

Integration of Scientific Knowledge into Islamic Juridical Work: The Search for a Unified Legislative Framework

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Abstract

Technological advancement in the field of medicine and its allied sciences continues to unfold new questions for juridical response from the contemporary jurists. In consequence, in the recent past a great deal of juridical opinions (*fatawa*), at the behest of both individual jurists and official bodies, have piled up. However, a reflective survey of the existing literature reveals that when it comes to reconciling the scientific findings with the purport of textual imperatives, the jurists by and large go bipolar, namely, either accept them all in sundry or reject them in totality. This state of affairs, among other medico-ethical implications, tends to have far-reaching implications for Muslim families particularly if they want to make a choice between such contrasting positions. To put things in true perspective, this study proposes to take the law of abortion as a case study with the purpose of identifying appropriate Islamic juridical frameworks by which the juristic divide on the issue in question could be synchronized.

Keywords: scientific, juridical, Islamic legislation, integration, framework

Abstrak

Kemajuan teknologi dalam bidang perubatan dan sains kesihatan terus menimbulkan persoalan baharu dalam ruang lingkup perundangan untuk para juri masa kini. Akibatnya, kebelakangan ini terdapat banyak keputusan juri berbentuk fatwa dikeluarkan atas arahan juri individu dan badan rasmi. Berdasarkan tinjauan rambang daripada teks yang ada menunjukkan para juri cenderung bertindak sama ada menerima ataupun menolak keseluruhannya. Keadaan ini menimbulkan implikasi pada etika perubatan dan memberi kesan mendalam kepada keluarga Muslim terutamanya bagi mereka yang ingin membuat pilihan antara dua kedudukan yang bertentangan. Bagi mendapatkan perspektif yang sebenar, kajian ini bercadang memilih undang-undang pengguguran bayi sebagai kes kajian dengan tujuan mengenal pasti kerangka perundangan Islam yang sesuai untuk menyelaraskan perbezaan pandangan juri terhadap isu tersebut.

Kata kunci: saintifik, perundangan, undang-undang Islam, penyatuan, kerangka

Conceptual Framework

Muslims derive their rules of conduct, values and principles from the Qur`an and the Sunnah. But since the teachings of the Qur`an and the Sunnah are embodied in Arabic language, overwhelming

*Corresponding author: Sayed Sikandar Shah Haneef, Department of Fiqh and Usul al-Fiqh, Kulliyyah of Islamic Reveal Knowledge and Human Sciences, International Islamic University Malaysia (IIUM), P.O. Box 10, 50728 Kuala Lumpur, MALAYSIA E-mail: zahids1@hotmail.com majority of Muslims are bound to follow their interpretations and contextualization from the experts in the field. In this process, difference of interpretations among the legal scholars is a legislative reality for variety of reasons topmost among them are three: linguistic nature of the legal texts; contextualizing them to social context; and extending them to unprecedented situations. Accordingly, on the positive side, legal pluralismⁱ as such has enriched Muslim cultures and Muslim law which accommodates a variety of legal perspectives on subsidiary issues especially in the areas other than acts of devotion.

Consequently, in this scenario, bio-medical issues are no exceptions. Nevertheless, formulation of legal rules with the participation of clinicians to help the legal experts with technical knowledge poses difficulty to common folk in instances where there are two or more contrasting legal positionsⁱⁱ on the To ethicians, this itself raises the point. epistemological question of legal pluralism(a kind of relativism) verses absolute normative moral principles, such as inviolability of human life on questions such as abortion, euthanasia, absoluteness sexual propriety vis-à-vis reproductive of technology, principle of heterosexuality in marriage verses transsexuality, to name a few.

Accordingly, in view of the far reaching implications of such concerns, I believe that we need to examine the existing legal verdicts (fatwas) on bioscientific issues against the backdrop of ethico-legal paradigm of the Shari`ah so as to synchronize the various views for the purpose of resolving moral dilemma of ordinary Muslims and identifying the paradigmatic non-negotiable Islamic principles which can neither be surrendered to juridical pragmatism nor to scientific imperatives. The reason is that to give legislative force to the ethical judgment of `right` and `wrong`, Islamic law mandates both the jurists and legislatures to legislate only within the framework of the divinely ordained principles of legality as enshrined in the Our`an and the authentic Prophetic Sunnah. Consequently, legal-scientific pragmatism alone cannot sustain legal judegment in Islamic value system unlike the western legal system as revelation is not a source of law, i.e., their law is anchored in three-tier sources of case law(both in common law and civil law), statutory law and administrative law.ⁱⁱⁱTo that end, the study, first, presents the position of Islam on science in general; second, it delineates a critical summary of Muslim views on abortion with the idea of identifying Islamic framework for integration between science and juristic legacy on the issue.

Islam and science

The essence of science lies on the episteme of rational analytical conclusion derived from experimental method of studying material being. As such scientific finding being a matter of extra-revelation propositions fits within the moral paradigm of Hippocratic tradition^{iv} which *apriori* is

not derived from revelation though some of its ethos are consistent with moral principles sanctioned by the world's major divine religions. In other words, reason-based legal-ethical systems generally do not feel much constraint to embrace scientific opinions as compared to Islamic law according to overwhelming majority of Muslim scholars except the Mu'tazilah. In the pages the follow we present the general position of Muslims scholars on the findings of empirical sciences.

Science as a source of knowledge

Science as defined by UNESCO stands for : "every known fact which is subject to sensory perception and experimentation"^v by and large is regarded as one-sided and materialistic by Muslims in the sense that it negates the divine based sciences known to Muslims from the dawn of Islamic history. As such its integration within legal methodology or its use has become suspects by some famous Muslim thinkers but embraced by others. Among the protagonists, for instance, al-Afghani maintains that modern science transcends ...religions although at the application level it needs the guidance from cultural values.^{vi}

Skeptics like Al-Attas, on the other hand, devalues its incumbency by advancing the view that the Western science by presenting the enchanted secular views of nature thus, foiling its cosmic meaning and disconnecting its symbolic relation with God. Hence it is a limited knowledge although not false.^{vii} Joining him, Nasr maligns the desacralization and profanation of nature by science which amounts to nothing but conjecturing and constructing theories "which are functional and utilitarian in purpose and practice with no regard to the symbolic aspect in theoretical representation of nature."viii Similarly al-Alwani diagnoses the handicap of modern science in neglecting to combine the reading of created universe with that of written revelation. Such an approach to him, positively epitomizes the purposelessness of creation which the Islamic alternative remedies.^{ix}

To support his view, al-Alwani argues that such a monolithic notion of science has no legitimacy in Islamic tradition as is evident from categorization of sciences (*`ilm*) by noted Muslim thinkers from premodern era till now. For instance, al-Ghazali divided science into legal and non-legal, the latter of which subsumes knowledge based on sense perceptions. Ibn Taymiyyah placed natural sciences under the category of rational knowledge. Al-Farabi and Ibn Sina configured natural sciences and mathematics under the category of theoretical sciences. To Ibn Khaldun, science encompasses two kinds of knowledge, wisdom- based sciences and revelation-based type.^x

Among the contemporary thinkers, Sabri echoes the same view by saying that sciences can be perception-based or revelation-based. However, complete certainty is achieved only by the second type but not by first category because humans' perceptions of reality can be certain only up to the level of their understanding of things.^{xi} This is also implied by Nasr when he said that ultimate reality is only attained through religious intuition inspired by the Divine.^{xii}

One may observe that in spite of the fact that premodernity scholars accord explicit recognition to various genre of sciences in the sense of *`ilm*(p. *`ulum*) and some among them even were celebrated scientists on their own right, such as al-Farabi and Ibn Sina, some leading contemporary thinkers, however, seem to cast doubt on modern science as a body of Godless knowledge which should be distrusted and conjectured. Such a notion would shut down the jurists when it comes to integrating them into medical *fiqh* and proves fatalistic.

Nevertheless, the flexibility of Islamic law lies on the fact that there are always balanced views, which provide a case for the integration between manmade and revelation-based norms construction and postulates. One such trend was expressed by Hoodbhoy when he implied that unlike some claims, there is no such dictum as "Islam verses science" in the Islamic tradition. Similar to al-Afghani, he sees science as a universal phenomenon but cautions us saying that "it does not imply that science is a replacement for religion and it does not constitute a code of morality. Science provides a unique framework and a paradigm for calculating and quantifying: but it knows nothing about justice, beauty or feeling."xiii Accordingly, to him it is the skewed outlook about science, which has led to its abuse by the West. Embracing science and technology in the case of Muslims, does not entail changing their religion but adapting their interpretation of it to contemporary needs.xiv

All in all, one may conclude that beyond the philosophical polemics over Islamicity of science, scientific knowledge as an end product of inductive methods of observation, hypothesis and experiment^{xv} is capable of unveiling hidden mysteries of the

created book which Muslims cannot afford not to integrate with their readings of the revealed book. However, I believe that such an integration needs to be attempted within the epistemological value framework and ethical parameters of the revealed laws. This approach has the double advantage of value guided use of science in juridical work as inspired by revelation but not constrained by inherited conjectural cultural traditions which are inadequate to solve complex legal medical concerns of Muslims in the age of globalization.

Abortion as a case for integration

Termination of pregnancies by human interference (induced abortion) has been known to humans ever since the dawn of human civilization. However, in our time not only its frequency has escalated beyond imagination^{xvi} but also its forms and manifestations have multiplied especially on account of human manipulation of pregnancy through biotechnology. For instance, the fetus surgically or via hormonal inducement is removed if found to have been malformed or is infected with AIDS or they are destroyed when they are produced in the lab through In Vitro Fertilization and so on.

Abortion (*ijhad*) or *isqat al-haml*(terminating a pregnancy)^{xvii} in Islamic law, as such ^{xviii}has been a topic of juristic discourse among the Muslim jurists since the formative stage of Islamic law. However, medical definition of human life together with medical technological means to terminate it has reignited its juridical articulation and debate once again in our contemporary time.^{xix} One of the issues in this debate is the relevance and the extent of incorporating scientific findings in evaluating its juridical determination. The existing studies, by and large, seem to have taken it for granted that such integration does not pose any challenge. This paper, therefore, delineates the juristic paradigm on abortion, followed by a brief outline of the scientific fetal development model with the intention of pinpointing to the framework for integration between scientific and *fiqhi* paradigm on the issue.

The juristic fetal development postulates

A cursory reading of the juristic works on abortion indicates a paradox in the Islamic position at the moral plane in juxtaposition to its stand on technical or legal province. For instance, every discussion of the discourse on the subject in question takes off by a deliberation on sanctity of human life^{xx}, then it proceeds to describe embryological picture of human fetal development based on the Qur`an and the Sunnah, followed by the juridical delineation of the law on criminal liability of those offending against a pregnancy.

At the level of morality, it is contended that all forms of abortions are immoral and illegal as they involve aggression on inviolable human life which starts from the moment of union between sperm and ovum. This is aptly categorical from many provisions of the Qur`an on prohibition of infanticide including: "Kill not your children for fear of want. We shall provide sustenance for them as well as for you. Verily the killing of them is a great sin."^{xxi};"Kill not your children on a plea of want. We will provide sustenance for you and for them. Come not near shameful deeds whether open or secret. Take not life, which God has made sacred except by way of justice and law. Thus He commands you that you may learn wisdom."xxii ; "The pledge of the believing women that they shall not kill their children."xxiii; "And when the female infant who was buried alive is asked for what crime she was killed?"xxiv

The above verses condemn the crime of killing a baby after birth, which by extension covers the sanctity of the life of a human baby even prior to its birth. However, these verses do not specifically spell out the details of culpability for terminating pregnancies which have been inferred from the embryological delineation of fetal growth as established by two passages of the Our`an and reaffirmed by the Sunnah. For instance, the Our`an provides:: "And indeed We created man from a quintessence of clay. Then we placed him as a small quantity of liquid (nutfah) in a safe lodging firmly established. Then we have fashioned the nutfah into something which hangs (alaqah). Then We made *`alagah* into a chewed lump of flesh (*mudghah*). And We made the *mudgha* into bones, and clothed the bones with flesh. And then We brought it forth as another creation. So blessed be God, the best to create"xxv Another passage reiterates the same embryonic stages except that after the stage of read:...,and *mudghah*(chewed-like-lump) yet ghayr incomplete(*mukhallaqah*) which differentiates.... xxvi

The Sunnah affirmed this by stating that, according to one version: "Verily, the creation of each one of you is brought together in his mother's belly for 40 days. Then it remains there as a leech-like structure(`alaqah) for *a similar [period*]. Then it

remains there as a lump of chewed flesh(mudghah) for a similar [period]. Then an angel is sent to determine four things for it: sustenance, term of life, whether miserable or lucky."^{xxvii} According to another narration of the same: "The creation of each one of you is composed in the mother's womb in forty days, in that (creation) it turns into such a clot, then in that turns into such a *mudgha* and then Allah sends an angel and orders him to write four things, i.e., his provision, his age, and whether he will be of the wretched or the blessed (in the Hereafter). Then the soul is breathed into him...."^{xxviii}

The new dimension in the *hadith* is the mentioning of the angles involvement in the process which according to reading of the majority of the jurists marks the infusion of soul into the fetus when its 120 days old according to the first version and occurrence of the same event without specifying the timeline in the second version. This second version is in accord with another *hadith* which states the coming of angel takes place when the fetus is forty or forty nine days old. "When the embryo is forty or forty two days, God send an angel to give it shape and craft his senses."^{xxxix} Or according to another report "One of yours creation in the mother's womb is completed after forty days."^{xxx}

Accordingly, this became a bone of contention among the jurists^{xxxi} as to which is the time when the angel breathes the spirit into the fetus. Noted jurists like Ibn Abidin, al-Qarafi, al-Nawawi and al-Qurtubi, by claiming unanimity of opinions among the jurists, advance the view that it occurs after 120 days.^{xxxii} Others nevertheless dissented by upholding the connotation of the second *hadith*, i.e., it happens after 40 or 42 days from the date of conception.^{xxxiii}

In analyzing the above, al-Qaradaghi maintains that both the conflicting *hadith* relied upon by the two groups are not explicit as far as the time for ensoulment is concerned. But the fact of the matter is that as far as the embryologic development of the fetus is concerned, the *hadith* by the second group is in harmony with the scientific finding today.^{xxxiv} However, the ensoulment stage is a matter of belief which science has no jurisdiction to determine. Science concludes that human physical anatomy is featured up to forty days or so. To him, unlike the polemics among the classical jurists, the two *ahadith* imply that the human shape is completed after 40 days but the ensoulment takes place after 120 days.^{xxxv} Joining him, Al-Zindani also maintained that the first *hadith* which is reported by both al-Bukahri and Muslim is not explicit on the time which marks the formation of bones, flesh and ensoulment for two reasons: first, only the version reported by Muslim mentions the phrase "*thumma yakun fi dhalika*",i.e., after forty days it runs into flesh and then after the same period it is covered by bones and then after the same duration it is ensouled; second, linguistically "*thumma yakun fi dhalika*" refers to the collection of one's creation in the womb rather than the occurrence of changes in the fetus within a certain time frame. Otherwise to state that bone structure is formed after 120 or 90 days will be unscientific.^{xxxvi}

The ramification of the above controversy, therefore is that some classical jurists like Ibn Qudamah, Ibn Hazm, al-Shawkani held that a fetus prior to ensoulment is like lifeless matters or blood, and its termination does not amount to taking a human life away and when aborted will not be given funeral prayer. xxxvii This represents the view of the vast majority of Hanabilah, Hanafiyyah and Shafi`iyyah in contrasts to the position by Malikiyyah and some renowned jurists belonging to other three schools, such as al-Ghazali, Ibn Qayyim, Ibn Abidin.^{xxxviii} For instance, Ibn Qayyim held that an embryo has the life of growth and nourishment like a plant before the soul enters into its body. Then it has the sense of perception and volition (which constitute the basis of human life).^{xxxix} More pro-life was Imam al-Ghazali who held that the more a fetus grows, the graver will be the degree of culpability in terminating it from the moment of conception till birth.^{xl}

To add to the puzzle, the pre-ensoulment proabortion jurists had no choice but to acquiesce that unlawful destruction of fetus before 120 days is still a crime where one tenth of the *diyah* will be due(*ghurrah*).^{xli}

Capturing this messy situation, al-Bar, held that the classical jurists` distinction between animated fetus (ensouled) and inanimate fetus though valid in law raises serious implications in bioethics. It apparently does not only allow voluntary interruption of pregnancy or therapeutic abortion but also sanctions the use of embryonic stem cells for research, gametes and embryos for artificial reproduction.^{xlii}

However, if we go by position adopted by al-Ghazali and other insightful jurists, the dilemma will be overcome as to him every new inanimate has the potential /destined by God to be animated at a later time. This legal stand seems to represent contemporary jurists' position^{xliii} who in their ruling of aborting debilitating and defective fetuses maintained that although people can choose from among the divergent views of the classical jurists and may opt for abortion *during the first 120 days* of pregnancy but the rule of prudence dictates its impermissibility unless its continued existence endangers the mother's life, for instance.

The scientific paradigm

From a pure embryological perspective, life in the womb undergoes four stages each earmarking a distinct phases of biological development: 1) a zygote- fertilized male and female eggs residing in women's fallopian tubes for a duration of three days; 2) a blastocyst – when the zygote moves into the uterus and attaches itself into its walls; 3) an embryowhen it evolves into a differentiated entity, after two weeks from the conception; 4) a fetus – a full structured rudimentary human entity from eight weeks of pregnancy till birth. ^{xliv}

In detail, embryological evolution of fetus confirms with the allegorical six phases mentioned in the Qur`an as al-Ghazal explained: nutfat amshaj is a zygote (a mixture of male fluid chromosomes and female ovum chromosomes) which then divides and after 5 hrs moves from Fallopian Tube towards the uterus; Alaqa starts on the 15th day and ends on the 23rd or 24th day and hangs to the lining of the uterus(endometrium) by the umbilical blastocyst/embryo; cord(implantation)called mudghah a marked transformation within two days from `alaqah to this stage(24-26 days after conception) the appearance of somites on the 24th or 25th day on top of the embryonic scapula, and then gradually their appearance at the embryo's buttock and on the 28th day the embryo is formed of several bulges, with grooves in between, thus giving the embryo the image of a chewed gum(rolls in the cavity) some organs begin to appear, such as the eves, tongue and the lips. The mudgha stage ends at the 6^{th} week (i.e. 40 days); bones structuring (`izam) signifies the appearance of the skeleton which gives the embryo the human image from the beginning of the 7th week; the muscle formation starts at the end of the 7th week and ends at the end of the 8th week(marking the end of embryology stage which will be followed by the fetus stage; and lastly, developing another creature(nash`at khalqan akhar) which marks the end of the 8th week during which

the pace of development accelerates :the sizes of head, body and limbs start to be balanced and regular between the 9^{th} and 12^{th} week. At the 10^{th} week, external genital organs appear; the weight of the embryo increases noticeably. Voluntary and involuntary muscles develop, and voluntary movements start in this stage. In the 16th week (112

days) the fetus can grasp with his hands, kick, or even somersault. From 22th to 26^{th} weeks is viable (can live outside the womb).^{xlv}

The pictorial description of fetus gestational development according to the Qur`an and its approximate evolvement^{xlvi} in embryology:



Figure 1: Mixed male and female eggs (nutfat amshaj) Hundreds of sperms, only one can fertilize the ovum.



Figure 2: The zygote divides within hours of the process of fertilization



Figure 3: (a) Leech-like clot (alaqah) – 23rd days; (b) Chewed-like lump of flesh (*mudghah*) – 28 days; (c) bone formation stage (izam); and (d) clothing with flesh (lahm) – 42 days



Figure 4: (a) developing another creation(insha` khalq akhar) 48^{th} days; (b) 56^{th} days; (c) The 12^{th} week(around 84^{th} days) the embryonic shape appears with sizes of head, body and limbs well formed, and fingers distinguished (*Nash'ah* 'formation of another creature'); and (d) The 16^{th} week (112 days), 13 cm tall embryo. eyebrows, eyelashes and fine hair appear. The foetus can grasp with his hands, kick, or even somersault. here the unborn baby is sucking his thumb

Psycho-physiologically, it undergoes distinct phases of growth as follows:

Day 1:

Fertilization: all human chromosomes are present; unique human life begins.

Day 6:

Embryo begins implantation in the uterus.

Day 22:

Heart begins to beat with the child's own blood, often a different type than the mothers'.

Week 3:

By the end of third week the child's backbone spinal column and nervous system are forming. The liver, kidneys and intestines begin to take shape.

Week 4:

By the end of week four the child is ten thousand times larger than the fertilized egg.

Week 5:

Eyes, legs, and hands begin to develop.

Week 6:

Brain waves are detectable; mouth and lips are present; fingernails are forming.

Week 7:

Eyelids, and toes form, nose distinct. The baby is kicking and swimming.

Week 8:

Every organ is in place, bones begin to replace cartilage, and fingerprints begin to form. By the 8^{th} week the baby can begin to hear.

Weeks 9, 10:

Teeth begin to form, fingernails develop. The baby can turn his head, and frown. The baby can hiccup.

Weeks 10, 11:

The baby can "breathe" amniotic fluid and urinate. Week 11 the baby can grasp objects placed in its hand; all organ systems are functioning. The baby has a skeletal structure, nerves, and circulation.

Week 12:

The baby has all of the parts necessary to experience pain, including nerves, spinal cord, and.Vocal cords are complete. The baby can suck its thumb.

Week 14:

At this age, the heart pumps several quarts of blood through the body every day.

Week 15:

The baby has an adult's taste buds.

Month 4:

Bone Marrow is now beginning to form. The heart is pumping 25 quarts of blood a day. By the end of

month 4 the baby will be 8-10 inches in length and will weigh up to half a pound.

Week 17:

The baby can have dream (REM) sleep.

Week 19:

Babies can routinely be saved at 21 to 22 weeks after fertilization, and sometimes they can be saved even younger.

Week 20:

The earliest stage at which Partial birth abortions are performed. At 20 weeks the baby recognizes its' mothers voice.

Months 5, 6:

The baby practices breathing by inhaling amniotic fluid into its developing lungs. The baby will grasp at the umbilical cord when it feels it. Most mothers feel an increase in movement, kicking, and hiccups from the baby. Oil and sweat glands are now functioning. The baby is now twelve inches long or more, and weighs up to one and a half pounds.

Months 7, 9:

Eyeteeth are present. The baby opens and closes his eyes. The baby is using four of the five senses (vision, hearing, taste, and touch.) He knows the difference between waking and sleeping, and can relate to the moods of the mother. The baby's skin begins to thicken, and a layer of fat is produced and stored beneath the skin. Antibodies are built up, and the baby's heart begins to pump 300 gallons of blood per day. Approximately one week before the birth the baby stops growing, and "drops" usually head down into the pelvic cavity.^{xlvii}

Comparison

A reflective evaluation of the juristic paradigm and scientific description of fetal development, point to three major points of contrasts between Islamic law and embryology: firstly, while scientific delineation is more detailed, the juridical explanation is brief and generalized. Addressing this issue, Sachedina commented that Qur`anic delineation of gestational development does not neatly correspond to the distinctive phases of biological development in science. Accordingly, the jurists do not distinguish between embryo and fetus in their discourse on abortion.^{xlviii}

Anees also emphasized this when he advanced the view that the gestational developmental model developed by the jurists is still entangled with the question of pre-ensoulment and post-ensoulement humans. Hence is "behind the time."^{xlix} The recent

scientific paradigm establishes that the stage of conception is fundamental in structuring a blueprint for biological development of an entity called human. The fertilized eggs through the process of heterosexual vaginal intercourse, not only constitutes the first step in human creation, it also determines its genetic traits including its sex at this stage.¹ This is called zygote which then differentiates and within five days evolves into marula and then blastula which then implants itself into the uterus wall which is then called embryo. Subsequently it develops into the full-term fetus.^{li}

Secondly, while science unveils that a fetus moves and grasps objects from week ten onwards, jurists like Ibn Qayyyim and Ibn Hajar held that before 120 days, a fetus is in a vegetative state and not fully formed, thus it has no sensory perception and voluntary movements of its own.^{lii}

Lastly, science being an art of understanding matter does not concern itself with the issue of ensoulment which is beyond its province unlike the Islamic paradigm.

I submit, however, that a cursory look at the outline of scientific view of fetal growth in comparison to the *fiqhi* model points to the fact that the scientific perspective presents a technical specialized account while the latter presents the identification of fetal development in a language understandable by a people whom the Qur`an addressed long before the birth of embryology. Accordingly, neither the Qur`an nor the Sunnah and even the jurists could be faulted for that matter. However, a precise scientific understanding of the gestational development could enhance our appreciation of respect to fetal life without being bogged down with the juristic obsession with ensoulment and the consequent inconsistencies which it implies.

Problematic of the juristic delineation

The juristic juridical delineation of abortion law, hinges on the question of ensoulment as the sole determinant of full criminal liability for abortion. This if viewed from the scientific perspective, is tainted with the following obscurities:

Life determinacy

To most of the jurists, a fetus will attain full personhood upon ensoulment(marking the onset of its life) which occurs either after forty days or four months which marks the beginning of life. Medical science, however, designates the function of brain and its cessation as the criterion for life and death. Anees contends that if we go by this postulate, then "the outset of brain activity" which comes about twelve weeks after conception could become the basis for the beginning of life. ^{liii} This runs counter to the juristic theory of fetal progressive growth from "a biological being into a human being." Hence as a biological being, it is not socially protected as it is not regarded as a moral-legal person.^{liv}

Ethical pluralism

The legal spectrum of views ranging from permissible to prohibition of abortion particularly of the pre-ensouled fetus obscures the true Islamic moral standard on abortion. This, among others, poses a daunting task for Muslim jurists to espouse lifesaving rules on new emerging bio-medical technologies such as embryonic stem cell researches, unwanted pregnancies, defective fetuses, disposal of surplus embryos from IVF etc.

Sensing this, Sachedina maintains that imprecise definition of life and its beginning in the juristic paradigm poses serious ethical questions about embryonic sanctity of a pre-implantation embryo (zygote) if diagnosed to be genetically defective, disabled or abnormal.^{Iv} I believe this fear is real as jurists predominantly condone such an abortion before the emolument.^{Ivi}

Aware of this inconsistency, Hathout maintained that even if one subscribes to ensoulment model, it cannot be concluded that an "embryo before its 120 days is simply a dead weight or dormant mass" with no protection as is evident from the liability for perpetrating a crime against it in the form of *gurrah* and expiation. ^{Ivii} To top it all, a pregnancy cannot be terminated collaterally by executing the legal punishment meted out against a pregnant woman to safeguard the right of the fetus.^{Iviii}

Fetus as an auxiliary

More problematic is the juristic thesis regarding the fetus as a part of its mother's body prior to its birth, without any full claim of right to life as it can be eliminated to preserve the mother's life.^{lix} The reason is that it does not have its own existence as it is still dependent on its mother for sustenance. Hence, if its continued existence endangers its mother's life, can be aborted on the principle of commission of the lesser of two conflicting harms.

One may contend that this juristic stand need to be reconsidered in the light of medical possibility of

saving a viable fetus / and immature baby in advanced maternity wards equipped with technologies in our time. Al-`Aqeel points out to this fact when she stated that today abortion can be prevented by reason that the janin is malformed or infected with genetic diseases. This is through preimplantation genetic diagnosis (PGD) which was introduced at the beginning of the 1990's. This is resorts In Vitro Fertilization in the case of couples whose offspring is most likely to be carriers of some genetic diseases. In this procedure, only the zygotes free of diseases will be implanted in the womb. ^{lx} Moreover, this is also used to prevent diseases associated with genetic disorder (inborn errors of metabolism (IEMs) and other inherited Mendelian disorders), such as mental retardation, physical disability etc, which normally affect children born out of marriages between cousins.^{Ixi}

Integrate or not to integrate?

Great majority of text writers^{lxii} seem not to propose any workable formula for integration between *fiqhi* and scientific account, in spite of seeing problems with soul-infusion based debate on abortion. However, some insightful researchers do diagnose the predicament. For instance, Anees submits that the tentative juristic discussion on *ruh*(spirit) and its infusion in the fetus do not provide us with a sure criterion to draw a demarcation line between protected and unprotected fetus as the Qur`an is not unequivocal about it but rather allegorically points to it and defines it as something whose true knowledge is vested with God(qul al-ruhu min amr Rabbi). In the same vein, the transient biological findings cannot be allowed to control the reconsideration of juridical definition of life-non-life debate on abortion. The only contribution of Islamic juridical discourse is to identify medical emergency as a valid ground for termination of pregnancies on the rational that saving at least one life is better than losing two.^{lxiii}

Conscious of this need, Sachedina, maintains that juristic postulates on this issue contain many anomalies which can be resolved via an "educated partnership between medical profession and religious sciences."^{ixiv} For instance, the juristic postulate on a dislodged pre-ensouled fetus is premised on some segmented questionable understanding of certain traditions, such as its ineligibility to be given funeral rites, or its non-resurrection on the Day of Resurrection. If that be the case how a spontaneously aborted fetus intercedes on behalf of its parent in the Day of Judgment as we know it from the *hadith*. This if now viewed in its context, opens a flood gate for tampering with pregnancies to market their tissues for therapeutic stem cell research and other clinical uses in our time. Even an ensouled fetus's inviolability can be consecrated on flimsy reasons such as saving a mother's life.

Accordingly, this is an area which I believe, provides a potent case for integration between scientific findings and juristic postulates but consistent with the immutable principles of the Qur`an and the Sunnah. The reasons are: first, that sanctity of human life is non-negotiable. Second, Neither the Qur`an nor the Sunnah is categorical on the criminality of offending against the fetus. Lastly, the juristic criminological theory is divisive and speculative. Accordingly, to uphold categorical prohibition of Islam on violation of human life, plurality of views on abortion albeit being justified on technical grounds have to be regulated by the uncompromising, non-negotiable, fixed and eternal Islamic ethico-legal principles (musallamat) on human life and its sanctity. They, among others include:

1- Human life is inviolable which should not be tampered with except as justified by the law.^{lxv} The justification, however, has to be enshrined on core ethical principles of Islam on life and human dignity and not on some loose or technically vague legal dictums like public good(*maslahah*), protection against distresses and constrictions(*daf a al-darar*), sacrificing the lesser humans(*irtikab akhaffu dararayn*)^{lxvi} etc.

2- Human child needs to be protected beyond the polemics about its growth even before birth right from the moment of conception. The Qur`an and the Prophet when elucidating human development during gestation do not dichotomize humans as jurists and scientist have done so. For instance, the Our`an presents human gestational development as a life in the making (perpetual life) and not as the one in the form of a dead lump or inanimate ^{lxvii}or those with life "We created man ...","O man!". The Sunnah also implies the same by addressing human as " Each of you is constituted as", i.e., they address them as humans in the making whether as nutfah, alaqah, mudghan or ghayr mukhallaqah. Sachedina senses this when he comments that jurists did not accord full personhood to the fetus as some like Hanafiyyah regard *janin* as a part of mother's body thus having no absolute protection on its own rights. As such it can be terminated any time if warranted by

reasons to save the life of the principal, the mother. This license has far-reaching implications for termination of pregnancies on flimsy clinical reasons by mothers in the Muslim world today.^{Ixviii}

3- Scientific findings though speculative and experiment-bound can throw weight on pro-life positions as advanced by some leading jurists like al-Ghazali.

Conclusion

From the forgoing discussion, it is submitted that any discussion of abortion in the context of situations and means warranting it today cannot be articulated in isolation from the scientific explanation about the growth of an embryo in the uterus. I assert that it does not amount to superimposing scientific premises on the tenets of revelation because neither the Qur`an nor the Sunnah is explicit and conclusive on criminological aspects of human growth in the womb. It was a matter of speculation for the jurists to theorize and criminalize on the basis of analogical deduction. The empirical- based findings of science today about the fact of pre-emolument state of the fetus though not conclusive is more probable than conjecture- based juristic postulates, and thus more supportive of valuing life and preserving the dignity of the pre-ensouled humans in the uterus. Accordingly, the necessary ethico-legal framework for such integration would be as follows:

1- Human life deserves respect both at the foundational and physical existence levels as the Qur`an categorically establishes;

2- Juridical articulation of the law on abortion is mutable and tentative. Any fresh understanding of factual situations by scientific knowledge, if reaffirms the immutable principles of Islam as enunciated by the textual sources of Islamic law, would be good and useful;

3- Juristic legal excuses to terminate pregnancies have to be reevaluated in the light of available means and access to medical technologies in our time in order to determine genuine causes for an abortion; and

4- Gestational stages of development based on Qur`anic account cannot be regarded as unscientific simply because they are not coined in medical jargons, on the simple reason that the Holy Qur`an is not a book of embryology but of guidance, direction, moral principles and a belief system.

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NOTES

ⁱⁱ Having opposing views on such issues is not peculiar to Islamic legal tradition but to people of other traditions as well-since human being as a rational entity innately have some sense of right and wrong. For instance, Viqi Wagner ably compiles opposing views of some leading scholars on a host of biomedical issues, such as cloning, stems cells and reproductive technologies. To David and Bruno, such an approach is necessary for objective evaluation of contenders' position on both sides of the spectrum in overcoming one's own biases and most importantly for learning the ethics of differing with others, namely, *they deserve to be carefully examined*. See Viqi Wagner, *Biomedical Ethics*(New York: Thomson &Gale,2008), 11-13.

ⁱⁱ This is particularly so when critics point that apparently Muslim jurists are quick to proffer fatwa on medical issues whether they know their technical details or otherwise. See Shahid Athar, *Islamic Perspective In Medical Ethics*, accessed on June 5, 2011,

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http://www.islam-

usa.com/index.php?option=com_content&view=article&id=282 &Itemid=249).

ⁱⁱⁱ For details of manmade sources of law see ,Karen Judson & Sharon Hicks, *Law & Ethics for Medical Careers* (New York: Glencoe/McGraw-Hill, 1999), 2nd ed., 38-39.

^{iv} Hippocratic tradition is known as code of medical ethics which was devised to create a contractual relationship between a Greek physician and a patient against the unregulated treatment of a patient by witchcraft and other traditional modes of treatment. To Philip and James, over two thousand years it has constituted the basis of medical practitioners' oath, the thrust of which was to emphasis on the twin principles of non-infliction of harm and maintaining confidentiality. It predates religions, Islam, Christianity and Judaism, but is compatible with them. See Philips Howard & James Dogle , Medical Law and Ethics(Massachusetts: Blackwell, 2005), 4-7. It is to be noted that this somewhat has been qualified by modern codes such as Code of Nuremberg, 1947 and Declaration of Helsinki in 1964 which allowed harming the patient if they freely consented. However, to Deryck and Roger, the recent developments in biosciences and biomedicine in the twenty first century has shifted the emphasis from one of individual choice to one of human dignity. This is by virtue of Council of Europe's Convention on Human Rights and Biomedicine 1996. For details see, Deryck Beyleveld & Roger Brownsword, Human Dignity and Bioethics and Biolaw(New York: Oxford University Press, 2004), 29-30.

^vTaha Jabir al-Alwani , *Islamic Thought : An Approach to Reform*(London, Washington: The International Institute of Islamic Thought,2006), 79.

^{vi} Mohd. Nakhaie Ahmad , "The Attitude of the Muslims Towards Science" in Azizan Baharuddin(edit.) ,Science and Religion : An Islamic Perspective(Kuala Lumpur: Centre for Civilisational Dialogue, 2006), 26.

^{vii} Mohd. Hazim Shah, The Discourse on Islam, Science and Technology: Between the Onthological and the Pragmatic, " in Azizan Baharuddin(edit.) ,Science and Religion : An Islamic Perspective(Kuala Lumpur: Centre for Civilisational Dialogue, 2006),35-36.

^{viii} Ibid, 38.

^{ix} Al-Alwani , Islamic Thought : An Approach to Reform, 79-80.

^x All quoted in Ibid, 75-78.

^{xii} Shah, the Discourse on Islam, Science and Technology: Between the Ontological and the Pragmatic, ibid,38.

^{xiv} Ibid.

^{xv} Nakhaie Ahmad ,*The Attitude of the Muslims Towards Science*, 19.

xvi About 2 million fetuses are aborted per year in the U.S, Ibid.
xvii It is also referred as *itrah*(expussion), *ilqa* (causing to throw out) and *imlas*(cause to slip). See Abdulaziz Sachedina, *Islamic Biomedical Ethics*(New York: Oxford University Press, 2009), 129.

^{xviii} Human intervention to terminate pregnancies today, by and large, can either be self-induced where mother takes drugs which cause her baby to be aborted or by direct intervention of a physician who either empties the content of the uterus either by suction or by replacing the amniotic fluid surrounding the fetus with a solution of salt and water to cause an abortion. See Abul Fadl Mohsin Ebrahim , *Biomedical Issues : Islamic Perspective*(Kuala Lumpur: A.S Noordeen, 1993),121-122. See also Anees, Munawar Ahmad,*Islam and Biological Futures*(London: Man sell,1989),165.

^{xix} Anees aptly states that technology definitely influence future debates on juridico-medical topics such as abortion. See 159.

128; Muhammad Ali al-Qaradaghi, *Fiqh al-Qadaya al-Tibbi al-Mu`asirah*(Beirut: Dar al-Basha`ir al-Islamiyyah, 2006), 447-448. ^{xxi}Al-Isra:31.

^{xxii} Al-An`am:151.

^{xxiii} Al-Mumtahinah:2.

xxiv Al-Takwir:2.

^{xxv} Al-Mu`minun: 12-14. In scientific terms,to Musa, *nutfah* signifies blastocyst which embeds within the endometrium, `*alaqah*, is something which clings onto the inner uterine wall like a leech and *mudghah* refer s to somites. See Musa Mohd. Nordin, *Islamic medical ethics amidst Developing Biotechnologies*, accessed June 7,2011, from www.fimaweb.net/.../medicalethics.

xxvi Al-Hajj:5.

xxvii Sahih Muslim, vol.2, 24; Ibn Hajar, Fath al-Bari,11, 481.

xxix Sahih Muslim, 4, 122.

^{xxx} Ibid, 4, 123.

^{xxxi} Here we refer to Sunni fuqha while some Shi`ah contend that life is present from the very outset of conception. See Schedina, *Islamic Biomedical Ethics*, 132-133.

xxxii See Abd al-Haq Humaysh, Qadaya Fiqhiyyah

Mu`asirah(Amarat: Jami`at al-Shariqah,2007), 196-197. ^{xxxiii} Ibid.

^{xxxiv} Nevertheless other jurists like Humaysh, see the first *hadith* to be in line with scientific view. See Humaysh, ibid, p.197. see also Shahid Athar , *Islamic Perspective In Medical Ethics*, accessed on June 5, 2011, from http://www.islam-sa.com/index.php?option=com_content&view=article&id=282&I temid=249).

^{xxxv} To al-Bar, brain formation is complete after 120 days and sex differentiation is possible after 40 days. See Zahir Ahmad al-Siba`i & Muhammad Ali al-Bar, *al-Tabib Adabuhu wa Fiqhuhu*(Beirut: Dar al-Qalam, 2005), 273.

^{xxxvi} Abd al-Majid al-Zindani *et al*, *Atwar Khalq al-Insan fi al-Ayyam al-Arba`in al-`Ula*, accessed December 6 2011, from <u>http://www.jameataleman.org/book/agena/agena6.htm</u>.

^{xxxvii} Humaysh, *Qadaya Fiqhiyyah Mu`asirah*, 198-199. ^{xxxviii} For details see, Humaysh, ibid, 198-199; Abd al-Fattah

Mahmud Idris, *Qadaya Tibbiyah min Manzur Islami*(Azhar: Abd al-Fattah Mahmud Idris, 1993), 108-111; Schedina, *Islamic Biomedical Ethics*, 134.

^{xxxix} Ibn Al-Qayim: *Al-Tibian fi Ahkam al-Quran*(Cairo: Maktabat al-Qahira,n.d) , 255.

xl Al-Ghazali, Ihya `Ulum al-Din, 2, 53.

xli Al-Qaradaghi, *Fiqh al-Qadaya al-Tibbiyyah al-Mu`asirah*, pp.438-441.

^{xlii} Muhammad Ali al-Bar, Ethical Issues at the End of Life: Islamic perspective, accessed June, 12,2011 from <u>http://www.khayma.com/maalbar/MedicalEyhics.htm#Abstract</u>.

^{xliii} See Mahmud Idris, *Qadaya Tibbiyah min Manzur Islami, 111;* Humaysh, *Qadaya Fiqhiyyah Mu`asirah, 200-203;* al-Qaradaghi, *Fiqh al-Qadaya al-Tibbiyyah al-Mu`asirah,* 451;`Umar

^{xi} Ibid, 78.

^{xiii} Ibid,45.

xx See Ebrahim, Biomedical Issues : Islamic Perspective ,122-

^{xxviii} Sahih Muslim , Ibid.

Sulayman al-Ashqar, "al-Ahkam al-Shar`iyyah al-Muta`alliqah bi Marad 'Idz," Umar Sulayman al-Ashqar et al(eds), Dirasat Fiqhiyyah fi Qadaya Tibbiyyah Mu`asirah (Amman: Dar al-Nafa`is, 2001), 66-67; al-Siba`i & al-Bar, al-Tabib Adabuhu wa Fighuhu, 272-273.

^{xliv} Ebrahim, 133.

xlv Sharif Kaf al-Ghazal, 2004, Embryology and Human Creation between Quran & Science, accessed December 6, 2011 from http://www.islamicmedicine.org/embryoengtext.htm.

^{xlvi} Adopted from ibid.

xlvii Adopted verbatim from

http://www.nrlc.org/abortion/facts/fetaldevelopment.html.

(20/10/2011).

xlviii Sachedina, Islamic Biomedical Ethics, 125.

^{xlix} Anees, Islam and Biological Futures, 154.

¹ Ibid, 145.

^{li} Ibid,150.

^{lii} Sachedina, Islamic Biomedical Ethics, 140.

liii Anees, Islam and Biological Futures, 156.

liv Sachedina, Islamic Biomedical Ethics, 131.

^{lv} ibid, 125.

^{1vi} Both Humaysh and al-Qaradaghi quoting the resolution by Rabitah-based Figh Assembly concur with them by maintaining that termination of pregnancy poses no legal inhibition if a penal of pathologist to find that the fetus is seriously defective prior to the stage of ensoulment. See al-Qaradaghi Figh al-Qadaya al-Tibbi al-Mu`asirah, 451; Humaysh, Qadaya Fiahivvah Mu`asirah. 200.

^{1vii} Quoted in Anees, Islam and Biological Futures, 171.

^{1viii} The Prophet ruled in a case which he presided over it.

^{lix} Although Ibn Abidin dissented by saying that such as choice cannot be made as the life of both the baby and the mother are equally sacrosanct, vast majority had all legal justifications to refute that by simply invoking some legal maxims in isolation of more cardinal moral principles of Islam. See Schedina, Islamic Biomedical Ethics, 126 and 136.

^{Ix} Aida I. al-Aqeel, *Ethical Guidelines and Genomics: An Islamic* Perspective, accessed 2011. July 5, from http://ambassadors.net/archives/issue20/selectedstudy11.htm.

^{1xi} In Saudi Arabia 25% are marriages between the first cousins, 20-25% are between second cousins and 15-20% are family related, with a total of 60-65% of consanguineous marriages. Ibid.

^{lxii} See for instance, Ebrahim, *Biomedical Issues: Islamic* Perspective, 132-160; Humaysh, Oadava Fighivyah Mu`asirah, 196-200.; Vardit Respler- Chaim, Islamic Medical

Ethics in the Twentieth Century(New York: E.J. Brill, 1993), 7-12.

lxiii Anees, Islam and Biological Futures, 180-183.

^{lxiv} Sachedina, Islamic Biomedical Ethics, 144.

^{lxv} Al-Ma`idah: 32; al-Isra`:31- 33; al-Nisa: 29.

lxvi Sachedina, Islamic Biomedical Ethics, 135-136.

^{lxvii} Haqqi maintains similar line of argument. see Anees, Islam and Biological Futures,

172. ^{Ixviii} Sachedina, *Islamic Biomedical Ethics*, 126.