ant" as indicated by al Qurṭubī. Historically, the discovery of atomic physics falls within the modern technical revolution. However, the Arabization of the word "atom" has led to the Arabic word *dharrah*, which has led to the misinterpretation of the meaning of the one used in the Qur'an.

من الجدير بالذكر أن كلمة ذرة كما أوضحها كثير من الكتاب المعاصرين الذين يرجعون في كتاباتهم إلى فهمهم الخاص تذكر بمعناها المعروف في الفيزياء الحديثة. وهؤلاء الكتاب يعارضون حقيقتين أساسيتين إحداهما لغوية والأخرى تاريخية. فالحقيقة اللغوية لمعنى كلمة ذرة (الجمع ذر) هو كما ذكرها القرطبي النملة الحمراء. أما الحقيقة التاريخية فتعود إلى أن كلمة ذرة هي نتاج لعملية تعريب لحقت بالكلمة الإنجليزية atom بمدلولها في علم الفيزياء الذرية اللاحق بالثورة التكنولوجية الحديثة. وقد كان لعملية التعريب هذه الأثر الأول للاضطراب الذي يقع فيه هؤلاء الكتاب.

11. Signature

The fact that errors occur in abstracts is recognized by readers. The purpose of a signature is to identify the checker in order to give him the credit for his work and to place responsibility upon him. The signature should consist of his full name and be followed by the date, the month, and the year of the service.

B. Indexing Cards

The indexing card is used by the indexer to compile the subject-term from the abstract form in order to establish the retrieval system. It also has the feature of collecting the index terms and establishing relationships among them. In principle, this card should have five general sections (Figure 5-2):

1. Keyword

The keyword is to be decided by the indexer from the Qur'anic verse on the abstract form. It should be located along the top of the card, because this is the first place the user looks when scanning.

Keyword :		Accession No. :	
Definition:			
USE :		Related terms :	
1.	8.	1.	8.
2.	9.	2.	9.
3.	10.	3.	10.
4.	11.	4.	11.
5.	12.	5.	12.
		13.	
		14.	
Keyword :		Accession No. :	
Definition:			
USE :		Related terms :	
1.	8.	1.	8.
2.	9.	2.	9.
3.	10.	3.	10.
4.	11.	4.	11.
5.	12.	5.	12.
6.	13.	6.	13.
7.			
Keyword :		Accession No. :	
Definition:			
USE :		Related terms :	
1.	8.	1.	8.
2.	9.	2.	9.
3.	10.	3.	10.
		11.	
		12.	
		13.	
		14.	
Indexer :		Proof-checker :	
Date :		Date :	

Figure 5-2: The index cards samples.

2. Card Accession Number

The accession number is a unique number that identifies the card. It is given next to the keyword box, in the upper right-hand corner. It should be added by the indexer in serial form and not exceed four digits (for the sake of simplicity). Added to the accession number are two empty digits, which are to be used by the keyword. When matching the numbers in the construction of the system, the compiler has to look at the class number next to the accession number in the card and scan the other keywords. The keywords are accumulated into classes or groups (later to be referred to as subfacets) that indicate the separate major areas (later to be referred to as facets) upon which the initial structure of the retrieval system is built.

3. Definition

The definition supplies the indexers with information about the keyword. Definitions are neither parts of the keywords to which they are appended nor intended to be dictionary definitions. These are appended to the keywords only to clarify the limited sense in which keywords are to be used for retrieval purposes and to exclude other possible alternative meanings. In that sense, it is not necessary to attach definitions to all keywords, but only to those that show some degree of ambiguity. For example:

dharrah is a very tiny thing that has a weight and a size. الذرة هي شيء صغير جدا في الوزن والحجم.

4. Cross-Reference

This is a two-part section composed of two lists of keywords. Each list covers the important vocabularies in relation to the keyword either as equivalents or as related terms. The two lists might range anywhere in number, depending upon the number and importance of the ideas discussed. Equivalence terms (i.e., synonyms, derived nouns, and

plurals) are listed in the *USE* column, and related terms are listed in the *RT* column.

5. Signature

The indexers' signatures are included to indicate that the signatories have done their best to ensure that their abstracts are as error-free as possible. They should sign their names in full, and not in initialized or another abbreviated form, and include the date of the service rendered.

5.3. Construction Techniques

A. Selection of Terms

As a first step, the subject field should be defined and boundaries between the subject itself and related issues of marginal importance should be distinguished. The second step is to compile the subject terms into easy access lists. There are four main steps in compiling the terminology. In brief, they are:

1. Check-lists

In this step, terms are extracted from the Qur'an during a preliminary indexing stage. From this representative collection, important concepts can be selected for possible inclusion in the index system. The sample should be large enough to yield a reasonably complete collection of concepts. No attempt should be made to control the vocabulary or to determine the relationships among terms at this stage. It is highly likely that specialized vocabularies serving a specific subject will be listed alphabetically in noun form and presented on one or two sheets of paper. These check-lists have the advantage of limiting the subjectivity of the staff constructors and improving the consistency and the reliability of their judgment.

The major aim of check-lists is to make it possible for staff workers to consider by a quick glance the relevance of virtually every term (i.e., if it is to be considered a term of the subject or not). The use of Qur'anic

concordances is of great help in constructing check-lists. Therefore multiple copies of specialized vocabularies should be provided to each staff worker. An example of check-lists compiled in the field of psychology is shown in Figure 5-3.

2. Authority Files

As check-lists to be composed of noun-form terms extracted from the Qur'an, names representing important descriptors for certain subjects have to be separated in a different list: the authority file. This file should consist of the names of historical characters, geographical regions, events, and other such relevant information. They should be organized alphabetically according to the KWIC display, as that method has been shown to be the most efficient in this case. In addition, there should be some cross-references to control the synonyms. An example of an authority file in the field of history is shown in Figure 5-4.

3. Class Menus

After the collection of terms in steps 1 and 2, the terms covered should be organized into main categories so that, after the selection process, they can be stored and menued under appropriate headings to await further analysis. This operation is necessary, for it will reveal the extent of the coverage of the subject's terminology and the existence of gaps and overloaded areas. Other advantages are that bringing similar terms together will facilitate the determination of possible structural relationships between them. An example of this step in the field of economics is shown in Figure 5-5.

4. Consultation of Experts

It must be emphasized that these steps are empirical and based on real concepts. Thus they are likely to be employed at an early stage in the system's construction and made available to abstractors during the construction of the verse searching method. At the next stage, subject experts will be asked to contribute important concepts. These will then

shn	al-sa'm al-sab al-saklah' al-shakriyah al-saklay al-sawr al-safah al-sakhah al-shaw	Boredom Abuse Liberality Jeer Antoyance Delight Incompetence Calmness Inalienitiveness	السأم السا السا السا السا السا السا السا
shin	al-shukh al-shik al-shiqat al-shiqat'ah al-shak al-shakr al-shamalah al-shama'ah al-sha'at	Sunginess Asso. partners with God Far-off act or speech Interestion Suspicion Graduate of God Gloating Rancour Falschhood witnessng	الشح الشك الشقا الشقا الشك الشكر الشاق الشاق الشاق
shd	al-shabr al-sidiq al-safat' al-safh	Patience Truthfulness Serenity Pardoning	الصبر الصديق الصفا الصفا
qhd	al-dahik al-daghabah al-damir	Laughng Hidden enmity Innate mind	الضحك الدا الضمير
id'	al-id'ah al-ihghayh al-iuna' nashah	Obedience Transgression Pseculfulness	الاطاعة الاطغان الاطاعة
zhr'	al-zahm al-zama ayn	Injustice Surreise	الظلم الظلم
ayn	al-'ad al-'zah al-'ad' al-'afy	Justice Self-esteem Beneficence Abslutence Forgiveness	العدل العدو العدل العدل
ghayn	al-ghadr al-ghawr al-ghad' al-ghadab al-ghafrah al-gha' al-ghafh al-gham al-ghawyah al-ghabrah al-ghayr	Predistination Arrogance- Restraining the eyes Anger Absent-mindedness Rancour Rudeness Grief Seduction Backbitng Lealouy Wrath	الغدر الغور الغدر الغضب الغفرا الغفرا الغفرا الغفرا الغفرا الغفرا الغفرا
qaf	al-qafah al-qarah al-fadl al-firah al-fayrah al-fayrah	Pride Happiness Surplus Happiness Coarsness	الغفرا الغفرا الغفرا الغفرا الغفرا
qaf	al-qashwah al-qand'ah al-qand' al-qahr	Obduracy Contentment Despair Vanquishing	القشرا القنطرا القنطرا القنطرا
kaf	al-kabr al-kahib al-karbiyah al-karam al-kayd' al-kayd'	Arrogance Lying Hateful Generosity Restain the rage Unbelieveg Ruse	الكبر الكبر الكبر الكبر الكبر الكبر
lam	al-laf al-laghv al-lanz	Niceness Loquacity Innuendoes	اللائف اللائف اللائف
mim	al-murawadah al-maqi al-maqr al-mumdarah al-mayr al-mawadah	Destng Repugnance Cunning Disputation Hinderng of good Amiability	المرواة المقات المقات المقات المقات المقات
nam	al-nahw al-nayn al-nafq al-naf nagd al-'and al-namih al-namihah	Confidential talk Forgetfulness Hypocrisy Self Breaking the promise Indignation Spreading calumny	النحو النحن النحن النحن النحن النحن النحن
ha'	al-hanz	Spurring	الحن
waw	al-waswah	Evil whisperng of thought	الوسوا

cont. 5-3.

01.01	Adam	آدم		02.06	<i>al-Bayr al-Harām</i>	البيت الحرام	= 22.01 02.05 02.07
01.02	Ibnuy	ابن آدم		02.07	<i>al-Bayr al-'Alīq</i>	البيت المتبق	= 22.01 02.05 02.06
01.03	Adam	آدم	= 01.06	04.01	<i>Thamūd</i>	ثمود	= 14.03
01.04	Azaz	أزر		05.01	<i>Jālūt</i>	جالوت	
01.05	Ibrāhīm	إبراهيم		05.02	<i>Jibrīl</i>	جبريل	
01.06	Abū Ibrāhīm	أبو إبراهيم	= 01.04	06.01	<i>Huṣayn</i>	حُصَيْن	= 18.11
01.07	Abū Ibrāhīm	أبو إبراهيم		06.02	<i>al-Hawdriyān</i>	الحواريون	
01.08	Imrā'at Ibrāhīm	إمرأة إبراهيم	= 01.16 01.21	08.01	<i>Dāwūd</i>	داود	
01.09	Dhūriyya Ibrāhīm	ذرية إبراهيم		09.01	<i>Dhū al-Qarnayn</i>	ذو القرنين	
01.10	Qawn Ibrāhīm	قوم إبراهيم		09.02	<i>Djā al-Kifl</i>	ذو الكفل	
01.11	Maqām Ibrāhīm	مكان إبراهيم		09.03	<i>Dhū al-Nīn</i>	ذو النون	= 14.01 28.10
01.12	Abū Lūḥab	أبو لؤح		10.01	<i>al-Rūm</i>	روم	
01.13	Abū Lūḥab	أبو لؤح		11.01	<i>Zakariyyā</i>	زكريا	
01.14	Uḥūd	أحود	= 24.03	11.02	<i>Qiyāḥim Zakariyyā</i>	قِيَاهِيم زَكْرِيَا	= 28.03
01.15	Almāz	المذ		11.03	<i>Imrā'at Zakariyyā</i>	إمرأة زكريا	
01.16	Iḥrās	إحراس	= 01.08	11.04	<i>Zayd</i>	زيد	
01.17	Ishāq	إسحاق	= 01.18 28.04	11.05	<i>al-Sāmiriyy</i>	السامري	
01.18	Ibn Ishāq	ابن إسحاق		12.01	<i>Zawj Zayd</i>	زوج زيد	
01.19	Ismā'īl	إسماعيل	= 01.17 28.04	12.02	<i>Saba'</i>	سبأ	
01.20	Banī Isrā'īl	بنو إسرائيل	= 28.06 28.09	12.03	<i>Malika Saba'</i>	ملكة سبأ	
01.21	Nabiyī Isrā'īl	نبي بني إسرائيل		12.04	<i>Sulaymān</i>	سليمان	
01.22	Ismā'īl	إسماعيل	= 01.08	12.05	<i>Sayyid</i>	سيد	
01.23	Abū Ismā'īl	أبو إسماعيل	= 01.05	12.06	<i>Tār Sayyid</i>	طور سيد	
01.24	Ashāb al-Uḥūd	أصحاب الأحود		13.01	<i>Ṭayr Sā'iyā</i>	طيئ	
01.25	Ashāb al-Ras	أصحاب الرأس		13.02	<i>Ibnat Sā'iyā</i>	ابنتا سعيب	
01.26	Ashāb al-Fil	أصحاب الفيل		13.03	<i>Ibnat Sā'iyā</i>	كوم سعيب	= 24.07 24.08
01.27	Ashāb al-Qaryah	أصحاب القرية		14.01	<i>Qawn Sā'iyā</i>	صاحب العوت	= 09.03 28.10
01.28	Ashāb al-Kaḥf	أصحاب الكهف		14.02	<i>Shāh</i>	صالح	
01.29	Ayūb	أيوب		14.03	<i>Shāh</i>	صالح	= 04.01
02.01	Imrā'at Ayūb	إمرأة أيوب		14.04	<i>al-Safā</i>	الصفا	
02.01	Bābil	بابل		16.01	<i>Tālūt</i>	طالوت	
02.02	Badr	بدر		18.01	<i>'Aad</i>	عاد	= 26.07
02.03	Ba'ī	بعل	= 24.15	18.02	<i>al-'Uzzah</i>	العرضة	
02.04	Bakkaḥ	بكة		18.03	<i>'Uṣayr</i>	عزير	
02.05	al-Bayr	البيت	= 22.01 02.06 02.07				

Figure 5-4: an authority file sample of Qur'anic terms in the field of history

18.04	al-'Asiz	ابو اسيز	24.12	Um Maryam	لم مريم	= 18.08
18.05	Imra' al-'Asiz	امراة اسيز	24.13	Misr	مصر	= 18.04
18.06	'Imrah	عمران	24.14	'Asiz Misr	عزبة مصر	= 02.04
18.07	Ad 'Imrah	ال عمران	24.15	Makshah	مكة	= 26.03
18.08	Imra' 'Imrah	امراة عمران	24.16	Mada	مكة	= 26.02
18.09	Imra' 'Imrah	امراة عمران	24.17	Ubbi Mada	لحم مومس	
18.10	'Ijad	عيسى	24.18	Abba Mada	لحم مومس	
18.11	Um 'Ijad	لم عيسى	24.19	Um Mada	لحم مومس	
18.12	Asidr 'Ijad	لقد عيسى	24.20	Ahl Mada	قوم مومس	= 01.19
20.01	Fir'awn	فرعون	25.01	Nub	نوب	
20.02	Imra' al Fir'awn	امراة فرعون	25.02	Im Nub	ابن نوب	
20.03	Qomn Fir'awn	قوم فرعون	25.03	Imra' al Nub	امراة نوب	
21.01	Qayin	قايين	25.04	Qomn 'Ibb	قوم نوب	
21.02	Qomn Tubb'	قوم تيب	26.01	Harid	حارث	
22.01	al-Ka bah	الكعبة	26.02	Harid	حارث	= 24.16
23.01	al-Lah	اللائح	26.03	Im Um Harid	ابن ام حارث	= 24.10
23.02	Lughah	اللغة	26.04	Ubbi Harid	لحم حارث	
23.03	Ibn Lughah	ابن اللغة	26.05	Harid	حارث	
23.04	Lah	لوط	26.06	Hud	هود	= 18.01
23.05	Ibbah Lah	ابن لوط	26.07	Hud	هود	
23.06	Imra' al Lah	امراة لوط	28.01	Ye 'Ibb	عزبة	
23.07	Ba'at Lah	بناة لوط	28.02	Yedrib	يادرب	
24.01	Ma' Ibb	ماتح	28.03	Yahya	يحيى	= 11.02
24.02	Maba'at	ماتح	28.04	Ye qub	عزبة	= 01.17 01.18
24.03	Muhammad	لوط	28.05	Abd Ye qub	عزبة	= 01.16
24.04	Aswaj Muhammad	لوط	28.06	Ba'at Ye qub	بناة	= 01.19 28.09
24.05	Ba'at Muhammad	بناة لوط	28.07	Yasuf	يوسف	
24.06	Qomn Muhammad	قوم لوط	28.08	Abd Yasuf	عزبة يوسف	= 01.18 28.04
24.07	Qomn Muhammad	قوم لوط	28.09	Yasuf	يوسف	= 01.19 28.06
24.08	Qomn Ma'dyan	قوم مديان	28.10	Yasuf	يوسف	
24.09	Ma' Ma'dyan	ماتح مديان	28.11	Yaus	يوسف	= 09.03 14.01
24.10	Ma'dyan	مديان		Yaus	يوسف	
24.11	Ibn Maryam	ابن مريم		Yaus	يوسف	

cont. 5-4.

al-bf'ah	environment	plants	al-haywān	animals	الحوان	al-mu'ammalat	transactions	المعاملات
al-dhār	wells	pastures	al-ibīl	camels	الإبل	al-ajr	wage	الأجر
al-arḍ	earth	tamarisks	al-aḥḍār	hair	الأشجار	al-ajal	appointed time	الأجل
al-anhār	rivers	onions	al-ḥayyāt	wools	الأحبار	al-amwāl	wealth	الأموال
al-awḍiyah	valleys	green herbs	al-ḥayyāt	catties	الأموال	al-ḥayyāt	spending	الإفلاق
al-bihar	seas	figs	al-ḥayyāt	stiles	الإبل	al-ḥayyāt	spoils of war	الأنفال
al-ibārā	sands	fruits	al-ḥayyāt	camels	الإبل	al-ḥayyāt	sales	البيع
al-jibāl	mountains	gardens	al-ḥayyāt	camels	الإبل	al-ḥayyāt	poll tax	الجزية
al-hadīd	iron	grains	al-ḥayyāt	mules	الإبل	al-ḥayyāt	land tax	الخراج
al-ḥadīd	gold	gardens	al-ḥayyāt	cows	الإبل	al-ḥayyāt	debt	الدين
al-ḥadīd	winds	anoining oil	al-ḥayyāt	leather	الإبل	al-ḥayyāt	blood-money	الدية
al-ḥadīd	clouds	ripe dates	al-ḥayyāt	camels	الإبل	al-ḥayyāt	interest	الربا
al-sahāb	rocks	pomegranates	al-ḥayyāt	beasts	الإبل	al-ḥayyāt	profit	الربح
al-sukūn	spring	plants	al-ḥayyāt	donkeys	الإبل	al-ḥayyāt	pledge	الرمق
al-ḥayyāt	rain	olives	al-ḥayyāt	pigs	الإبل	al-ḥayyāt	purification due	الزكاة
al-ḥayyāt	silver	trees	al-ḥayyāt	horses	الإبل	al-ḥayyāt	partnership	الشراكة
al-ḥayyāt	copper	glue	al-ḥayyāt	blood	الإبل	al-ḥayyāt	charity	الصدقة
al-ḥayyāt	pearl	lentils	al-ḥayyāt	animals	الإبل	al-ḥayyāt	contracts	المعقود
al-ḥayyāt	water	honey	al-ḥayyāt	quails	الإبل	al-ḥayyāt	promises	العهود
al-ḥayyāt	coral	fruits	al-ḥayyāt	sheeps	الإبل	al-ḥayyāt	spoils of war	الغنيمة
al-ḥayyāt	clouds	cereals	al-ḥayyāt	frogs	الإبل	al-ḥayyāt	ransom	الدية
al-ḥayyāt	rubies	cucumbers	al-ḥayyāt	birds	الإبل	al-ḥayyāt	spoils of war	الغنى
		vegetables	al-ḥayyāt	small ans	الإبل	al-ḥayyāt	loan	القرض
		plants	al-ḥayyāt	dogs	الإبل	al-ḥayyāt	expiation	التكفير
		palm trees	al-ḥayyāt	bees	الإبل	al-ḥayyāt	property	المكينة
		mannā	al-ḥayyāt	ants	الإبل	al-ḥayyāt	promise	الميثاق
			al-ḥayyāt		الإبل	al-ḥayyāt	inheritance	الميراث
			al-ḥayyāt		الإبل	al-ḥayyāt	blowing	الميمر
			al-ḥayyāt		الإبل	al-ḥayyāt	vows	النذر
			al-ḥayyāt		الإبل	al-ḥayyāt	bequest	الوصية

Figure 5-5: class menu sample of Qur'anic terms in the field of economics

المصطلحات	behaviour	al-sawābiyyat	الأفعال	activities	al-a'māl	الأشخاص	class-people	al-ashkhhās	الحالات	situations	al-ahādīth
الإيمان	good doing	al-ithbān	الضمان	goods	al-bi'dā'ah	بنينا السليل	wayfarers	ابن سبيل	الأيام	signs	al-ahādīth
الإحسان	faithfulness	al-ithbāt	التجارة	trade	al-ibārāh	الرقابي	slaves	الرقابي	الإيمان	security	al-amānāh
الإحسان	saving	al-ashkhhās	الجهد	effort	al-ijhād	الغزاة	poor	الغزاة	الميت	poverty	al-umūdāq
الأذى	harm	al-ahādīth	المحصار	harvest	al-ḥajr	الغريب	kims	الغريب	الميت	misery	al-ḥab' s
الإحسان	self sufficiency	al-istiqnā'	الزراعة	agriculture	al-zirā'ah	المستأمن	indigens	المستأمن	الزراف	blessing	al-barakāh
الإحسان	extravagance	al-istiqf	المسح	activity	al-ṣā'y	اليتيم	orphans	اليتيم	الجمع	affluence	al-tarāf
الإحسان	balance	al-'itidāl	الظلم	shipment	al-ṣubḥā			الجمع	الجمع	saturation	al-rabbā'ah
الإحسان	hoarding	al-ḥirāz	المساعمة	work	al-ṣubḥā			الجمع	الجمع	welfare	al-rabbā'ah
الإحسان	forcing	al-ḥirāz	المساعمة	industry	al-ṣubḥā			الجمع	الجمع	income	al-rabbā'ah
الإحسان	trustingness	al-ḥirāz	المساعمة	hunting	al-ṣubḥā			الجمع	الجمع	thunder	al-rabbā'ah
الإحسان	holding	al-ḥirāz	المساعمة	activities	al-ṣubḥā			الجمع	الجمع	pleasure	al-rabbā'ah
الإحسان	altruism	al-ḥirāz	المساعمة	work	al-ṣubḥā			الجمع	الجمع	adversity	al-rabbā'ah
الإحسان	avarice	al-ḥirāz	المساعمة	ships	al-ṣubḥā			الجمع	الجمع	difficulty	al-rabbā'ah
الإحسان	righteousness	al-ḥirāz	المساعمة	diligent work	al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	wantonness	al-ḥirāz	المساعمة	work	al-ṣubḥā			الجمع	الجمع	richness	al-rabbā'ah
الإحسان	tyranny	al-ḥirāz	المساعمة	diligent work	al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	wasting	al-ḥirāz	المساعمة	migration	al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	rigidardness	al-ḥirāz	المساعمة		al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	envy	al-ḥirāz	المساعمة		al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	greed	al-ḥirāz	المساعمة		al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	fear	al-ḥirāz	المساعمة		al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	betrayal	al-ḥirāz	المساعمة		al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	begging	al-ḥirāz	المساعمة		al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	stinginess	al-ḥirāz	المساعمة		al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	injustice	al-ḥirāz	المساعمة		al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	justice	al-ḥirāz	المساعمة		al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah
الإحسان	renunciation	al-ḥirāz	المساعمة		al-ṣubḥā			الجمع	الجمع	poverty	al-rabbā'ah

cont. 5-5.

be considered by a committee of specialists, preferably consisting of both compilers and subject experts, who will decide which of the terms represent (or do not represent) the related category. At least six copies of each reference for each item should be made. The purpose of these references is to highlight the slight differences between the terms understood from the Qur'anic point of view and those belonging to the modern disciplines. The references suggested in this exercise are listed in Figure 5-6 and Figure 5-7.

B. Compilers' Guidelines

It may be argued that a few step-by-step guidelines are not sufficient. Thus the procedure that follows has been broken down into discrete steps with more general guidelines included, in recognition of the fact that it does not replace the compiler's own experience. In addition, it is flexible enough to be used on other system constructions.

1. Readers' Guidelines

Before starting the work in detail, the subject must be determined. At this stage, a group of homogeneous and previously subgrouped experts should be brought together and divided into specialist branches. Next, elementary and relevance materials have to be prepared for all of the participants.

Later on, readers move to the Qur'an and begin the process of identifying those verses that best reflect the specified selected subject-term. The essential operations in this process are as follows:

(a) Clear the mind as much as possible and rid it of all artificial memory and preconceived and trivial visual ideas and thoughts.

(b) Evaluate the self and recognize very clearly one's limitations and capabilities. Bear in mind that understanding the Qur'an is a vast, multi-dimensional process. Do not delve into grammatical and lexical issues, but concentrate on direct, literal meanings.

(c) Familiarize the eyes as much as possible with the Qur'anic language, since this enables one to understand its meaning without the

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Figure 5-7: A reading references sample for terminological studies.

help of interpretation. Feel its cohesive unity and begin to look at its message as a unified whole.

(d) Scan the Qur'an from beginning to the end in order to comprehend its direct, simple and literal meaning. This initial scanning gives the general overall message of the Qur'an as well as some idea of its style, diction, argument, and rhetoric.

(e) Understand the objectives precisely and set specific goals for the study. Decide on one concept at the time of searching. Type the prospective concept in the correspondence keyword box on the abstracting card.

(f) Repeat the scanning with an expert as opposed to a superficial eye. Understand the meanings of the words and the message that the Qur'an wants to tell at the level of human intelligence and knowledge, and then use that knowledge to make a critical evaluation based upon Qur'anic criteria.

(g) Bring your own knowledge to understand the Qur'an on the issues it raises and to understand it in the current idiom. Never use the Qur'an to confirm contemporary knowledge or preconceived ideas. Confine yourself to short commentaries and Arabic dictionaries whenever the need for personal detail of the Qur'an is required. Do not delve into long and elaborate exegetical works.

(h) Read the whole Qur'an again with a much more detailed analysis. Understand every word as if it were being revealed at that moment. Try to relate and apply it to real life today, but be very aware that its message is eternally valid and immutable and unchanging. Use exegetical, lexical, and concordance references, but do not let them become a veil between the mind and the Qur'an.

(i) Take up all of the passage, portion, and verse selections that best express the meanings of the concept for which you are searching. Read the chosen selections again and again. Concentrate on them and mark them in the judgment boxes indicating, if they are relevant, partially relevant, or a matter of doubt.

(j) Study the selection in greater detail, following a systematic formulated thematic syllabus with reference to advanced exegesis,

Arabic dictionaries, and such specialized books as those dealing with various readings, reasons of revelations, abrogation, and so on. As part of the above analysis, decide upon the position of the verse, whether to retain or to alter it, and then mark this it in the judgment box.

(k) Go to the *tafāsīr* for confirmation that the selected verse is approved with the suggested subject-term. If the interpretation appears to be pertinent, abstract it, write down the selected passage in the verse box, and confine a single *tafāsīr* to a single box in the abstract file.

(l) Write the interpretation in the abstract box. Do not add criticism, interpretation, comments, notes, ideas, or evaluation to the actual content. Eliminate all information concerning who wrote the abstract, as well as the introduction, redundancy, summaries, history, and all information that is already known and amplified. Use the author's terminology and make no substitution without good reason, so that the original author's homogeneity of thought is retained and the significant content and character of the original document is conveyed.

(m) Fill in the bibliographic information located along the bottom of the abstract box and then date and sign the card of the applied service.

2. Indexers' Guidelines

By this stage, the indexers should have the collected abstracting forms and the copies of terminology compiled and prepared in the initial stages. What they now have to do is to reconsider the whole collection and then compile it on indexing cards. The main steps for this process are:

(a) Reassemble the entire collection of abstract cards. Start an elementary classification according to their subject-term concepts.

(b) Scan the basic prerequisite and inner participation, read the passage, comprehend its meaning, and recollect its broad contents.

(c) Note all major themes that can be discerned, and then note the central theme in relation to the aim of indexing.

(d) Divide the passage into such shorter portions that are thought to convey a single message.

(e) Analyze the content of each group accurately and tag the concepts with appropriate index terms. No selective step should be taken at this stage.

(f) Underline all words and phrases that are thought to be keywords and central to express the subject.

(g) Find out what the important words mean and determine their exact meanings.

(h) Record the keyword and its definition, if applicable, on the indexing card.

(i) Review the underlined words in the abstract form as indicated in the Qur'anic verse and try to see how the words are interlinked as well as their unity and cohesion.

(j) Decide which words express relationships to the keywords and record this information in the *RT* box.

(k) Use check-lists, authority files, and subject menus to search for those words that express equivalence relationships to the keyword. Record this information in the *USE* box.

(l) Repeat the above three steps for each keyword underlined in the verse. Use a single index card for each keyword.

(m) Repeat the process for all other groups and for each abstract card. Accumulate the resulting index terms and the corresponding indexing card.

(n) Gather all indexing cards and classify the keywords into classes according to the strength of their relationship. Give them a unique class number in the upper-hand-side square of the card.

(o) Review the card, sign the signature box, and record the date of the service.

3. Checkers' Guidelines

While performing the abstracting and indexing services, the checkers' main goal is to eliminate errors and to establish consistency and uniformity in style and presentation in the final revision. These functions should be performed primarily by the readers and the indexers,

but the checkers should go through it one last time to make sure that all of the required work has been done. Checkers should use a different color of ink from that of the readers and the indexers, who should both use one standard color. The checking process is outlined below in detail:

(a) Start checking information related to the titles, the authors, the publishers and so on for factual accuracy and form. Write directly on the manuscript rather than in the margins.

(b) Refer to the original documents and start checking the abstract for its proper meaning. Add or modify on the manuscript any important information that has been missed. Eliminate any unnecessary amplified information.

(c) Sign the abstract form in the appropriate box and date it.

(d) Move to the corresponding indexing cards for the subject-term indicated on the abstract form.

(e) Review the definition of the keyword for any factual mistake.

(f) Check the terms listed in the *USE* and *RT* boxes for grammatical accuracy and diction.

(g) Sign the index card in the appropriate box and date it.

(h) With the final pre-publication script, check the form of terms, spellings, and cross-references.

(i) Check the alphabetization and pay special attention to the alphabetical section.

(j) Check the indenting and pay special attention to the hierarchical section.

(k) Check the group arrangements and pay special attention to the facet section.

(l) Check the typeface, size, and style of the layout.

4. Programmers' Guidelines

During the early design stages, data about current performance should be gathered and interviews should be conducted with interested parties. One or two program designers might take responsibility for the whole undertaking. In the beginning, however, the members of the

design team should discuss among themselves and generate a set of guidelines. Such guidelines could be arranged in the following steps:

- (a) Get a feel for the problem by sketching free-hand diagrams.
- (b) Prepare a preliminary list of transactions that the data model must support.
- (c) Prepare a preliminary list of attributes.
- (d) Write down a preliminary list of entity types that can be identified confidently and select each type's identifier. For each entity type, write down a table containing only its identifier.
- (e) Draw a flow chart diagram showing all known relationships between the entity types.
- (f) Conduct a preliminary check to make sure that your diagram will support the transaction. Amend the diagram if necessary.
- (g) Add menu selection formats and make use of multiple windows and display formats for items and lists.
- (h) Design the screen layout, use of color, highlighting, and audible sounds.
- (i) Decide on the keyboard's character set, function keys, and cursor control devices.
- (j) Identify the wording of prompt and feedback messages, response times, and display rates.
- (k) Test the screen in the company of the users and redesign it if necessary.

5.4. Scheme Policy

A. Exegetical Instructions

The first aim of the system compiler is to understand the exact text of the Qur'an as it was understood and explained by the Prophet and his Companions. As this task is made quite difficult by the very nature of the Qur'anic language, the seeker has to refer to the exegetical sources.

1. Philological Aspects

The first priority here is to choose one of the readings that is accepted and widespread in the Muslim world. Try to understand the verses by applying the following steps:

(a) Place the words or the texts in their textual context and try to understand them intellectually.

(b) Follow the direct literal meanings with reference to the preceding and succeeding texts and, if necessary, the whole chapter.

(c) Identify the unified thread behind the apparent fluctuation and randomness of the themes.

(d) Compare apparent repetitions of words or parallel verses.

(e) Consult exegetical references for authentic historical material and avoid unnecessary Judaica.

(f) In case of two or more different interpretations of ambiguous phrases, pronominal references, and continuous statements, place all of the interpretations under separate headings and provide cross-reference to each in a footnote.

(g) For two or more different dialectical interpretations, employ the Quraysh dialect and provide the other interpretation(s) in a footnote.

(h) In the case of two or more variant readings, choose one and indicate the differences from the others (if any) in a footnote.

(i) Maintain those meanings that are closest to the literal and lexical ones according to the norms associated with the readings of marks of *aḥkām al tilāwah*.

(j) Make continuous reference to authentic exegetical sources in order to check other aspects of background knowledge that is related to the verse.

2. Historical Aspects

The purpose of including historical knowledge in the retrieval system is to make it possible for the user to become aware of the circumstances surrounding each revealed section of the Qur'an, which

will help him compile his system. This procedure should be undertaken as follows:

(a) Place the verse under its literal meaning, regardless of the occasion of its revelation, abrogation, or other historical elements.

(b) Confine the occasion of revelation, if any, to the specific verses and refer to them in the footnotes.

(c) Restrict the abrogation of verses, if any, to the level of exceptions, particularizations, and clarifications of the verses and refer to them in the footnotes.

(d) In the case of two contradictory statements (narrations), place the verse under its general heading and refer to the two contradictory narrations.

(e) Avoid *isrā'īliyyāt* (Judaica) wherever possible. Refer to it only if there is an approved Hadith that supports its contents.

3. Theological Aspects

Interpretations should never be allowed to become a veil between the Qur'an and the mind. Thus, consult commentaries only to acquire clarification of certain aspects. The selection of Qur'anic verses should be used to serve only the needs of the present era, whether on the level of scientific facts or social activity, and interlinked to earlier interpretations. For the present work, the compiler should note carefully any differences resulting from the time—space paradox and not reject the commentaries completely. The methodological way to compile these guidelines is outlined below:

(a) Start with the semantics of the language, grammatical and derivative, taking into account the meanings of the words at the time of the revelation.

(b) Elucidate the real intent and import of the Qur'an. Concentrate on its essential message rather than on complex juridical, theological, philosophical, or scientific issues.

(c) Prefer the apparent meaning to the hidden one. The latter is only to be considered in the absence of the former.

(d) Bear in mind the relationship between the connected parts of a single verse and between the verses.

(e) Exclude any metaphysical verse, even if it is apparently revealing when searching for scientific facts.

(f) Clarify the verses' meanings and the facts derived from the frame of the Arabic language, laws, and cosmic sciences.

(g) When interpreting, maintain contact with the facts that were known at the time of the revelation, when dealing with matters related to cosmic sciences, social norms and Arab history.

B. Indexing Rules

Indexing rules in this information retrieval system are of three types: those leading to data contained in the alphabetic section (known as keywords), those guiding to the term's location in the facet section (known as descriptors), and those guiding to specific subject matter contained in the body of the system (known as subject headings).

1. Keywords

Keywords are the main parts of the retrieval system, for they are used by the researcher as identifiers and entry terms for the subjects requested. For the purpose of identification, they should:

(a) Target the specific branch of learning to be served and represent simultaneously the important concepts found in the Qur'an.

(b) Express one idea or concept, excluding slang, jargon, coined terms, and deprecated terminology.

(c) Include all synonyms, derived nouns and second declination plurals of words whose meanings coincide with established ones.

(d) Be filed as much near uniterms as possible. Compound keywords should be reduced to equivalent uniterms or else filed as direct entries (i.e., inversion entries are not allowed).

2. Descriptors

In general all descriptors are keywords. Verify their characteristics. They also serve to identify verses listed in the retrieval system. In addition to their characteristics as keywords, descriptors should:

- (a) Reflect a level of specificity commensurate with that which represents discreet concepts.
- (b) Be unambiguous and have identifiable meanings.
- (c) Be evaluated as of high frequency use or comparatively represent concepts quantitatively within the Qur'an.
- (d) Be evaluated as a high frequency use or acceptability precision within the discipline of science.
- (e) Appear in bold face type throughout the system in order to distinguish them from the keywords.

3. Subject Headings

Subject headings are the tags of the verse's contents. They are placed under the descriptors in the retrieval system and are derived from the context of the verse described. They should not be complicated, very specific, or too general. They should retain the natural rhyme and grammar formulation within themselves. Unlike keywords and descriptors, the construction of subject headings violates the uniterm principle (i.e., subject headings have to be compound nouns). An imposed version is completely rejected, and the natural structure of the language is the concrete nature and norm for their use.

a. Compound Nouns

The construction of the compound nouns should be filed by using a noun connected with "wa , and" preceding the word that is functioning as a descriptor. For example:

al wafāh wa al waṣīyah الوفاة والوصية (Death and bequeathing)

This method allows the searcher to locate the concept with ease and, on the other hand, fulfils the need of machine matching.

b. Synonyms

The problems associated with synonyms are avoided in the selection of the keywords by listing all of the equivalences in the alphabetic section, because this is considered an essential part of searching for a term. On the other hand, for descriptors the criterion is the highest level of frequency use in the Qur'an or in the specific branch of learning respectively. The preferred term is distinguished by a bold font. For example,

Synonyms:

Unpreferred noun	<i>al bayt</i>	البيت	
Unpreferred noun	<i>al bayt al ḥarām</i>	البيت الحرام	
Unpreferred noun	<i>al bayt al 'atīq</i>	البيت العتيق	
Preferred noun	<i>al ka'bah</i>	الكعبة	(God's house)

Derived nouns:

Unpreferred noun	<i>al istikbār</i>	الإستكبار	
Unpreferred noun	<i>al takabbur</i>	التكبر	
Preferred noun	<i>al kibr</i>	الكبر	(haughtiness)
Unpreferred noun	<i>al kibriyā'</i>	الكبرياء	

Irregular plural:

Preferred noun	<i>al ashhur</i>	الأشهر	(lunar months)
Unpreferred noun	<i>al shuhūr</i>	الشهور	

c. *Homographs*

Homographs should be distinguished on three consecutive levels: initially by providing vowel signs for terms in their original forms.

Example:	<i>al dyn</i>	الدين	
To become	<i>al dayn</i>	الدَّيْنِ	(debt)
To become	<i>al dīn</i>	الدِّينِ	(religion)

If the term is still not recognizable, a qualifying expression in brackets should be added to clarify the meaning.

Example:	<i>al fiṣāl</i>	الفصال	
To become	<i>al fiṣāl (raḍā'ah)</i>	الفصال (رضاعة)	(Weaning)
To become	<i>al fiṣāl (ṭalāq)</i>	الفصال (طلاق)	(Divorce)

A supplementary clarifying expression should be attached to the term if the term is normally with it.

Example:	<i>al bayt</i>	البيت	
To become	<i>al bayt al ḥarām</i>	البيت الحرام	(God's house)
To become	<i>al bayt al 'atīq</i>	البيت العتيق	(God's house)

d. *Singular-Dual-Plural*

Words that happen to be used in their singular, dual, or plural forms either as keywords or as descriptors should be distinguished on two levels: the empirical approach and the committee approach.

On the empirical approach level, the Qur'anic terminology will be used. Application of this method will give the following results:

* Use the singular form for words that appear only in their singular forms. Example:

Use ***al arḍ*** الأرض not ***al arḍūn*** الأرضون (earths)

* Use the dual form for words that appear only in their dual forms. Example:

Use ***al thaqalān*** الثقلان not ***al ins*** الإنس and ***al jinn*** الجن

* Use the plural form for words that appear only in their plural form. Example:

Use ***al albāb*** الأبواب not ***labīb*** ليب (sensibles)

* Use the mass noun for words that appear in their singular, dual, and plural forms. Example:

Use			
<i>al shurūq</i>	الشروق	not <i>al mashriq</i>	المشرق (sunset)
		nor <i>al mashriqayn</i>	المشرقين (two sunsets)
		nor <i>al mashāriq</i>	المشارق (sunsets)

* Use the plural form for words that appear in their singular, dual, and/or plural form, but which have no mass nouns. Example:

<i>a'yun</i>	أعين	not <i>'ayn</i>	عين (eye)
		nor <i>'aynān</i>	عينان (eyes)
<i>'uyūn</i>	عيون	not <i>'ayn</i>	عين (spring of water)

On the level of the committee approach, the terminology of disciplines will be used. This will produce the following results:

* Use singular forms to convey these cases:

Proper names	eg. <i>Maryam</i>	مريم	(Mary)
Properties	eg. <i>al ḥarārah</i>	الحرارة	(heat)
Mass nouns	eg. <i>al ṭalāq</i>	الطلاق	(divorce)
Materials (specific)	eg. <i>al ḥadīd</i>	الحديد	(iron)
Objects (specific)	eg. <i>al dharrah</i>	الذرة	(tiny object)
Events (specific)	eg. <i>al 'adhāb</i>	العذاب	(torment)

* Use the dual form to convey all of the cases that the singular and plural have failed to express.

* Use the plural form to convey the cases:

Genus	eg. <i>al yatāmā</i>	اليتامى	(orphans)
Materials (generic)	eg. <i>al ḥijārah</i>	الحجارة	(stones)
Objects (generic)	eg. <i>al nabāt</i>	النبات	(plants)
Events (generic)	eg. <i>al amrād</i>	الأمراض	(diseases)

e. Irregular Plural

In general, all types of irregular plural forms of the keyword should appear in the alphabetic section. Preferred forms should appear in a bold font for those keywords that will appear as descriptors in the facet section. The criteria of selection should be as follows:

* Irregular plurals that differ in meaning should be provided in the facet section with no distinction. Example:

<i>al ikhwān</i>	الإخوان	(friendship)
<i>al ikhwah</i>	الإخوة	(blood or spiritual brotherhood)

* Irregular plurals that differ in frequency but have the same meaning should be distinguished and provided in the facet section.

Priority is given to the highest frequency in the Qur'an or the highest acceptability precision in the subject area. Example:

unpreferred plural	الصوم	<i>al ṣawm</i>	
Preferred plural	الصيام	<i>al siyām</i>	(fasting)

5.5. Displays

A. Printed Display

The display suggested and used in this study is the facet display. An alphabetic display is used for the index. The reason for such a choice is based on the unique construction of this system, which serves as a thesaurus as well as a subject index indicating its contents. In this display, all keywords appear in the alphabetical section and the descriptors appear for a second time in the facet section. The keywords that do not reappear in the facet section serve as locators for the descriptors in the facet section. Both sections are integrated and complementary, but, if consulted separately, are incomplete. The link between the two sections consists of a class number, which works as an indicator from the alphabetic section (that includes the keywords) to the facet section (that includes the subject contents).

In general, there are two reasons for developing this particular kind of display:

(1) The integrity between the alphabetic section and the facet section is capable of demonstrating and organizing a large vocabulary system with high efficiency.

(2) This integrity also eliminates the problem of equivalences, as all equivalent keywords are indicated by the same class number. Keywords that are interrelated hierarchically are considered related associatively.

1. Alphabetic Section

The alphabetical section, which is the main part of the retrieval system, is an accession key for the subject matter. In this section, key-

words should be arranged in word-by-word sequences and follow the alphabetization method common in most Muslim countries (Figure 1-1). The order should be stated clearly at the beginning of the system so that people who follow another order (i.e., Morocco) will not be confused by the method of entry arrangement. Numbers, articles, and mixed letters should be treated as follows:

- * The definite article *al-* ﻻ should not be taken into account unless it is a part of the word.

- * The letter *hamzah* ء, when standing alone, should precede *alif* ا in order.

- * The letter *hamz* ء, when accompanying the letters *alif* ا, *yā'* ي, and *wāw* و, should be treated as a part of these letters and precede them in order.

- * The letter *alif maddah* آ should be treated as one letter and precede *alif* ا in order.

- * Letters that are vowelless with *shaddah* ّ should be treated as single letters and follow the *ḍammah* in the same order as simple vowels.

- * Letters that are similar in shape but differ in meaning when the appropriate vowels are applied, should be arranged thus *sukūn* ْ, *fathah* َ, *kasrah* ِ, *ḍammah* ُ, *shaddah* with *fathah* َ, *shaddah* with *kasrah* ِ, and *shaddah* with *ḍammah* ُ respectively.

2. Facet Section

In the facet section, broad concepts are classified under main classes that, in turn, are subdivided into subclasses (subfacets) that provide clusters of descriptors. Those descriptors located under subfacets are related more closely to each other than are those between neighboring facets. In the facet section, descriptors are arranged according to the subject field served and are completely attributable to subject experts. Any resulting differences in arrangement are due to their subjectivity. However, such differences do not affect the system's efficiency, for the seeker should consult the alphabetical section before going to the required subject. For example:

Menstruation 01 04	<i>al maḥīd</i>	المحيض
Intercourse	<i>al rafath</i>	الرفث

3. Hierarchical Section

The hierarchical section serves as a supplement to the facet section. Descriptors that appear in the facet section reappear again in the same order in the hierarchical section. Subheadings under their specified descriptors are listed on a one discrimination level, which is indicated by one dot. Descriptors appear in a bold face type, while subheadings are listed in a systematic (and non-alphabetical) KWIC arrangement. The sequences covered appear in the subject section. For example:

Intercourse	<i>al-rafath</i>	الرفث
. Intercourse and menstruation	. <i>al rafath wa al maḥīd</i>	. الرفث والمحيض
. Intercourse and ordination	. <i>al rafath wa al ityān</i>	. الرفث والإتيان
. Intercourse and praying	. <i>al rafath wa al ṣalāh</i>	. الرفث والصلاة
. Intercourse and mosques	. <i>al rafath wa al masājīd</i>	. الرفث والمساجد
. Intercourse and fasting	. <i>al rafath wa al ṣiyām</i>	. الرفث والصيام
. Intercourse and pilgrimage	. <i>al rafath wa al ḥajj</i>	. الرفث والحج

4. Subject Section

The subject section contains all of the subject matter (i.e., the verses). The subject matter is arranged according to its place in the facet section, not in alphabetic order. Verses appearing under subject headings should be filed as follows:

* Verses that contain a specific concept should be listed under their tagged descriptors.

* Verses should be subgrouped under their subject headings as the subject becomes more fragmented.

* Verses that are concrete and undivided should be listed directly under their descriptors, for they have no subject.

* Verses should be arranged under their subject headings according to the ascending order of chapter and verse numbers.

* Verses containing a double concept should be entered under both concepts. It is not necessary to include cross-references in this section.

* Verses should be indicated by the parts most related to the headings. Unrelated parts should be eliminated and replaced by dots.

* Verses with different verse numbers, but which follow a continuous concept, should be listed together. An indication of the verse numbers should be provided.

5. Cross-References

Cross-references are used to guide the searcher from the keywords in the alphabetical section to the exact location of the descriptors in the facet section and the main body of the retrieval system. The descriptor's location is indicated by a serial number, which consists of four numbers. The first two digits refer to the facet number, while the second two digits refer to the subfacet number. When taken in its full form, the serial number replaces the descriptor in the alphabetical section. This instruction applies to all keywords. All equivalent keywords have the same serial number, and no preferred nouns are used to permit accession to the sub-ject matter. Authorized descriptors are indicated by a bold font. For example:

Synonyms:

<i>al bayt (al ka'bah)</i>	03 06	البيت (الكعبة)
<i>al bayt al ḥarām</i>	03 06	البيت الحرام
<i>al bayt al 'atīq</i>	03 06	البيت العتيق
<i>al ka'bah</i>	03 06	الكعبة

Derived nouns:

<i>al istikbār</i>	04 01	الإستكبار
<i>al takabbur</i>	04 01	التكبر
<i>al kibr</i>	04 01	الكبر
<i>al kibriyā'</i>	04 01	الكبرياء

Irregular plural:

<i>al ashhur</i>	16 02	الأشهر
<i>al shuhur</i>	16 02	الشهر

B. Screen Display

The display that has been suggested and used in this study is the menu selection. Its suggested instructures are as follows (see Figure 5-8):

- * Provide a horizontal permanent menu for function operations and leave at least two spaces between adjacent captions.
- * Provide ten function keys within the program to be used for immediate required processes. Do not exceed this number, as commercially used keyboards have from 10 to 14 function keys.
- * Provide a “help” function key that will allow the user immediate and easy access to information that will help him solve the problem encountered.
- * Provide a “interrupt” function through the use of an UNDO reverse process.
- * Provide a function key that will allow the data on the screen, as well as all of the data required, to be printed through a single retrieval process.
- * Provide a function key for page scrolling control, so that unwanted data can be skipped over with a fast scroll and more interesting data can be inspected with a slow scroll. In both cases, ensure that part of the previous display is visible at the top/bottom of the new page so that the user will have a degree of continuity.
- * Provide a function key for color off/on, so that people who suffer from color blindness can use the black and white screen.
- * Provide a function key for sound off/on, so that people who find the clicking sound irritating can turn it off and use a silent service.

- * Provide a function key for mouse off/on, so that the people who are not used to the mouse control can use the keyboard keys.
- * Provide a function key to interrupt the program at any point without affecting program loading or requiring the machine to be turned off and the program to be reloaded.
- * Provide a window menu for function operations.
- * Arrange menu items in alphabetical sequence.
- * Provide for menu item selection by highlighting the choice identified through the keyboard cursors or the mouse device.
- * Provide a multipath level for window menu items.
- * Provide no more than five to six windows at one time that are related to the item requested.
- * Use overlapping windows instead of tiled windows.
- * Eliminate irrelevant windows automatically from the screen.
- * Provide a menu map, as it is often difficult for users to maintain a sense of position as they go deeper into a multipath menu. A note such as MENU 2 OF 4 is very helpful.
- * Permit one simple key action to return to the permanent menu. Use for instance, ESC key.
- * Provide a single menu on the full screen that is able to present the verses, and surround the screen areas or draw explicit boundaries with a box.
- * The quantity of data per screen, including titles, headings, and so on, should not cover more than 30 percent of the total area.
- * Provide clear headings and other ways of finding information to help the user navigate within the display.
- * Use a point size of 18 to 24 for characters in the headings, and a point size of 10 to 12 for characters appearing in the subheadings and the text.
- * Use double spacing for those characters having a point size of 18 to 24, and single spacing for those characters having a point size of 10 to 12.
- * Use bold or distinguished colors for headings and subheadings.

- * Employ the user's conventions for font shapes, and do not use different calligraphies unless necessary. It is much better to use the 'Uthmanic calligraphy.

- * Use margins that are justified on both sides, and maintain equal spacing between words.

- * Headings should be aligned to the right of the columns.

- * Tabulate the verses represented in three columns: verse, chapter number, and verse number respectively. Columns should be separated by at least two blank spaces.

- * Provide numbers for pages and titles.

5.6. Conclusion

The guidelines drawn in this chapter call for three concluding remarks. First, establishing a Qur'anic retrieval system requires professionalism, commitment, and belief in the purpose. Second, the success of the manual system is highly influenced by the level of compiling the vocabulary control. Third, the success of the automatic system is directly proportional to the simplicity or complexity of the natural language in use.

CHAPTER SIX

Two Examples of Qur'anic Retrieval System: Display and Organization

Overview

It is perfectly common and practical to build up the information retrieval system with examples to serve as a concrete base for the system. However, there are two aspects that should be highlighted in these examples. First, these examples form the base of an information network in which there is a large common set of keywords as well as numerous subfacets of descriptors that form the subject system itself. Secondly, the effectiveness of the subject-terms as a means of identifying and retrieving information depends upon the selection of these terms which together tag a subject provided in the system, and the organization of these terms in facets and subfacets provides a means of keeping track of interterm relationships. However, it is worth noting that although all the members of a facet are conceived of as related terms and the closest degree of relationship is presented to the members of subfacets, the degree and the type of these relationships vary from one subfacet to another.

The purpose of this chapter is to target the display and organization of terms that serve as examples for the information retrieval system. The examples are based upon general principles which apply to any subject field, and for the maximum benefit of this study they are divided into two fundamental classes of knowledge viz, natural sciences and social sciences. One of the two selected examples is physics that represents a discipline of the natural sciences, while the marital and familial status is used as a multi-purpose example in social sciences, that is sociology, social services and law.

Example
No. 1

Physics

ALPHABETIC SECTION		القسم الهجائي	
Light	02 01	<i>al ḍaw'</i>	الضوء
Sound	02 02	<i>al ṣawt</i>	الصوت
Electricity	02 03	<i>al kaḥraba'</i>	الكهرباء
Matter	01 01	<i>al māddah</i>	المادة
Waves	02 05	<i>al mawjāt</i>	الموجات
Mechanics	02 06	<i>al mīkānīka</i>	الميكانيكا
Relativity	02 04	<i>al nisbīyah</i>	النسبية

FACET SECTION		القسم الوجهي	
FACET	01	General	عام
Measuring Units	01 02	<i>waḥadāt al qiyās</i>	وحدات القياس
FACET	02	Specific	خاص
Matter	01 01	<i>al māddah</i>	المادة
Measuring Units	01 02	<i>waḥdāt al qiyās</i>	وحدات القياس
Light	02 01	<i>al ḍaw'</i>	الضوء
Sound	02 02	<i>al ṣawt</i>	الصوت
Electricity	02 03	<i>al kaḥraba'</i>	الكهرباء
Relativity	02 04	<i>al nisbīyah</i>	النسبية
Waves	02 05	<i>al mawjāt</i>	الموجات
Mechanics	02 06	<i>al mīkānīka</i>	الميكانيكا

HIERARACHICAL SECTION		القسم الهرمي	
Matter		<i>al māddah</i>	المادة
. Duality of matter		. <i>izdiwājīyat al māddah</i>	. ازدواجية المادة
. Density		. <i>al kathāfah</i>	. الكثافة
. Heat		. <i>al ḥarārah</i>	. الحرارة
. Atmospheric Pressure		. <i>al ḍaḡht al jawwī</i>	. الضغط الجوي
Measuring Units		<i>waḥadāt al qiyās</i>	. الوحدات القياس
. Weight		. <i>al wazn</i>	. الوزن
. Length		. <i>al ṭūl</i>	. الطول
. Time		. <i>al zaman</i>	. الزمن
. Direction		. <i>al ittījāh</i>	. الإتجاه
Light		<i>al ḍaw'</i>	الضوء
Sound		<i>al ṣawt</i>	الصوت
Electricity		<i>al kaḥraba'</i>	الكهرباء
Relativity		<i>al nisbīyah</i>	النسبية
Waves		<i>al mawjāt</i>	الموجات
Mechanics		<i>al mīkānīkā</i>	الميكانيكا
. Gravitational force		. <i>al jādhībīyah al arḍīyah</i>	. الجاذبية الأرضية
. Weightlessness		. <i>in'idām al wazn</i>	. إنعدام الوزن

FACET 01 SUBFACET 0101	الوجه الوجه الفرعي
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Matter	المادة
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Duality of matter

And of everything We created pairs, that perhaps you may remember. (51:49)

إزدواجية المادة

﴿وَمِنْ كُلِّ شَيْءٍ خَلَقْنَا زَوْجَيْنِ لَعَلَّكُمْ تَذَكَّرُونَ﴾ (الذاريات: ٤٩)

Density

He it is who has separated the two seas, this one is fresh, palatable to taste, and this one is saltish, piquant. And He set a barrier between them, and an insurmountable bar. (25:53)¹

الكثافة

﴿وَهُوَ الَّذِي مَرَجَ الْبَحْرَيْنِ هَذَا عَذْبٌ فُرَاتٌ وَهَذَا مِلْحٌ أُجَاجٌ وَجَعَلَ بَيْنَهُمَا بَرْزَخًا وَحِجْرًا مَّحْجُورًا﴾ (الفرقان: ٥٣)

He let forth the two seas to meet together, between them a barrier they cannot surpass. (55:19-20)

﴿مَرَجَ الْبَحْرَيْنِ يَلْتَمِسَانِ، بَيْنَهُمَا بَرْزَخٌ لَا يَبْغِيَانِ﴾ (الرحمن: ٢٠)

Heat

(He) who has made fire for you from the green trees and, behold, you may kindle flame. (36:80)

الحرارة

﴿الَّذِي جَعَلَ لَكُمْ مِنَ الشَّجَرِ الْأَخْضَرِ نَارًا فَإِذَا أَسْمُ مِنْهُ تَوَفَّدُونَ﴾ (يس: ٨٠)

¹ The Arabic word *al bahrayn* (two seas) is a reference to the two sources of fresh water and salt seas. However, the great masses of fresh water in rivers, lakes, ponds and underground springs are all one, and the great salt ocean with its seas and gulfs is also all one. The separation between these two masses during their meeting could possibly be due to the difference in their densities.

١ تعود كلمة البحرين في هذه الآية إلى المصدرين الماء العذب والماء المالح. ويتمثل الماء العذب في كتلة الماء المنساب من الأنهار والبحيرات والبرك والعيون، بينما يتمثل الماء المالح في كتلة الماء المتواجد في المحيطات والبحار والخلجان. وفي حالة التقاء هاتين الكتلتين ينتج عادة فاصل ترجع نشأته - احتمالاً - إلى اختلاف الكثافة بين الكتلتين.

Atmospheric Pressure

But whoever God desires to guide,
He expands his breast to Islam.
And whoever He desires to lead
into perversity, He makes his
breast narrow, constricted as if he
were ascending to heaven ...
(6:125)²

الضغط الجوي

فَمَنْ يُرِدِ اللَّهُ أَنْ يَهْدِيَهُ يَشْرَحْ صَدْرَهُ لِلْإِسْلَامِ
وَمَنْ يُرِدْ أَنْ يُضِلَّهُ يَجْعَلْ صَدْرَهُ ضَيِّقًا
حَرَجًا كَأَنَّمَا يَصْعَقُ فِي
السَّمَاءِ... ﴿الأنعام: ١٢٥﴾^٢

Measuring Units

وحدات القياس

Weight

الوزن

Surely God shall not wrong you
the weight of an atom. And if it be
a good deed, He shall multiply it
and shall give from Himself a vast
wage. (4:40)³

﴿إِنَّ اللَّهَ لَا يَظْلِمُ مِثْقَالَ ذَرَّةٍ وَإِنْ تَكَ حَسَنَةً
يُضَاعِفْهَا وَيُؤْتِ مِنْ لَدُنْهُ أَجْرًا
عَظِيمًا﴾ (النساء: ٤٠)^٣

² This is the condition of a person who is climbing and finds it difficult to breathe due to the lack of oxygen in the upper level of atmosphere.

³ The implication of the word "atom" as referred to in verses (4:40), (10:61), (34:3), (34:22), and (99:7-8), in the Arabic language is *dharrah*. The latter has been misused by most contemporary authors, who rely on their own understanding of the word as known in modern physics rather than as a reference to the lexical meaning and the historical background of this word. Lexically, it means a red ant (pl. *dharrr*), an ant's head, or a grain of mustard seed, as indicated by most of the early commentators. Hence verses (4:40), (10:61), (34:3), (34:22), and (99:7-8) mean that God never treats mankind unjustly by any means even by the weight of the smallest thing that was ever conceived. Historically, the discovery of atomic physics falls within the modern technical revolution. The Arabization of the word "atom" has lead to the Arabic word *dharrah*, a fact that leads to the contem-

^٢ تشير هذه الآية إلى حالة الشخص الذي يصعد إلى عنان السماء فيجد صعوبة في التنفس بسبب تناقص كميات الأكسجين المصاحبة للارتفاع إلى طبقات الجو العليا.

^٣ تعود كلمة ذرة كما وردت في نص الآيات (٤٠:٤) ، (٦١:١٠) ، (٣:٣٤) ، (٢٢:٣٤) ، (٨-٧:٩٩) ، إلى معناها الدارج المستعمل في اللغة الإنجليزية atom و الجدير بالذكر أن كثيرا من الكتاب المعاصرين يعتمدون في كتاباتهم على فهمهم الخاص لهذه الكلمة بمدلولها الوارد في الفيزياء الحديثة. ويعارض الكتاب بهذا المفهوم حقيقتين إحداهما والأخرى تاريخية. فالحقيقة اللغوية كما وردت في كتب المفسرين من أن معنى كلمة ذرة (الجمع ذر) هو النملة الحمراء أو رأس النملة أو حبة الخردل. وبالتالي فإن المعنى العام لكلمة ذرة الواردة في سياق الآيات (٤:٤) ، (٦١:١٠) ، (٣:٣٤) ، (٢٢:٣٤) ، (٢٢:٣٤) ، (٨-٧:٩٩) يدل على أن الله لا يقضى بظلم أي إنسان حتى ولو كان بمقدار وزن أصغر شيء يمكن تصوره. أما الحقيقة التاريخية فتعود إلى أن كلمة ذرة هذه هي نتاج لعملية تعريب لحقت بالكلمة الإنجليزية atom بمدلولها في علم الفيزياء الذرية اللاحق بالثورة التكنولوجية الحديثة. وقد

... And not so much as the single weight of an atom in the earth or in the heaven is hidden from your Lord, neither anything smaller than that nor greater, but in a lucid Book. (10:61)

﴿... وَمَا يَعْرُبُ عَنْ رَبِّكَ مِنْ مِثْقَالِ ذَرَّةٍ فِي الْأَرْضِ وَلَا فِي السَّمَاءِ وَلَا أَصْفَرَ مِنْ ذَلِكَ وَلَا أَكْبَرَ إِلَّا فِي كِتَابٍ مُبِينٍ...﴾ (يونس: ٦١)

And We shall set up the just balances for the Day of Resurrection, so that no single soul will be wronged in any way. And if it be the weight of one grain of mustard seed, We shall bring it forth ... (21:47)

﴿وَنَضَعُ الْمَوَازِينَ الْقِسْطَ لِيَوْمِ الْقِيَامَةِ فَلَا تُظْلَمُ نَفْسٌ شَيْئًا وَإِنْ كَانَ مِثْقَالَ حَبَّةٍ مِنْ خَرْدَلٍ أَتَيْنَا بِهَا وَكَوْثِرًا حَاسِبِينَ﴾ (الأنبياء: ٤٧)

... Not even the weight of an atom either in the heaven or in the earth escapes Him; neither anything less than that nor bigger, but in a lucid Book. (34:3)

﴿... لَا يَعْرُبُ عَنْهُ مِثْقَالُ ذَرَّةٍ فِي السَّمَاوَاتِ وَلَا فِي الْأَرْضِ وَلَا أَصْفَرُ مِنْ ذَلِكَ وَلَا أَكْبَرُ إِلَّا فِي كِتَابٍ مُبِينٍ...﴾ (سبأ: ٣)

Say: "Invoke whomever you associate with God. They possess not even an atom's weight either in the heavens or in the earth, nor have they any share in either, nor has He any helper from among them." (34:22)

﴿قُلْ ادْعُوا الَّذِينَ رَعَيْتُمْ مِنْ دُونِ اللَّهِ لَا يَمْلِكُونَ مِثْقَالَ ذَرَّةٍ فِي السَّمَاوَاتِ وَلَا فِي الْأَرْضِ وَمَا لَهُمْ فِيهَا مِنْ شَرِكٍ وَمَا لَهُ مِنْهُمْ مِنْ ظَهِيرٍ﴾ (سبأ: ٢٢)

So, whoever has done an atom's weight of good, will behold it. And whoever has done an atom's weight of evil, will behold it. (99:7-8)

﴿فَمَنْ يَعْمَلْ مِثْقَالَ ذَرَّةٍ خَيْرًا يَرَهُ ، وَمَنْ يَعْمَلْ مِثْقَالَ ذَرَّةٍ شَرًّا يَرَهُ﴾ (الزلزلة: ٧-٨)

porary reference to the atom as identical to the one mentioned in the Qur'an.

كان لعملية التعريب هذه الأثر الأول للحلظ الذي وقع فيه هؤلاء الكتاب.

Length

Take him, and fetter him, then cast him into al Jahim (the Blaze), and insert him in a chain of seventy cubits length. (69:30-32)

الطول

﴿ خَذُوهُ فَعَسُوهُ، ثُمَّ الْجَحِيمَ صَلُّوهُ،
ثُمَّ فِي سِلْسِلَةٍ ذَرْعُهَا سَبْعُونَ ذِرَاعًا
فَأَسْلُكُوهُ ﴾ (الحاقة: ٣٠-٣٢)

Time

They ask you of the crescent moons. Say: "They are times fixed for mankind and for pilgrimage ..." (2:189)

الزمن

﴿ يَسْأَلُونَكَ عَنِ الْأَهْلِ قُلْ هِيَ مَوَاقِيْتُ
لِلنَّاسِ وَالْحَجِّ ... ﴾ (البقرة: ١٨٩)

He is the splitter of the dawn, and He has made the night for repose, and the sun and the moon for computing (time) ... (6:96)

﴿ فَجَاءَ الْإِصْبَاحَ وَجَعَلَ اللَّيْلَ سَكَنًا
وَالشَّمْسَ وَالْقَمَرَ حُسْبَانًا ... ﴾ (الأنعام: ٩٦)

It is He who has made the sun a shining and the moon a light, and has ordained it in phases that you may know the number of years and the reckoning ... (10:5)

﴿ هُوَ الَّذِي جَعَلَ الشَّمْسَ ضِيَاءً وَالْقَمَرَ نُورًا
وَقَدَرَهُ مَنَازِلَ لِتَعْلَمُوا عَدَدَ السِّنِينَ
وَالْحِسَابَ ... ﴾ (يونس: ٥)

And We have made the night and the day as two signs, then We effaced the sign of the night, and made the sign of the day to give sight that you may seek bounty from your Lord, and that you may know the number of the years and the reckoning ... (17:12)

﴿ وَجَعَلْنَا اللَّيْلَ وَالنَّهَارَ آيَاتٍ فَحَوَّنَا آيَةَ اللَّيْلِ
وَجَعَلْنَا آيَةَ النَّهَارِ مُبْصِرَةً لِتَبْتَغُوا
فَضْلًا مِنْ رَبِّكُمْ وَلِتَعْلَمُوا عَدَدَ السِّنِينَ
وَالْحِسَابَ ... ﴾ (الإسراء: ٢٠)

And they lingered in their cave three hundred years and nine over ... (18:25)⁴

﴿ وَابْتِئْنَا فِي كَهْفِهِمْ ثَلَاثَ مِائَةٍ سِنِينَ
وَارْتَدَدُوا فِيهَا تِسْعَةَ ... ﴾ (الكهف: ٢٥)

⁴ According to al Qurṭubī 10:366-87, the number nine as mentioned literally in the verse is not definite, and it is not known whether it refers to hours, days, week, months, or years. He asserts,

٤ طبقا لما أورده القرطبي في تفسيره لقوله "وارتادوا تسعة" لم يدر الناس أهي ساعات أم أيام أم جمع أم شهور أم أعوام ، إلا أن ظاهر كلام العرب المفهوم منه أنها أعوام. ويضيف القرطبي

Direction

And it is He who has made the stars for you to be guided thereby in the darkness of the land and the sea ... (6:97)

And waymarks; and by the stars they are guided. (16:16)

الإتجاه

﴿وَهُوَ الَّذِي جَعَلَ لَكُمْ النُّجُومَ لِيَهْتَدُوا بِهَا فِي ظُلُمَاتِ الْبَرِّ وَالْبَحْرِ﴾ (الأعنام: ٩٦)

﴿وَعَلَّمَاتٍ وَالنَّجْمِ مِمَّ يَهْتَدُونَ﴾ (النحل: ١٦)

FACET 02
SUBFACET 0201

الوجه
الوجه الفرعي

Light

الضوء

And those who disbelieve, their deeds are like a mirage on a plain which the thirsty thinks to be water, until, when he comes near to it, he finds it is nothing ... (24:39)

﴿وَالَّذِينَ كَفَرُوا أَعْمَالُهُمْ كَسَرَابٍ بِقِيعَةٍ يَحْسَبُهُ الظَّمَانُ مَاءً حَتَّى إِذَا جَاءَهُ لَمْ يَجِدْهُ شَيْئًا...﴾ (النور: ٣٩)

however, that according to the norms of Arabic, the apparent meaning is nine years. Al Qurṭubī states further that the number three hundred is calculated by the actual number of years according to the solar calendar. But as the speech is directed to the Prophet Muhammad, whose calculation was by the lunar calendar, a difference of nine years was added. The difference makes exactly 0.03 every solar year, which in terms of days equals 10.8 days every year. On the other hand, The Muslim calendar begins with the 1 Muḥarram of the year in which the Pro-phet migrated from Makkah to Madinah. This corresponds to the year 622 A.C. By summing up the above calculations, the equation of transformation from A.H. to A.C. is:

$$CE = AH - 0.03 AH + 622.$$

$$CE = 0.97 AH + 622.$$

رواية عن النقاش أنهم لبثوا ثلثمائة سنة شمسية بحساب الأيام ، فلما كان الإخبار هنا للنبي العربي ذكرت التسع ، إذ المفهوم عنده من السنين القمرية وهذه الزيادة هي ما بين الحسابين (أنظر القرطبي ، المرجع السابق ، مج ١٠ ، ص ٣٨٦-٣٨٧). من هذه المسلمة الإلهية يمكن حساب هذه الزيادة بفارق قيمته ٠.٣ و ٠ لكل عام شمسي ، وهو ما يقابل بالأيام ٨ و ١٠ يوم. فإذا كان في الاعتبار ان المسلمين يدعون حسابهم للتقويم الهجري من شهر المحرم الموافق عام ٦٢٢ ميلادي ، فإنه يجمع هاتين الأطروحتين يمكن أن نستنتج معادلة للتحويل من التقويم الميلادي إلى التقويم الهجري كالآتي :

$$ت م = ت ه - ٠.٣ و ت ه + ٦٢٢$$

$$ت م = ٩٧ و ت ه + ٦٢٢$$

Have you not seen that God drives the clouds, then gathers them together, then makes them in layers, then you see the rain issuing from the midst of them. And He causes to descend from heaven mountains wherein there is hail, then He smites with it whom He wills, and averts it from whom He wills. The brightness of its lightning almost snatches away the sight. (24:43)

﴿أَلَمْ تَرَ أَنَّ اللَّهَ يَرْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ
ثُمَّ يَجْعَلُهُ رُكَامًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خِلَالِهِ
وَيُنزَلُ مِنَ السَّمَاءِ مِنْ جِبَالٍ فِيهَا مِنْ
بَرَدٍ فَيُصِيبُ بِهِ مَنْ يَشَاءُ وَيَصْرِفُهُ عَنِ
مَنْ يَشَاءُ يَكَادُ سَنَا بَرْقِهِ يَذْهَبُ
بِالْأَبْصَارِ﴾ (النور: ٤٣)

FACET 02	الوجه
SUBFACET 0202	الوجه الفرعي
Sound	الصوت

Or as a rainstorm from heaven, wherein is darkness, thunder and lightning, they thrust their fingers into their ears because of thunder-claps, fearing death ... (2:19)

﴿أَوْ كَهَيِّبٍ مِنَ السَّمَاءِ فِيهِ ظُلُمَاتٌ وَرَعْدٌ
وَبَرْقٌ يَجْعَلُونَ أَصَابِعَهُمْ فِي آذَانِهِمْ مِنَ
الصَّوَاعِقِ حَذَرَ الْمَوْتِ ...﴾ (البقرة: ١٩)

And the thunder extols His praise, and the angels are in awe of Him. And He sends the thunderbolts, then He smites with them whom He wills ... (13:13)

﴿وَيُسَبِّحُ الرَّعْدُ بِحَمْدِهِ وَالْمَلَائِكَةُ
مِنْ خِيْفَتِهِ وَيُرْسِلُ الصَّوَاعِقَ بِهَا مَنْ
يَشَاءُ ...﴾ (الرعد: ١٣)

FACET 02 SUBFACET 0203	الوجه الوجه الفرعي
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Electricity	الكهرباء
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Have you not seen that God drives the clouds, then gathers them together, then makes them in layers, then you see the rain issuing from the midst of them. And He causes to descend from heaven mountains wherein there is hail, then He smites with it whom He wills, and averts it from whom He wills. The brightness of its lightning almost snatches away the sight. (24:43)⁵

﴿الْم تَرَأَنَّ اللَّهَ يُزْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَّامًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خِلَالِهِ وَيُنزِلُ مِنَ السَّمَاءِ مِنْ جِبَالٍ فِيهَا مِنْ بَرَدٍ فَيُصِيبُ بِهِ مَنْ يَشَاءُ وَيَصْرِفُهُ عَنِ مَنْ يَشَاءُ يَكَاذُ سَنَا بَرْقِهِ يَذْهَبُ بِالْأَبْصَارِ﴾ (النور: ٤٣)^٥

FACET 02 SUBFACET 0204	الوجه الوجه الفرعي
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Relativity	النسبية
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... And truly a day with your Lord is as a thousand years by your counting. (22:47)⁶

﴿... وَإِنَّ يَوْمًا عِنْدَ رَبِّكَ كَأَلْفِ سَنَةٍ مِمَّا تَعُدُّونَ﴾ (الحج: ٤٧)^٦

⁵ This verse, which should be read together with (30:48), gives a brief picture of two types of cloud layers: heavy and spread out. According to (24:43), rain is formed in the heavy layer since electrical discharges occurs only among them.

⁶ The three statements in (22:47), (32:5) and (70:3-4) could possibly have the meaning of relative time, which would pass more slowly for a person travelling in space near the speed of light as compared to a person who was stationary in relation to the one travelling.

٥ بقراءة هذه الآية مجتمعة مع نص ما ورد في الآية (٤٨:٣٠) يمكن التعرف على نوعين من طبقات السحاب، الطبقة الثقيلة والطبقات المنتشرة. وبالرجوع إلى آية (٤٣:٢٤) يمكن استنتاج ان المطر يتكون في الطبقات الثقيلة وذلك لحدوث تفريغ الشحنات الكهربائية بين هذه الطبقات.

٦ تشير النصوص الثلاثة الواردة في الآيات (٤٧:٢٢)، (٥:٣٢)، (٤٠:٣-٤) الى نسبية الزمن والمعنى يتحمل تصورنا لشخص متقل في الفضاء بسرعة الضوء فيشعر ببطء الزمن إذا قيس بشخص آخر ملاحظ له في حالة ثبات.

He directs the affair from the heaven to the earth, then it ascends to Him in a day whose measure is a thousand years of what you reckon. (32:5)

﴿يُدَبِّرُ الْأَمْرَ مِنَ السَّمَاءِ إِلَى الْأَرْضِ ثُمَّ يَعْرُجُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ أَلْفَ سَنَةٍ مِمَّا تَعُدُّونَ﴾ (السجدة:٥)

To Him the angels and the Spirit ascend in a day, the measure of which is fifty thousand years. (70:4)

﴿تَعْرُجُ الْمَلَائِكَةُ وَالرُّوحُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ خَمْسِينَ أَلْفَ سَنَةٍ﴾ (الحاقة:٤)

FACET 02	الوجه
SUBFACET 0205	الوجه الفرعي

Waves	الموجات
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Or like darkness on a deep sea covered by waves upon waves, above which are clouds. Darkness accumulated layer upon layer, that when man puts forth his hand, he can scarcely see it. (24:40)

﴿أَوْ كَلَّمَاتٍ فِي بَحْرٍ لَجِيٍّ يَغْشَاءُ مَوْجٌ مِنْ فَوْقِهِ مَوْجٌ مِنْ فَوْقِهِ سَحَابٌ ظَلَمَاتٌ بَعْضُهَا فَوْقَ بَعْضٍ إِذَا أَخْرَجَ يَدَهُ لَمْ يَكِدْ يَرَاهَا...﴾ (النور:٤٠)

FACET 02	الوجه
SUBFACET 0206	الوجه الفرعي

Mechanics	الميكانيكا
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Gravitational force

الجاذبية الأرضية

God is He who has raised up the heavens without pillars you can see ... (13:2)⁷

﴿اللَّهُ الَّذِي رَفَعَ السَّمَاوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا...﴾ (الرعد:٢)^٧

⁷ Generally speaking the word *samā'* (heaven) means anything that is high. Hence it may mean the earth spheres and all of outer space. According to al Qurṭubī, *al Jāmi'* 9:279, one interpretation of the literal meaning of the verse is that the heavens above are held up by invisible pillars. Another interpretation, also nar-

٧ بصفة عامة تعود كلمة سماء إلى أي شيء عالٍ وهذا قد يتضمن الغلاف الجوي للأرض ومحيطها الخارجي تبعاً لما ذكره القرطبي. (سبق ذكره، مع ٩٠، ص ٢٧٩) وطبقاً لما ورد في التفسيرات اللغوية لألفاظ الآية نجد قولين أحدهما: أنها مرفوعة بغير عمد على الإطلاق، والثاني: أن لها عمداً ولكنه لا يرى. ومقارنة التفسيرين يرجح

Have you not seen that God has subjected to you all that is in the earth, and the vessels that run upon the sea by His behest. And that He holds back the heaven lest it should fall on the earth, save by His leave? ... (22:65)

﴿أَلَمْ تَرَ أَنَّ اللَّهَ سَخَّرَ لَكُمْ مَّا فِي الْأَرْضِ
وَالْفُلَّكَ تَجْرِي فِي الْبَحْرِ بِأَمْرِهِ وَيُمْسِكُ
السَّمَاءَ أَنْ تَقَعَ عَلَى الْأَرْضِ إِلَّا
بِإِذْنِهِ...﴾ (الحج: ٦٥)

He has created the heavens without pillars that you can see; and He cast on the earth mountains, lest it should sway with you ... (31:10)

﴿خَلَقَ السَّمَاوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا وَقَى
فِي الْأَرْضِ رَوَاسِيَ أَنْ تَمِيدَ
بِكُمْ...﴾ (لقمان: ١٠)

Surely God holds the heavens and the earth lest they should wither away, for if they were to wither away, no one could hold them after Him ... (35:41)

﴿إِنَّ اللَّهَ يُسَكِّنُ السَّمَاوَاتِ وَالْأَرْضَ أَنْ
تَزُولَا وَلَئِن زَالَا إِنْ أَسْكَمْنَا مِنْ أَحَدٍ مِنْ
بَعْدِهِ...﴾ (فاطر: ٤١)

Weightlessness

... For whoever associates with God, it is as through he has fallen from heaven, then birds snatch him away; or the wind has blown him to a distance place. (22:31)⁸

إنعدام الوزن

﴿... وَمَنْ يُشْرِكْ بِاللَّهِ فَكَأَنَّمَا خَرَّ مِنَ
السَّمَاءِ فَتَخْطَفُهُ الطَّيْرُ أَوْ تَهْوِي بِهِ الرِّيحُ فِي
مَكَانٍ سَحِيقٍ﴾ (الحج: ٣١)^٨

rated by al Qurtubi, is that the heavens are held up without any pillars. This last interpretation is more convincing, as the statements of (22:65), (31:10), and (35:41) say that God holds the heavens lest they should fall on the earth. Regardless of the interpretation accepted, however, both support the idea of the existence of gravitational force.

الأول وذلك لما ورد في نص الآيتين (٦٠:٢٢) و (٤١:٣٥) واللتين تعطيان مدلولاً بأن الله هو الذي يقبض السماوات أن يقعن على الأرض. وفي كلتا الحالتين فإن كلا التفسيرين يشير إلى حقيقة وجود الجاذبية الأرضية.

⁸ In this verse there is a possible reference to the state of weightlessness and the general condition of a person in the space above the earth's atmospheric level.

٨ في هذه الآيات احتمال دلالي لحالة إنعدام الوزن والوضع العام لشخص موجود في الفراغ الخارجي للككرة الأرضية.

*Example
No. 2*

Family

ALPHABETIC SECTION	القسم الهجائي
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Abortion	02 01	<i>al ijhād</i>	الإجهاض
Inheritance	03 01	<i>al irth</i>	الإرث
Wet nursing	02 03	<i>al istirdā'</i>	الإسترضاع
Maintenance	01 02	<i>al infāq</i>	الإنفاق
Periodical abstention	01 05	<i>al ilā'</i>	الإيلاء
Adoption	02 02	<i>al tabannī</i>	التبني
Upbringing	02 04	<i>al tarbiyah</i>	التربية
Inheritance	03 01	<i>al tarikah</i>	التركة
Intercourse	0104	<i>al jimā'</i>	الجماع
Nursing	02 03	<i>al ḥadānah</i>	الحضانة
Pregnancy	02 03	<i>al ḥaml</i>	الحمل
Menstruation	01 04	<i>al ḥayd</i>	الحيض
Betrothal	01 01	<i>al khūbah</i>	الخفطبة
Separation	01 06	<i>al khul'</i>	الخلع
Breastfeeding	02 03	<i>al raḍā'ah</i>	الرضاعة
Caring	01 03	<i>al ri'āyah</i>	الرعاية
Intercourse	01 04	<i>al rafath</i>	الرفث
Marriage	01 01	<i>al zawāj</i>	الزواج
Dowry	01 02	<i>al ṣadāq</i>	الصداق
Divorce	01 06	<i>al ṭalāq</i>	الطلاق
Eternal abstention	01 05	<i>al zihār</i>	الظهار
Waiting period	02 02	<i>al 'iddah</i>	العدة
Weaning	02 03	<i>al fiṣāl (raḍā'ah)</i>	الفصال (رضاعة)
Divorce	01 06	<i>al fiṣāl (ṭalāq)</i>	الفصال (طلاق)
Weaning	02 03	<i>al fiṣām (raḍā'ah)</i>	الفصام (رضاعة)
Weaning	02 03	<i>al fiṭām</i>	الفطام
Slaying	02 01	<i>al qatl</i>	القتل
Guardianship	01 03	<i>al qawāmah</i>	القوامة
Adoption	02 02	<i>al kafālah (tabanni)</i>	الكفالة (التبني)
Inheritance	03 01	<i>al kalālah</i>	الكلالة
Malediction	02 02	<i>al li'ān</i>	اللعان
Menstruation	01 04	<i>al maḥīd</i>	المحض
Dowry	01 02	<i>al mahr</i>	المهر
Death	01 06	<i>al mawt</i>	الموت
Inheritance	03 01	<i>al mirāth</i>	الميراث
Lineage	02 02	<i>al nasab</i>	النسب
Ill-behaviour	01 05	<i>al nushūz</i>	النشوز
Maintenance	01 02	<i>al nafaqah</i>	النفقة
Marriage	01 01	<i>al nikāh</i>	النكاح
Slaying	02 01	<i>al wa'd</i>	الوآء
Bequest	03 01	<i>al waṣīyah</i>	الوصية
Intercourse	01 04	<i>al waṭ'</i>	الوطء
Death	01 06	<i>al wafāh</i>	الوفاة

FACET SECTION		القسم الوجهي
FACET 01	Husband-Wife relationship	علاقة الزوج - الزوجة
Betrothal Marriage	01 01 <i>al khūbah</i> <i>al nikāh</i>	الخطبة النكاح
Dowry Maintenance	01 02 <i>al mahr</i> <i>al nafaqah</i>	المهر النفقة
Guardianship Caring	01 03 <i>al qawāmah</i> <i>al rī'ayah</i>	القوامة الرعاية
Menstruation Intercourse	01 04 <i>al maḥīḍ</i> <i>al rafath</i>	الحيض الرفث
Ill-behavior Periodical abstention Eternal abstention	01 05 <i>al nushūz</i> <i>al ilā'</i> <i>al dhihār</i>	النشوز الإيلاء الظهار
Divorce Separation Death	01 06 <i>al ṭalāq</i> <i>al khul'</i> <i>al mawt</i>	الطلاق الخلع الموت
FACET 02	Parents-Children relationship	علاقة الآباء - الأطفال
Abortion Slaying	02 01 <i>al ijhād</i> <i>al qatl</i>	الإجهاض القتل
Waiting Period Lineage Adoption Malediction	02 02 <i>al 'iddah</i> <i>al nasab</i> <i>al tabannī</i> <i>al li'ān</i>	العدة النسب التيخي اللعان
Pregnancy Breastfeeding Nursing	02 03 <i>al ḥaml</i> <i>al raḍā'ah</i> <i>al ḥadānah</i>	الحمل الرضاعة الحضانة
Upbringing	02 04 <i>al tarbiyat</i>	التربية
FACET 03	Familial relationship	العلاقة الأسرية
Bequest Inheritance	03 01 <i>al waṣīyah</i> <i>al mīrāth</i>	الوصية الميراث

HIERARACHICAL SECTION

القسم الهرمي

Betrothal

Marriage

- . Marriage and life continuity
- . Marriage and disability
- . Marriage and family classes
- . Marriage and breastfeeding
- . Marriage and in-laws
- . Marriage and chaste women
- . Marriage and adoption
- . Marriage and first/second divorce
- . Marriage and third divorce
- . Marriage and polygamy
- . Marriage and slaves
- . Marriage and People of the Book
- . Marriage and unbelievers
- . Marriage and adulterers/Idolaters
- . Marriage and guardianship

Dowry

- . Dowry and women
- . Dowry and the right of the whole
- . Dowry and the right of the half
- . Dowry and the loss of the right
- . Dowry and separation

Maintenance

- . Maintenance and man
- . Maintenance and guardianship
- . Maintenance and pregnancy
- . Maintenance and breastfeeding
- . Maintenance and divorce
- . Maintenance and waiting period

Guardianship

- . Guardianship and marriage
- . Guardianship and maintenance

Caring

Menstruation

- . Menstruation and intercourse
- . Menstruation and divorce
- . Menstruation and waiting period
- . Menstruation and garments

Intercourse

- . Intercourse and menstruation
- . Intercourse and sexual practice
- . Intercourse and praying
- . Intercourse and mosques
- . Intercourse and fasting
- . Intercourse and pilgrimage

al khitbah

al nikāh

- . *al nikāh wa istimrāriyat al hayāh*
- . *al nikāh wa 'adam al qudrah*
- . *al nikāh wa al qarābah*
- . *al nikāh wa al raḍā'ah*
- . *al nikāh wa al muṣāharah*
- . *al nikāh wa al ḥaṣānah*
- . *al nikāh wa al tabannī*
- . *al nikāh wa al ḥalāq al raḥīmī*
- . *al nikāh wa al ḥalāq al bā'in*
- . *al nikāh wa al ta'addud*
- . *al nikāh wa milk al yamīn*
- . *al nikāh wa ahl al kūtāb*
- . *al nikāh wa al kufr*
- . *al nikāh wa al zinā'al shirk*
- . *al nikāh wa al qawāmah*

al mahr

- . *al mahr wa al mar'ah*
- . *al mahr wa kāmil al adā'*
- . *al mahr wa nisf al adā'*
- . *al mahr wa fuqḍān haq al adā'*
- . *al mahr wa al khul'*

al nafaqah

- . *al nafaqah wa al rajul*
- . *al nafaqah wa al qawāmah*
- . *al nafaqah wa al ḥaml*
- . *al nafaqah wa al raḍā'ah*
- . *al nafaqah wa al ḥalāq*
- . *al nafaqah wa al 'iddah*

al qawāmah

- . *al qawāmah wa al nikāh*
- . *al qawāmah wa al nafaqah*

al ri'āyah

al maḥīd

- . *al maḥīd wa al rafath*
- . *al maḥīd wa al ḥalāq*
- . *al maḥīd wa al 'iddah*
- . *al maḥīd wa al zīnah*

al rafath

- . *al rafath wa al maḥīd*
- . *al rafath wa al āyān*
- . *al rafath wa al ṣalāh*
- . *al rafath wa al masājīd*
- . *al rafath wa al ṣiyām*
- . *al rafath wa al ḥajj*

الخطبة

النكاح

- . النكاح واستمرارية الحياة
- . النكاح وعدم القدرة
- . النكاح والقرابة
- . النكاح والرضاعة
- . لنكاح والمصاهرة
- . النكاح والحصنة
- . النكاح والتبني
- . النكاح والطلاق الرجعي
- . النكاح والطلاق البائن
- . النكاح والتعدد
- . النكاح وملك اليمين
- . نكاح أهل الكتاب
- . النكاح والكفر
- . النكاح والزنا/الشرك
- . النكاح والقوامة

المهر

- . المهر والمرأة
- . المهر وكامل الاداء
- . المهر ونصف الاداء
- . المهر وفقدان حق الاداء
- . المهر والخلع

النفقة

- . النفقة والرجل
- . النفقة والقوامة
- . النفقة والحمل
- . النفقة والرضاعة
- . النفقة والطلاق
- . النفقة والعدة

القوامة

- . القوامة والنكاح
- . القوامة والنفقة

الرعاية

الحيض

- . الحيض والرفث
- . الحيض والطلاق
- . الحيض والعدة
- . الحيض والزينة

الرفث

- . الرفث والحيض
- . الرفث والإيمان
- . الرفث والصلوة
- . الرفث والمساجد
- . الرفث والصيام
- . الرفث والحج

al nushūz

. Ill-behavior and man
 . Ill-behavior and woman
 Periodical abstention
 Eternal abstention
 . Eternal abstention and prohib
 . Eternal abstention and explanation
 Divorce

. Divorce and woman
 . Divorce and the limits allowed
 . Divorce and 1st/2nd time
 . Divorce and third time
 . Divorce and dowry
 . Divorce and maintenance

Separation**Death**

. Death and waiting period
 . Death and adultery
 . Death and bequest

Abortion**Slaying**

. Slaying and children
 . Slaying and blood fine

Waiting period

. Waiting period and compulsority
 . Waiting period and intercourse
 . Waiting period and menstruation
 . Waiting period and months
 . Waiting period and pregnancy
 . Waiting period and maintenance
 . Waiting period and 1st/2nd time
 . Waiting period and death

Lineage

. Lineage and marriage
 . Lineage and pregnancy

Adoption**Malediction****Pregnancy**

. Pregnancy and concealment
 . Pregnancy and maintenance
 . Pregnancy and waiting period
 . Pregnancy and breastfeeding

Breastfeeding

. Breastfeeding and marriage
 . Breastfeeding and pregnancy
 . Breastfeeding and complete per
 . Breastfeeding and weaning
 . Breastfeeding and maintenance

Nursing

. *al nushūz wa al rajul*
 . *al nushūz wa al mar'ah*
al ıla

al zihār

. *al zihār wa al taḥrīm*
 . *al zihār wa al kaffārah*
al ṭalāq

. *al ṭalāq wa al mar'ah*
 . *al ṭalāq wa 'adaḍ al ṭalqūt*
 . *al ṭalāq wa al rujū'*
 . *al ṭalāq wa al baynūnah*
 . *al ṭalāq wa al mahr*
 . *al ṭalāq wa al nafaqah*

al khul'**al mawt**

. *al mawt wa al 'iddah*
 . *al mawt wa al zina*
 . *al mawt wa al waṣīyah*

al iḥḥād**al qatl**

. *al qatl wa al abnā'*
 . *al qatl wa al diyah*

al 'iddah

. *al 'iddah wa al wujūb*
 . *al 'iddah wa al rafath*
 . *al 'iddah wa al maḥīd*
 . *al 'iddah wa al ashhur*
 . *al 'iddah wa al ḥaml*
 . *al 'iddah wa al nafaqah*
 . *al 'iddah wa al ṭalāq al raj'ī*
 . *al 'iddah wa al mawt*

al nasab

. *al nasab wa al nikāh*
 . *al nasab wa al ḥaml*

al tabannu**al li'ān****al ḥaml**

. *al ḥaml wa al kūmān*
 . *al ḥaml wa al nafaqah*
 . *al ḥaml wa al 'iddah*
 . *al ḥaml wa al raḍā'ah*
al raḍā'ah
 . *al raḍā'ah wa al nikāh*
 . *al raḍā'ah wa al ḥaml*
 . *al raḍā'ah wa kāmil al muddah*
 . *al raḍā'ah wa al fiṣāl*
 . *al raḍā'ah wa al nafaqah*
al ḥadānah

النشوز

. النشوز والرجل
 . النشوز والمرأة
 . الإيلاء
 . الظهار
 . الظهار والتحریم
 . الظهار والكفارة
 . الطلاق

. الطلاق والمهر
 . الطلاق وعدد الطلاق
 . الطلاق والرجوع
 . الطلاق والبينة
 . الطلاق والمهر
 . الطلاق والنفقة

المخلع**الموت**

. الموت والعدة
 . الموت والزنا
 . الموت والوصية

الإجهاض**القتل**

. القتل والأبناء
 . القتل والدية
 . العدة

. العدة والرجوع
 . العدة والرفث
 . العدة والحيض
 . العدة والأشهر
 . العدة والحمل
 . العدة والنفقة
 . العدة والطلاق الرجعي
 . العدة والموت

النسب

. النسب والنكاح
 . النسب والحمل

التبني**اللعان****الحمل**

. الحمل والكتمان
 . الحمل والنفقة
 . الحمل والعدة
 . الحمل والرضاعة
 . الرضاعة
 . الرضاعة والنكاح
 . الرضاعة والحمل
 . الرضاعة وكامل المدة
 . الرضاعة والفضال
 . الرضاعة والنفقة
 . الحضنة

Upbringing

- . Upbringing and religion
- . Upbringing and children's rights
- . Upbringing and parent's rights
- . Upbringing and manners

Bequest

- . Bequest and death
- . Bequest and testimony

Inheritance

- . Inheritance and children
- . Inheritance and parents
- . Inheritance and husband
- . Inheritance and wife
- . Inheritance and brothers/sisters
- . Inheritance and kinsmen

al tarbiyah

- . *al tarbiyah wa al dīn*
- . *al tarbiyah wa ḥuqūq al abnā'*
- . *al tarbiyah wa ḥuqūq al ābā'*
- . *al tarbiyah wa al akhlāq*
- al waṣīyah**
- . *al waṣīyah wa al mawt*
- . *al waṣīyah wa al shahādah*
- al mirāth**
- . *al mirāth wa al abnā'*
- . *al mirāth wa al abawān*
- . *al mirāth wa al zawj*
- . *al mirāth wa al zawjah*
- . *al mirāth wa al ikhwah/al akhawāt*
- . *al mirāth wa al aqārib*

التربية

- . التربية والدين
- . التربية وحقوق الأبناء
- . التربية وحقوق الآباء
- . التربية والأخلاق
- الوصية**
- . الوصية والموت
- . الوصية والشهادة
- الميراث**
- . الميراث والأبناء
- . الميراث والآباء
- . الميراث والزوج
- . الميراث والزوجة
- . الميراث والإخوة/الأخوات
- . الميراث والأقارب

FACET 01
SUBFACET 0101

الوجه
الوجه الفرعي

Betrothal

الخطبة

There is no sin on you in making proposals for betrothal to women or in keeping this (intention) to yourselves. God knows that you will be thoughtful of them, but plight not your troth in secret unless you utter virtuous words. And do not resolve on the marriage tie until the prescribed term is reached ... (2:235)

﴿وَلَا جُنَاحَ عَلَيْكُمْ فِيمَا عَرَّضْتُمْ بِهِ مِنْ خِطْبَةِ النِّسَاءِ أَوْ أَكْتُمْتُمْ فِي أَنْفُسِكُمْ عَلِمَ اللَّهُ أَنَّكُمْ سَتَذْكُرُونَهُنَّ وَلَكِنْ لَا تَأْخُذُونَهُنَّ سِرًّا إِلَّا أَنْ تَقُولُوا مَعْرُوفًا وَلَا تَعْزِمُوا عُقْدَةَ النِّكَاحِ حَتَّىٰ يَبْلُغَ الْكِتَابُ أَجَلَهُ ... ﴾ (البقرة: ٢٣٥)

Marriage

النكاح

Marriage and life continuity

النكاح وإستمرارية الحياة

And God has given you wives of your own kind. And He has given you from your sons wives, sons and grandsons ... (16:72)

﴿وَاللَّهُ جَعَلَ مِنْ أَنْفُسِكُمْ أَزْوَاجًا وَجَعَلَ لَكُمْ مِنْ أَزْوَاجِكُمْ بَنِينَ وَحَفَدَةً ... ﴾ (النحل: ٧٢)

And it is He who has created man of water, and He made him kindred by blood and marriage ... (25:54)

﴿وَهُوَ الَّذِي خَلَقَ مِنَ الْمَاءِ بَشَرًا فَجَعَلَهُ نَسَبًا وَصِهْرًا ... ﴾ (الفرقان: ٥٤)

And among His signs is that He created for you wives from yourselves, that you might repose in them. And He has set between you amity and mercy ... (30:21)

﴿وَمِنْ آيَاتِهِ أَنْ خَلَقَ لَكُمْ مِنْ أَنْفُسِكُمْ أَزْوَاجًا لِتَسْكُنُوا إِلَيْهَا وَجَعَلَ بَيْنَكُمْ مَوَدَّةً وَرَحْمَةً ... ﴾ (الروم: ٢١)

Originator of the heavens and the earth. He made for you wives of yourselves, and of the cattle (He made) pairs, whereby He causes you to multiply ... (42:11)

﴿فَاطَرُ السَّمَاوَاتِ وَالْأَرْضِ جَعَلَ لَكُمْ مِنْ أَنْفُسِكُمْ أَزْوَاجًا وَمِنَ الْأَنْعَامِ أَزْوَاجًا يَذُرُّكُمْ فِيهِ ... ﴾ (الشورى: ١١)

Marriage and disability

And let those who find no way to marriage be chaste until God enriches them of this bounty ... (24:33)

النكاح وعدم القدرة
﴿وَلَيْسَتَعْفِيبِ الَّذِينَ لَا يَجِدُونَ نِكَاحًا حَتَّىٰ يُغْنِيَهُمُ اللَّهُ مِنْ فَضْلِهِ...﴾ (النور: ٣٣)

Marriage and family classes

Forbidden you are your mothers, and your daughters, and your sisters, and your aunts (paternal and maternal) and your nieces ... (4:23)

النكاح والقرابة
﴿حُرِّمَتْ عَلَيْكُمْ أُمَّهَاتُكُمْ وَبَنَاتُكُمْ وَأَخَوَاتُكُمْ وَعُمَّاتُكُمْ وَخَالَاتُكُمْ وَبَنَاتُ الْأَخِ وَبَنَاتُ الْأَخْتِ...﴾ (النساء: ٢٣)

Marriage and breastfeeding

And (forbidden) your mothers who have suckled you, and your suckling sisters ... (4:23)

النكاح والرعاية
﴿وَأُمَّهَاتُكُمُ اللَّائِي أَرْضَعْنَكُمْ وَأَخَوَاتُكُم مِّنَ الرَّضَاعَةِ...﴾ (النساء: ٢٣)

Marriage and in-laws

And marry not the women whom your fathers have married, save what already has happened in the past, for it is lewdness and abomination, and an evil way. (4:22)⁹

النكاح والمصاهرة
﴿وَلَا تَنْكِحُوا مَا نَكَحَ آبَاؤُكُمْ مِنَ النِّسَاءِ إِلَّا مَا قَدْ سَلَفَ إِنَّهُ كَانَ فَاحِشَةً وَمَقْتًا وَسَاءَ سَبِيلًا﴾ (النساء: ٢٢)

⁹ This verse includes a difference of opinion in the recitation of the word *al nisā'i illā* (women except) based on the reading of Warsh and Qālūn. See 'Umar and Makram, *Mu'jam* 2:121.

٩ يرد في هذه الآية اختلاف في القراءة للفظ النساء إلا وفقا لقراءة ورش وقالون (أنظر عمر ومكرم، المرجع السابق، مج ٢، ص ١٢١).

... And (forbidden) your wives' mothers, and your step daughters who are in your care, from wives whom you have consorted with. But if you have not consorted with them, then it is no sin for you. And (forbidden) are the wives of your sons who are from your own loins. And you are not to take two sisters together unless it is something of the past ... (4:23)¹⁰

﴿... وَأُمَّهَاتُ نِسَائِكُمْ وَرَبَائِكُمُ اللَّائِي فِي حُجُورِكُمْ مِنْ نِسَائِكُمُ اللَّائِي دَخَلْتُمْ بِهِنَّ فَإِنْ لَمْ تَكُونُوا دَخَلْتُمْ بِهِنَّ فَلَا جُنَاحَ عَلَيْكُمْ وَحَلَائِلُ أَبْنَائِكُمُ الَّذِينَ مِنْ أَصْلَابِكُمْ وَأَنْ تَجْمَعُوا بَيْنَ الْأُخْتَيْنِ إِلَّا مَا قَدْ سَلَفَ ...﴾ (النساء: ٢٣)^{١٠}

Marriage and chaste women

And (forbidden you also) are the married women except whom your right hands possess. So are God's commands to you. And it is lawful for you what is beyond that, if you use your wealth in virtuous wedlock not in lewdness ... (4:24)

النكاح والحصانة

﴿وَالْمُحْصَنَاتُ مِنَ النِّسَاءِ إِلَّا مَا مَلَكَتْ أَيْمَانُكُمْ كِتَابَ اللَّهِ عَلَيْكُمْ وَأُحِلَّ لَكُمْ مَا وَرَاءَ ذَلِكَ أَنْ تَبْتَغُوا بِأَمْوَالِكُمْ مُحْصِنِينَ غَيْرَ مُسَافِحِينَ ...﴾ (النساء: ٢٤)

Marriage and adoption

... Then when Zayd had divorced her, We married her to you, so that there may be no sin for the believers in (marrying) the wives of their adherents if they divorce them ... (33:37)¹¹

النكاح والتبني

﴿... فَلَمَّا قَضَى زَيْدٌ مِنْهَا وَطَرًا زَوَّجْنَاكَهَا لِكَيْ لَا يَكُونَ عَلَى الْمُؤْمِنِينَ حَرَجٌ فِي أَنْزَاجِ أَدْعِيَائِهِمْ إِذَا قَضَوْا مِنْهُنَّ وَطَرًا ...﴾ (الأحزاب: ٣٧)^{١١}

¹⁰ This verse is related to an occasion(s) of revelation. See al Suyūfi, *al Itqān*, 70-71.

١٠ هذه الآية يصاحبها سبب نزول (أنظر السيوطي (١٩٨٧)، ذكر أنفا، ص ص ٧٠-٧١).

¹¹ This verse is related to an occasion(s) of revelation. See al Suyūfi, *al Itqān*, 227-28.

١١ هذه الآية يصاحبها سبب نزول (أنظر السيوطي (١٩٨٧)، المرجع السابق، ص ص ٢٢٧-٢٢٨).

Marriage and first/second divorce

Divorced women shall wait by themselves three menstrual courses; it shall not be licit for them to conceal what God has created in their wombs, if they truly believe in God and the Last Day. Their husbands have more right to restore them in such a state, if they so desire to reconcile. And they (women) have rights similar to their obligations in all equity ... (2:228)¹²

Divorce is twice, then retention in honour or setting a way in kindness ... (2:229)¹³

النكاح والطلاق الرجعي

﴿وَالْمُطَلَّقاتُ يَتَرَتَّبْنَ بِأَنفُسِهِنَّ ثَلَاثَةَ قُرُوءٍ
وَلَا يَحِلُّ لَهُنَّ أَنْ يَكْتُمْنَ مَا خَلَقَ اللَّهُ فِي
أَرْحَامِهِنَّ إِنْ كُنَّ يُؤْمِنْنَ بِاللَّهِ وَالْيَوْمِ الْآخِرِ
وَيُعَوِّدُهُنَّ أَحَقُّ بِرَدِّهِنَّ فِي ذَلِكَ إِنْ
أَرَادُوا إِصْلَاحًا وَلَهُنَّ مِثْلُ الَّذِي عَلَيْهِنَّ
بِالمَعْرُوفِ ...﴾ (البقرة: ٢٢٨)^{١٢}

﴿الطَّلَاقُ مَرَّتَيْنِ فَإِمَّا سَأَلَ بِمَعْرُوفٍ
أَوْ تَسْرِيحٍ بِإِحْسَانٍ ...﴾ (البقرة: ٢٢٩)^{١٣}

¹² This verse includes a difference of opinion in the recitation of the word *ann yaktumna* (to conceal) based on the reading of al Dūwri. See 'Umar and Makram, *Mu'jam* 1:174. It is also related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 39-40). The phrase "Their husbands have more right to restore them in such a state" has the possibility of an abrogation, being abrogated by verse 2:229-30. See Ibn al Bārīzī, *Nāsikh*, 26-27.

¹³ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 40-41.

١٢ يرد في هذه الآية اختلاف في القراءة للفظ أن يَكْتُمْنَ وفقاً لقراءة الدوري (انظر عمر ومكرم ، المرجع السابق ، ص ١٧٤). كما بصاحب هذه الآية سبب نزول (انظر السيوطي ، المرجع السابق، ص ص ٣٩-٤٠). وكذلك يمتثل النص "ويعودتهن أحق بردهن في ذلك" إمكانية النسخ بالآيتين ٢٢٩-٢٣٠ من سورة ٢٠ (انظر ابن البارزي ، ذكر أنفا ، ص ص ٢٦-٢٧).

١٣ هذه الآية بصاحبها سبب نزول (انظر السيوطي المرجع السابق، ص ص ٤٠-٤١).

If you divorce women and they have reached their term, do not prevent them from remarrying their husbands if they honorably agree so among themselves. ...

(2:232)

﴿ وَإِذَا طَلَّقْتُمُ النِّسَاءَ قَبْلَ نِجَاسِ أَجَلِهِنَّ فَلَا تَعْضُلُوهُنَّ أَنْ يَنْكِحْنَ أَزْوَاجَهُنَّ إِذَا تَرَاضَوْا بَيْنَهُم بِالْمَعْرُوفِ ﴾ (البقرة: ٢٣٢)

Marriage and third time divorce

Divorce is twice, then retention in honor or setting a way in kindness ... (2:229)¹⁴

But if he divorces her, she shall not be lawful to him thereafter until she has wedded another husband. And if he (the other husband) divorces her, it is then no sin on them that they return to each other should they think that they can keep the bounds of God ... (2:230)¹⁵

النكاح والطلاق البائن
﴿ الطَّلَاقُ مَرَّتَانٍ فَإِمْسَاكٌ بِمَعْرُوفٍ أَوْ تَسْرِيحٌ بِإِحْسَانٍ ... ﴾ (البقرة: ٢٢٩)^{١٤}

﴿ فَإِنْ طَلَّقَهَا فَلَا تَحِلُّ لَهُ مِنْ بَعْدِ حَيْثُ تَنْكِحَ زَوْجًا غَيْرَهُ فَإِنْ طَلَّقَهَا فَلَا جُنَاحَ عَلَيْهِمَا أَنْ يَتَرَاجَعَا إِنْ ظَنَّا أَنْ يُقِيمَا حُدُودَ اللَّهِ ... ﴾ (البقرة: ٢٣٠)^{١٥}

¹⁴ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 40-41.

¹⁵ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 41.

١٤ هذه الآية بصاحبها سبب نزول (انظر السيوطي، المرجع السابق، ص ٤٠-٤١)

١٥ هذه الآية بصاحبها سبب نزول (انظر السيوطي، المرجع السابق، ص ٤١).

Marriage and polygamy

... Then marry of the women such as seem good to you, two, three, or four. But if you fear that you cannot act fairly, then one only or what your right hands have acquired. This is the least that you can do to obviate injustice. (4:3)¹⁶

النكاح والتعدد

﴿فَانكِحُوا مَا طَابَ لَكُمْ مِنَ النِّسَاءِ مَنَىٰ وَثَلَاثَ وَرُبَاعَ ۚ فِإِنْ خِفْتُمْ أَلَّا تَعْدِلُوا فَوَاحِدَةً أَوْ مَا مَلَكَتْ أَيْمَانُكُمْ ذَلِكَ أَدْنَىٰ أَلَّا تَعْلُوا﴾ (النساء: ٣)^{١٦}

Marriage and slaves

And whoever of you is unable to afford marrying the chaste believing women, then (you can marry) of what your right hands possess of your believing maidens. And God knows best your belief. The one of you comes from another. Hence, marry them by permission of their families, and give them their dowry in kindness as women in wedlock, not as in whoredom, nor as in taking concubines. But if they are married and commit debauchery, then upon them falls half of the punishment that falls on (free) women. This is for those of you who fear committing sins; that you persevere is better for you ... (4:25)

النكاح و ملك اليمين

﴿وَمَنْ لَّمْ يَسْتَطِعْ مِنْكُمْ طَوْلاً أَنْ يَنْكِحَ الْمُحْصَنَاتِ الْمُؤْمِنَاتِ فَمِنْ مَا مَلَكَتْ أَيْمَانُكُمْ مِنْ قَبَائِكُمُ الْمُؤْمِنَاتِ وَاللَّهُ أَعْلَمُ بِإِيمَانِكُمْ بَعْضُكُمْ مِنْ بَعْضٍ فَانكِحُوهُنَّ بِإِذْنِ أَهْلِهِنَّ وَأَتَوْهُنَّ أَجُورَهُنَّ بِالْمَعْرُوفِ مُحْصَنَاتٍ غَيْرِ مُسَافِحَاتٍ وَلَا مُتَّخِذَاتِ أَخْدَانٍ فَإِذَا أُحْصِنَ فَرَأَىٰ أُنثَىٰ فَاحْشَىٰ فَعَلَيْهِنَّ نِصْفُ مَا عَلَى الْمُحْصَنَاتِ مِنَ الْعَذَابِ ذَلِكَ لِمَنْ خَشِيَ الْعَنَتَ مِنْكُمْ وَأَنْ تَصْبِرُوا خَيْرٌ لَكُمْ ...﴾ (النساء: ٢٥)

And marry those of you who are single (male or female) and the righteous of your slaves and female slaves. If you are poor, God will enrich them of His munificence ... (24:32)

﴿وَأَنْكِحُوا الْأَيَامَىٰ مِنْكُمْ وَالصَّالِحِينَ مِنْ عِبَادِكُمْ وَإِمَائِكُمْ إِنْ يَكُونُوا فُقَرَاءَ يُغْنِهِمُ اللَّهُ مِنْ فَضْلِهِ ...﴾ (النور: ٣٢)

¹⁶ This verse includes a difference of opinion in the recitation of the word *adnā* (the least) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 2:107.

١٦ يرد في هذه الآية إختلاف في القراءة للفظ أَدْنَىٰ وفقاً لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، مج ٢ ، ص ١٠٧).

Marriage and People of the Book

Today the good provisions are lawful for you, and the food of those who were given the Book is lawful for you and your food is licit for them. In like manner, believing women of those who were given the book before you give them their dowry in chaste wedlock and not in fornication, nor as taking concubines ... (5:5)

النكاح واهل الكتاب
 ﴿الْيَوْمَ أُحِلَّ لَكُمْ الطَّيِّبَاتُ وَطَعَامُ الَّذِينَ أُوتُوا الْكِتَابَ حِلٌّ لَكُمْ وَطَعَامُكُمْ حِلٌّ لَهُمْ وَالْمُحْصَنَاتُ مِنَ الْمُؤْمِنَاتِ وَالْمُحْصَنَاتُ مِنَ الَّذِينَ أُوتُوا الْكِتَابَ مِن قَبْلِكُمْ إِذَا آتَيْتُوهُنَّ أَجُورَهُنَّ مُحْصِنِينَ غَيْرَ مُسَافِحِينَ وَلَا مُتَّخِذِي أَخْدَانٍ ... ﴿ (المائدة: ٥)

Marriage and unbelievers

O you who believe, when believing women come to you as emigrants, test them; God (alone) knows best their belief. Then if you know them to be true believers, do not return them to the unbelievers; they are not lawful to them, nor are they (disbelieving men) lawful to them ... (60:10)

النكاح والكفر
 ﴿يَا أَيُّهَا الَّذِينَ آمَنُوا إِذَا جَاءَكُمُ الْمُؤْمِنَاتُ مُهَاجِرَاتٍ فَاِمْتَحِنُوهُنَّ اللَّهُ أَعْلَمُ بِإِيمَانِهِنَّ فَإِن عَلِمْتُمُوهُنَّ مُؤْمِنَاتٍ فَلَا تَرْجِعُوهُنَّ إِلَى الْكُفَّارِ لَأَسْنَ حِلًّا لَّهُمْ وَلَا هُمْ يَحِلُّونَ لَهُنَّ ... ﴿ (المتحنة: ١٠)

Marriage and adulterers/idolaters

Wed not idolatresses till they believe, for truly a believing slave-girl is better than an idolatress even if you admire her. And wed not (your daughters to) idolaters till they believe, for surely a believing slave is better than an idolater even if you admire him ... (2:221)

النكاح والزنا/الشرك
 ﴿وَلَا تَنْكِحُوا الْمُشْرِكَاتِ حَتَّى يُؤْمِنَ وَلَا أُمَّةٌ مُّؤْمِنَةٌ خَيْرٌ مِّنْ مُّشْرِكَةٍ وَلَوْ أَعْجَبَتْكُمْ وَلَا تَنْكِحُوا الْمُشْرِكِينَ حَتَّى يُؤْمِنُوا وَلَقَدْ خَيْرٌ مِّنْ مُّشْرِكٍ وَلَوْ أَعْجَبَكُمْ ... ﴿ (البقرة: ٢٢١)

The adulterer shall not marry but an adulteress or an idolatress, and the adulteress, none shall marry her except an adulterer or an idolater. And that (adultery) is forbidden to believers. (24:3)¹⁷

﴿الزَّانِي لَا يَنْكِحُ إِلَّا زَانِيَةً أَوْ مُشْرِكَةً
وَالزَّانِيَةُ لَا يَنْكِحُهَا إِلَّا زَانٍ أَوْ مُشْرِكٌ وَحُرْمٌ
ذَلِكَ عَلَى الْمُؤْمِنِينَ﴾ (النور: ٣)^{١٧}

Marriage and guardianship

... But men shall have one degree above them ... (2:228)

النكاح والقوامة
﴿... وَلِلرِّجَالِ عَلَيْهِنَّ دَرَجَةٌ
...﴾ (البقرة: ٢٢٨)

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Dowry	المهر

Dowry and woman

And give the women their dowry, an obligation. But if they, of their own accord, should remit to you any of it, then enjoy it as convenient and appreciable. (4:4)

المهر والمرأة
﴿وَأْتُوا النِّسَاءَ صَدُقَاتِهِنَّ نِحْلَةً فَمَنْ طَبِقَ
لَكُمْ عَنْ شَيْءٍ مِنْهُ نَقْصًا فَكُلُوهُ هَنِيئًا
مَّرِيئًا﴾ (النساء: ٤)

O you who believe, it is neither lawful of you to inherit women against their will, nor is it lawful to restrain them so that you may take away what you have given them unless they commit flagrant debauchery ... (4:19)¹⁸

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا لَا يَحِلُّ لَكُمْ أَنْ تَرِثُوا
النِّسَاءَ كَرِهًا وَلَا تَصْلُوهُنَّ لْتَضْحَكُنَّ
بِعِضِّ مَا آتَيْتُوهُنَّ إِلَّا أَنْ يَأْتِيَنَّ بِفَاحِشَةٍ
مُتَبَيِّنَةٍ...﴾ (النساء: ١٩)^{١٨}

¹⁷ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 192.

١٧ هذه الآية يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ص ١٩٢).

¹⁸ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 69-70.

١٨ هذه الآية يصاحبها سبب نزول (انظر السيوطي المرجع السابق، ص ص ٦٩-٧٠).

And (forbidden you also) are married women except whom your right hands possess. So are God's commands to you. And it is lawful for you what is beyond that, if you use your wealth in virtuous wedlock not in lewdness. For the enjoyment you get from them, give them their dowry. It is a duty. But there is no sin on you in what you agree between yourselves after the appropriate due ... (4:24)

﴿وَالْمُحْصَنَاتُ مِنَ النِّسَاءِ إِلَّا مَا مَلَكَتْ
أَيْمَانُكُمْ كِتَابَ اللَّهِ عَلَيْكُمْ وَأُحِلَّ لَكُمْ
مَا وَرَاءَ ذَلِكَ أَنْ تَبْتَغُوا بِأَمْوَالِكُمْ
مُحْصِنِينَ غَيْرَ مُسَافِحِينَ فَمَا اسْتَمَعْتُمْ
بِهِ مِنْهُنَّ فَأْتُوهُنَّ أَجُورَهُنَّ فَرِيضَةً وَلَا جُنَاحَ
عَلَيْكُمْ فِيمَا تَرَاضَيْتُمْ بِهِ مِنْ بَعْدِ
الْفَرِيضَةِ ...﴾ (النساء: ٢٤)

And whoever of you is unable to afford marrying chaste and believing women, then (you can marry) of what your right hands possess of your believing maidens. And God knows best your belief. The one of you comes from another. Hence, marry them by permission of their families and give them their dowry in kindness as women in wedlock, not as in whoredom, nor as in taking concubines ... (4:25)

﴿وَمَنْ لَمْ يَسْتَطِعْ مِنْكُمْ طَوْلًا أَنْ يَنْكَحَ
الْمُحْصَنَاتِ الْمُؤْمِنَاتِ فَمِنْ مَا مَلَكَتْ
أَيْمَانُكُمْ مِنْ قَبَائِكُمُ الْمُؤْمِنَاتِ وَاللَّهُ أَعْلَمُ
بِإِيمَانِكُمْ بَعْضُكُمْ مِنْ بَعْضٍ فَانكِحُوهُنَّ
بِإِذْنِ أَهْلِهِنَّ وَأَتُوهُنَّ أَجُورَهُنَّ بِالْمَعْرُوفِ
مُحْصَنَاتٍ غَيْرِ مُسَافِحَاتٍ وَلَا مُتَّخِذَاتِ
أَخْدَانٍ ...﴾ (النساء: ٢٥)

Today the good provisions are lawful for you, and the food of those who were given the Book is lawful for you your food is licit for them. In like manner, believing women in wedlock, and in wedlock virtuous women of those who were given the book before you if you give them their dowry, in chaste wedlock and not in fornication, nor as taking concubines ... (5:5)

﴿الْيَوْمَ أُحِلَّ لَكُمْ الطَّيِّبَاتُ وَطَعَامُ الَّذِينَ
أُوتُوا الْكِتَابَ حِلٌّ لَكُمْ وَطَعَامُكُمْ حِلٌّ
لَهُمْ وَالْمُحْصَنَاتُ مِنَ الْمُؤْمِنَاتِ وَالْمُحْصَنَاتُ
مِنَ الَّذِينَ أُوتُوا الْكِتَابَ مِنْ قَبْلِكُمْ إِذَا
أَتَيْتُوهُنَّ أَجُورَهُنَّ مُحْصِنِينَ غَيْرَ مُسَافِحِينَ
وَلَا مُتَّخِذِي أَخْدَانٍ ...﴾ (المائدة: ٥)

O you who believe, when believing women come to you as emigrants, test them; God (alone) knows best their belief. Then if you know them to be true believers, do not return them to the unbelievers; they are not lawful to them, nor are they (disbelieving men) lawful to them. And give back what they (the unbelievers) have expended; there is no sin upon you to wed them when you pay them their dowries. And do not hold fast to marriage ties with unbelieving women; ask what you have expended, and let them ask what they expended ... (60:10)

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا إِذَا جَاءَكُمُ الْمُؤْمِنَاتُ
مُهَاجِرَاتٍ فَامْتَحِنُوهُنَّ اللَّهُ أَعْلَمُ بِإِيمَانِهِنَّ
فَإِنْ عَلِمْتُمُوهُنَّ مُؤْمِنَاتٍ فَلَا تَرْجِعُوهُنَّ إِلَى
الْكُفَّارِ لَا مِنْ حَيْثُ لَسَّوْنَ وَلَا هُمْ يَحِلُّونَ
لَهُنَّ وَأَوْلَهُنَّ مَا أَنْفَقُوا وَلَا جُنَاحَ عَلَيْكُمْ
أَنْ تَنْكِحُوهُنَّ إِذَا آتَيْتُمُوهُنَّ أَجُورَهُنَّ
وَلَا تَسِيكُوا بَعْضَهُنَّ بِالْكَافِرِ وَسَأَلُوا مَا أَنْفَقْتُمْ
وَلْيَسْأَلُوا مَا أَنْفَقُوا ... ﴾ (الممتحنة: ١٠)

Dowry and the right of the whole

And if you wish to change one wife for another, and you have given to one of them a hundred-weight take nothing of it. Will you take it by way of calumny and blatant perfidy? And will you take it when one of you has consorted with the other, and they have taken from you a solemn pledge (of union). (4:20-21)¹⁹

المهر وكامل الأداء

﴿وَإِنْ أَرَدْتُمْ اسْتِبْدَالَ زَوْجٍ نَكَانَ زَوْجٍ
وَأْتَيْتُمْ بِحَدَاثٍ فَبَطَرًا فَلَا تَأْخُذُوا
بِهِ شَيْئًا آتَاخُذُونَهُ بُهَانًا وَإِنَّمَا بُنِيَتْ
وَكَيْفَ تَأْخُذُونَهُ وَقَدْ أَفْضَى بَعْضُكُمْ
إِلَى بَعْضٍ وَأَخَذْنَ مِنْكُمْ مِيثَاقًا
غَلِيظًا ﴾ (النساء: ٢٠-٢١)^{١٩}

¹⁹ This verse includes a difference of opinion in the recitation of the words *ihdāhunna* (one of them) and *afḍā* (have taken from) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 2:121.

١٩ يرد في هذه الآية إختلاف في القراءة للفظ إحدن ولفظ أفضى وفقا لقراءة ورش (أنظر عمر ومكرم، المرجع السابق، مج ٢، ص ١٢١).

Dowry and the right of the half

And if you divorce them before you have touched them and have settled a dowry on them, then half of what you have appointed to them ... (2:237)

المهر ونصف الأداء

﴿ وَإِنْ طَلَّقْتُمُوهُنَّ مِنْ قَبْلِ أَنْ تَمْسُوهُنَّ وَقَدْ فَرَضْتُمْ لَهُنَّ فَرِيضَةً فَنِصْفُ مَا فَرَضْتُمْ ... ﴾ (البقرة: ٢٣٧)

Dowry and the loss of the right

And if you divorce them before you have touched them and have settled a dowry on them, then half of what you have appointed to them, unless they agree to forgo it, or he forgoes it who authorizes the marriage tie. Yet, to forgo is nearer to piety ... (2:237)

المهر وفقدان حق الأداء

﴿ وَإِنْ طَلَّقْتُمُوهُنَّ مِنْ قَبْلِ أَنْ تَمْسُوهُنَّ وَقَدْ فَرَضْتُمْ لَهُنَّ فَرِيضَةً فَنِصْفُ مَا فَرَضْتُمْ إِلَّا أَنْ يَعْفُونَ أَوْ يَعْفُوا الَّذِي بِيَدِهِ عَقْدَةُ النِّكَاحِ وَأَنْ تَعْفُوا أَقْرَبُ لِلتَّقْوَى ... ﴾ (البقرة: ٢٣٧)

Dowry and separation

... But if you fear that you cannot maintain the bounds of God, then it is no sin on them if she redeems herself. These are the limits of God, therefore do not exceed them, for they who transgress the bounds of God are iniquitous. (2:229)

المهر والخلع

﴿ ... فَإِنْ خِفْتُمْ أَلَّا يَتَّقِيَ اللَّهُ حَدُودَهُ فَاَلْحَاجَّ عَلَيْهِمَا فِيمَا افْتَدَتْ بِهِ تِلْكَ حُدُودُ اللَّهِ فَلَا تَعْدُوهَا وَمَنْ يَتَعَدَّ حُدُودَ اللَّهِ فَأُولَئِكَ هُمُ الظَّالِمُونَ ﴾ (البقرة: ٢٢٩)

Maintenance

النفقة

Maintenance and man

النفقة والرجل

... It is for the father to provide them and clothe them in kindness. No one is charged except within his means. A mother shall not suffer because of her child, nor shall a father because of his child, and the same shall be incumbent on the heir ... (2:233)

﴿ ... وَعَلَى الْمَوْلُودِ مِنْ رِزْقِهِنَّ وَكِسْوَتُهُنَّ بِالْمَعْرُوفِ، لَا تُكَلَّفُ نَفْسٌ إِلَّا وُسْعَهَا، لَا تُضَارُّ وَالِدَةٌ بَوْلَدِهَا وَلَا مَوْلُودٌ لَهُ بِوَالِدِهِ، وَعَلَى الْوَارِثِ مِثْلُ ذَلِكَ ... ﴾ (البقرة: ٢٣٣)

Maintenance and guardianship

Men are guardians over women for that God has made some of them excel others, and for that they have spent of their wealth ... (4:34)²⁰

النفقة والقوامة

﴿الرِّجَالُ قَوَّامُونَ عَلَى النِّسَاءِ بِمَا فَضَّلَ اللَّهُ بَعْضَهُمْ عَلَى بَعْضٍ وَبِمَا أَنْفَقُوا مِنْ أَمْوَالِهِمْ ...﴾ (النساء: ٣٤)^{٢٠}

Maintenance and pregnancy

And if they are pregnant, then spend on them until they deliver their burden ... (65:6)

النفقة والحمل

﴿... وَإِنْ كُنَّ أُولَاتٍ حَمْلًا فَأَنْفِقُوا عَلَيْهِنَّ حَتَّى يَضَعْنَ حَمْلَهُنَّ ...﴾ (الطلاق: ٦)

Maintenance and nursing

... But if they desire to wean the child through consent and consultation, then it is no sin on them. But if you wish to seek nursing for your children, then it is no guilt on you if you deliver what you have given with kindness ... (2:233)²¹

النفقة والرضاعة

﴿... فَإِنْ أَرَادَا فِصَالًا عَنْ تَرَاضٍ مِنْهُمَا وَتَشَاوُرٍ فَلَا جُنَاحَ عَلَيْهِمَا، وَإِنْ أَرَدْتُمْ أَنْ تَسْرِضُوا أَوْلَادَكُمْ فَلَا جُنَاحَ عَلَيْكُمْ إِذَا سَلَّمْتُمْ مَا آتَيْتُم بِالْمَعْرُوفِ ...﴾ (البقرة: ٢٣٣)^{٢١}

²⁰ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 72.

²¹ This verse includes a difference of opinion in the recitation of the word *fiṣālan* (to wean the child) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 1:179.

٢٠ هذه الآية يصاحبها سبب نزول (أنظر السيوطي ، المرجع السابق، ص ٧٢).

٢١ يرد في هذه الآية إحتلاف في القراءة للفظ فصالاً وفقاً لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، مع ١ ، ص ١٧٩).

... And if they suckle for you, then pay them their wages, and consult one another in kindness. But if you differ then let another woman suckle for him. Let him who is affluent expend from his affluence. And let him whose provision has been straitened (by God) expend from what God has given him; for God charges no living soul except according to what He has bestowed upon it. Surely God shall make ease after hardship. (65:6-7)²²

﴿... فَإِنْ أَرْضَعْنَ لَكُمْ فَآتُوهُنَّ أُجُورَهُنَّ وَأَمْرُهُمْ بَيْنَكُمْ بِمَعْرُوفٍ وَإِنْ تَعَاسَرْتُمْ فَسَرِّضِي لَهُ أُخْرَى، لِيُنْفِقَ ذُو سَعَةٍ مِنْ سَعَتِهِ وَمَنْ قَدِرَ عَلَيْهِ رِزْقُهُ فَلْيُنْفِقْ مِمَّا آتَاهُ اللَّهُ لَا يُكَلِّفُ اللَّهُ نَفْسًا إِلَّا مَا آتَاهَا سَيَجْعَلُ اللَّهُ بَعْدَ عُسْرٍ يُسْرًا﴾ (الطلاق: ٦-٧)^{٢٢}

Maintenance and divorce

No sin shall be on you if you divorce women before you have touched them, and have fixed a dowry on them. Yet, provide for them; the affluent man according to his means, and the straitened according to his means; a provision in honor incumbent on the beneficent. (2:236)

النفقة والطلاق

﴿لَا جُنَاحَ عَلَيْكُمْ إِنْ طَلَقْتُمُ النِّسَاءَ مَا لَمْ تَمْسُوهُنَّ أَوْ تَفْرِضُوا لَهُنَّ فَرِيضَةً وَمِعْوَهُنَّ عَلَى الْمُسْتَوْسِعِ قَدْرَهُ وَعَلَى الْمُقْتِرِ قَدْرُهُ مَتَاعًا بِالْمَعْرُوفِ حَقًّا عَلَى الْمُحْسِنِينَ﴾ (البقرة: ٢٣٦)

Maintenance and waiting period

Let them dwell wherever you dwell, according to your means; and do not harass them, so as to straiten circumstances against them ... (65:6)

النفقة والعدة

﴿أَسْكُوهُنَّ مِنْ حَيْثُ سَكَنْتُمْ مِنْ وَجْدِكُمْ وَلَا تُضَارُوهُنَّ لِتُضَيِّقُوا عَلَيْهِنَّ...﴾ (الطلاق: ٦)

²² This verse includes a difference of opinion in the recitation of the word *ukhrā* (another woman) based on the readings of Warsh and Qālūn. See 'Umar and Makram, *Mu'jam* 12:169).

٢٢ يرد في هذه الآية اختلاف في القراءة للفظ أُخْرَى وفقاً لقراءة ورش (أنظر عمر ومكرم، المرجع السابق، مج ٧، ص ١٦٩).

FACET 01
SUBFACET 0103

الوجه
الوجه الفرعي

Guardianship

القوامة

Guardianship and marriage

القوامة والنكاح

... But men shall have one degree above them ... (2:228)

﴿... وَالرِّجَالُ قَوَّامُونَ عَلَى النِّسَاءِ بِمَا فَضَّلَ اللَّهُ بَعْضَهُمْ عَلَى بَعْضٍ وَبِمَا أَنْفَقُوا مِنْ أَمْوَالِهِمْ﴾ (البقرة: ٢٢٨)

Guardianship and maintenance

Men are guardian over women for that God has made some of them excel others, and for what they have spent of their wealth ... (4:34)²³

﴿الرِّجَالُ قَوَّامُونَ عَلَى النِّسَاءِ بِمَا فَضَّلَ اللَّهُ بَعْضَهُمْ عَلَى بَعْضٍ وَبِمَا أَنْفَقُوا مِنْ أَمْوَالِهِمْ﴾ (النساء: ٣٤)^{٢٣}

Caring

الرعاية

O you who believe, it is neither lawful of you to inherit women against their will, nor is it lawful to restrain them so that you may take away what you have given them unless they commit flagrant debauchery. And consort with them in kindness. But if you feel odium to them, then it may be that you feel aversion for a thing, God places in it much good. (4:19)²⁴

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا لَا يَحِلُّ لَكُمْ أَنْ تَرِثُوا النِّسَاءَ كَرِهًا وَلَا تَعْضُلُوهُنَّ لِيَذْهَبْنَ بِبَعْضِ مَا آتَيْتُوهُنَّ إِلَّا أَنْ يَأْتِيَنَّ بِفَاحِشَةٍ مُبِينَةٍ وَعَاشِرُوهُنَّ بِالْمَعْرُوفِ فَلَوْلَا كَرِهْتُمُوهُنَّ لَفَسَدَتُمْ وَأَنْتُمْ سَوَاءٌ بِرَأْيِكُمْ وَاللَّهُ فِيهِ خَيْرٌ كَثِيرًا﴾ (النساء: ١٩)^{٢٤}

²³ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 72.

٢٣ هذه الآية يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ٧٢).

²⁴ This verse includes a difference of opinion in the recitation of the word *fa'asā* (it may be) based on the reading of al Dūwri. See 'Umar and Makram, *Mu'jam* 2:120. It is also related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 69-70.

٢٤ يرد في هذه الآية إختلاف في القراءة للفظ فَعَسَى وفقاً لقراءة الدوري (أنظر عمر ومكرم، المرجع السابق، مسج ٢، ص ١٢٠). كما يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ٦٩-٧٠).

Let them dwell wherever you dwell, according to your means; and do not harass them, so as to straiten circumstances against them ... (65:6)

﴿أَسْكُونُ مِنْ حَيْثُ سَكْتُمْ
مِنْ وَجْدِكُمْ وَلَا تَضَارُّوهُمْ لَضَيْقُوا
عَلَيْهِمْ...﴾ (الطلاق: ٦)

FACET 01
SUBFACET 0104

الوجه
الوجه الفرعي

Menstruation

المحيض

Menstruation and intercourse

المحيض والرفث

They ask you concerning menstruation. Say: 'It is pernicious.' So retire from women and approach them not till they are cleansed ... (2:222)²⁵

﴿وَيَسْأَلُونَكَ عَنِ الْمَحِيضِ قُلْ هُوَ أَذَى
فَاعْتَزِلُوا النِّسَاءَ فِي الْمَحِيضِ وَلَا تَقْرُبُوهُنَّ
حَتَّى يَطْهُرْنَ...﴾ (البقرة: ٢٢٢)^{٢٥}

Menstruation and divorce

المحيض والطلاق

Divorced women shall wait by themselves three menstrual courses ... (2:228)²⁶

﴿وَالْمُطَلَّاتُ يَتَرَبَّصْنَ بِأَنْفُسِهِنَّ ثَلَاثَةَ
قُرُوءٍ...﴾ (البقرة: ٢٢٨)^{٢٦}

²⁵ This verse includes a difference of opinion in the recitation of the word *adhan* (pernicious) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 1:170. It is also related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 38.

٢٥ يرد في هذه الآية إختلاف في القراءة للفظ أذى وفقا لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، ص ١ ، ص ١٧٠). كما يصاحبها سبب نزول (أنظر السيوطي ، المرجع السابق ، ص ٣٨).

²⁶ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 40.

٢٦ هذه الآية يصاحبها سبب نزول (أنظر السيوطي ، المرجع السابق ، ص ٤٠).

Menstruation and waiting period

And those of your women who despaired of menstruating, if you are in doubt (during the waiting period), then their waiting period shall be three months; and those too who have not menstruated as yet ... (65:4)

الحيض والعدة

﴿وَاللَّاتِي يَسْنَنَ مِنَ الْمَحِيضِ مِنْ نِسَائِكُمْ إِنْ رْتَبْتُمْ فِعْدَهُنَّ ثَلَاثَةَ أَشْهُرٍ وَاللَّاتِي لَمْ يَحِضْنَ ...﴾ (الطلاق: ٤)

Menstruation and garments

And such women who are past childbearing, and have no hope of marriage, there is no sin in them that they put aside their (outer) garments, in such (a way) as not to show their adornment; and better still for them is to be abstinent ... (24:60)

الحيض والزينة

﴿وَالْقَوَاعِدُ مِنَ النِّسَاءِ اللَّاتِي لَا يَرْجُونَ نِكَاحًا فَلَيْسَ عَلَيْهِنَّ جُنَاحٌ أَنْ يَضَعْنَ ثِيَابَهُنَّ غَيْرَ مُتَبَرِّجَاتٍ بِزِينَةٍ وَأَنْ يَسْتَعْفِفْنَ خَيْرٌ لَهُنَّ ...﴾ (النور: ٦٠)

Intercourse

الرفث

Intercourse and menstruation

الرفث والحيض

They ask you concerning menstruation. Say: 'It is pernicious.' So retire from women and approach them not till they are cleansed ... (2:222)²⁷

﴿وَسْأَلُونَكَ عَنِ الْمَحِيضِ قُلْ هُوَ أَذَى فَأَعْرِضُوا عَنِ النِّسَاءِ فِي الْمَحِيضِ وَلَا تَقْرُبُوهُنَّ حَتَّى يَطْهُرْنَ ...﴾ (البقرة: ٢٢٢)^{٢٧}

²⁷ This verse includes a difference of opinion in the recitation of the word *adhan* (pernicious) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 1:170. It is also related to an occasion(s) of revelation. See al Suyūfi, *al Itqān*, 38.

٢٧ يرد في هذه الآية إختلاف في القراءة للفظ أذى وفقا لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، مج ١ ، ص ١٧٠). كما يصاحبها سبب نزول (أنظر السيوطي ، المرجع السابق، ص ٣٨).

Intercourse and sexual practice

When they are cleansed come to them as God has ordained you, for God loves those who are penitent and those who are clean. Your wives are tilth for you, so go in to your tilth whenever you wish, and advance good deed for yourselves ... (2:222-223)²⁸

الرفث والوطء

﴿... فَإِذَا تَطَهَّرْنَ فَأْتُوهُنَّ مِنْ حَيْثُ أَمَرَكُمُ اللَّهُ إِنَّ اللَّهَ يُحِبُّ التَّوَّابِينَ وَيُحِبُّ الْمُتَطَهِّرِينَ، نِسَاؤُكُمْ حَرْثٌ لَكُمْ فَأْتُوا حَرْثَكُمْ أَنْتَى شِئْتُمْ وَقَدِّمُوا لِأَنْفُسِكُمْ...﴾ (البقرة: ٢٢٢-٢٢٣)^{٢٨}

Intercourse and praying

O you who believe, approach not the prayer when you are drunken, till you know what you are saying; nor when you are defiled, unless you are traversing a way, until you have washed yourselves. And if you are sick or on a journey, or if any of you comes from the privy, then you have touched women, and you can find no water, then have recourse to clean dust and wipe your faces and your hands with it ... (4:43)²⁹

الرفث والصلاة

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَقْرُبُوا الصَّلَاةَ وَأَنْتُمْ سُكَارَىٰ حَتَّىٰ تَعْلَمُوا مَا تَقُولُونَ وَلَا جُنُبًا إِلَّا عَابِرِي سَبِيلٍ حَتَّىٰ تَغْتَسِلُوا، وَإِنْ كُنْتُمْ مَرْضَىٰ أَوْ عَلَىٰ سَفَرٍ أَوْ جَاءَ أَحَدٌ مِنْكُمْ مِنَ الْغَائِطِ أَوْ لَأَسَمْتُمُ النِّسَاءَ فَلَمْ تَجِدُوا مَاءً فَتَيَمَّمُوا صَعِيدًا طَيِّبًا فَامْسَحُوا بِرُءُوسِكُمْ وَأَيْدِيكُمْ...﴾ (النساء: ٤٣)^{٢٩}

²⁸ This verse includes a difference of opinion in the recitation of the word *annā* (whenever) based on the readings of Warsh and al Dūrī. See 'Umar and Makram, *Mu'jam* 1:17. It is also related to an occasion(s) of revelation. See al Su-yūfī, *al Itqān*, 38-39).

²⁹ This verse includes a difference of opinion in the recitation of the words *sukarā* (are drunken), *marḍā* (are sick), and *aḥadun* (any of you) based on the readings of Warsh and Qālūn. See 'Umar and Makram, *Mu'jam* 2:135-36.

٢٨ يرد في هذه الآية إختلاف في القراءة للفظ أنى وفقا لقراءة ورش والدوري (أنظر عمر ومكرم ، المرجع السابق ، مسج ١ ، ص ١٧٢). كما يصاحبها سبب نزول (أنظر السيوطي ، المرجع السابق، ص ص ٣٨-٣٩).

٢٩ يرد في هذه الآية إختلاف في القراءة للفظ سُكَارَىٰ وللفظ مَرَضَىٰ وللفظ أَحَدٌ وفقا لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، مسج ٢ ، ص ص ١٣٥-١٣٦).

O you who believe, when you rise up for prayer, wash your faces and your hands up to the elbows, and wipe your heads and (wash) your feet to the ankles. If you are unclean, then purify yourselves. And if you are sick or on a journey, or if one of you come from the privy, or you have touched women, and you find no water, then have recourse to clean dust and rub your faces and your hands with it ... (5:6)³⁰

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا إِذَا قُمْتُمْ إِلَى الصَّلَاةِ فَاغْسِلُوا وُجُوهَكُمْ وَأَيْدِيَكُمْ إِلَى الْمَرَافِقِ وَامْسَحُوا بِرُءُوسِكُمْ وَأَرْجُلَكُمْ إِلَى الْكَعْبَيْنِ وَإِنْ كُنْتُمْ جُنُبًا فَاطَّهَرُوا وَإِنْ كُنْتُمْ مَرْضَى أَوْ عَلَى سَفَرٍ أَوْ جَاءَ أَحَدٌ مِنْكُمْ مِنَ الْغَائِطِ أَوْ لَامَسْتُمُ النِّسَاءَ فَلَمْ تَجِدُوا مَاءً فَتَيَمَّمُوا صَعِيدًا طَيِّبًا فَامْسَحُوا بِوُجُوهِكُمْ وَأَيْدِيكُمْ مِنْهُ ...﴾ (المائدة: ٦)^{٣٠}

Intercourse and mosques

... And do not consort with them while you cleave to mosques ... (2:187)³¹

الرَّفَثِ وَالْمَسَاجِدِ
﴿... وَلَا تَبَاشِرُوهُنَّ وَأَنْتُمْ عَاكِفُونَ فِي الْمَسَاجِدِ ...﴾ (البقرة: ١٨٧)^{٣١}

³⁰ This verse includes a difference of opinion in the recitation of the words *mardā* (are sick) and *ahadun* (any of you) based on the readings of Warsh and Qālūn. See 'Umar and Makram, *Mu'jam* 2:195.

³¹ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 27.

٣٠ يرد في هذه الآية إختلاف في القراءة للفظ مَرْضَى ولفظ آحَدٌ وفقاً لقراءة ورش وقالون (أنظر عمر ومكرم، المرجع السابق، مسج ٢، ص ١٩٥).

٣١ هذه الآية يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ٢٧).

Intercourse and fasting

It is lawful to you to consort with your wives on the night of the fast. They are a raiment for you and you are a raiment for them. God knows you have betrayed yourselves, but He has relented towards you and has relieved you. So now have intercourse with them, and seek what God has decreed for you ... (2:187)³²

الرفث والصيام

﴿أَحِلَّ لَكُمْ لَيْلَةَ الصِّيَامِ الرَّفَثُ إِلَى نِسَائِكُمْ
مَنْ لِبَاسٍ لَكُمْ وَأَنْتُمْ لِبَاسٌ لَهُنَّ عَلِمَ اللَّهُ
أَنْكُمْ كُنتُمْ تَخَانُونَ أَنْفُسَكُمْ فَتَابَ عَلَيْكُمْ
وَعَفَا عَنْكُمْ فَإِنَّ بَاشِرُوهُنَّ وَابْتِغُوا مَا كَتَبَ
اللَّهُ لَكُمْ ...﴾ (البقرة: ١٨٧)^{٣٢}

Intercourse and pilgrimage

Pilgrimage is in the months already known. Hence, whoever undertakes the duty of pilgrimage therein, shall have neither intercourse nor debauchery, nor disputation in the pilgrimage ... (2:197)

الرفث والحج

﴿الْحَجُّ أَشْهُرٌ مَعْلُومَاتٌ فَمَنْ فَرَضَ فِيهِنَّ
الْحَجَّ فَلَا رَفَثَ وَلَا فُسُوقَ وَلَا جِدَالَ فِي
الْحَجِّ ...﴾ (البقرة: ١٩٧)

³² This verse includes a difference of opinion in the recitation of the word *fal-āna* (so now) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 1:147, It is also related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 27.

^{٣٢} يرد في هذه الآية إختلاف في القراءة للفظ فَأَلْفَنَ وفقاً لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، ص ١ ، ص ١٤٧). كما يصاحبها سبب نزول (أنظر السيوطي ، المرجع السابق، ص ٢٧).

FACET 01
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الوجه
الوجه الفرعي

Ill-behaviour

النشوز

Ill-behaviour and man

And if a woman fears ill-behaviour or aversion on the part of her husband, then it is no sin on both that they amend things between them, for right settlement is better ... (4:128)³³

النشوز والرجل

﴿وَإِنْ امْرَأَةٌ خَافَتْ مِنْ بَعْلِهَا نُشُورًا أَوْ إِعْرَاضًا فَلَا جُنَاحَ عَلَيْهِمَا أَنْ يُصْلِحَا بَيْنَهُمَا صُلْحًا وَالصُّلْحُ خَيْرٌ...﴾ (النساء: ١٢٨)^{٣٣}

Ill-behaviour and woman

... And those women of whom you fear their dissent, exhort them, and abandon them in the beds, and beat them. But if they obey you, then seek not a way against them ... (4:34)

النشوز والمرأة

﴿... وَاللَّاتِي تَخَافُونَ نُشُورَهُنَّ فِعْظُوهُنَّ وَاهْجُرُوهُنَّ فِي الْمَضَاجِعِ وَاضْرِبُوهُنَّ فَإِنْ أَطَعْنَكُمْ فَلَا تَبْغُوا عَلَيْهِنَّ سَبِيلًا...﴾ (النساء: ٣٤)

Periodical abstention

الإيلاء

For those who swear to abstain from their wives, a wait of four months; but if they revert, then God is Forgiving, Merciful. (2:226)³⁴

﴿الَّذِينَ يُؤْلُونَ مِنْ نِسَائِهِمْ تَرِيصَ أَرْبَعَةٍ أَشْهُرٍ فَإِنْ فَاءُوا فَإِنَّ اللَّهَ غَفُورٌ رَحِيمٌ﴾ (البقرة: ٢٢٦)^{٣٤}

³³ This verse includes a difference of opinion in the recitation of the word *yushliḥā* (amend things) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 2:168.

³³ يرد في هذه الآية إختلاف في القراءة للفظ يُصْلِحًا وفقًا لقراءة ورش (انظر عمر ومكرم ، المرجع السابق ، مج ٢ ، ص ١٦٨).

³⁴ This verse includes a difference of opinion in the recitation of the word *yu'lūna* (put aside) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 1:172). It is also related to an

³⁴ يرد في هذه الآية إختلاف في القراءة للفظ يُؤْلُونَ وفقًا لقراءة ورش (انظر عمر ومكرم ، المرجع السابق ، مج ١ ، ص ١٧٢). كما يصاحبها سبب نزول (انظر الواحدي ، ذكر أنفا،

Eternal abstention

الظهار

Eternal abstention and prohibition

God has not made for any man two hearts within his breast, nor has He made your wives whom you declare to be as your mothers ... (33:4)³⁵

And those who put aside their wives saying, 'You are to me as my mother's back,' they are not indeed their mothers, for their mothers are none but those who gave them birth. They certainly say a despicable saying and a falsehood ... (58:2)³⁶

الظهار والتحریم

﴿ مَا جَعَلَ اللَّهُ لِرَجُلٍ مِنْ قَلْبَيْنِ فِي حَوْفِهِ
وَمَا جَعَلَ أَزْوَاجَكُمْ اللَّائِي تَظَاهِرُونَ مِنْهُنَّ
أُمَّهَاتِكُمْ ... ﴾ (الأحزاب: ٤)^{٣٥}

﴿ الَّذِينَ يَظَاهِرُونَ مِنْكُمْ مِنْ نِسَائِهِمْ
مَا هُنَّ أُمَّهَاتِهِمْ إِنْ أُمَّهَاتُهُمْ إِلَّا اللَّائِي
وَلَدْنَهُمْ وَإِنَّهُمْ لَيَقُولُونَ مُنْكَرًا مِنَ الْقَوْلِ
وَزُورًا ... ﴾ (المجادلة: ٢)^{٣٦}

occasion(s) of revelation. See al Wāhidi, *Asbāb*, 42-43.

³⁵ This verse includes a difference of opinion in the recitation of the word *al-lāī* (whom) based on the reading of Warsh and Qālūn. See 'Umar and Makram, *Mu'jam* 5:109.

³⁶ This verse is related to an occasion(s) of revelation. See al Wāhidi, *Asbāb*, 232-33.

ص ص ٤٢-٤٣).

٣٥ يرد في هذه الآية إختلاف في القراءة للفظ اللّئي ورفقا لقراءة ورش وقالون (أنظر عمر ومكرم، المرجع السابق، مج ٥، ص ١٠٩).

٣٦ هذه الآية يصاحبها سبب نزول (أنظر الواحدي، المرجع السابق، ص ص ٢٣٢-٢٣٣).

Eternal abstention and expiation

And those who put apart their wives, then retract what they have said, should set a slave free before they touch one another. That is for you to be exhorted by. And truly God is cognizant of what you do. But whoever finds not (the means) shall then fast two consecutive months before they touch one another. And whoever is not able (to fast), shall then feed sixty poor persons. That is in order to believe in God and His Messenger ... (58:3-4)

الطهار والكفارة

﴿ وَالَّذِينَ يُظَاهِرُونَ مِن نِّسَائِهِمْ ثُمَّ يَعُودُونَ لِمَا قَالُوا فَتَحْرِيرُ رَقَبَةٍ مِن قَبْلِ أَن يَتَمَاسَا ذَلِكُمْ تَوْعظُونَ بِهِ وَاللَّهُ بِمَا تَعْمَلُونَ خَبِيرٌ ، فَمَن لَّمْ يَجِدْ فَصِيَامَ شَهْرَيْنِ مُتَابِعَيْنِ مِن قَبْلِ أَن يَتَمَاسَا فَمَن لَّمْ يَسْتَطِعْ فإِطْعَامُ سِتِّينَ مِسْكِينًا ذَلِكَ لَتُؤْمِنُوا بِاللَّهِ وَرَسُولِهِ ... ﴾ (المجادلة: ٣-٤)

FACET 01
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الوجه
الوجه الفرعي

Divorce

الطلاق

Divorce and woman

الطلاق والمرأة

But if they resolve on divorce, then indeed God is All-hearing, All-Knowing. (2:227)

﴿ وَإِن عَزَمُوا الطَّلَاقَ فإِنَّ اللَّهَ سَمِيعٌ عَلِيمٌ ﴾ (البقرة: ٢٢٧)

Divorce and the limits allowed

الطلاق وعدد الطلقات

Divorce is twice, then retention in honour or setting a way in kindness ... (2:229)³⁷

﴿ الطَّلَاقُ مَرَّتَانِ فَإِيسَافٌ بِمَعْرُوفٍ أَوْ تَسْرِيحٌ بِإِحْسَانٍ ... ﴾ (البقرة: ٢٢٩)^{٣٧}

³⁷ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 40-41.

^{٣٧} هذه الآية بصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ص ٤٠-٤١).

Divorce and first/second time

If you divorce women, and they reach their term, either retain them with kindness, or let them go with kindness. But retain them not intending to hurt them in transgression, for whoever does that will be iniquitous to himself ... (2:231)³⁸

And if they reach their set time, then retain them in kindness, or depart from them in kindness. And call in two just witnesses from amongst yourselves, and observe the witnessing for God ... (65:2)

Divorce and third time

But if he divorces her, she shall not be lawful to him thereafter until she has wedded another husband. And if he divorces her, it is then no sin on them that they return to each other should they think that they can keep the bounds of God ... (2:230)³⁹

الطلاق والرجعة

﴿وَإِذَا طَلَّقْتُمُ النِّسَاءَ فَبَلَغْنَ أَجَلَهُنَّ فَأَمْسِكُوهُنَّ بِمَعْرُوفٍ أَوْ سَرِّحُوهُنَّ بِمَعْرُوفٍ وَلَا تَمْسِكُوهُنَّ ضِرَارًا لِعَعْدُوهُنَّ وَمَنْ يَفْعَلْ ذَلِكَ فَقَدْ ظَلَمَ نَفْسَهُ...﴾ (البقرة: ٢٣١)^{٣٨}

﴿فَإِذَا بَلَغْنَ أَجَلَهُنَّ فَأَمْسِكُوهُنَّ بِمَعْرُوفٍ أَوْ فَارِقُوهُنَّ بِمَعْرُوفٍ وَأَشْهِدُوا ذَوَى عَدْلٍ مِنْكُمْ وَأَقِيمُوا الشَّهَادَةَ لِلَّهِ...﴾ (الطلاق: ٢)

الطلاق والبيونة الكبرى

﴿فَإِنْ طَلَّقَهَا فَلَا تَحِلُّ لَهُ مِنْ بَعْدِ حَتَّى تَنْكِحَ زَوْجًا غَيْرَهُ فَإِنْ طَلَّقَهَا فَلَا جُنَاحَ عَلَيْهِمَا أَنْ يَتَرَاجَعَا إِنْ ظَنَّا أَنْ يُقِيمَا حُدُودَ اللَّهِ...﴾ (البقرة: ٢٣٠)^{٣٩}

³⁸ This verse includes a difference of opinion in the recitation of the word *zalama* (iniquitous) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 1:176. It is also related to an occasion(s) of revelation. See al Suyūfi, *al Itqān*, 42.

³⁹ This verse is related to an occasion(s) of revelation. See al Suyūfi, *al Itqān*, 41.

^{٣٨} يرد في هذه الآية إختلاف في القراءة للفظ ظَلَمَ وفقاً لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، مج ١ ، ص ١٧٦). كما يصاحبها سبب نزول (أنظر السيوطي ، المرجع السابق ، ص ٤٢).

^{٣٩} هذه الآية يصاحبها سبب نزول (أنظر السيوطي السيوطي ، المرجع السابق ، ص ٤١).

Divorce and dowry

And if you divorce them before you have touched them and have settled a dowry on them, then half of what you have appointed to them, unless they agree to forgo it, or he forgoes it who authorizes the marriage tie. Yet, to forgo is nearer to piety ... (2:237)

And if you wish to exchange one wife for another, and you have given to one of them a hundred-weight take nothing of it. Will you take it by way of calumny and blatant perfidy? And will you take it when one of you has consorted with the other, and they have taken from you a solemn pledge (of union). (4:20-21)⁴⁰

Divorce and maintenance

No sin shall be on you if you divorce women before you have touched them, and have fixed a dowry on them. Yet, provide for them; the affluent man according to his means, and the straitened according to his means; a provision in honour incumbent on the beneficent. (2:236)

الطلاق والمهر

﴿ وَإِنْ طَلَقْتُمْوهُنَّ مِنْ قَبْلِ أَنْ تَمْسُوهُنَّ وَقَدْ فَرَضْتُمْ لَهُنَّ فَرِيضَةً فَنِصْفُ مَا فَرَضْتُمْ إِلَّا أَنْ يَعْفُونَ أَوْ يَعْفُوَ الَّذِي بِيَدِهِ عُقْدَةُ النِّكَاحِ وَأَنْ تَعْفُوا أَقْرَبُ لِلتَّقْوَى... ﴾ (البقرة: ٢٣٧)

﴿ وَإِنْ أَرَدْتُمْ اسْتِبْدَالَ زَوْجٍ مَكَانَ زَوْجٍ وَآتَيْتُمْ إِحْدَاهُنَّ قِنطَارًا فَلَا تَأْخُذُوا مِنْهُ شَيْئًا، أَنَاخُذُوهُنَّ بِهَنَانًا وَإِنَّمَا تُمْسِنَا، وَكَيْفَ تَأْخُذُوهُنَّ وَقَدْ أَفْضَى بَعْضُكُمْ إِلَى بَعْضٍ وَأَخَذْتُمْ مِنْكُمْ مِيثَاقًا غَلِيظًا ﴾ (النساء: ٢٠-٢١)^{٤٠}

الطلاق والنفقة

﴿ لَا جُنَاحَ عَلَيْكُمْ إِنْ طَلَقْتُمُ النِّسَاءَ مَا لَمْ تَمْسُوهُنَّ أَوْ تَفْرِضُوا لَهُنَّ فَرِيضَةً وَمَتَّعُوهُنَّ عَلَى الْمَوْسِعِ قَدَرُهُ وَعَلَى الْمَقْتِرِ قَدَرُهُ مَتَاعًا بِالْمَعْرُوفِ حَقًّا عَلَى الْمُحْسِنِينَ ﴾ (البقرة: ٢٣٦)

⁴⁰ This verse includes a difference of opinion in the recitation of the words *ihdahunna* (one of them) and *afda* (has consorted) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 2:121.

٤٠ يرد في هذه الآية إختلاف في القراءة للفظ *إِحْدَاهُنَّ* و لفظ *أَفْضَى* وفقاً لقراءة ورش (أنظر *عمر ومكرم*، المرجع السابق، مسج ٢، ص ١٢١).

Separation

الخلع

... But if you fear that you cannot maintain the bounds of God, then it is no sin on them if she redeems herself ... (2:229)

﴿... فَإِنْ خِفْتُمْ أَلَّا يَمِيزَا حُدُودَ اللَّهِ فَلَا جُنَاحَ عَلَيْهِمَا فِيمَا افْتَدَتْ بِهِ...﴾ (البقرة: ٢٢٩)

Death

الموت

Death and waiting period

الموت والعدة

Those of you who die and leave wives behind, they shall wait by themselves four months and ten (days). Then when they reach the end of their term, it is no sin on you that they do for themselves (what they desire) in honour ... (2:234)

﴿وَالَّذِينَ يُتَوَفَّوْنَ مِنْكُمْ وَيَذَرُونَ أَزْوَاجًا يَتَرْتَمِنَ بِأَنْفُسِهِنَّ أَرْبَعَةَ أَشْهُرٍ وَعَشْرًا فِإِذَا بَلَغْنَ أَجَلَهُنَّ فَلَا جُنَاحَ عَلَيْكُمْ فِيمَا فَعَلْنَ فِي أَنْفُسِهِنَّ بِالْمَعْرُوفِ...﴾ (البقرة: ٢٣٤)

Death and adultery

الموت والزنا

And those of your women who commit whoredom, call four witnesses from amongst yourselves against them. If they witness, then confine them to the homes until death overtakes them or until God opens a way for them. (4:15)⁴¹

﴿وَاللَّاتِي يَأْتِيَنَّهَا فَاغِيَةٌ مِنْ نِسَائِكُمْ فَاسْتَشْهِدُوا عَلَيْهِنَّ أَرْبَعَةً مِنْكُمْ فَإِنْ شَهِدُوا فَأَمْسِكُوهُنَّ فِي الْبُيُوتِ حَتَّى يَمُوتُنَّ أَوْ يُجْعَلَ اللَّهُ لَهُنَّ سَبِيلًا﴾ (النساء: ١٥)⁴¹

⁴¹ This verse includes a difference of opinion in the recitation of the word *yatawafahunna* (death overtakes them) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 2:118. It also contains a possibility of an abrogation being abrogated by verse 24:2. See Ibn Du'āmah, *al Nāsikh*, 39.

٤١ يرد في هذه الآية إختلاف في القراءة للفظ يَتَوَفَّهِنَّ وفقاً لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، مج ٢ ، ص ١١٨). وكذلك تشمل هذه الآية إمكانية النسخ بالآية ٢ من سورة ٢٤ (أنظر ابن دعامة ، ذكر أنفا ، ص ٣٩).

Death and bequest

Decreed for you is that, when one of you approaches death, if he leaves wealth, he makes a will bequeathing equitably to the parents and kinsmen (and kinswomen). (That is) a duty on the godfearing. Yet, whoever changes it after he has heard it, the sin for it shall surely fall on those who change it. Verily, God is All-Hearing, All-knowing. But whoever fears deviation or sinful tendency from a testator and makes things right between them, no sin shall rest upon him...(2:180-182)⁴²

Those of you who die and leave wives, (should leave) a testament for their wives bequeathing a provision for a year without expulsion. But if they go out, then there is no sin on you in what they do with themselves in fairness ... (2:240)⁴³

الموت والوصية

﴿كُتِبَ عَلَيْكُمُ إِذَا حَضَرَ أَحَدُكُمُ الْمَوْتُ إِذْ تَرَكَ خَيْرًا الْوَصِيَّةَ لِلْوَالِدَيْنِ وَالْأَقْرَبِينَ بِالْمَعْرُوفِ حَقًّا عَلَى الْمُتَّقِينَ، فَمَنْ بَدَّلَهُ بَعْدَ مَا سَمِعَهُ فَإِنَّمَا إِثْمُهُ عَلَى الَّذِينَ يُبَدِّلُونَهُ إِنَّ اللَّهَ سَمِيعٌ عَلِيمٌ، فَمَنْ خَافَ مِنْ مَوْصٍ جَنَفًا أَوْ إِثْمًا فَأَصْلَحَ بَيْنَهُمْ فَلَا إِثْمَ عَلَيْهِ...﴾ (البقرة: ١٨٠-١٨٢)^{٤٢}

﴿وَالَّذِينَ يُؤْتُونَ مِنْكُمْ وَيَذَرُونَ أَزْوَاجًا وَصِيَّةً لِأَزْوَاجِهِمْ مَتَاعًا إِلَى الْحَوْلِ غَيْرَ إِخْرَاجٍ فَإِنْ خَرَجْنَ فَلَا جُنَاحَ عَلَيْكُمْ فِي مَا فَعَلْنَ فِي أَنْفُسِهِنَّ مِنْ مَّعْرُوفٍ...﴾ (البقرة: ٢٤٠)^{٤٣}

⁴² This verse contains a possibility of an abrogation being abrogated by verse 4:11. See Ibn al Bārīzī, *Nāsikh*, 25.

⁴³ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 43-44. It also contains a possibility of an abrogation being abrogated by verse 4:12. See Ibn Du'āmah, *al Nāsikh*, 36.

٤٢ تحتل هذه الآية إمكانية النسخ بالآية ١١ من سورة ٤ (أنظر ابن البارزي، المرجع السابق، ص ٢٠).

٤٣ هذه الآية يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ٤٣-٤٤). وكذلك تحتل إمكانية النسخ بالآية ١٢ من سورة ٤ (أنظر ابن دعامة، المرجع السابق، ص ٣٦).

FACET 02
SUBFACET 0201

الوجه
الوجه الفرعي

Abortion

الإجهاض

And do not slay your children for fear of indigence, for We provide them and you. Surely their slaying is a heinous sin. (17:31)

O Prophet, when believing women come to you, swearing allegiance to you that they will not ascribe anything to God; neither will they steal nor commit whoredom, nor slay their children, nor bring any calumny that they may forge between their hands and their feet, nor disobey you in a good turn; then seal a pledge with them, and ask God's forgiveness for them. (60:12)⁴⁴

﴿وَلَا تَقْتُلُوا أَوْلَادَكُمْ خَشْيَةَ إِمْلَاقٍ نَحْنُ نَرْزُقُهُمْ وَإِيَّاكُمْ، إِنَّ قَتْلَهُمْ كَانَ خِطْئًا كَبِيرًا﴾ (الإسراء: ٣١)

﴿يَا أَيُّهَا النَّبِيُّ إِذَا جَاءَكَ الْمُؤْمِنَاتُ يُبَايِعْنَكَ عَلَىٰ أَنْ لَا يُشْرِكْنَ بِاللَّهِ شَيْئًا وَلَا يَسْرِقْنَ وَلَا يَزْنِينَ وَلَا يَقْتُلْنَ أَوْلَادَهُنَّ وَلَا يَأْتِينَ بِبُهَانٍ يَفْتَرِيهِ بَيْنَ أَيْدِيهِنَّ وَأَرْجُلِهِنَّ وَلَا يَعْتَصِمْنَ فِي مَعْرُوفٍ قَبَائِعِهِنَّ وَأَسْتَغْفِرَ لِهِنَّ اللَّهُ...﴾ (المتحنة: ١٢)

⁴⁴ The phrase "nor bring any calumny that they may forge between their hands and their feet" has two different interpretations. Al Qurṭubī has pointed out that, according to one view, the phrase generally refers to adultery or those [women] who beget illegitimate children (by deceiving their husbands). According to the other view, it refers to bewitching and acts related to bewitching. See al Qurṭubī, *al Jāmi'* 17:72-74. It may also have the possibility of being a reference to the abortion. In addition, it includes a difference of opinion in the recitation of the words *wa istaghfir lahunn* (and ask God's forgiveness for them) based on the reading of al Dūwri. See 'Umar and Makram, *Mu'jam* 7:133.

٤٤ طبقاً لما أورده القرطبي في تفسيره أن النص "ولا يأتين ببهتان يفتريه بين أيديهن وأرجلهن" يتحمل تفسيران. الأول: أن النص عامة يحمل معنى الزنا أو النساء اللواتي يلحقن بأزواجهن أطفالاً ليسوا من أصلابه. الثاني: أن النص يشير إلى مضمون السحر (انظر القرطبي، المرجع السابق، مج ١٧، ص ٧٢-٧٤). هذا ويحمل النص أيضاً المعنى المجازي للإجهاض. كما يرد في هذه الآية اختلاف في القراءة لفظ واستغفر لهن وفقاً لقراءة الدوري (انظر عمر ومكرم، المرجع السابق، مج ٧، ص ١٣٣).

And when the girl-child buried alive is asked, for what reason was she slain. (81:8-9)

﴿وَإِذَا الْمَوْءُودَةُ سُئِلَتْ، بِأَيِّ ذَنْبٍ قُتِلَتْ﴾ (التكوير: ٨-٩)

Slaying

القتل

Slaying and children

قتل والأطفال

... And slay not yourselves ... (4:29)

﴿... وَلَا تَقْتُلُوا أَنْفُسَكُمْ﴾ (النساء: ٢٩) ...

And he who slays a believer with premeditation, his reward shall be Gehenna, therein to abide for ever, and God will be irate with him, and will curse him, and shall prepare a great torment for him. (4:93)

﴿وَمَنْ يَقْتُلْ مُؤْمِنًا مُتَعَمِّدًا فَجَزَاؤُهُ جَهَنَّمُ خَالِدًا فِيهَا وَغَضِبَ اللَّهُ عَلَيْهِ وَلَعَنَهُ وَأَعَدَّ لَهُ عَذَابًا عَظِيمًا﴾ (النساء: ٩٣)

And thus those associates made it seem fair to many of the idolaters to slay their children, that they may destroy and confound for them their religion ... (6:137)

﴿وَكَذَلِكَ زَيَّنَ لِكَثِيرٍ مِنَ الْمُشْرِكِينَ قَتْلَ أَوْلَادِهِمْ شُرَكَاؤُهُمْ لِيُرْدُوهُمْ وَلِيَلْبِسُوا عَلَيْهِمْ دِينَهُمْ﴾ (الأنعام: ١٣٧)

Lost are they who slay their children in folly, without knowledge, and forbid what God has provided for them, in calumny against God ... (6:140)⁴⁵

﴿قَدْ خَسِرَ الَّذِينَ قَتَلُوا أَوْلَادَهُمْ سَفَهًا بِغَيْرِ عِلْمٍ وَحَرَّمُوا مَا رَزَقَهُمُ اللَّهُ افْتِرَاءً عَلَى اللَّهِ﴾ (الأنعام: ١٤٠)^{٤٥}

... And that you do not slay your children because of poverty, for We provide for you and them ... (6:151)

﴿... وَلَا تَقْتُلُوا أَوْلَادَكُمْ مِنْ إِسْلَاقٍ نَحْنُ نَرْزُقُكُمْ وَإِيَّاهُمْ﴾ (الأنعام: ١٥١)

⁴⁵ This verse includes a difference of opinion in the recitation of the word *qad khasira* (lost are they) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 2:326.

٤٥ يرد في هذه الآية اختلاف في القراءة للفظ قد خسر وفقا لقراءة ورش (أنظر عمر ومكرم، المرجع السابق، مج ٢، ص ٣٢٦).

... And that you do not slay the soul that God has prohibited save by justice ... (6:151)

And when any one of them is given the tidings of a female, his face is darkened, stifling (anger), retiring from the sight of the people because of the evil tidings he was given; should he keep it in contempt or inhume it in the dust? Wretched is that which they judge! (16:58-59)⁴⁶

And do not slay the soul that God has forbidden save with justice ... (17:33)

And those who do not impute another god to God, and who do not slay the living soul that God has forbidden expect by right, nor commit adultery, for whoever does that shall receive (the reward) of the sin. (25:68)

﴿... وَلَا تَقْتُلُوا النَّفْسَ الَّتِي حَرَّمَ اللَّهُ إِلَّا بِالْحَقِّ ...﴾ (الأنعام: ١٥١)

﴿وَإِذَا بُشِّرَ أَحَدُهُمْ بِالْأُنثَىٰ ظَلَّ وَجْهُهُ مُسْوَدًّا وَهُوَ كَظِيمٌ ، يَتَوَارَىٰ مِنَ الْقَوْمِ مِنْ سُوءِ مَا بُشِّرَ بِهِ أَيُمْسِكُهُ عَلَىٰ هُونٍ أَمْ يَدُسُّهُ فِي التُّرَابِ أَلَا سَاءَ مَا يَحْكُمُونَ﴾ (النحل: ٥٨-٥٩)^{٤٦}

﴿وَلَا تَقْتُلُوا النَّفْسَ الَّتِي حَرَّمَ اللَّهُ إِلَّا بِالْحَقِّ ...﴾ (الإسراء: ٣٣)

﴿وَالَّذِينَ لَا يَدْعُونَ مَعَ اللَّهِ إِلَهًا آخَرَ وَلَا يَقْتُلُونَ النَّفْسَ الَّتِي حَرَّمَ اللَّهُ إِلَّا بِالْحَقِّ وَلَا يَزْنُونَ وَمَنْ يَفْعَلْ ذَلِكَ يَلْقَ أَثَامًا﴾ (الفرقان: ٦٨)

⁴⁶ This verse includes a difference of opinion in the recitation of the word *yatawārā* (retiring from the sight) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 3:284.

^{٤٦} يرد في هذه الآية اختلاف في القراءة للفظ يتوارى وفقا لقراءة ورش (أنظر عمر ومكرم، المرجع السابق، مج ٣، ص ٢٨٤).

O Prophet, when believing women come to you, swearing allegiance to you that they will not ascribe anything to God; neither will they steal nor commit whoredom, nor slay their children, nor bring any calumny that they may forge between their hands and their feet, nor disobey you in a good turn; then seal a pledge with them, and ask God's forgiveness for them ... (60:12)⁴⁷

﴿يَا أَيُّهَا النَّبِيُّ إِذَا جَاءَكَ الْمُؤْمِنَاتُ يُبَايِعْنَكَ عَلَىٰ أَنْ لَا يُشْرِكْنَ بِاللَّهِ شَيْئًا وَلَا يَسْرِقْنَ وَلَا يَزْنِينَ وَلَا يَقْتُلْنَ أَوْلَادَهُنَّ وَلَا يَأْتِينَ بِبُهْتَانٍ يَفْتَرِينَهُ بَيْنَ أَيْدِيهِنَّ وَأَرْجُلِهِنَّ وَلَا يَعْصِينَكَ فِي مَعْرُوفٍ فَبَايِعْهُنَّ وَاسْتَغْفِرْ لَهُنَّ اللَّهُ...﴾ (المتحنة: ١٢)^{٤٧}

And when the girl-child buried alive is asked, for what reason was she slain. (81:8-9)

﴿وَإِذَا الْمَوْءُودَةُ سُئِلَتْ، بِأَيِّ ذَنْبٍ قُتِلَتْ﴾ (التكوير: ٨-٩)

⁴⁷ The phrase "nor bring any calumny that they may forge between their hands and their feet" has two different interpretations. Al Qurṭubī has pointed out that according to one view, the phrase generally refers to adultery or those [women] who beget illegitimate children (by deceiving their husbands). According to the other view, it refers to bewitching and to acts related to bewitching. See al Qurṭubī, *al Jāmi'* 18:72-74. However, it may also have the possibility of being a reference to abortion and slaying. The verse includes a difference of opinion in the recitation of the words *wa istaghfir lahunn* (and ask God's forgiveness for them) based on the reading of al Duwri. See 'Umar and Makram, *Mu'jam* 7:133.

٤٧ طبقا لما أورده القرطبي في تفسيره أن النص "ولا يأتين ببهتان يفتريه بين أيديهن وأرجلهن" يحتمل تفسيران. الأول: أن النص عامة يجعل معنى الزنا أو النساء اللواتي يلحقن بأزواجهن اطفالا ليسوا من اصله. الثاني: ان النص يشير إلى مضمون السحر (انظر القرطبي، المرجع السابق، مج ١٧، ص ٧٢-٧٤). هذا ويحتمل النص أيضا المعنى المجازي للإجهاض أو القتل. كما يرد في هذه الآية إختلاف في القراءة للفظ واستغفر لهم وفقا لقراءة الدوري (انظر عمر ومكرم، المرجع السابق، مج ٧، ص ١٢٣).

Slaying and blood fine

O you who believe, requital for bloodshedding is decreed for you: the free man for the free man, the slave for the slave, and the female for the female. But he who is pardoned by one's (slain) brother, will pay something of a blood fine. This is to be carried out in kindness and dealt with in equity. This is an alleviation and mercy from your Lord. But he who transgresses after that will have a grievous torment. (2:178)⁴⁸

القتل والدية

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا كُتِبَ عَلَيْكُمُ
الْقِصَاصُ فِي الْقَتْلِ الْحُرُّ بِالْحُرِّ
وَالْعَبْدُ بِالْعَبْدِ وَالْأُنثَى بِالْأُنثَى فَمَنْ
عُفِيَ لَهُ مِنْ أَخِيهِ شَيْءٌ فَاتَّبِعْ
بِالْمَعْرُوفِ وَأَدَاءٌ إِلَيْهِ بِإِحْسَانٍ ذَلِكَ
تَخْفِيفٌ مِنْ رَبِّكُمْ وَرَحْمَةٌ فَمَنْ
عَتَدَى بَعْدَ ذَلِكَ فَلَهُ عَذَابٌ
أَلِيمٌ﴾ (البقرة: ١٧٨)^{٤٨}

⁴⁸ This verse includes a difference of opinion in the recitation of the words *al qatlā* (bloodshedding), *al unthā bi al-unthā* (the female for the female) and *i'tadā* (transgresses) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 1:139-40). It has also the possibility of abrogation by verse 4:25. See Ibn al Bārīzī, *Nāsikh*, 25.

٤٨ يرد في هذه الآية إحتلاف في القراءة للفظ القتل واللفظ الأنثى بالأنثى ولفظ اعتدى وفقا لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، ص ١ ، ١٣٩-١٤٠). كذلك تختمل هذه الآية إمكانية النسخ بالآية ٢٥ من سورة ٤ (أنظر ابن البارزي ، المرجع السابق ، ص ٢٥).

It is not for a believer to slay a believer unless it is by mistake. And he who slays a believer by mistake, shall be committed to freeing a believing slave, and a blood-fine (shall he pay) to his family unless they forgo it as free-will alms. But if he belongs to a people hostile to you and is a believer, then (the slayer must) set free a believing slave. And if he belongs to a people between whom and yourselves there is a pact, then a blood-fine is to be paid to his family and a believing slave is to be set free. But if he finds no means, let him fast two consecutive months as a penance from God ... (4:92)⁴⁹

... And whoever is wrongfully slain, then We have appointed authority to his next of kin. But let him not exceed in slaying, for surely he will be succoured. (17:33)

﴿ وَمَا كَانَ لِمُؤْمِنٍ أَنْ يَقْتُلَ مُؤْمِنًا إِلَّا خَطَاً
وَمَنْ قَتَلَ مُؤْمِنًا خَطَاً فَتَحْرِيرُ رَقَبَةٍ مُؤْمِنَةٍ
وَدِيَّةٌ مُسَلَّمَةٌ إِلَىٰ أَهْلِهِ إِلَّا أَنْ يَصَدَّقُوا فَإِنْ كَانَ
مِنْ قَوْمٍ عَدُوٍّ لَكُمْ وَهُوَ مُؤْمِنٌ فَتَحْرِيرُ رَقَبَةٍ
مُؤْمِنَةٍ وَإِنْ كَانَ مِنْ قَوْمٍ بَيْنَكُمْ وَبَيْنَهُمْ بِيْثَاقٌ
فَدِيَّةٌ مُسَلَّمَةٌ إِلَىٰ أَهْلِهِ وَتَحْرِيرُ رَقَبَةٍ مُؤْمِنَةٍ
فَمَنْ لَمْ يَجِدْ فَصِيَامًا شَهْرَيْنِ مُتَابِعَيْنِ تَوْبَةً مِّنَ
اللَّهِ ... ﴾ (النساء: ٩٢)^{٤٩}

﴿ ... وَمَنْ قَتَلَ مَظْلُومًا فَقَدْ جَعَلْنَا لَوْلِيهِ
سُلْطَانًا فَلَا يُسْرِفُ فِي الْقَتْلِ إِنَّهُ كَانَ
مَنْصُورًا ﴾ (الإسراء: ٣٣)

⁴⁹ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 83.

٤٩ هذه الآية بصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ٨٣).

FACET 02
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الوجه
الوجه الفرعي

Waiting Period

العدة

Waiting period and compulsorily

O you Prophet, when you divorce women, divorce them after their period, and count the period. And fear God, your Lord. Do not eject them from their homes; nor let them depart unless they commit a clear act of lewdness. (65:1)

العدة والوجوب

﴿يَا أَيُّهَا النَّبِيُّ إِذَا طَلَقْتُمُ النِّسَاءَ فَطَلِّقُوهُنَّ
لِعَدَّتِهِنَّ وَأَحْصُوا الْعِدَّةَ وَاتَّقُوا اللَّهَ رَبَّكُمْ لَا
تُخْرِجُوهُنَّ مِنْ بُيُوتِهِنَّ وَلَا يَخْرُجْنَ إِلَّا أَنْ
يَأْتِيَنَّ بِفَاحِشَةٍ مُّبِينَةٍ...﴾ (الطلاق: ١)

Waiting period and intercourse

O you who believe, if you marry believing women, and you divorce them before you touch them, you shall have no waiting period to reckon on them ... (33:49)

العدة والرفث

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا إِذَا نَكَحْتُمُ الْمُؤْمِنَاتِ
تَمَّ طَلِّقْتُمُوهُنَّ مِنْ قَبْلِ أَنْ تَسَّوهُنَّ
فَمَا لَكُمْ عَلَيْهِنَّ مِنْ عِدَّةٍ
تَعْدُونَهَا...﴾ (الأحزاب: ٤٩)

Waiting period and menstruation

Divorced women shall wait by themselves three menstrual courses ... (2:228)⁵⁰

العدة والحيض

﴿وَالْمُطَلَّقَاتُ يَتَرَبَّصْنَ بِأَنْفُسِهِنَّ ثَلَاثَةَ
قُرُوءٍ...﴾ (البقرة: ٢٢٨)⁵⁰

⁵⁰ This verse is related to an occasion(s) of revelation. See al Suyūfi, *al Itqān*, 40.

٥٠ هذه الآية يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ٤٠).

Waiting period and months

And those of your women who despaired of menstruating, if you are in doubt, (during the waiting period) then their waiting period shall be three months; and those too who have not menstruated as yet ... (65:4)

العدة والشهور

﴿ وَاللَّائِي يَتَسَنَّأْنَ مِنَ الْمَحِيضِ مِنْ نِسَائِكُمْ
إِنْ أَرْتَمْتُمْ فَعِدَّتُهُنَّ ثَلَاثَةُ أَشْهُرٍ وَاللَّائِي لَمْ
يَحِضْنَ ... ﴾ (الطلاق: ٤)

Waiting period and pregnancy

... And those who are pregnant, their term is when they deliver their burden ... (65:4)

العدة والحمل

﴿ ... وَأُولَاتِ الْأَحْصَالِ أَجَلُهُنَّ أَنْ يَضَعْنَ
حَمْلَهُنَّ ... ﴾ (الطلاق: ٤)

Waiting period and maintenance

Let them dwell wherever you dwell, according to your means; and do not harass them, so as to straiten circumstances against them ... (65:6)

العدة والنفقة

﴿ أَسْكُونَهُنَّ مِنْ حَيْثُ سَكَنْتُمْ
مِنْ وَجْهِكُمْ وَلَا تَضَارُوهُنَّ لَنْصِبِقُوا
عَلَيْهِنَّ ... ﴾ (الطلاق: ٦)

Waiting period and first/second time divorce

If you divorce women, and they reach their term, either retain them with kindness, or let them go with kindness. But retain them not intending to hurt them in transgression, for whoever does that will be iniquitous to himself ... (2:231)⁵¹

العدة والطلاق الرجعي

﴿ وَإِذَا طَلَقْتُمُ النِّسَاءَ فَلَمَّا بَلَغْنَ أَجَلَهُنَّ
فَأَسْكُونَهُنَّ بِمَعْرُوفٍ أَوْ سَرِّحُوهُنَّ بِمَعْرُوفٍ
وَلَا تُمْسِكُوهُنَّ ضِرَارًا لَعَدُوًّا وَمَنْ يَفْعَلْ
ذَلِكَ فَقَدْ ظَلَمَ نَفْسَهُ ... ﴾ (البقرة: ٢٣١)⁵¹

⁵¹ This verse includes a difference of opinion in the recitation of the word *zalama* (iniquitous) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 1:176). It is also related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 42.

٥١ يرد في هذه الآية إختلاف في القراءة للفظ ظَلَمَ وفقاً لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، مج ١ ، ص ١٧٦). كما يصاحبها سبب نزول (أنظر السيوطي ، المرجع السابق ، ص ٤٢).

And if they reach their set time, then retain them in kindness, or depart from them in kindness. And call in two just witnesses from amongst yourselves, and observe the witnessing for God ... (65:2)

﴿فَإِذَا بَلَغْنَ أَجَلَهُنَّ فَأَمْسِكُوهُنَّ بِمَعْرُوفٍ أَوْ
فَارْقُوهُنَّ بِمَعْرُوفٍ وَأَشْهَدُوا ذَوَى عَدْلٍ مِنْكُمْ
وَأَقِيمُوا الشَّهَادَةَ لِلَّهِ ...﴾ (الطلاق: ٢)

Waiting period and death

Those of you who die and leave wives behind, they shall wait by themselves four months and ten (days). Then when they reach the end of their term, it is no sin on you that they do for themselves (what they desire) in honour ... (2:234)

العدة والموت

﴿وَالَّذِينَ يُتَوَفَّوْنَ مِنْكُمْ وَيَذَرُونَ أَزْوَاجًا
يَتَرْتَبْنَ بِأَنْفُسِهِنَّ أَرْبَعَةَ أَشْهُرٍ وَعَشْرًا فَإِذَا
بَلَغْنَ أَجَلَهُنَّ فَلَا جُنَاحَ عَلَيْكُمْ فِيمَا فَعَلْنَ فِي
أَنْفُسِهِنَّ بِالْمَعْرُوفِ ...﴾ (البقرة: ٢٣٤)

Lineage

النسب

Lineage and marriage

And marry not the woman whom your fathers have married, save what already has happened in the past, for it is lewdness and abomination, and an evil way. Forbidden you are your mothers, and your daughters, and your sisters, and your aunts (paternal and maternal) and your nieces, and your mothers who have suckled you, and your suckling sisters, and your wives' mothers, and your stepdaughters who are in your care, from wives with whom you have consummated marriage. But if you have not consummated marriage with them, then it is no sin for you. And (forbidden) are the wives of your sons who are from your own loins. (4:22-23)⁵²

النسب والنكاح

﴿وَلَا تَنْكِحُوا مَا نَكَحَ آبَاؤُكُمْ مِنَ النِّسَاءِ إِلَّا
مَا قَدْ سَلَفَ إِنَّهُ كَانَ فَاحِشَةً وَمَقْتًا وَسَاءَ
سَبِيلًا، حُرِّمَتْ عَلَيْكُمْ أُمَّهَاتُكُمْ وَبَنَاتُكُمْ
وَأَخَوَاتُكُمْ وَعُمَّاتُكُمْ وَخَالَاتُكُمْ وَبَنَاتُ الْأَخِ
وَبَنَاتُ الْأَخْتِ وَأُمَّهَاتُكُمْ اللَّائِي أَرْضَعْنَكُمْ
وَأَخَوَاتُكُمْ مِنَ الرِّضَاعَةِ وَأُمَّهَاتُ نِسَائِكُمْ
وَرَبَائِبُكُمْ اللَّائِي فِي حُجُورِكُمْ مِنْ نِسَائِكُمْ
اللَّائِي دَخَلْتُمْ بِهِنَّ فَإِنْ لَمْ تَكُونُوا دَخَلْتُمْ بِهِنَّ
فَلَا جُنَاحَ عَلَيْكُمْ وَحَلَائِلُ أَبْنَائِكُمُ الَّذِينَ مِنْ
أَصْلَابِكُمْ ...﴾ (النساء: ٢٢-٢٣)^{٥٢}

⁵² This verse is related to an occasion(s) of revelation. See al Wāḥidī, *Asbāb*, 84.

٥٢ هذه الآية يصاحبها سبب نزول (أنظر الواحدي، المرجع السابق، ص ٨٤).

And (forbidden you also) are the married women except whom your right hands possess. So are God's commands to you. And it is lawful for you what is beyond that, if you use your wealth in virtuous wedlock not in lewdness. (4:24)

﴿وَالْمَحْصَنَاتُ مِنَ النِّسَاءِ إِلَّا مَا مَلَكَتْ أَيْمَانُكُمْ كِتَابَ اللَّهِ عَلَيْكُمْ...﴾ (النساء: ٢٤)

The adulterer shall not marry but an adulteress or an idolatress, and the adulteress, none shall marry her except an adulterer or an idolater. And that (adultery) is forbidden to believers. (24:3)⁵³

﴿الزَّانِي لَا يَنْكِحُ إِلَّا زَانِيَةً أَوْ مُشْرِكَةً وَالزَّانِيَةُ لَا يَنْكِحُهَا إِلَّا زَانٍ أَوْ مُشْرِكٌ وَحَرِّمَ ذَلِكَ عَلَى الْمُؤْمِنِينَ﴾ (النور: ٣)^{٥٣}

... Then when Zayd had divorced her, We married her to you, so that there may be no sin for the believers in (marrying) the wives of their adherents if they have divorced them. (33:37)⁵⁴

﴿... فَلَمَّا قَضَى زَيْدٌ مِنْهَا وَطَرًا زَوَّجْنَاكَهَا لِكَيْ لَا يَكُونَ عَلَى الْمُؤْمِنِينَ حَرَجٌ فِي أَزْوَاجِ أَدْعِيَائِهِمْ إِذَا قَضَوْا مِنْهُنَّ وَطَرًا...﴾ (الأحزاب: ٣٧)^{٥٤}

⁵³ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 192.

⁵⁴ This verse includes a difference of opinion in the recitation of the word *qadā* (had consummated) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 5:126. It is also related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 227-28.

٥٣ هذه الآية يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ١٩٢).

٥٤ يرد في هذه الآية إختلاف في القراءة للفظ قَضَى وفقاً لقراءة ورش (أنظر عمر ومكرم، المرجع السابق، مسج ٥، ص ١٢٦). كما يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ٢٢٧-٢٢٨).

Lineage and pregnancy

O Prophet, when believing women come to you, swearing allegiance to you that they will not ascribe anything to God; neither will they steal nor commit whoredom, nor slay their children, nor bring any calumny that they may forge between their hands and their feet, nor disobey you in a good turn; then seal a pledge with them, and ask God's forgiveness for them ... (60:12)⁵⁵

... It shall not be licit for them to conceal what God has created in their wombs, if they truly believe in God and the Last Day. (2:228)⁵⁶

النسب والحمل

﴿ يَا أَيُّهَا النَّبِيُّ إِذَا جَاءَكَ الْمُؤْمِنَاتُ يُبَايِعْنَكَ عَلَىٰ أَنْ لَا يُشْرِكْنَ بِاللَّهِ شَيْئًا وَلَا يَسْرِقْنَ وَلَا يَزْنِينَ وَلَا يَقْتُلْنَ أَوْلَادَهُنَّ وَلَا يَأْتِينَ بِهَتَّانِ يَفْتَرِيهِ بَيْنَ أَيْدِيهِنَّ وَأَرْجُلِهِنَّ وَلَا يَعْمِيَنَّ فِيكَ فِي مَعْرُوفٍ قَبَائِحَهُنَّ وَاسْتَغْفِرْ لَهُنَّ اللَّهُ... ﴾ (المتحنة: ١٢)⁵⁵

﴿ ... وَلَا يَحِلُّ لَهُنَّ أَنْ يَكْتُمْنَ مَا خَلَقَ اللَّهُ فِي أَرْحَامِهِنَّ إِنْ كُنَّ يُؤْمِنُ بِاللَّهِ وَالْيَوْمِ الْآخِرِ... ﴾ (البقرة: ٢٢٨)⁵⁶

⁵⁵ The phrase "nor bring any calumny that they may forge between their hands and their feet" has two different interpretations. Al Qurtubī has pointed out that, according to one view, the phrase generally refers to adultery or those [women] who beget illegitimate children (by deceiving their husbands). According to the other view, it refers to bewitching and acts related to bewitching. See al Qurtubī, *al Jāmi'* 17:72-74. The verse includes a difference of opinion in the recitation of the words *wa istaghfir lahun* (and ask God's forgiveness for them) based on the reading of al Dūwri. See 'Umar and Makram, *Mu'jam* 7:133.

⁵⁶ This verse includes a difference of opinion in the recitation of the word *ann yaktumna* (to conceal) based on the reading of al Dūwri. See 'Umar and Makram, *Mu'jam* 1:174.

٥٥ طبقا لما أورده القرطبي في تفسيره أن النص "ولا يأتين بهتان يفتريه بين أيديهن وأرجلهن" يحتمل تفسيران. الأول: أن النص عامة يحمل معنى الزنا أو النساء اللواتي يلحقن بأزواجهن أطفالا ليسوا من اصلابه. الثاني: أن النص يشير إلى مضمون السحر (أنظر القرطبي، المرجع السابق، مج ١٧، ص ٧٢-٧٤). كما يرد في هذه الآية إختلاف في القراءة للفظ واستغفر لهن وفقا لقراءة الدوري (أنظر عمر ومكرم، المرجع السابق، مج ٧، ص ١٣٣).

٥٦ يرد في هذه الآية إختلاف في القراءة للفظ أن يَكْتُمْنَ وفقا لقراءة الدوري. (أنظر عمر ومكرم، المرجع السابق، مج ١، ص ١٧٤).

Adoption**التبني**

... Nor has He made whom you claim to be as your sons, your sons. That is your saying of your own mouths. But God says the truth and guides on the path. Call them after their (natural) fathers, that will be more equitable in the consideration of God ... (33:4-5)

﴿... وَمَا جَعَلَ أَدْعِيَاءَكُمْ أَبْنَاءَكُمْ ذَلِكُمْ قَوْلِكُمْ بِأَفْوَاهِكُمْ وَاللَّهُ يَقُولُ الْحَقَّ وَهُوَ يَهْدِي السَّبِيلَ ، ادْعُوهُمْ لِأَبَائِهِمْ هُوَ أَقْسَطُ عِنْدَ اللَّهِ ...﴾ (الأحزاب: ٤-٥)

Muhammad is not a father of any one of your men, but he is the Messenger of God and the Seal of prophets ... (33:40)

﴿مَا كَانَ مُحَمَّدٌ أَبَا أَحَدٍ مِنْ رِجَالِكُمْ وَلَكِنْ رَسُولَ اللَّهِ وَخَاتَمَ النَّبِيِّينَ ...﴾ (الأحزاب: ٤٠)

Malediction**اللعان**

And those who accuse their wives but have no witnesses save their own selves, then the testimony of each of them shall be to swear by God four times that he is (one) of the veracious. And the fifth time God's malediction shall fall upon him, should he be of the liars. And He shall avert the torment from her if she swears by God four times that he is surely one of the liars. And the fifth, surely God's wrath will fall upon her if he is one of the veracious. (24:6-9)⁵⁷

﴿وَالَّذِينَ يَرْمُونَ أَزْوَاجَهُمْ وَلَمْ يَكُن لَّهُمْ شُهَدَاءُ إِلَّا أَنفُسُهُمْ فَشَهَادَةُ أَحَدِهِمْ أَرْبَعُ شَهَادَاتٍ بِاللَّهِ إِنَّهُ لَمِنَ الصَّادِقِينَ، وَالخَامِسَةَ أَنَّ لَعْنَةَ اللَّهِ عَلَيْهِ إِنْ كَانَ مِنَ الْكَاذِبِينَ، وَيَدْرُؤُا عَنْهَا الْعَذَابَ أَنْ تَشْهَدَ أَرْبَعُ شَهَادَاتٍ بِاللَّهِ إِنَّهُ لَمِنَ الْكَاذِبِينَ، وَالخَامِسَةَ أَنَّ غَضَبَ اللَّهِ عَلَيْهَا إِنْ كَانَ مِنَ الصَّادِقِينَ﴾ (النور: ٦-٩)^{٥٧}

⁵⁷ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 193-94.

٥٧ هذه الآية يصاحبها سبب نزول (أنظر السيوطي ، المرجع السابق، ص ص ١٩٣-١٩٤).

FACET 02	الوجه
SUBFACET 0203	الوجه الفرعي

Pregnancy	الحمل
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Pregnancy and concealment

... It shall not be licit for them to conceal what God has created in their wombs, if they truly believe in God and the Last Day ... (2:228)⁵⁸

الحمل والكتمان

﴿... وَلَا يَحِلُّ لَهُنَّ أَنْ يَكْتُمْنَ مَا خَلَقَ اللَّهُ فِي أَرْحَامِهِنَّ إِنْ كُنَّ يُؤْمِنُنَّ بِاللَّهِ وَالْيَوْمِ
الْآخِرِ...﴾ (البقرة: ٢٢٨)^{٥٨}

Pregnancy and maintenance

... And if they are pregnant, then spend on them until they deliver their burden ... (65:6)

الحمل والنفقة

﴿... وَإِنْ كُنَّ أُولَاتٍ حَمْلٌ فَأَنْفِقُوا عَلَيْهِنَّ
حَتَّى يَضَعْنَ حَمْلَهُنَّ...﴾ (الطلاق: ٦)

Pregnancy and waiting period

... And those who are pregnant, their term is when they deliver their burden ... (65:4)

الحمل والعدة

﴿... وَأُولَاتِ الْأَحْمَالِ أَجَلُهُنَّ أَنْ يَضَعْنَ
حَمْلَهُنَّ...﴾ (الطلاق: ٤)

Pregnancy and breastfeeding

... His mother bore him with weariness and gave him birth with tediousness. And the bearing and the weaning of him is thirty months ... (46:15)

الحمل والرضاعة

﴿... حَمَلَتْهُ أُمُّهُ كُرْهًا وَوَضَعَتْهُ
كُرْهًا وَحَمَلُهُ وَفِصَالُهُ ثَلَاثُونَ
شَهْرًا...﴾ (الأحقاف: ١٥)

⁵⁸ This verse includes a difference of opinion in the recitation of the word *ann yaktumna* (to conceal) based on the reading of al Dūwri. See 'Umar and Makram, *Mu'jam* 1:174.

٥٨ يرد في هذه الآية إختلاف في القراءة للفظ أن يَكْتُمْنَ وفقا لقراءة الدوري (أنظر عمر ومكرم، المرجع السابق، مج ١، ص ١٧٤).

Breastfeeding

الرضاعة

Breastfeeding and marriage

... And (forbidden) your mothers who have suckled you, and your suckling sisters ... (4:23)

الرضاعة والنكاح

﴿... وَأُمَّهَاتِكُمُ اللَّائِي أَرْضَعْنَكُمْ وَأَخَوَاتِكُم مِّنَ الرُّضَاعَةِ...﴾ (النساء: ٢٣)

Breastfeeding and pregnancy

... His mother bears him in weakness upon weakness, and his weaning is in two years. (31:14)

الرضاعة والحمل

﴿... حَمَلَتْهُ أُمُّهُ وَهِنًا عَلٰى وَهِنٍ وَفَصَّالَهُ فِي عَامَيْنِ...﴾ (القمان: ١٤)

... His mother bore him with weariness and gave him birth with tediousness. And the bearing and the weaning of him is thirty months ... (46:15)

﴿... حَمَلَتْهُ أُمُّهُ كُرْهًا وَوَضَعَتْهُ كُرْهًا وَحَمَلُهُ وَفَصَّالَهُ ثَلَاثِينَ شَهْرًا...﴾ (الأحقاف: ١٥)

Breastfeeding and complete period

Mothers are to suckle their children two complete years, for whoever so desires to complete suckling ... (2:233)

الرضاعة وكامل المدة

﴿وَالْوَالِدَاتُ يُرْضِعْنَ أَوْلَادَهُنَّ حَوْلِينَ كَامِلِينَ لِمَن أَرَادَ أَن يُتِمَّ الرُّضَاعَةَ...﴾ (البقرة: ٢٣٣)

Breastfeeding and weaning

... But if they desire to wean the child through consent and consultation, then it is no sin on them ... (2:233)⁵⁹

الرضاعة والتراضي

﴿... فَلِإِن أَرَادَا فِصَالًا عَنِ تَرَاضٍ مِّنْهُمَا وَتَشَاوُرٍ فَلَا جُنَاحَ عَلَيْهِمَا...﴾ (البقرة: ٢٣٣)^{٥٩}

⁵⁹ This verse includes a difference of opinion in the recitation of the word *fiṣālan* (to wean the child) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 1:179.

٥٩ يرد في هذه الآية إختلاف في القراءة للفظ فِصَالًا وفقًا لقراءة ورش (أنظر عمر ومكرم، المرجع السابق، مج ١، ص ١٧٩).

Breastfeeding and maintenance

... And if they suckle for you, then pay them their wages, and consult one another in kindness ... (65:6)

الرضاعة والنفقة

﴿... فَإِنْ أَرْضَعْنَ لَكُمْ فَآتُوهُنَّ أُجُورَهُنَّ
وَاتَمِرُوا بَيْنَكُمْ بِمَعْرُوفٍ...﴾ (الطلاق: ٦)

Nursing**الحضاعة**

... But if you wish to seek nursing for your children then it is no guilt on you if you deliver what you have given with kindness ... (2:233)

﴿... وَإِنْ أَرَدْتُمْ أَنْ تَسْرِعُوا أَوْلَادَكُمْ
فَلَا جُنَاحَ عَلَيْكُمْ إِذَا سَلَّمْتُمْ مَا آتَيْتُمْ
بِالمَعْرُوفِ...﴾ (البقرة: ٢٣٣)

... And if they suckle for you, then pay them their wages, and consult one another in kindness. But if you differ then let another woman suckle for him. Let him who is affluent expend from his affluence. And let him whose provision has been straitened (by God) expend from what God has given him; for God charges no living soul except according to what He has bestowed upon it. Surely God shall make ease after hardship. (65:6-7)⁶⁰

﴿... فَإِنْ أَرْضَعْنَ لَكُمْ فَآتُوهُنَّ أُجُورَهُنَّ
وَاتَمِرُوا بَيْنَكُمْ بِمَعْرُوفٍ وَإِنْ تَعَاَسَرْتُمْ
فَسَرِّضْ لَهُ أُخْرَى، لِيُنْفِقَ ذُو سَعَةٍ مِنْ
سَعِيهِ وَمَنْ قُدِرَ عَلَيْهِ رِزْقُهُ فَلْيُنْفِقْ مِمَّا آتَاهُ
اللَّهُ لَا يُكَلِّفُ اللَّهُ نَفْسًا إِلَّا مَا آتَاهَا سَيَجْعَلُ
اللَّهُ بَعْدَ عُسْرٍ يُسْرًا﴾ (الطلاق: ٦-٧)^{٦٠}

⁶⁰ This verse includes a difference of opinion in the recitation of a word *ukhrā* (another woman) based on the reading of Warsh and Qālūn. See 'Umar and Makram, *Mu'jam* 7:169.

٦٠. يرد في هذه الآية اختلاف في القراءة للفظ أُخْرَى وفقاً لقراءة ورش وقالون (انظر عمر ومكرم، المرجع السابق، مج ٧، ص ١٦٩).

FACET 02
SUBFACET 0204

الوجه
الوجه الفرعي

Upbringing

التربية

Upbringing and religion

And (remember) when Abraham raised up the foundations of the House, together with Ismael: 'Our Lord, accept this from us. You, are the All-Hearing, the All-knowing. Our Lord, make us submissive to You, and of our progeny a submissive nation to You, and show us our rites, and relent toward us, for You are the Relenting, the Merciful.' (2:127-128)

When his Lord said to him, 'Surrender,' he said, 'I surrender to the Lord of the worlds.' And with this did Abraham bequeath his children, and Jacob: 'O my children, God has chosen for you the religion. So depart not this life unless you are Muslims (surrenderers to God).' (2:131-132)⁶¹

التربية والدين

﴿وَإِذْ يَرْفَعُ إِبْرَاهِيمُ الْقَوَاعِدَ مِنَ الْبَيْتِ وَإِسْمَاعِيلُ رَبَّنَا تَقَبَّلْ مِنَّا إِنَّكَ أَنْتَ السَّمِيعُ الْعَلِيمُ، رَبَّنَا وَاجْعَلْنَا مُسْلِمِينَ لَكَ وَمِنْ ذُرِّيَّتِنَا أُمَّةً مُسْلِمَةً لَكَ وَأَرْنَا مَنَاسِكَنَا وَتُبْ عَلَيْنَا إِنَّكَ أَنْتَ التَّوَّابُ الرَّحِيمُ﴾ (البقرة: ١٢٧-١٢٨)

﴿إِذْ قَالَ لَهُ رَبُّهُ أَسْلِمْ قَالَ أَسْلَمْتُ لِرَبِّ الْعَالَمِينَ، وَوَصَّى بِهَا إِبْرَاهِيمُ بَنِيهِ وَيَعْقُوبُ يَا بَنِيَّ إِنَّ اللَّهَ اصْطَفَى لَكُمُ الدِّينَ فَلَا تَتَوَكَّلْ إِلَّا وَآتَمُّ مُسْلِمُونَ﴾ (البقرة: ١٣١-١٣٢)^{٦١}

⁶¹ This verse includes a difference of opinion in the recitation of the words *waṣṣā* (bequeath) and *iṣṭafā* (has chosen) based on the reading of Warsh. See 'Umar and Mak-ram, *Mu'jam* 1:117.

٦١ يرد في هذه الآية إختلاف في القراءة للفظ وَوَصَّى ولفظ اصْطَفَى وفقا لقراءة ورش (أنظر عمر ومكرم، المرجع السابق، مج ١، ص ١١٧).

... And Noah called to his son who stood isolated, 'O my son embark with us and be not among the unbelievers.' (11:42)⁶²

﴿... وَنَادَى نُوحٌ ابْنَهُ وَكَانَ فِي مَعْزِلٍ
يَا بُنَيَّ ارْكَب مَعَنَا وَلَا تَكُن مَعَ
الْكَافِرِينَ﴾ (هود: ٤٢)^{٦٢}

And when Abraham said, 'My Lord, make this land safe, and turn me and my sons from worshipping the idols.' (14:35)

﴿وَإِذْ قَالَ إِبْرَاهِيمُ رَبِّ اجْعَلْ هَذَا
الْبَلَدَ آمِنًا وَاجْنُبْنِي وَبَنِيَّ أَنْ نَعْبُدَ
الْأَصْنَامَ﴾ (إبراهيم: ٣٥)

And when Luqmān said to his son, exhorting him, 'O my son, associate nothing with God, for surely imputing (other gods to God) is a great iniquity.' (31:13)

﴿وَإِذْ قَالَ لُقْمَانُ لِابْنِهِ وَهُوَ يُعِظُهُ
يَا بُنَيَّ لَا تَشْرِكْ بِاللَّهِ إِنَّ الشِّرْكَ لَظُلْمٌ
عَظِيمٌ﴾ (لقمان: ١٣)

'O my son, observe the prayer, and enjoin the good turn, and forbid abomination and persevere in whatever may befall you, for surely that is from firm resolution.' (31:17)

﴿يَا بُنَيَّ أَقِمِ الصَّلَاةَ وَأْمُرْ بِالْمَعْرُوفِ
وَانهَ عَنِ الْمُنْكَرِ وَاصْبِرْ عَلَى مَا أَصَابَكَ
إِنَّ ذَلِكَ مِنْ عَزْمِ الْأُمُورِ﴾ (لقمان: ١٧)

Upbringing and children's rights

... Their husbands have more right to restore them in such a state, if they so desire to reconcile. And they (women) have rights similar to their obligations in all equity ... (2:228)⁶³

التربية وحقوق الأبناء

﴿... وَبُعُولَتُهُنَّ أَحَقُّ بِرَدِّهِنَّ فِي ذَلِكَ إِنْ
أَرَادُوا إِصْلَاحًا وَلَهُنَّ مِثْلُ الَّذِي عَلَيْهِنَّ
بِالمَعْرُوفِ...﴾ (البقرة: ٢٢٨)^{٦٣}

⁶² This verse includes a difference of opinion in the recitation of the words *irkab ma'anā* (embark with us) and *al kāfirin* (the unbelievers) based on the readings of Warsh, al Dūwri, and Qālūn. See 'Umar and Makram, *Mu'jam* 3:113-14.

٦٢ يرد في هذه الآية اختلاف في القراءة للفظ *أرْكَب* معنًى ولفظ *الْكَافِرِينَ* وفقا لقراءة ورش والدوري (انظر عمر ومكرم، المرجع السابق، مج ٣، ص ١١٣-١١٤).

⁶³ This verse has the possibility of an abrogation being abrogated by verse 2:229-30. See Ibn al Bārīzī, *Nāsikh*, 26-27.

٦٣ تختمل هذه الآية إمكانية النسخ بالآيتين ٢٢٩-٢٣٠ من سورة ٢ (انظر ابن البارزي، المرجع السابق، ص ٢٦-٢٧).

No compulsion is there in religion, for rectitude is henceforth distinct from perversity ... (2:256)⁶⁴

﴿لَا إِكْرَاهَ فِي الدِّينِ قَدْ تَبَيَّنَ الرُّشْدُ مِنَ الْغَيِّ...﴾ (البقرة: ٢٥٦)^{٦٤}

And if you fear discord between the two, then send forth an arbiter from his folk and an arbiter from her folk, if they both desire amendment God will reconcile between them ... (4:35)

﴿وَإِنْ خِفْتُمْ شِقَاقَ بَيْنِهِمَا فَابْعَثُوا حَكَمًا مِنْ أَهْلِهِ وَحَكَمًا مِنْ أَهْلِهَا إِنْ يُرِيدَا إِصْلَاحًا يُوَفِّقِ اللَّهُ بَيْنَهُمَا...﴾ (النساء: ٣٥)

He said, 'O my son, do not narrate your vision to your brethren lest they should contrive against you some artifice. Truly Satan is a manifest foe of man.' (12:5)⁶⁵

﴿قَالَ يَا بُنَيَّ لَا تَقْصُصْ رُؤْيَاكَ عَلَى إِخْوَتِكَ فَيَكِيدُوا لَكَ كَيْدًا إِنَّ الشَّيْطَانَ لِلْإِنْسَانِ عَدُوٌّ مُبِينٌ﴾ (يوسف: ٥)^{٦٥}

Upbringing and parent's rights

And when Abraham said to his father Azar, 'Do you take idols for gods? I truly see you and your folk in blatant error.' (6:74)

التربية وحقوق الأباء
﴿وَإِذْ قَالَ إِبْرَاهِيمُ لِأَبِيهِ آزَرَ أَتَتَّخِذُ أَصْنَامًا آلِهَةً إِنِّي أُنسِي أَرَاكَ وَقَوْمَكَ فِي ضَلَالٍ مُبِينٍ﴾ (الأنعام: ٧٤)

And We have commanded on man concerning his parents ... (31:14)

﴿وَوَصَّيْنَا الْإِنْسَانَ بِوَالِدَيْهِ﴾ ... (لقمان: ١٤)

⁶⁴ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 44-45.

٦٤ هذه الآية يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ٤٤-٤٥).

⁶⁵ This verse includes a difference of opinion in the recitation of the word *ru'yāka* (your vision) based on the readings of Warsh and al Dūrī. See 'Umar and Makram, *Mu'jam* 3:148.

٦٥ يرد في هذه الآية اختلاف في القراءة للفظ رُؤْيَاكَ وفقا لقراءة ورش والدوري (أنظر عمر ومكرم، المرجع السابق، مج ٣، ص ١٤٨).

But if they endeavour with you to make you impute associates to Me, that of which you have no knowledge, then do not obey them; keep their company in this world in kindness, and follow the path of him who turns to Me (in penitence). To Me shall be your return, then I shall apprise you of what you were doing. (31:15)⁶⁶

﴿ وَإِنْ جَاهَدَاكَ عَلَىٰ أَنْ تُشْرِكَ بِي مَا لَيْسَ لَكَ بِهِ عِلْمٌ فَلَا تُطِعْهُمَا وَصَاحِبُهُمَا فِي الدُّنْيَا مَعْرُوفًا وَاتَّبِعْ سَبِيلَ مَنْ أَنَابَ إِلَيَّ ثُمَّ إِلَىٰ مَرْجِعِكُمْ فَأُنَبِّئُكُم بِمَا كُنتُمْ تَعْمَلُونَ ﴾ (القمان: ١٥)^{٦٦}

And We have commanded on man kindness toward his parents ... (46:15)

﴿ وَوَصَّيْنَا الْإِنْسَانَ بِوَالِدَيْهِ إِحْسَانًا ... ﴾ (الأحقاف: ١٥)

Upbringing and manners

He said, 'O my sons, enter not by one gate; enter by separate gates.' ... (12:67)

التربية والأخلاق
﴿ وَقَالَ يَا بَنِيَّ لَا تَدْخُلُوا مِن بَابٍ وَاحِدٍ وَادْخُلُوا مِن أَبْوَابٍ مُّتَفَرِّقَةٍ ... ﴾ (يوسف: ٨٧)

﴿ يَا بَنِيَّ اذْهَبُوا فَتَحَسَّنُوا مِن يَوْسُفَ وَأَخِيهِ ... ﴾ (يوسف: ٨٧)

O my sons, go in search of Joseph and his brother ... (12:87)

⁶⁶ This verse includes a difference of opinion in the recitation of the word *al dunyā* (this world) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 5:86.

٦٦ يرد في هذه الآية إختلاف في القراءة للفظ *الدُّنْيَا* وفقا لقراءة ورش (أنظر عمر ومكرم ، المرجع السابق ، مج ٥ ، ص ٨٦).

O you who believe, let those whom your right hands possess, and those of you who have not become pubescent, ask leave of you at three times: before the dawn prayer, and when you lay aside your raiment at midday, and after the night prayer. Three times of privacy for you. It is no sin for you, nor for them thereafter, when you go round attending one another. Thus God elucidates to you the signs, for God is Omniscient, Wise. And when the children among you reach puberty, let them then ask leave, as those before them asked ... (24:58-59)⁶⁷

﴿ يَا أَيُّهَا الَّذِينَ آمَنُوا لَيْسَ عَلَيْكُمْ جُنَاحٌ عَلَيْهِمْ أَنْ يَسْأَلُوا مِنْكُمْ لَمَّا لَمْ يَلْبَسُوا الْحُلُمَ مِنْكُمْ ثَلَاثَ مَرَّاتٍ مِنْ قَبْلِ صَلَاةِ الْفَجْرِ وَحِينَ تَصُومُونَ لِيَأْتِيَكُمُ مِنَ الظَّهِيرَةِ وَمِنْ بَعْدِ صَلَاةِ الْعِشَاءِ ثَلَاثَ عَوْرَاتٍ لَكُمْ لَيْسَ عَلَيْكُمْ وَلَا عَلَيْهِمْ جُنَاحٌ بَعْدَ ذَلِكَ مِنْكُمْ وَلَا يُغْنِي عَنْكُمْ كِتَابُ اللَّهِ ذَلِكَ يَبَيِّنُ اللَّهُ لَكُمْ الْآيَاتِ وَاللَّهُ عَلِيمٌ حَكِيمٌ، وَإِذَا بَلَغَ الْأَطْفَالُ مِنْكُمُ الْحُلُمَ فَلْيَسْأَلُوا كَمَا اسْتَأْذَنَ الَّذِينَ مِنْ قَبْلِهِمْ ... ﴾ (النور: ٥٨-٥٩) ٦٧

And turn not your cheek in scorn toward people, and walk not in the land struttingly, for God loves no one swaggering, boastful. And be midmost in your walk, and lower your voice, for indeed the most repulsive voice is the voice of asses. (31:18-19)

﴿ وَلَا تَصْغِرْ خَدَّكَ لِلنَّاسِ وَلَا تَمْشِ فِي الْأَرْضِ مَرَحًا إِنَّ اللَّهَ لَا يُحِبُّ كُلَّ مُخْتَالٍ فَخُورٍ، واقْصِدْ فِي مَشْيِكَ وَاغْضُضْ مِنْ صَوْتِكَ إِنَّ أَنْكَرَ الْأَصْوَاتِ لَصَوْتُ الْحَمِيرِ ﴾ (لقمان: ١٨-١٩)

And when he reached (the age of) working with him, he said, 'My son, I have seen in a dream that I should sacrifice you. Consider, what do you think?' He said, 'O my father, do what you are ordained; you shall find me, God willing, amongst the steadfast.' (37:102)⁶⁸

﴿ فَلَمَّا بَلَغَ مَعَهُ السَّعْيَ قَالَ يَا بُنَيَّ إِنِّي أَرَى فِي الْمَنَامِ أَنِّي أَذْبَحُكَ فَانظُرْ مَاذَا تَرَى قَالَ يَا أَبَتِ افْعَلْ مَا تُؤْمَرُ سَتَجِدُنِي إِنْ شَاءَ اللَّهُ مِنَ الصَّابِرِينَ ﴾ (الصافات: ١٠٢) ٦٨

⁶⁷ This verse includes a difference of opinion in the recitation of the word *li-yastadhnikum* (ask leave of you) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 4:267.

٦٧ يرد في هذه الآية إختلاف في القراءة للفظ *لَيْسَ عَلَيْكُمْ* وفقا لقراءة ورش (انظر عمر ومكرم ، المرجع السابق ، مج ١ ، ص ٢٦٧).

⁶⁸ This verse includes a difference of opinion in the recitation of the words *arā*

٦٨ يرد في هذه الآية إختلاف في القراءة للفظ

FACET 03
SUBFACET 0301

الوجه
الوجه الفرعي

Bequest

الوصية

Bequest and death

It is decreed for your that, when one of you approaches death, if he leaves wealth, he make a will bequeathing equitably to the parents and kinsmen (and kins-women). (That is) a duty on the godfearing. Yet, whoever changes it after he has heard it, the sin for it shall surely fall on those who change it. Verily, God is All-Hearing, All-Knowing. But who-ever fears deviation or sinful tendency from a testator and makes things right between them, no sin shall rest upon him ... (2:180-182)⁶⁹

Those of you who die and leave wives, (should leave) a testament for their wives bequeathing a provision for a year without expulsion. But if they go out, then there is no sin on you in what they do with themselves in fairness ... (2:240)⁷⁰

الوصية والموت

﴿كَبَّ عَلَيْكُمْ إِذَا حَضَرَ أَحَدَكُمُ الْمَوْتُ إِنْ تَرَكَ خَيْرًا الْوَصِيَّةُ لِلْأَدْرَبِينَ وَالْأَقْرَبِينَ بِالْمَعْرُوفِ حَقًّا عَلَى الْمُتَّقِينَ، فَمَنْ بَدَّلَهُ بَعْدَ مَا سَمِعَهُ فَإِنَّمَا إِثْمُهُ عَلَى الَّذِينَ يُبَدِّلُونَهُ إِنَّ اللَّهَ سَمِيعٌ عَلِيمٌ، فَمَنْ خَافَ مِنْ مَوْصٍ جَنَفًا أَوْ إِثْمًا فَأَصْلَحَ بَيْنَهُمْ فَلَا إِثْمَ عَلَيْهِ ...﴾ (البقرة: ١٨٠-١٨٢)^{٦٩}

﴿وَالَّذِينَ يُؤْتُونَ مِنْكُمْ وَيَذَرُونَ أَزْوَاجًا وَصِيَّةً لِأَزْوَاجِهِمْ مَتَاعًا إِلَى الْحَوْلِ غَيْرَ إِخْرَاجٍ فَإِنْ خَرَجْنَ فَلَا جُنَاحَ عَلَيْكُمْ فِي مَا فَعَلْنَ فِي أَنْفُسِهِنَّ مِنْ مَعْرُوفٍ ...﴾ (البقرة: ٢٤٠)^{٧٠}

(I have seen) and *tarā* (you think) based on the reading of Warsh. See 'Umar and Makram, *Mu'jam* 5:242.

⁶⁹ This verse has the possibility of an abrogation being abrogated by verse 4:11. See Ibn Du'amah, *al Nāsikh*, 35.

⁷⁰ This verse is related to an occasion(s) of revelation. See al Suyūfī, *al Itqān*, 43-44. It also has the possibility

أَرَى وَلِفِظِ تَرَى وَفَقَا لِقِرَاءَةِ وَرَش (أَنْظُرَ عَمْرٍ وَمَكْرَمِ، الْمَرْجِعِ السَّابِقِ، مَج ٥، ص ٢٤٢).

٦٩ تتحمل هذه الآية إمكانية النسخ بالآية من ١١ سورة ٤ (أنظر ابن دعامه، المرجع السابق، ص ٣٥).

٧٠ هذه الآية يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ٤٣-٤٤). كذلك تتحمل هذه الآية إمكانية النسخ بالآية ١٢

Bequest and testimony

O you who believe, let there be testimony between you when death comes to any one of you, at the bequeathing two men of fairness among you, or two others from another folk, if you are travelling in the land and the calamity of death befalls you. You shall let them both stay after the prayer, then they shall swear by God, if you are doubtful, 'We will not sell it for a price, even if it were a near kinsman, nor will we conceal the testimony of God, for then we would be among the sinful. But if it be found that both of them have committed a sin, then let two others take their place, from those against whom the two had sinfully testified. Then let those two swear by God: 'Our testimony is truer than their testimony; and if we transgress, then we will be among the iniquitous.' This is nearer to bearing testimony in its correct way; or they will fear that testimony will be borne after their testimony ... (5:106-108)

الوصية والشهادة

﴿يَا أَيُّهَا الَّذِينَ آمَنُوا شَهَادَةُ بَيْنَكُمْ إِذَا حَضَرَ أَحَدَكُمْ الْمَوْتُ حِينَ الْوَصِيَّةِ اثْنَانِ ذَوَا عَدْلٍ مِمَّنْكُمْ أَوْ آخَرَانِ مِنْ غَيْرِكُمْ إِنْ أَنتُمْ ضَرَبْتُمْ فِي الْأَرْضِ فَأَصَابَتْكُمْ مُصِيبَةُ الْمَوْتِ، تَحْبِسُوهُمَا مِنْ بَعْدِ الصَّلَاةِ فَيُقْسِمَانِ بِاللَّهِ إِنْ أَرْتِمَا وَلَا تَشْرِي بِهِ تَمَنَّا وَلَوْ كَانَ ذَا قُرْبَى وَلَا تَشْرِي بِهِ تَمَنَّا وَلَوْ كَانَ ذَا قُرْبَى وَلَا نَكْتُمُ شَهَادَةَ اللَّهِ إِنَّا إِذَا لَمِنَ الْأَيْمِينَ، فَمَنْ غُيِّرَ عَلَىٰ أَتْمَا اسْتَحَقَّا إِنَّمَا فَآخَرَانِ يَقُومَانِ مَقَامَهُمَا مِنَ الَّذِينَ اسْتَحَقَّ عَلَيْهِمُ الْأَوْلِيَانِ فَيُقْسِمَانِ بِاللَّهِ لَشَهَادَتُنَا أَحَقُّ مِنْ شَهَادَتِهِمَا وَمَا اعْتَدَيْنَا إِنَّا إِذَا لَمِنَ الظَّالِمِينَ، ذَلِكَ أَذْنَىٰ أَنْ يَأْتُوا بِالشَّهَادَةِ عَلَىٰ وَجْهَيْهَا أَوْ يَخَافُوا أَنْ تُرَدَّ أَيْمَانٌ بَعْدَ أَيْمَانِهِمْ وَاتَّقُوا اللَّهَ وَاسْمَعُوا وَاللَّهُ لَا يَهْدِي الْقَوْمَ الْفَاسِقِينَ﴾ (المائدة: ١٠٦-١٠٨)

of an abrogation being abrogated by verse 4:12. See Ibn Du'amah, *al Nāsikh*, 36.

من سورة ٤ (أنظر ابن دعامه ، المرجع السابق ، ص ٣٦).

Inheritance

الميراث

Inheritance and children

God commands you, concerning your children to the male the like of the portion of two females. And if there only be women above two, then they shall have two-thirds of what he leaves; but if she is only one, then she shall have one-half. (4:11)⁷¹

الميراث والأبناء

﴿يُوصِيكُمُ اللَّهُ فِي أَوْلَادِكُمُ لِلذَّكَرِ مِثْلُ حَظِّ الْأُنثَيَيْنِ فَإِن كُنَّ نِسَاءً فَوْقَ اثْنَتَيْنِ فَلَهُنَّ ثُلُثَا مَا تَرَكَ وَإِن كَانَتْ وَاحِدَةً فَلَهَا النِّصْفُ...﴾ (النساء: ١١)^{٧١}

Inheritance and parents

... And to each one of his parents one sixth of what he leaves if he has a son. But if he has no children and his parents inherit him, then one-third to his mother. But if he has brothers, then a sixth to his mother, after any will he may bequeath, or a debt ... (4:11)⁷²

الميراث والأبوان

﴿... وَالْأُيُوبِ لِكُلِّ وَاحِدٍ مِّنْهُمَا السُّدُسُ مِمَّا تَرَكَ إِنْ كَانَ لَهُ وَوَلَدٌ، فَإِن لَّمْ يَكُنْ لَهُ وَوَلَدٌ وَوَرِثَةُ آبَاؤُهُ فَلِأُمِّهِ الثُّلُثُ، فَإِن كَانَ لَهُ إِخْوَةٌ فَلِأُمِّهِ السُّدُسُ مِنْ بَعْدِ وَصِيَّةٍ يُوصِي بِهَا أَوْ دَيْنٍ...﴾ (النساء: ١١)^{٧٢}

Inheritance and husband

And you shall have half of what your wives leave, if they have no children. But if they have children, you shall only have a fourth of what they leave after a will they may bequeath or a debt ... (4:12)

الميراث والزوج

﴿وَلَكُمْ نِصْفُ مَا تَرَكَ أَزْوَاجُكُمْ إِنْ لَّمْ يَكُنْ لَهُنَّ وَوَلَدٌ فَإِن كَانَ لَهُنَّ وَوَلَدٌ فَلَكُمْ الرُّبْعُ مِمَّا تَرَكْنَ مِنْ بَعْدِ وَصِيَّةٍ يُوصِيْنَ بِهَا أَوْ دَيْنٍ...﴾ (النساء: ١٢)

⁷¹ This verse is related to an occasion(s) of revelation. See al Suyūfi, *al Itqān*, 68-69.

٧١ هذه الآية يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ص ٦٨-٦٩).

⁷² This verse is related to an occasion(s) of revelation. See al Suyūfi, *al Itqān*, 68-69.

٧٢ هذه الآية يصاحبها سبب نزول (أنظر السيوطي، المرجع السابق، ص ص ٦٨-٦٩).

Inheritance and wife

... And for them a fourth of what you leave, if you have no children. But if you have children then they shall have an eighth of what you leave after a will you may bequeath or debt ... (4:12)

الميراث والزوجة

﴿... وَلَهُنَّ الرُّبْعُ مِمَّا تَرَكْتُمْ إِنْ لَمْ يَكُنْ لَكُمْ وَكْدٌ، فَإِنْ كَانَ لَكُمْ وَكْدٌ فَلَهُنَّ الثَّمَنُ مِمَّا تَرَكْتُمْ مِنْ بَعْدِ وَصِيَّةٍ تُوصُونَ بِهَا أَوْ دَيْنٍ...﴾ (النساء: ١٢)

Inheritance and brothers/sisters

... And if a man or a woman have no heir, but have a uterine brother or sister, then to each of the two is the sixth. But if they are more than that, then they shall be equal shares in one-third after a will that may be bequeathed therewith, or a debt not injurious ... (4:12)

الميراث والأخوة/الأخوات

﴿... وَإِنْ كَانَ رَجُلٌ يُورَثُ كَلَالَةً أَوْ امْرَأَةٌ وَلَهُ أَخٌ أَوْ أُخْتٌ فَلِكُلِّ وَاحِدٍ مِنْهُمَا السُّدُسُ، فَإِنْ كَانُوا أَكْثَرَ مِنْ ذَلِكَ فَهُمْ شُرَكَاءُ فِي الثُّلُثِ مِنْ بَعْدِ وَصِيَّةٍ يُوصَى بِهَا أَوْ دَيْنٍ غَيْرِ مُضَارٍ...﴾ (النساء: ١٢)

They ask your verdict, say 'God gives you His verdict concerning the heir. If a man dies childless, but he has a sister, she receives a half of what he leaves, and he shall inherit her if she has no children. But if there be two sisters, then they shall have two-thirds of what he leaves. And if they are brothers and sisters, then to the male the share of two females ...' (4:176)⁷³

﴿يَسْأَلُونَكَ قُلُوبُ اللَّهِ يُعِينُكُمْ فِي الْكَلَالَةِ إِنْ امْرُؤٌ هَلَكَ لَيْسَ لَهُ وَكْدٌ وَلَهُ أُخْتٌ فَلَهَا نِصْفُ مَا تَرَكَ وَهُوَ يَرِثُهَا إِنْ لَمْ يَكُنْ لَهَا وَكْدٌ فَإِنْ كَانَتَا اثْنَتَيْنِ فَلَهُمَا الثُّلُثَانِ مِمَّا تَرَكَ وَإِنْ كَانُوا إِخْوَةً رِجَالًا وَنِسَاءً فَلِلذَّكَرِ مِثْلُ حَظِّ الْأُنثَى...﴾ (النساء: ١٧٦)^{٧٣}

⁷³ This verse includes a difference of opinion in the recitation of the word *wa huwa* (and he) based on the reading of Qālūn. See 'Umar and Makram, *Mu'jam* 2:185. It is also related to an occasion(s) of revelation. See al Suyūfī, *al Itqā*, 95-96.

٧٣ يرد في هذه الآية إختلاف في القراءة للفظ وهو وفقا لقراءة وقالون (أنظر عمر ومكرم، المرجع السابق، مج ٢، ص ١٨٥). كما يصاحبها سبب نزول (أنظر السيوطي المرجع السابق، ص ٩٥-٩٦).

Inheritance and kinsmen

And when the kinsmen, and the orphans and the indigent attend the division then provide them some of it, and speak to them with kindly words. (4:8)⁷⁴

الميراث والأقارب

﴿وَإِذَا حَضَرَ الْقِسْمَةَ أُولُو الْقُرْبَىٰ وَالْيَتَامَىٰ
وَالْمَسَاكِينُ فَارْزُقُوهُمْ مِنْهُ وَقُولُوا لَهُمْ قَوْلًا
مَعْرُوفًا﴾ (النساء: ٨)^{٧٤}

⁷⁴ This verse has the possibility of an abrogation being abrogated by verse 4:11. See Ibn Du'amah, *al Nāsikh*, 38-39.

٧٤ تحتمل هذه الآية إمكانية النسخ بالآية ١١ من سورة ٤ (أنظر ابن دعامه ، المرجع السابق ، ص ٣٨-٣٩).

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About This Book

The feeling that Islamic literature deserves and requires an Islamic classification scheme has been met with a widespread dissatisfaction among information scientists in the Muslim world. However, indexing classical Qur'anic exegeses and Ḥadīth collections still requires an alphabetical operation list of subject headings of both the Qur'anic and Ḥadīth texts.

This book is based on an investigation of the terminology in the Qur'anic text for the purpose of designing a retrieval system. It makes use of conceptual verses and words as partial examples for the required task. These examples are used to test the factors affecting the design at both the documentary and the computation levels. At the documentary level, these examples are used to examine the effects of Qur'anic terminology on commentators and to see how it affects the performance of the retrieval system. Also it examines the characteristics of the Qur'anic vocabulary, against the problems known to be encountered in constructing an efficient information retrieval system. On the computation level, these examples are used to examine the possibility of the Qur'an, in its original form, being processed by the computer. As a result, the study offers guidelines and recommendations with two examples for the natural and social sciences, as a model for constructing a retrieval system for the Qur'anic text.

