

The Glorious Quran and the Human Sperm: Scientific, Philosophical, and Theological Commentary

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Scientific Context: From “Despised Fluid” to Human Life

Quran 32:8 states: “Then He made his progeny from an extract of a liquid disdained.” In the original Arabic, *sulālah* (translated “extract” or “quintessence”) denotes something drawn out – “the best part of a thing” ¹. Classical commentators understood this “*liq*” “disdained” (Arabic *mā’ maḥīn*) to mean the lowly semen or sperm-drop by which human reproduction occurs ^{2,3}. Modern scholarship affirms that this phrasing uncannily aligns with **modern reproductive science**. Semen is now known to be a complex fluid – a “mingled fluid” (*nutfah amshāj* as Quran 76:2 describes ⁴) composed of various secretions and sperm cells ⁵. Yet out of hundreds of millions of sperm in an ejaculation, typically only a single sperm cell fertilizes the egg. The Quran’s term *sulālah* or “extract” precisely captures this fact: “only one single cell, [a] spermatozoon, out of over 50 million” is the essential seed for a new human ¹. In other words, the Quran says “human progeny will be formed from something extracted from this liquid” ⁶ – exactly what science confirmed over a millennium later when **Antonie van Leeuwenhoek** observed human sperm under a microscope in 1677. It took until the **19th–20th centuries** for biologists to understand fertilization and that **one sperm** unites with the ovum to form a zygote. Yet the 7th-century Quran already distinguishes the “despised fluid” (semen) from its “extract,” implying that a mere tiny portion of the semen is actually *responsible* for creation of a new life ^{7,11}.

Crucially, the Quranic narrative omits the misconceptions prevalent in earlier eras. Ancient Greek and medieval theories of reproduction were rife with errors – for example, Aristotle thought the **male semen and female menstrual blood** combined to form an embryo, and some later theorists believed in preformed miniature humans (homunculi) in sperm or eggs ⁸. By contrast, the Quran’s references are free of such folklore. **Maurice Bucaille**, a modern physician and Quran commentator, emphasizes “the total absence of any reference...to the mistaken ideas that were prevalent around the world at the time” in the Quran’s embryological verses ^{10,9}. Indeed, even as late as 1651, scientists like **William Harvey** only began formulating that “all life comes from an egg,” and debates raged for centuries over the roles of sperm versus egg ⁸. The Quranic account anticipated the essential role of the sperm *extract* without the benefit of microscopes, steering clear of ideas (like the mother’s menstrual blood forming the fetus or semen coming from the spine) that were later debunked.

Another point of alignment with **modern genetics** is the determination of a baby’s sex. The Quran intimates that *male fluid* is the decisive factor in whether a child is male or female. “He creates the two mates – the male and the female – from a sperm-drop when it is emitted,” says Quran 53:45–46. For centuries, many assumed the mother’s body determined the sex of a child; even into the 19th century, some scientists thought the woman’s egg carried gender information. Yet the **X/Y chromosome** mechanism – where the father’s sperm provides the sex-determining chromosome – was discovered only in the **20th century**. Remarkably, “in the Qur’an, it is reported that gender...is created from the semen...However, until quite recently it was thought that gender was determined by the mother’s cells. Science discovered this information – given in the Qur’an – only in the 20th century.” ¹¹. Modern Islamic commentators frequently highlight this as an instance of Quranic foresight: the scripture attributed the origin of male/female outcome to the father’s “drop of fluid,” which aligns precisely with genetic science ¹¹.

Furthermore, Quran 23:12–14 outlines **stages of embryonic development** in a way that impressed contemporary embryologists. It says humans are created from “a drop in a safe lodging” (the womb), then “from the drop, We made an *alaqah* (a clinging entity), then made the *alaqah* into a *mudghah* (chewed-like lump), and made from the *mudghah* bones, then clothed the bones with flesh, then brought forth a new creation” ¹². These terms correspond to identifiable embryonic stages: after the fertilizing drop (zygote), the embryo implants and clings to the uterine wall (literally *alaqah* means “that which clings,” also likened to a leech) ¹³.

The *mudghah* or “chewed lump” stage reflects the somite and pharyngula stage of the embryo, which has a segmented, tooth-mark-like appearance¹⁵. Following this, the verses describe “bones” forming and then being “clothed with flesh” – an order of development **confirmed by modern embryology**: cartilage models of bones form first and muscle tissue later wraps around them¹⁵. As Dr. Keith Moore (a prominent embryologist) observed, “*the Qur’an describes not only the development of external form, but emphasizes also the internal stages...of its creation, emphasizing major events recognized by contemporary science.*”¹⁶ He was “astonished by the accuracy” of these 7th-century descriptions¹⁷. In fact, after studying the Quran’s terminology, Prof. Moore proposed a new system of staging embryos based on the Quran and Hadith terms, calling it “*amazing since it was recorded in the seventh century A.D... the descriptions in the Qur’an cannot be based on scientific knowledge in the seventh century.*”¹⁸.

Additionally, Quran 76:2 says, “*Verily, We created man from a drop of mixed fluid (amshāj).*” Early commentators took “*mixed*” to refer to the mingling of male and female contributions¹⁹ – an accurate intuition, since both sperm and egg are needed to form a new human, and **fertilization** is literally a mixing of genetic material. Modern scholars further note it could allude to semen’s complex composition: seminal fluid contains sperm plus fluids from the prostate and other glands⁵. The Quran’s brief phrase thus encapsulates the idea that the origin of a human is not a “pure” element but a *blend* of substances, again concordant with our scientific understanding. All these points illustrate a striking **harmony between the Quran’s language and modern embryology and genetics**. As one Muslim scholar concludes: “*Not all of the semen is needed for fertilization – something not known in the 7th century – and the Qur’an’s use of nutfā (a tiny droplet) and sulālah (an extracted part) reflects that scientific reality*”^{20 21}. Little wonder that many scientists and commentators today view such verses as *indicators that the Qur’an anticipated modern discoveries* in reproductive science in a way difficult to attribute to chance or pre-existing knowledge^{22 23}.

Philosophical Reflection: Metaphysics of Human Origin and Identity

Beyond its scientific foresight, Quran 32:8 invites profound **philosophical and metaphysical reflection** on human origins and identity. It confronts us with a striking contrast: on the one hand, our **material beginning** is from a humble, even “despised,” fluid – an unremarkable drop of biology. On the other hand, humans occupy a lofty position in creation, endowed with intellect, moral agency, and spiritual soul. This contrast embodies a core Quranic theme: **humility** vs. **honor**. The verse implicitly urges humility by reminding us of our lowly physical origin. Islamic sages often echoed this; a saying attributed to Imam Ali ibn Abi Talib starkly puts it: “*Your origin is a drop of impure semen and your end is a decaying corpse; in between, you are a vessel of excrement.*” Such admonitions strip away human arrogance. No matter one’s accomplishments, one’s **biological genesis** was a crude fluid. This reflection on origins serves a moral philosophy: recognizing our createdness and dependency. As the Quran elsewhere asks, “*Does man not remember that We created him before, when he was nothing?*” (19:67).

Yet, equally, the Qur’an asserts human **dignity and unique identity** that transcend that material starting point. The very next verse (32:9) says: “*Then He fashioned him and breathed into him of His Spirit, and gave you hearing, sight and hearts...*”^{24 25}. This signifies the infusion of something beyond the merely physical – a direct divine endowment (*rūḥ* from God). Philosophically, this corresponds to the concept of the **rational soul** or spirit that animates the human being. As Mawdūdī explains, the Qur’an’s use of “His Spirit” here does not mean God’s own essence, but rather a special **spiritual principle** granted to humans, which “*imbues man with consciousness, thought, discernment and personality*”²⁶. It is by virtue of this spirit that humans become self-aware, morally responsible beings – “*distinguished from all other earthly creations*”²⁷. In a metaphysical sense, then, the Quran presents a **dual ontology** of the human: a material aspect (body originating in physical matter) and an immaterial aspect (soul originating from the divine command). This echoes classical philosophical anthropology (for instance, Aristotelian-Thomistic **hylomorphism**, where the soul is the form of the body) but here in a distinctly Qur’anic idiom. The *spirit* is what actualizes the potential of that fertilized egg to become a thinking, feeling person. Before the spirit, the Qur’an refers to the developing human in third person (“him”), but after the divine spirit is breathed, the address shifts to second person (“gave **you** hearing and sight”) – signifying that only with the spirit does the developing human truly become a “**you**,” a person

capable of being addressed ²⁵. This subtle linguistic shift highlights personhood emerging from the union of lowly matter with divine spirit.

Thus, Quran 32:7–9 as a unit encapsulates a **metaphysical principle**: human beings are at once **dust and divine breath**. The origin from a drop of fluid underscores our continuity with the animal and material world – we are biological creatures with DNA, subject to biochemical processes. Yet the “breath of His Spirit” signifies a transcendent origin of our rational consciousness and moral capacities, pointing to a reality that cannot be explained by material causes alone ²⁸. Our **identity**, therefore, is not defined solely by the base matter we come from, but by the divine purpose and attributes (knowledge, will, creativity) that God instills in us as reflections of His own attributes ²⁸. This has deep implications for questions of meaning: it suggests that humans carry a divine trust (cf. 33:72), and that our **dignity** (cf. 17:70 “We have honored the children of Adam”) is rooted in this spiritual endowment rather than our physical composition.

Philosophically, one can also marvel at how **information and form** are drawn out of formless fluid. Modern genetics reveals that in the microscopic gametes resides the **blueprint of life** – the DNA code that will unfold into a human being. One might say the *sulālah* (extract) of the despised fluid is laden with an “*inscribed program*.” The Quran often emphasizes divine knowledge and decree in the context of embryonic development, hinting that what is merely fluid to the human eye actually contains a meticulously arranged destiny. For example, Quran 80:18–19 says God “*created [man] from a drop and apportioned him (destined his path)*”, and 57:22 states “*no creature is born but it is written in a Book*.” Such verses harmonize with the idea that the **genetic code** – unbeknownst to people of the past – is the “book” within the drop that determines much of the creature’s development. A believer might view DNA as a material sign of the **divine knowledge** imbued in that initial drop: a *logos* or command that organizes matter into complex life. In this sense, the “extract” carries not just physical substance but **teleology** – a directed potential that only an All-Knowing source could have programmed. Thus, philosophically, Quran 32:8 inspires contemplation of how **being and essence** intersect: how from a simple, ignoble substance emerges the rich tapestry of human life, guided by an intelligence far beyond the substance itself. It is a reminder that **our origins contain mysteries that point to a higher order**, and that human identity is grounded in both the lowliness of earth and the nobility of a God-given soul.

Theological Analysis: Divine Foreknowledge and Quranic Omniscience

From a theological perspective, Quran 32:8 and related verses exemplify the Islamic concept of **divine foreknowledge and the miraculous knowledge in revelation**. Muslims believe the Quran is the verbatim word of God (*kalām Allāh*), and thus any scientific truths in it reflect God’s omniscience rather than human learning. The presence of detailed embryological and natural knowledge in a 7th-century text is interpreted as a sign of the Quran’s divine origin and the **limitless knowledge of Allah (Al-‘Alīm)**. The verse occurs in a passage that begins by affirming God’s comprehensive knowledge: “*He knows all that is beyond (unseen) and all that is within a creature’s perception*” (32:6) ²⁹. This contextual emphasis on God’s knowledge prepares the reader to understand that the subsequent detailed statements about human creation are **grounded in divine knowledge** inaccessible to people of that era. In Islamic theology, God’s knowledge encompasses past, present, future – and indeed **all scientific reality**, since He is the Creator of those realities. The Quran poses the rhetorical question: “*Does He who created not know [His own creation]?*” (67:14). Thus, it is theologically unsurprising that God could reveal accurate details about embryogenesis or cosmology; what is striking is that He *chose* to disclose such details in scripture long before humans could know them on their own.

This has led modern Islamic scholars to speak of the “**scientific miracles**” of the Quran. They argue that when the Quran correctly mentions natural facts that were discovered only centuries later, it is a form of *ijāz* (inimitable miraculous quality) meant to bolster faith in the scripture’s divine origin. For instance, Dr. Maurice Bucaille noted “*the remarkable degree of agreement between the Qur’an’s statements and modern scientific knowledge*” across various fields, and importantly, “*the absence of contradiction*” – something virtually impossible if the text were merely a product of 7th-century science ^{30 31}. In embryology, we saw that the Quran avoided the errors of contemporary Greco-Roman theories – something Bucaille and others

argue **points to knowledge beyond the Prophet Muhammad's own ability or environment** ³² ⁸ . The **total consistency** of Quranic statements with modern confirmed facts (and the Quran's silence on the false notions of the time) is taken as an **indicator of divine guidance**. As Bucaille observed, *"how could an uneducated man in the desert have accurately discussed so many varied subjects...at a time when mythology and superstition reigned supreme? How could he so skillfully avoid every belief that was proven inaccurate centuries later?"* ³⁰ . The logical theological answer for believers is that *God* is the source of this knowledge. Indeed, prominent scientists who examined the Quran's embryological verses – such as **Keith L. Moore** and **T.V.N. Persaud** – publicly expressed that they found it difficult to explain the Quran's accuracy **except by divine revelation** ²² ²³ . Prof. Moore stated: *"It is clear to me that these statements must have come to Muhammad from God, because most of this knowledge was not discovered until many centuries later."* ²² Likewise, Persaud, after noting the Quran's scientific accuracies, said he had "no difficulty in my mind" that *"this is a divine inspiration or revelation"* guiding Muhammad's statements ²³ .

The **notion of divine foreknowledge** in the Quran is not limited to human reproduction. Theologically, Muslims see the Quran as containing **portents of scientific truths** that would only be verified in later ages – a fulfillment of the verse, *"We shall show them Our signs in the horizons and within themselves until it becomes clear to them that this [revelation] is the Truth"* (Quran 41:53). Many Quranic verses are thus re-examined in light of modern discoveries. For example, the Quran describes the **origin of the universe** from a primordial explosion: *"Have not the unbelievers seen that the heavens and the earth were joined together, then We split them asunder?"* (21:30), and it speaks of an "initial gaseous mass" or "smoke" in which the heavens were formed (41:11) ³³ . These statements parallel the **Big Bang theory** and the state of the early universe as a cloud of cosmic gas ³³ . Moreover, Quran 51:47 says: *"We built the heaven with might, and indeed We are expanding it"* ³⁴ , a remarkable assertion that the universe is expanding – a fact only confirmed by astrophysics in the 20th century (through Hubble's observations and Einstein's relativity) ³⁵ . Another oft-cited example is Quran 78:6–7, which likens mountains to "stakes" pegged into the earth ³⁶ . Modern geology has discovered that mountains have deep "roots" and play a role in stabilizing tectonic plates, analogous to stakes or pegs securing a tent ³⁶ . The Quran also states *"We made every living thing out of water"* (21:30) ³⁷ , foreshadowing the scientific consensus that life on earth began in water and that cellular life is waterbased. It speaks of the water cycle with accuracy (e.g. describing evaporation, cloud formation, and rain in 39:21) long before it was understood scientifically ³⁸ ³⁹ ; it notes that plants have male and female components (which was unknown in 7th-century botany) ⁴⁰ ; and even touches on human physiology, such as the origin of milk in cattle from "between blood and digested food" (16:66), mirroring the biological formation of milk from nutrients in the bloodstream. While interpretations of some of these verses vary, the cumulative effect is a pattern where *"numerous verses of the Qur'an on [natural] subjects...conceal scientific meanings which are startling, to say the least"*, becoming clear only in modern times ⁴¹ .

Islamic theology holds that these insights were not discovered by human reason at the time of revelation; rather, they were **divinely revealed** as signs (*āyāt*) for future generations to discover and thus recognize the Quran's truth. Crucially, mainstream Muslim scholarship also cautions that the Quran is *"not a science textbook"* but a book of guidance – its primary purpose is to lead people to God. The scientific signs are therefore ancillary proofs, expressions of God's knowledge meant to instill awe and facilitate faith, rather than an end in themselves. When the Quran draws attention to natural phenomena (e.g. human development from a drop), it often does so to **teach a theological lesson**: that God who can create a human from a sperm-drop can surely resurrect humans for judgment, or that one should be grateful and not deny God's power. Quran 56:57–59, for instance, after describing human creation from a **seminal drop**, pointedly asks: *"Have you seen the semen that you emit? Is it you who create it, or are We the Creator?"*, driving home the theological point of God as the sole author of life. In the case of verse 32:8, the context in verses 7–9 is an argument against skepticism of resurrection: it reminds people of the **extraordinary knowledge and power of God in originating human life** in the first place, implying that resurrecting life is equally within His power ⁴² . Thus, the theological significance of these verses is twofold: they quietly *prefigured scientific truths* as a mercy for later generations' understanding, and they boldly *proclaim divine omnipotence and omniscience*, using those truths to call humanity towards faith. Modern Muslim scholars like Jamal Badawi note that one reason such Quranic statements remained enigmatic until science caught up is so that **the Quran would continue to reveal new layers of meaning across ages**, supporting the belief that it is an eternal divine message, not bound to the knowledge of one time ⁴¹ . In sum, the theological lens sees

Quran 32:8 as one tile in a grand mosaic of divine knowledge – a verse that both invites spiritual reflection on our created nature and stands as evidence (when viewed with today’s knowledge) of the “AllKnowing” Author behind the scripture 43 .

Comparative Verse Insights: Quranic Verses on Human Creation and Foreknowledge

To fully appreciate Quran 32:8, it helps to compare it with **other Quranic verses on human creation** which complement and elaborate its message. Modern Islamic scholarship often examines these verses collectively to build a holistic picture of the Quran’s discourse on embryology and divine knowledge. Key related verses include:

- **Quran 32:7–9** – “He Who perfected everything He created and began the creation of man from clay. Then He made his progeny from an extract of despised fluid. Then He fashioned him and breathed into him of His Spirit, and gave you hearing, sight and hearts...” This trio of verses (of which 32:8 is the centerpiece) encapsulates the **entire arc of human origin: the creation of the first human (Adam) from earth/ clay**, the continuation of human lineage via **reproduction from semen**, and the **ensoulment and gifting of faculties** by God 24 44 . Classical and modern commentators note the significance of “extract” (sulālah) of the fluid 3 , as discussed, and they underscore how *spirit* from God imparts humans with unique consciousness 26 . Thus 32:7–9 together affirm both **material and spiritual dimensions** of creation. Notably, verse 7’s mention of “clay” and verse 8’s “despised fluid” were understood by scholars like Abū’l A’lā Mawdūdī to refute the idea that these are conflicting origins – rather, **Adam** was directly fashioned from earth, and **Adam’s progeny** (all of us) are fashioned from semen by the laws God placed in nature 45 . God “*by one excellent act...gave life*” to clay (Adam), and “*by another excellent act placed in man’s own organism such a wonderful machinery*” of procreation for his offspring 44 . This addresses both the **creationist** origin of humanity and the **biological propagation** mechanism, in a complementary way.
- **Quran 23:12–14** – “We created man from an extract of clay, then We placed him as a drop of fluid (nutfah) in a secure place [womb]; then We made the drop into an alaqah (clinging form), then We made the clinging form into a mudghah (chewed lump), then We made out of that lump bones and clothed the bones with flesh; then We caused him to grow into another creation. So blessed be Allah, the Best of Creators!” 12 . These verses provide a **chronological roadmap of embryonic development** that has astonished modern readers. Each Quranic term corresponds to a stage now recognized in **embryology**: the *nutfah* stage (zygote/blastocyst) which is implanted in the “secure lodging” of the uterus; the *alaqah* stage, which in Arabic means “a clinging thing” and also “a blood clot” – evocative of the **implantation** where the early embryo clings to the womb, with its appearance and bloodfilled chorionic sac resembling a leech or clot 13 14 ; the *mudghah* stage meaning “like a chewed morsel,” mirroring the somite-stage embryo that indeed has **segmented somites** resembling teeth marks 15 ; then the development of skeletal structure (“bones”) followed by muscular flesh covering them (“clothed the bones with flesh”), which, as we know, is the actual sequence in fetal development 15 . Finally, the transformed “another creation” hints at the point when the embryo becomes a **fetus with human features** and perhaps when the soul is breathed (as some Islamic traditions hold the soul is given around 120 days). Modern Islamic scholarship often cites Dr. Keith Moore here, who noted that “*the sequence of developmental stages in the Qur’an is accurate*” and stated he could not have described these stages better himself without modern science 18 16 . The 23:12–14 passage thus is a centerpiece in arguments about the Quran’s **miraculous foreknowledge** in science. Its closing exclamation “*Blessed be God, the best of creators!*” also highlights the **theological purpose**: to inspire awe and reverence for God’s creative power manifest in the womb.
- **Quran 76:2** – “Verily, We created man from a drop of mixed fluids (nutfah amshāj), in order to test him; so We made him hearing, seeing.” This verse emphasizes two aspects: the **mixed nature of the reproductive fluid** and the **purposeful nature of human creation**. The term *amshāj* (“mingled” or mixed) appears to indicate that the fluid

(semen) itself is a mixture⁵ – indeed, modern biology reveals semen contains sperm plus fluids from various glands, and also that reproduction involves the **mixing of male and female gametes**. Early commentators like Ibn Abbas reportedly interpreted *amshāj* as the mixture of the man’s and woman’s fluids¹⁹, and modern writers add that it alludes to the **components of semen** (citric acid, enzymes, sperm, etc.)⁵. Either way, the Quran here acknowledges what could not be seen then: reproduction is not from a “pure seed” but a *compound*. The verse’s second part, “*that We may try him*”, reminds readers that emerging from this biological process is a moral being with tests in life – linking the **science of origins** to the **spiritual purpose** behind human life. It then notes God endowed the person with hearing and sight, faculties that make the test of life meaningful. Intriguingly, the Quran elsewhere (32:9, 76:2, etc.) **always mentions hearing before sight**, which some scholars note is consistent with developmental biology – the fetus’s hearing apparatus develops before the visual apparatus, and newborns can hear well before they can focus their eyes. Whether intended or not, this is another fine point of alignment that modern readers have appreciated.

- **Quran 86:6–7** – “*So let man consider from what he is created. He is created from a fluid, ejected, emerging from between the backbone (sulb) and the ribs (tara’ib).*” These verses, from *Surat at-Tāriq*, have historically generated discussion and debate. Superficially, taken literally, they were puzzling to modern minds: semen is actually produced in the testes, which reside in the scrotum, not between the spine and ribcage. Critics hastily branded this a “scientific error.” However, contemporary Islamic scholars provide **interpretative insights** that reconcile the verse with modern anatomy. One explanation notes that during **embryonic development**, the gonads (testes in males, ovaries in females) originate near the embryonic kidneys, high in the **lumbar (lower back) region, roughly between the spine and lower ribs**, before migrating down to their final positions^{46 47}. Thus, in an **embryological context**, human reproductive organs do in fact emerge from the area “between the backbone and ribs.” The **primordial germ cells** form and differentiate in that dorsal location, which corresponds to where the **intermediate mesoderm** (the embryonic tissue that gives rise to reproductive organs and kidneys) lies – dorsally between the developing spine and the rib outline^{48 49}. Islamic writers argue that the Quran, by saying “fluid issuing from between backbone and ribs,” alludes to this hidden developmental truth: instead of naming the testes outright, the text **pinpoints their original source region in the body’s blueprint**⁴³. This view sees the verse as “*a profound statement that aligns with modern embryology and anatomy*”, highlighting Allah’s knowledge of **human origins at the microscopic and developmental level**⁴³. Another interpretive angle is to read “backbone and ribs” as a *merism* (pair of words indicating an entire region – i.e., “*the loins*” or midsection of the body). In classical Arabic usage, *sulb* can mean loins (the area of generative power in a male), and *tara’ib* is sometimes interpreted as the pelvic arch or the general front of the body. By this reading, the verse is saying man is created from a gushing fluid issuing from the loins (of the father) into the pelvic area (of the mother) – essentially a poetic description of intercourse and ejaculation. **Islamic scholarship has not settled on one exclusive interpretation**, but most agree there is no actual scientific error once the verse is understood in context. Either it is pointing subtly to embryonic development of reproductive organs (knowledge unavailable in the Prophet’s time, thus again indicating foreknowledge), or it is employing euphemistic language to describe the reproductive act and parentage in a general way. In both cases, what’s clear is the Quran’s intent: to jolt “*man*” into pondering his humble **origin from a drop of fluid**, as the next verse (86:8) concludes: “*Surely, (God) is able to bring him back (to life)*”. The **theological message** hinges on recognizing God’s power in our creation in order to understand His power in resurrection – the scientific detail is a vehicle for that moral lesson.

- **Quran 53:45–46 and 75:37–39** – These verses stress that it is from the very **tiny drop** of sperm that both genders of humanity are made. “*He creates the two mates – the male and female – from a ejaculated drop (nutfah)*” (53:45–46) and “*Was he not a drop of semen emitted? Then he became a clinging clot, and (God) made of him two sexes, male and female*” (75:37–39)^{50 51}. The **emphasis on gender** here is significant. As discussed above, the Quran assigns the origin of male vs. female to that one tiny drop from the father, presaging the genetic fact that the sperm’s chromosome (X or Y) determines the sex of the offspring. These verses occur in contexts refuting denial of afterlife: they effectively say “*The One who can create such complex outcomes (male and female humans) from a mere drop surely can resurrect you from dust*”. Modern interpreters often highlight that the phrasing also corrects a possible human misconception – in many cultures, people blamed the mother for “producing” daughters instead of sons, not realizing it was the

father's contribution that decided it. The Quran's wording, "created the two genders from a sperm-drop," beautifully encapsulates the **scientific truth** and serves a **social-moral purpose**: to remove blame (or credit) from mothers for something determined by divine design in the sperm. This again underscores how intimately the Quran ties **scientific foresight with moral and theological themes**.

In sum, when Quran 32:8 ("progeny from an extract of a despised fluid") is read alongside these related verses, a **multifaceted picture** emerges. The Quran addresses human creation from the physical level (the drop of fluid, the stages in the womb, the mixture of fluids), the developmental level (the clinging and chewed stages, the emergence of bones and flesh, the originating location of sex cells), the genetic level (gender determination by the sperm's extract), and the metaphysical level (the ensoulment by God's spirit, the bestowal of faculties, and the divine knowledge underlying all stages). Each verse adds a layer of insight, and together they form a coherent doctrine that **life is purposefully designed and known by an Omniscient Creator**. The verses' consistency with modern science – spread across multiple chapters revealed in different periods – further convinces many Muslim scholars of the Quran's miraculous nature. As one Islamic Q&A commentary concludes after analyzing these verses: "Indeed, the sperm is both a part of semen and the essential element. The one sperm that fertilizes the ovum – a one-in-a hundred-million "winning swimmer" – is the *sulālah*, the chosen extract. This was stated in the *Qur'an* 1400 years ago, showing obviously that the *Qur'an* is the Word of the One who knows the creation of man in every fine detail." 3 52 . Such an appraisal captures the essence of why these comparative verse insights are so important: they demonstrate a unity of scientific, philosophical, and theological truth in the Quranic view of human origins, inviting both **intellectual admiration** and **spiritual reverence** for the Creator.

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