



## Examining Islamic Perspectives in Medical Imaging Literature: A Study Involving Scopus Indexed Journals

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### Abstract

This paper examines the incidence and themes of articles published in SCOPUS indexed journals that are related to Medical Imaging or Radiography and are written from Islamic perspectives. An initial search was conducted by using selected Islamic keywords to identify articles that have those words either in the title, abstract or keywords list. Only 6 articles out of a possible 341 000 were found; and the "Islamic perspectives" addressed in those articles were not those of the authors, but pertained rather to Muslims as subjects of the authors' studies. This paper postulates a number of possible factors contributing to the low number of articles written from Islamic perspectives. Among them are: (1) Western domination of the publication of articles in journals; and (2) the inability of Muslim Medical Imaging professionals to integrate Islamic perspectives into their scientific writings. Recommendations to improve the situation are made in this paper. This study could act as a catalyst for Muslim Medical Imaging professionals to reassess objectively their personal, professional and religious roles and functions in the international discourse on their specialised field of knowledge.

**Keywords:** Radiography, Scientific Writing, Journal articles, profession, professional

### Abstrak

Penulisan ini mengkaji tahap dan tema perspektif Islam yang merupakan bukti dalam Jurnal Indeks Scopus berkaitan dengan Pengimejan Perubatan atau Radiografi. Penggunaan teks keislaman dan artikel yang mempunyai teks dalam tajuk, abstrak atau kata kunci telah dikenalpasti. Hanya 6 artikel daripada kemungkinan 341 000, telah dijumpai. Perspektif Islam merujuk "Islam" sebagai subjek kajian. Kajian ini menunjukkan faktor-faktor penyumbang kepada bilangan artikel yang rendah berkaitan dengan perspektif Islam. Antaranya termasuk penguasaan Barat terhadap penerbitan artikel dalam jurnal dan ketidakupayaan golongan profesional Pengimejan Perubatan Islam untuk mengintegrasikan perspektif Islam ke dalam penulisan saintifik mereka. Cadangan untuk memperbaiki keadaan tersebut telah dibuat. Kajian ini boleh menjadi pemangkin kepada golongan profesional Muslim Pengimejan Perubatan untuk menilai semula peranan peribadi, profesionalisma dan pegangan agama mereka secara objektif.

**Kata kunci:** Radiografi, Penulisan Saintifik, Artikel, Jurnal, profesion, profesionalisma

### Introduction

There are mixed perceptions towards Islam and the Muslims especially post September 11th, 2001. It is vital that any negative perceptions towards Islam be corrected in order to enhance the call to Islam, as championed by Prophet Muhammad (PBUH). Allah, the Al-Mighty invokes upon Muslims to assume the responsibility to call others into the folds of truth

when He exclaims in the Holy Qur'an, "*Invite (all) to the Way of thy Lord with wisdom and beautiful preaching; and argue with them in ways that are best and most gracious: for thy Lord knoweth best, who have strayed from His Path, and who receive guidance.*" (The Qur'an 16:125) (Abdullah Yusuf Ali 2009). This call is further strengthened by Chapter Ar-Rad where Allah says " *Whether We show you part of what We have promised them or cause you to die, your duty is only to convey (the Message) and on Us is the reckoning*" (The Qur'an 13:40.) (Abdullah Yusuf Ali 2009). Ibnu Kathir pointed out that in this verse Allah reminded Prophet Muhammad (PBUH) of

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the duty to convey Allah's Message, and by doing so, he (Prophet Muhammad PBUH) will have fulfilled the mission that was ordained upon him (Shaikh Safiur Rahman Al-Mubarakpuri 2003). The obligation of conveying the message was extended to Muslims by Prophet Muhammad (PBUH) that was aptly reinforced when he was reported to have said in his Final Sermon in a hadith narrated by 'Abdullah bin 'Amr bin Al-As: *"The Prophet said, "Convey from me even an Ayah of the Qur'an: relate traditions from Bani Israel, and there is no restriction on that.; but he who deliberately forges a lie against me let him have his abode in hell"*(Al-Bukhari) (Al-Imam Abu Zakaria Yahya bin Sharaf An-Nawawi Ad-Dimashqi 1999).

The references above underlines the duty of Muslims, at all levels of society, to spread the teachings of Islam, using methods and avenues that are conducive to achieve those objectives. Hence, it is important for Muslim professionals to recognise that as people with the intellect, we should be able to identify all avenues and seize every opportunity to spread the message. This serves to relate to the purpose of our existence on earth; to be Vicegerents on earth as stated in the Holy Quran *"O David! We did indeed make thee a vicegerent on earth: so judge thou between men in truth (and justice): Nor follow thou the lusts (of thy heart), for they will mislead thee from the Path of Allah: for those who wander astray from the Path of Allah, is a Penalty Grievous, for that they forget the Day of Account."*(The Qur'an 38:26) (Abdullah Yusuf Ali 2009).

Medical Imaging or Radiography is a sub-specialisation in the field of medicine. It is concerned with the generation of images of the human anatomy to detect, locate and characterise medical abnormalities. Besides using medical imaging modalities, Medical Imaging professionals are also involved in the technicalities, as well as social interactions with patients and other healthcare practitioners. The amount of knowledge with respect to this field is fast expanding, giving opportunities to Muslim Medical Imaging professionals to realise their religious obligations outlined above.

Scientific writings or journal articles are now widely accepted as a preferable and effective way in the dissemination of knowledge in a particular field of specialisation. These publications represent information that can either be philosophical, conceptual or factual, including those that are empirically derived from research undertakings. The knowledge and evidences that they present serve to broaden or enhance the understanding of professionals and intellectuals within the professional field. A more proactive goal, these publications are

directed towards creating an influence on the beliefs, values and practice of others at the macro as well as the micro components to those respective professional areas.

It is evident that the use of the internet and online databases has created a major impact on the publishing scenario. Although there are still publications that are produced using hardcopies, the present concept is towards the online publications of journals with each journal to having it's own website. Online searches for archived articles can be made in a more convenient manner. Although some journals require subscriptions and may not offer full-text access online, the advantage of being able to know what are available through the table of contents and abstracts can assist the professionals to determine the materials that are of interest to them.

The advantages of having these journals online are in terms of accessibility, user friendliness and reliability that can dictate the readership of the articles. By optimising the use of search engines and online databases, professionals now have the pleasure of browsing through journals of choice, identifying and selecting materials that are appropriate for their individual uses at that particular time. In terms of accessibility, it is to be appreciated that the knowledge can be made available at one's own convenient time and place. Disseminating and receiving information are now limitless and borderless. This ease of access is translated into using this powerful tool of communication to incite, influence, instruct, indoctrinate, reform, re-evaluate or sustain values or practices.

It would be worthwhile to examine how well Muslim professionals in Medical Imaging, have used their professional status to fulfil the obligations that Allah and His Messenger has imposed upon us, to call others to embrace and practice the beauty of Islam. It is also important to study how well Muslim professionals have been able to utilise the might of the pen, through their scientific writings, to introduce and enhance the understanding concerning Islam to their fellow professionals in the field. Moreover, it would be beneficial to relate the current status of Islamic perspectives that are being addressed in these scientific literatures. Finally, it would be advantageous to study the effectiveness of the Muslim professionals in capitalising the use of the internet, taking into consideration the readership that is available, to disseminate what Islam enjoins and what it forbids.

Hence the purpose of this paper was to present the extent and effectiveness of disseminating Islamic perspectives in the journals indexed in SCIVERSE SCOPUS, primarily in Medical Imaging or

Radiography. In the evidence of Islamic inputs, the various subthemes that are associated with those journal articles that projects Islamic perspectives will be presented. Overall, the research documented the number of articles related to Medical Imaging, indexed in Scopus that actually address Islamic perspectives. From the articles, the various themes or subthemes associated with those Islamic perspectives were determined. The study also studied for indications where journals restrict articles anything religious in nature. It discussed the impact of the results on the obligation in projecting or promoting Islamic Worldview through the use of the journals related to Medical Imaging. Finally, based on the results, recommendations were made to enhance the depiction of Islamic perspectives in the Medical Imaging scientific literature.

### **Literature review**

Laird et al (2007) reported a study that examined the promotion of Islam as evident in publications indexed in Medline. It was believed to be among the few studies that examined the frequency of Islamic perspectives in databases, in this case Medline. The study included articles indexed in Medline between 1966 until August 2005. The researchers found that 2,342 articles had either the words "Islam", "Muslim", "Muslims", "Moslem" in their titles or abstracts. An increasing trend in the number of articles with those keywords in the title or abstract, were noted with time. As a general comparison, as of 30<sup>th</sup> September 2005, the total number of citations in Medline stood at 13,476,222 (Medline 2013).

Evidently, readers are influenced by the title and abstract of an article before deciding whether to read the article or otherwise. An observation by Trevelyan et al (2007) indicated that ninety-nine per cent of readers will read only the title and abstract of an article with the majority reading only the title. This underlines the importance of having the right choice of words in the title and abstract to draw the interest of readers to explore an article further. For online searches using search engines, the use of relevant keywords in the title, abstract or article keywords could increase the likelihood of the article being displayed higher up in the result list. Vidmar (2012) suggested that failure to find relevant materials related to the keywords used, after the first 20 to 50 sites, would indicate another search strategy to be adopted.

The use of databases provides access to a number of journals at any particular time. Using the search engine, a researcher can have access to journal titles

that address similar areas of interest, effectively reducing the time for the researcher to look up for the relevant materials. Some databases owned by publishers permit access to only publications it publishes.

Journal ranking is an approach to rate each journal denoting its relative place, influence or impact it commands in the area of specialisation. Each journal indexed in Scopus has a particular Impact Factor that simply translates into the importance of the journal in terms of the number of citations of its articles that it has generated. The number of articles published in Scopus indexed journals by academicians is also used as an indicator for the University Ranking exercise. It can be deduced that the higher the Impact Factor, the higher the readership the journal commands and the higher influence it will have on its readers. These criteria indirectly indicate the types of readers and the readership to the journal and hence the intensity of influence it is going to have in changing the mindset, behaviours and values of the readers.

Muslims have a long tradition in contributing to knowledge, particularly during the times of the Abbasid Caliphate onwards. However, those contributions have been diminished by major events such as the conquest of the Islamic Knowledge centres of Cordoba by Queen Isabella of Spain and Baghdad by the Mongols. Furthermore, the systematic latinisation of Islamic contributions in the fields of Medicine, Physics, Technology, Mathematics, Chemistry and Astronomy, had somehow been successful to blanket those contributions, especially to fellow Muslims of the present. There are still Muslims who are oblivious to the fact that Avicenna was actually Ibn Sina, Al-Rhazes was Muhammad ibn Zakariya Razi, and Albucasis was Abu al-Qasim al-Zahrawi, with their respective contributions in Medicine. Al-Hazen was Ibn Al-Haiytham who had created a great impact in the study of Optics. However, the tradition of Muslim scholarly contributions has somewhat diminished with the downfall of the various Caliphates in Muslim civilisation. An important point worth to be highlighted is Hehmeyer and Khan (2007) disputed the misconception that the contributions of these Muslim scholars were merely transmissions of Greek Science and the works of scholars of the Renaissance.

### **Methodology**

The study was carried out by identifying eleven (11) keywords associated to Islam. They included "Islam", "Islamic", "Tawhid", "Tawhidic", "Muslim", "Moslem", "Quranic", "Koran", "Islamic

Table 1: Details of articles

Islamic Keyword	Details of article	Notes
Islam	Hodgson, K. A practising faith—Islam <i>Radiography today</i> Volume 55, Issue 627, August 1989, Page 63	The word “Islam” in the title. No abstract available
Muslim	Nambiar, P., Ibrahim, N., Tandjung, Y.R.M., Shanmuhasuntharam, P. Susuks (charm needles) in the craniofacial region <i>Oral Radiology</i> Volume 24, Issue 1, June 2008, Pages 10-15	The word “Muslim” appears in the abstract. Muslim women as part of the subjects for the study. Published by Springer Japan.
	Ni RL, He GR, Liu WY, Xing Y, Zhao Y, Pan CX: Evaluation of incidence of coronary myocardial bridge in the Uyghur and Han peoples with 64-slice CT <i>Chinese Journal of Medical Imaging Technology</i> Volume 26, Issue 3, March 2010, Pages 480-483	The word “Muslim” appears in the abstract. Muslim Chinese as subjects for the study.
	Sharma A, Chibb S, Puri S, Sharma A, Mishra P.K: Calavariar tuberculosis with direct intracranial extension - Imaging findings: <i>Indian Journal of Radiology and Imaging</i> Volume 15, Issue 3, August 2005, Pages 343-345	The word “Muslim” appears in the abstract. Involves a Muslim as subject for the case report.
	Pamecha C, Patel J.G., Patel L.N., Patel P.R. Aneurysmal bone cyst of clavicle <i>Indian Journal of Radiology and Imaging</i> Volume 14, Issue 2, May 2004, Pages 179-180	The word “Muslim” appears in the abstract. Involves a Muslim as subject for the case report.
Moslem	Borochowitz Z., Berant M., Kristal H Spondylometaphyseal dysplasia: Further heterogeneity. <i>Skeletal Radiology</i> Volume 17, Issue 3, 1988, Pages 181-186	The word “Moslem” appears in the abstract. Involves an Arabic - Moslem as subject for the case report.

Worldview”, “Islamic Perspective” and “Islamic Perspectives”. These keywords were used to identify articles with those keywords either in the “title” or “abstract” or “article keywords”. Keywords that were related to authors’ name or country of origin were excluded from the data. The researchers decided to look for the keywords in either the title or abstract or article keywords based on the assumption that keywords in these sections will ensure more significant “hits” in online searches. It was also postulated that articles where those keywords appear in the article text will be displayed further down the “hits” menu. This effort could be seen in relation to an observation that reported ninety-nine per cent of readers will read only the title and abstract of an article, with the majority reading only the title as outlined above.

Scopus was accessed via the SciVerse interface at <http://www.scopus.com/home.url>. Using the “Document Search” window, a keyword, for example Islam, was typed into the “Search for” section. The “Article Title, Abstract, Keywords” was chosen from the drop-down menu. The “Data Range” was set at “All Years” to “Present”. The “Document type” was selected at “ALL”. All four “Subject Areas” were selected. Applying the “Search” button revealed a new window “Document results”. This listed the

number and detail of articles that contained the Islamic keyword concerned.

Next, the “Source Title” pane was accessed. This listed all the journal titles associated with the articles identified above. By clicking the “View more” followed by the “Sort on” button, a drop-down menu permitted the researchers to view the journals in individual alphabetical order. Based on the alphabetically listed journals, the researcher then selected the journals that were related to Medical Imaging or Radiography. These included the journal titles with any of these words; “Radiography”, “Radiology”, “Radiation”, “X-ray”, “Medical Imaging”, “Imaging”, “Neuroimaging”, “Ultrasound”, “Magnetic Resonance Imaging” and “Nuclear Medicine”. The choices were indicated by highlighting the adjacent boxes. The “Limit to” tab was used to display the articles from the selected journals. The result then showed the articles’ publication details. Attempts were made to retrieve the abstract of the article to study for the Islamic perspectives or Islamic themes that it addressed. The details of these articles were recorded for discussion. The process of identifying the journal titles was repeated for subsequent alphabetical list using the “Sort on” button. The whole process was repeated for each individual keyword. “Non-active” journals identified by Scopus were excluded from the study.

**Table 2:** The comparison between the study by Laird, de Marrais and Barnes and the present study.

	<b>Study by Laird et al (2007).</b>	<b>Present study</b>
Database	Medline	Scopus (including 100 per cent Medline coverage)
Year of study	2006	2012
Fields / Scope	All fields of Medicine	Medical Imaging only
Number of journals or publications included in database	As of September 30 <sup>th</sup> 2005, 4,928 journals were indexed for MEDLINE(11)	Scopus reported it offers 20,500 journal titles from 5,000 publishers worldwide with a total of 49 million records, 78% with abstracts, including 100 per cent Medline coverage. ( <a href="http://www.info.sciverse.com/scopus">http://www.info.sciverse.com/scopus</a> )
Articles dated	Limited to those indexed from 1966 – August 2005	All as far back to 1823 ( <a href="http://files.sciverse.com/documents/pdf/ContentCoverageGuide-jan-2013.pdf">http://files.sciverse.com/documents/pdf/ContentCoverageGuide-jan-2013.pdf</a> )
Keywords	Islam”, “Muslim”, “Muslims”, “Moslem” (4 keywords)	“Islam”, “Islamic”, “Tawhid”, “Tawhidic”, “Muslim”, “Moslem”, “Quranic”, “Koran”, “Islamic Worldview”, “Islamic Perspective” and “Islamic Perspectives” (11 keywords)
Presence of keywords	Title or abstract	Title or abstract or article keywords
Number of articles with Islamic themes / perspectives	2342	6
Estimated number of articles considered for the study	As of September 30 <sup>th</sup> 2005, the total number of citations stood at 13,476,222. (Medline: Detailed Indexing Statistics: 1965-2011)	More than 341,000
Themes covered by the Islamic perspectives	Five Pillars of Islam, Other religious practices, laws and ethics, history of medicine, public health etc	The term “Muslims” relates to Muslim individuals as subjects of the study.

The authors also viewed the “Instruction to authors” or “Guide to authors” section of the identified journals to look for clauses that indicate the individual journal’s stand on articles with religious perspectives.

## Results

A total of 132 active journals in Scopus with titles related to Medical Imaging were identified. The total number of articles indexed in Scopus from these journals was 341,217. The study revealed that there were eight (8) articles indexed in Scopus that contains any one of the eleven selected keywords that relate to in either in the title, abstract or article keyword. However, two articles were excluded as the keyword “Islamic” in their abstracts were related to the name of a country. The remaining articles are given in Table 1.

To facilitate for some meaningful discussions pertaining to the results, facts of the current study are

presented against the study by Laird et al (2007). They are as given in Table 2.

## Discussion

It can be expected that the number of articles retrieved with the identified keywords be reduced in this study, for Medical Imaging is just a sub-speciality within the bigger field of Medicine. Furthermore, the field is rather new compared to other sub-disciplines, owing to the fact that x-rays were only discovered in 1895. Earlier publications pertaining to Medical Imaging could have been incorporated in journals related to Medicine. But, with at least 132 journals that are related to medical imaging, as identified in the study, it can be appreciated that there are vast opportunities to publish articles related to the field of specialisation.

However, the number of articles that depict Islamic perspectives can be considered as insignificant; a mere six (6) articles from a possibility of more than

341,000. It can then be argued that in both studies, the number of articles with Islamic related keywords could be classified as insignificant. Compared to the study by Laird et al (2007), the use of eleven (11) keywords in this study, which is thought to give a wider coverage concerning Islam, could not unearth more articles that cover the different Islamic perspectives possible. The present study highlighted a notable area of concern where the Islamic perspective covered in the articles for Medical Imaging dwells around Muslims as mere subjects of those studies. A wider coverage of Islamic perspectives was observed for the study by Laird et al (2007). This finding should become a catalyst for consideration for Muslim Medical Imaging professionals to contemplate in the future.

**Both studies give rise to several questions and postulations.**

**1. Does the result suggest failure of Muslim professionals in Medical Imaging?**

Both studies did not identify the number of Muslim contributors to the overall total of the articles. The names of the authors cannot be used as indicators of their faith. Therefore, it would be unfair to suggest that Muslim professionals in Medical Imaging have failed to contribute to publish research findings or articles that contain elements of Islamic perspective. Furthermore, they could have incorporated Islamic perspectives within their professional articles in journals not listed in Scopus. However, the impact that those journals carry will be relatively insignificant since journals listed under Scopus will have a certain level of influence on the readership.

The reduced number of Islamic perspectives in Medical Imaging literature can also be attributed to the number of Muslim professionals in the field. Predominantly, the field of Medical Imaging is rather new compared to Medicine and Nursing. With the main development and advancement in Medical Imaging has been from the West, much of the influence in research and report writings are from the very same group of people who adopted secularisation in their daily life. The over dependence on foundation knowledge in the Medical Imaging based on Western literature, and the secular influence that these literature carry does not equip the Muslim practitioners with the insight to integrate Muslim perspectives in their professional area. Prospects for revival may be possible since Medical Imaging education is now at doctoral level and the number of Muslims pursuing their studies in the field beyond undergraduate level is on the rise.

**2. What are the implications of the results on the Muslim Medical Imaging professional?**

The small number of articles with the Islamic keywords in the title, abstract or article keywords should be used by Muslim Medical Imaging professionals to re-examine their position in aligning Islamic perspectives to their profession and professional status. While there could be Muslims who had imbued Islamic perspectives in the text of their articles, a paradigm shift in depicting those Islamic keywords in either in the title, abstract or article keywords would be a welcomed effort. This will guide the Muslim professionals in their personal as well as collective capacities to effectively align elements of their practice, profession and professionalism with respect to the religion. The need to identify, plan, implement and sustain possible initiatives to address the current void of Islamic perspectives in the articles thus has to be made.

**3. Could there be restrictions to publish anything religious in nature?**

The authors found no clauses within the journals' "Instruction to authors" or "Guide to authors" or similar sections that indicate restrictions to submit articles that contain religious perspectives. It can be established that hardly any of these journals indicate reservation to publish materials containing religious perspectives. However, journals tend to highlight their emphasis on publishing articles that relate to the scientific nature of the area of specialisation. This essentially means that the focus is towards publishing materials that addresses the scientific, clinical as well as the educational dimensions within the field of specialisation. It can be postulated that the journals give peer-reviewers or editors the full prerogative to recommend any particular article to be published.

By highlighting the nature of the publications and the possible prerogative given to the editors, it can also be inferred that there exist the privilege of the journals to not publish materials that contain religious matters. This hidden or latent restrains actually protects the journals from being seen as biased against religion. Based on good faith, those hidden restrains on religious aspects could be applied for all religions and not only to Islam. It would be worthy to note that efforts, whether "latent" or otherwise, to deter or discourage integration of religious aspects in articles, under the pretext of academia or otherwise, can be concluded as another secularisation approach. This is merely an extension of the systematic segregation of religion targeted at the intellectual professionals, limiting their role to mere discussions within the framework of their professional sphere. Muslim professionals should critically evaluate this particular state of affairs. It is to be realised that if such situation persists, questions about their contribution to call, as

well as to remind, others to Islam remains to be answered.

However on a positive note, there are evidences to suggest that certain publishers, such as Springer through SpringerLink, which is included in Scopus, do publish articles with Islamic perspectives. Evidences also show that some of those keywords can be found in the text of some publications. An effort worth mentioning is a result in the form of a chapter of book published by Springer and reviewed by Nimsky and Fahlbusch (2008) in American Journal of Neuroradiology. It discusses Islamic, Jewish, Buddhism and Shintoism viewpoints on the ethics of new technologies in neurosurgery. Part of the chapter concentrated on interviews with Islamic theologians covering principles of free will and personal responsibility. While neurosurgery might not be within the domains of medical imaging, this finding has its significance with respect to the presence of Islamic perspectives being discussed in certain publications. To consolidate the above finding, a study by Hogan (2009) examined ethical issues in radiology based on perspectives derived from the Christian tradition. Aspects involving the dignity of the person, social justice, the individual as embodied spirit and the importance of the common good were discussed by the author. It would be beneficial if comparisons from the Islamic Worldview and the Divine revelations be made to the aspects highlighted.

An important impact of the above results is the presence of religious, including Islamic, perspectives in journal articles, at least in the text. Thus, there have been instances where, within a certain level of acceptance, Islamic perspectives can be imbued in the articles. However, it would be advantageous if the types, scope or level of Islamic perspectives that are permitted by the journals be identified. The determination of a "friendly" journal is thereby indicated. The onus now on Muslim professionals is to infuse Islamic perspectives in their scientific writing and identify journals that are "friendly" in publishing articles that discuss elements pertaining to Islam.

#### **4. Will it still be worthwhile to publish literature that is devoid of Islamic Perspectives?**

Noting that scientific writings are effective avenues to disseminate Islam to fellow professionals, Muslim professionals could be at the crossroads. On one side, the scientific writings could be the pre-requisites for professional development in the form of career advancements and other forms of recognition. To have scientific writings being published in certain high impact journals will fit nicely into this agenda. A

mismatch then exist; not having to be published and not known to outside world, or having to publish in a journal at the expense of omitting the Islamic perspective. Some would eventually succumb to this condition, lest the article will not be published. As a matter of preference or priority, the Muslim writer succumbs to the norm, maintaining the status quo and opening avenues to trade off priorities for worldly gains to that of the Hereafter. Hence, it might be appropriate for Muslim professionals to ask themselves whether "will it still be worthwhile to publish something that is devoid of Islamic Perspectives, just to enable the article to be published in high impact journals while contributing nothing towards the aspirations of the religion and just fulfilling another secular agenda?" Or have we fallen into the abyss of segregating ourselves from religious obligations?

The time has come for Muslim professionals to challenge the status quo. Allah declares *"For each (such person) there are (angels) in succession, before and behind him: They guard him by command of Allah. Allah does not change a people's lot unless they change what is in their hearts. But when (once) Allah willeth a people's punishment, there can be no turning it back, nor will they find, besides Him, any to protect"* (The Qur'an 13:11) (Abdullah Yusuf Ali 2009). Hence, if we are still contributing to the current system then there will not be much change to be expected. It is to be reminded that Prophet Muhammad (PBUH) was reported to have written to Head of States, not knowing how they will receive the Message. Prophet Muhammad (PBUH) had nothing to lose in writing those letters. The same approach can be adopted by the Muslim professionals in integrating Islamic perspectives in their articles prior to submission. Should the articles be accepted then it relates to how Najashi accepted the letter from the Prophet. If rejected, then it is akin to Kisra who rejected the letter.

#### **5. Realising the obstacles**

It cannot be denied that there could be Muslim Medical Imaging practitioners who are not able or comfortable to relate or discuss their writings in relation to Islamic perspectives. This could be attributed to lack of the necessary religious background, support or even the knowledge to integrate Islamic perspectives. The ability to apply subtleness in the integration of Islamic inputs in their scientific writings needs to be inculcated to reduce the probability of the submission to the rejected by the editors. Continuous Professional Development (CPD) avenues that address specifically the art of subtle

integration should be organised. Appreciating articles from the Internet that contain Islamic perspectives is also a way to learn how the various Islamic perspectives are outlined and discussed.

## 6. Where do we go from here?

First and foremost, we need to reinforce our role to accomplish the task of Vicegerency on earth. Let us be reminded that this forms the main purpose of Man's presence on earth in which Allah the Al-Mighty exclaims in Surah Al-Baqarah *"Behold, thy Lord said to the angels: 'I will create a vicegerent on earth.' They said: 'Wilt Thou place therein one who will make mischief therein and shed blood? - whilst we do celebrate Thy praises and glorify Thy holy (name)?'" He said: "I know what ye know not."* (The Qur'an 2:30). Among others the Vicegerency calls man not to associate partners with Allah, enjoining good and forbidding evil, uphold justice and acquire noble values and virtues. These are consolidated in the Islamic or Tawhidic Worldview. Following the footsteps of the messengers of Allah, the Muslim individual is expected to internalise these values.

Secondly, the Muslim Medical Imaging practitioner needs to continuously enjoin what is good and refraining what is not and to do justice on earth. This should be seen in totality, within and outside the profession. Various verses in the Holy Qur'an highlight these virtues. They include in Surah- Al-Imran *"Let there arise out of you a band of people inviting to all that is good, enjoining what is right, and forbidding what is wrong: They are the ones to attain felicity."* (The Qur'an 3:104), followed by Surah- Al-Imran *"Ye are the best of peoples, evolved for mankind, enjoining what is right, forbidding what is wrong, and believing in Allah. If only the People of the Book had faith, it were best for them: among them are some who have faith, but most of them are perverted transgressors."* (The Qur'an 3:110). The messages in the earlier verses are further enhanced by Surah At-Taubah where Allah exclaims, *"The Believers, men and women, are protectors one of another: they enjoin what is just, and forbid what is evil: they observe regular prayers, practise regular charity, and obey Allah and His Messenger. On them will Allah pour His mercy: for Allah is Exalted in power, Wise."* (The Qur'an 9:71)

Thirdly, it has to be borne in the mind of a Muslim professional that his daily routine besides submitting to the concepts of valuing or preserving life and bringing comfort to all as outlined by the Sha'riah, there is an added responsibility. He is hereby reminded to call others into the fold of Tawhid and the essence of Islam. The virtue and responsibility of reminding others are mentioned in the Holy Qur'an in

Surah Al-Ala: Verse 9, *"Therefore give admonition in case the admonition profits (the hearer)"* (The Qur'an 87:9) and Surah Al-Anaam, *"On their account no responsibility falls on the righteous, but (their duty) is to remind them, that they may (learn to) fear Allah."* (The Qur'an 6:69) Furthermore, the existence of a hadith narrated by 'Abdullah bin 'Amr bin Al-'As (May Allah be pleased with them), presented earlier, highlights further the obligation to remind others. What can be interpreted from the Hadith is the obligation that the Prophet has put upon us to convey his teachings to assume the duties of da'wah (calling others to the religion).

The Muslim is expected to identify, create, associate and optimise all avenues to call others to the path of Allah. The Medical Imaging practitioner can fully benefit the professional and personal interactions, and scientific writings to spread the word of Allah to peers, other healthcare practitioners, patients and the general public. Actions to call, enhance and remind others are made with the intention of achieving prosperity on earth and in the Hereafter. The act of reminding was justifiably presented by Dr Abduljalil Sajid (2003) who quoted Surah Al-Hashr: *"And be ye not like those who forgot Allah; and He made them forget their own souls! Such are the rebellious transgressors!"* (The Qur'an 59:19). He acknowledged the effect of Secularism has in destroying the transcendence of all moral values and the disintegration of individual and corporate personalities. He further coined the verse to the eventuality of "those who forget God eventually forget themselves".

It is to be appreciated that calling others to the religion does not necessarily be interpreted in terms of success rate but to initiate and sustain the efforts will be of primary concerns. We should not be too concerned whether the efforts are fruitful or otherwise, since that is the prerogative of Allah. What is more important is to answer "Have we done enough to call others back into the folds of Islam? Or we have yet to take the first step as a Muslim individual to promote, inform, enhance Islamic beliefs and values to our fellow professionals, irrespective whether they are Muslims or yet to be Muslims." The importance in recognising all possible means to facilitate in achieving the above objectives cannot be denied.

It can be expected that there are still others who would not like to see efforts to spread the beauty of Islam through professional writings to be made readily available. The time has come that we take control of our destiny in the spirit of fulfilling the concept of Vicegerency. Muslim Medical Imaging professionals need to weigh our options objectively. Working as a group we can formulate a strategic



roadmap, outlining short-term and long-term goals. In terms of short-term objectives, Muslims professionals are to continue to submit articles under the present arrangement but with Islamic perspectives imbued in them. It would be advantageous if the “friendly” journals or publishers are identified to reduce the likelihood of those articles being rejected. The long-term objective lies in the primary need in identifying the possibilities to dictate our own standards in publishing. This is to ensure that Islamic perspectives can be freely, yet effectively imbued in articles to be published.

In order to facilitate for the long-term objectives, we need to work with or submit articles to established journals that are “Islamic based” for example, “The International Medical Journal Malaysia” (IMJM). This is an open-access journal that is universally and freely accessible via the Internet and is already indexed in Scopus. Accessibility and readership, the plus factors, in these types of journals are already secured and should be used to outmost benefit. Alternatively, the Journal of the Islamic Medical Association of North America (JIMA) that periodically publish articles related to Islamic Perspectives could be resorted to study on the integration methodology as well possibility of having the articles being published accordingly. It is felt that Muslims should not create too many journals of the same area of specialisation as it will dilute the efforts. Efforts should be intensified towards identifying avenues where the above can be easily accessible by the masses, paving opportunities for a better understanding of Islam among the Muslims as well as yet to be Muslims. The need to identify alternatives and distancing ourselves from standards set and imposed upon us by others could re-establish the Muslim identity that had been eroded since the falls of the knowledge capitals of Baghdad and Cordoba. The glories of the Ottoman Caliphate should not be forgotten, but revived in the present day Virtual environment.

Based on the concept of Khalifah, Muslims need to strive to establish and extend the concept by establishing a major database for Islamic publications. This database will cater for articles that have Islamic perspectives prominently imbued in them, irrespective of the major content of the article. Muslims need to work collectively in this aspect, eliminating territorial and racial dominances. The database serves to provide a convergence of Human Sciences and Islamic Revealed Knowledge that can also be appreciated by the non Muslims as well. Acting as a repository for all Islamic Scientific writings, the database could be formulated along the lines of Scopus whereby all

“Islamic journals” can be indexed in it. This could be a powerful platform for Muslim professionals to disseminate professional research findings imbued with the Islamic inputs, thus promoting the Islamic Worldview.

The setting up of this database can mark the revival of Islamic contribution in human sciences and Islamic perspectives, reducing the problems with high rejection possibilities and constrains in accessibility. This will augment the initiatives to enhance and conceptualise efforts to promote Islamic perspectives in future scientific writing. The database will also have its own “Islamic impact factor” for the Islamic perspectives. It is felt that it is essential to champion this concept among the members of the Organisation of Islamic Countries (OIC) where relatively the number of Muslim Medical Practitioners is increasing. An approach to delegate responsibilities between the countries can be adopted, each country concentrating on one area of specialisation but contributing to a single database. Setting up of a secretariat to oversee the processes would be advantageous. Not to be seen as trying to isolate from others, efforts should be made to invite participation from established databases.

In the true spirit of knowledge, the database should adopt the Open Access as opposed to subscription requirements that limits accessibility. There should not be any association with material gains by any party, including no charges to be imposed to have the materials to be published. Publications will solely be on merit. However for the reviewers, it would be ideal if the concept of Waqf or charity to a fixed fund be initiated to address the honorarium for this group of professionals.

#### **Proposed integration of Islamic perspectives into the scientific writings**

The authors wish to propose the following methods to integrate Islamic perspectives into the Medical Imaging literature to complement the above discussions:

##### **A. Direct method**

This approach is directed to inform readers of the Islamic content that it intends to deliver from within the title, abstract or “article keywords” itself. Themes such as “Islamic perspectives”, “Islamic approach”, “Islamic concept”, “Islamic Worldview”, and “Islamic Jurisprudence” will denote such message. Alternatively, other keywords such as “Muslim”, “Qur’an” and “Hadith” as well as “Muslim Civilisation” or “Islamic theology” will suggest to readers of the subject that is going to be highlighted.

The direct method could become a catalyst for readers to be interested in reading on highly specific areas as mentioned in the title, abstract or “article keywords”.

### **B. Subtle method**

In this method, the Islamic inputs are conspicuously imbued within the text itself and the Islamic keywords used are not evident either in the title, abstract or the “keywords” section of the article as opposed to the direct method above. This approach might be useful to discuss on topics that relates to medical imaging procedures or techniques. A short paragraph somewhere within the text that outlines the Islamic perspectives relevant to the main discussion may serve the integration purpose, without overshadowing the core deliberations being presented. However, the disadvantage of this method will be the article might not be favourably placed on the “hits” list.

Finally, the authors wish to propose the following sources of Islamic perspectives that can be imbued in the Medical Imaging scientific writings. They include:

- Islamic / Tawhidic Worldview
- Basic concepts in Islam and Islamic Faith
- Islamic revealed knowledge : Qur'an and Hadith
- Consensus by Islamic scholars (ijma')
- Maqasid (objectives) and Qawa'id (principles) Al- Sha'riah
- Islamic Jurisprudence (Fiqh)
- Lives of the Prophets, the Companions etc
- Muslim History and Civilisation
- Contribution of Islamic scholars in the various fields of Human Knowledge.
- Thoughts of present day Islamic scholars
- Islamic Medicine

### **Limitation of the Study**

To be fair, there could be keywords related to Islam that were used in the text of the articles related to Medical Imaging indexed in Scopus. However, this reflects the insignificant role of those keywords in depicting Islamic perspectives within the articles for which they appear. This would dilute the essence of the perspectives that it carries, for if one were to search the article online, the article might only appear much later in the “hits” list. A limitation of using the specific keywords to identify the journal titles and titles of articles above is it eliminates other publications that might be a part of Medical Imaging. The researchers came across two particular articles that highlight Islamic perspectives in dealing with technological advancements and ethical challenges in neuroimaging by Al-Delaimy (2012) and Moosa (2012). This is attributed to the fact that the word

“Neuroimaging” in the journal title was not among the words identified to relate to Medical Imaging. However, the issues that these two articles highlighted are relevant to the Medical Imaging fraternity and efforts taken by those authors can be replicated.

### **Conclusion**

It is to be appreciated that scientific writing has its dual role in contributing in human sciences as well as propagating the objectives and principles of Islam, enhancing Islamic values and other Islamic perspectives. This is to relate to the obligation of the Muslim Medical Imaging professional to champion the essence of Islam in both within and outside his field of specialisation. Based on the results, the low number of the articles that depict Islamic perspectives leaves a lot to be answered. Evidently, the utilisation of the virtual readership through the internet, and the effectiveness of the Muslim Medical Imaging professionals in using the scientific writing as tools to disseminate the teachings of Islam to fellow professionals, have yet to be fully realised. Furthermore, the present reference of using Muslims, merely, as subjects of the studies does not reflect the intensity of Islamic perspectives that can be benefitted in actual terms. The need to enhance and conceptualise efforts to promote Islamic perspectives in future scientific writing has also been presented. There might be arguments that justify the need not to integrate Islamic inputs at the expense of not being able to have the work published by journals. It is time for Muslims to free themselves from this constrain that actually is not a loss in actual terms. Through the development of a roadmap to address to the issues with publications, a change could materialise. Having set up our own standards in adhering to the need to infuse those relevant Islamic inputs, all efforts should then be intensified towards identifying avenues where the above can be easily accessible by the masses. Hopefully, all these initiatives will pave opportunities for a better understanding of Islam among the Muslims, as well as yet to be Muslims.

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