Our Universe May Be Teeming with Intelligent Life: A Devotional Exploration

Epigraph: "It is God who created seven heavens and a similar [number] of earths. His command descends throughout them. So you should realize that He has power over all things and that His knowledge encompasses everything." -- Quran 65:12

Introduction

When we gaze up at the night sky, we are confronted with a staggering expanse of creation. Modern astronomy tells us that the observable universe contains an unfathomable number of galaxies – on the order of hundreds of billions, and perhaps as many as **2 trillion galaxies** in total ². Each of these galaxies harbors billions (if not trillions) of stars, many of which host their own systems of planets. It is a humbling realization that our own planet Earth is but a tiny speck amid this cosmic ocean. Given this immense scale, a profound question naturally arises: **Are we alone, or is the universe teeming with other intelligent life?**

For those who believe in the God of the Abrahamic faiths – a God of *infinite* power, wisdom, and creativity – this question carries a special significance. An infinitely creative deity could create life abundantly, in forms and places beyond our imagination. Indeed, both scripture and science encourage us to ponder the possibility that life may exist beyond our world. The Quran refers to God as the "Lord of all worlds" (*Rabb al-ʿAlamīn*), hinting at multiple realms or worlds under His dominion ³. Likewise, the Bible proclaims, "The heavens declare the glory of God; the skies proclaim the work of His hands" (Psalm 19:1) ⁴, suggesting that the vast cosmos is a testament to its Creator's majesty – possibly filled with creations known and unknown. In this article, we will explore the hopeful proposition that our universe may be *teeming with intelligent life*, examining it from scientific, philosophical, and theological perspectives. We will see how modern discoveries about the cosmos resonate with age-old religious insights, and how the idea of a life-filled universe can inspire a deeper sense of wonder and devotion toward the Creator.

The Vastness of Creation and the Potential for Life

Contemplating the sheer scale of the universe is the first step in appreciating the plausibility of abundant life. Astronomers estimate that the **Milky Way** galaxy alone contains roughly 200–400 billion stars. Beyond our galaxy, as noted, the latest research using deep-sky surveys (such as the Hubble Space Telescope's 3D modeling of deep space images) suggests the observable universe may contain *on the order of trillions of galaxies* – perhaps around 2×10¹² (2 trillion) galaxies in total ². Each galaxy is an "island universe" comprising millions or billions of stars, and around those stars orbit untold billions of planets. Until the last few decades, scientists could only speculate about planets around other stars, but today we have hard evidence that **planets are exceedingly common**.

Thanks to improved telescopes and dedicated planet-hunting missions, we have confirmed the existence of thousands of **exoplanets** (planets outside our solar system). As of 2025, over 5,800 exoplanets have been

discovered in more than 4,300 star systems 5. These known exoplanets exhibit a startling diversity: some are gas giants larger than Jupiter, others are small, rocky worlds only slightly bigger than Earth. Significantly, astronomers have found that many stars – including stars broadly similar to our Sun – harbor planets in the so-called "habitable zone," the region around a star where temperatures could allow liquid water to exist. Current estimates suggest that roughly 1 in 5 Sun-like stars may have an Earth-sized planet in the habitable zone 6. In a galaxy of 200 billion stars, that statistic implies on the order of 10-40 billion potentially habitable Earth-like planets in the Milky Way alone 6. And that figure grows even more if we consider the most common stars in the galaxy – the red dwarfs – which are smaller than the Sun but often host Earth-size planets, some in their habitable zones.

These numbers are truly mind-boggling. If even a tiny fraction of those billions of worlds have actually given rise to life, the total number of life-bearing planets could be enormous. And if we extend our view to the entire universe with its myriad galaxies, the opportunities for life multiply astronomically. The famous astronomer *Carl Sagan* captured this intuition when he wrote: "The universe is a pretty big place. If it's just us, seems like an awful waste of space." 7 Indeed, from a purely statistical standpoint, it would be improbable for Earth to be the only cradle of life among countless planets unless there were some extraordinary, near-impossible barrier preventing life elsewhere. Modern scientific reasoning, encapsulated in tools like the **Drake Equation**, supports the idea that given the vast number of stars and planets, even conservative probabilities of life emerging could yield many civilizations. As long as the probability of life evolving on a suitable planet is not virtually zero, the law of large numbers suggests we are unlikely to be unique. One analysis by NASA scientists noted that humanity would be the only technological species in the entire universe only if the odds of civilization developing on a habitable planet were truly infinitesimal – on the order of 1 in 10²². In other words, even if only **one planet in a trillion** produces an advanced civilization, the universe would still have had many such civilizations over its history 8.

Conditions for Life and Life's Resilience

What makes a planet suitable for life? Earth provides a convenient template: it is a rocky planet at just the right distance from its star for liquid water to persist on the surface, it has a breathable atmosphere, a stable climate, and an array of essential chemical elements (carbon, hydrogen, oxygen, nitrogen, etc.) that form the building blocks of life. These factors define the classic "habitable zone" and conditions for life as we know it. However, ongoing research has taught us that life can be astonishingly adaptive, capable of thriving in conditions far more varied than scientists once assumed. This broadened understanding of habitability increases the chances that life could exist on many worlds, even those quite different from our own.

For instance, within our **own solar system**, we find potential habitats in surprising places. Moons such as **Jupiter's Europa** and **Saturn's Enceladus** are icy worlds that lie outside the Sun's traditional habitable zone, yet beneath their frozen crusts they harbor global **subsurface oceans** of liquid water kept warm by tidal heating. These dark oceans, cut off from sunlight, could nevertheless provide stable aquatic environments rich in minerals – essentially, giant planetary Petri dishes that might support life. Scientists have detected geysers of water erupting from Enceladus and evidence of complex organic molecules in those plumes, heightening speculation that microbial life could dwell in the moon's deep ocean. Meanwhile, Mars – though cold and arid today – once had lakes and rivers and still has subsurface ice; Mars rovers are actively searching for signs that life may have gained a foothold there in the distant past. Even *Venus*, with its hellish surface temperatures, has drawn curiosity after the tentative detection of phosphine (a possible biosignature gas) in its upper cloud layers, where conditions are cooler. All these examples reinforce the

idea that the "habitable zone" is not a narrow set of circumstances but rather a continuum of possibilities; life might arise in any environment that offers a stable medium (be it water or another solvent), energy sources, and the necessary chemistry. A planet doesn't have to be a twin of Earth to host life – it only needs to provide an arena where complex chemical processes can take place and persist.

One of the most eye-opening discoveries in biology is that life on Earth can survive (and even flourish) in extremely harsh conditions once thought utterly inimical to living organisms. Microbial life in particular shows an almost shocking resilience. Scientists have found microbes (called extremophiles) thriving in boiling hot deep-sea hydrothermal vents, in the acidic cauldrons of hot springs, in the frigid dryness of the Antarctic ice and dry valleys, and even kilometers beneath the Earth's crust in dark, high-pressure rocks. Bacteria have been discovered living inside nuclear reactor cooling waters, tolerating radiation that would kill most complex life. Some microbes can enter dormant states and endure the vacuum and intense radiation of space. In fact, certain hardy bacteria spores have survived direct exposure to the vacuum of space and the full blast of solar UV and cosmic rays for extended periods 9. Experiments on the International Space Station showed that microorganisms can remain viable outside the station, clinging to its outer hull. Such findings dramatically expand our understanding of where life could exist. If microbes can survive in extreme heat, cold, darkness, radiation, and toxicity on Earth, then life (especially simple life) might similarly endure on alien worlds once deemed uninhabitable - for example, in the lightless oceans of an ice moon, in the thin atmosphere of Mars, or in the clouds of a distant planet. As long as some form of liquid water or another solvent and an energy source are present, life has a fighting chance (9) 10. The tenacity of life on Earth suggests that the universe could be full of microbial biospheres, quietly toiling in niches from underground aquifers of Mars to the warm mud beneath an exoplanet's sea. And importantly, on at least one planet (Earth), simple life did not remain simple – it progressed over billions of years to complexity and intelligence. Thus, some of those myriad microbial worlds could, given enough time and stable conditions, eventually produce their own intelligent creatures.

Signs of Life in the Cosmos: The Work of Astrobiology

The scientific field dedicated to probing these possibilities is **Astrobiology** – an interdisciplinary science at the intersection of astronomy, biology, chemistry, and geology that focuses on life's potential in the universe. Formally defined, astrobiology is the study of the *origin*, *evolution*, *distribution*, *and future of life in the universe* 11. Astrobiologists tackle questions like: *How did life begin on Earth? In what extreme environments do we find life here? What signatures does life imprint on its environment? And where else beyond <i>Earth might similar conditions exist?* By answering these questions, we gain criteria to guide the search for life on other planets and moons.

One major thrust of astrobiology is identifying **biosignatures** – detectable signs that life is or was present. On Earth, life has dramatically altered the atmosphere and environment in ways that we can measure. For example, the air we breathe contains about 21% oxygen, a gas continually produced and replenished by plants and photosynthetic microbes. Methane is another gas that, in Earth's atmosphere, comes largely from biological sources (such as microbes in wetlands and the digestive tracts of animals). If we were observing Earth from afar, the simultaneous presence of oxygen and methane in the atmosphere would be a strong clue that something akin to life exists here, because these gases would not stably coexist in large quantities without ongoing biological activity. Astrobiologists therefore consider combinations like **oxygen** + **methane** in an exoplanet's atmosphere to be potential biosignatures. Recent and upcoming advanced telescopes – including the **James Webb Space Telescope (JWST)** and the next generation of extremely large ground-based telescopes – are aiming to analyze the atmospheres of Earth-sized exoplanets. They will look

for telltale chemical imbalances or compounds (like oxygen, ozone, methane, or other organic gases) that might indicate a living biosphere on the planet's surface 12 13. This is a challenging task, but it's now on the cutting edge of astronomy. Imagine the day when we detect, for instance, an exoplanet around a distant star that shows a spectral signature of abundant oxygen and seasonal swings in carbon dioxide – such a find would strongly hint at forests and life cycles on that remote world.

Astrobiology also extends to exploring our own solar system for **evidence of past or present life**. NASA's Mars rovers (like *Perseverance* and *Curiosity*) are essentially robotic astrobiologists combing the Martian soil for organic molecules and fossils of ancient microbes. On Mars, scientists have found organic compounds in the rocks and seasonal methane releases in the air; while not yet proof of biology, these findings keep interest high. Future missions are being designed to retrieve samples from Mars and to probe the subsurface oceans of Europa and Enceladus for signs of life. If even a simple microbe is found in any of these nearby locations, it would be a revolutionary confirmation that life is not unique to Earth – and if life started twice in one solar system, it likely started *millions of times* across the galaxy. As one astrobiologist put it, discovering even primitive life beyond Earth would strongly suggest "life has arisen *often* in the universe" and is not a freak accident but a natural outcome under the right conditions ¹⁴ ¹⁵ .

Interestingly, scientists have also found that the *building blocks of life* are widespread in space. Organic molecules, including amino acids (which are the subunits of proteins), have been detected in meteorites that fell to Earth and in comet samples. In a remarkable 2022 discovery, researchers analyzing samples from the asteroid **Ryugu** (brought back by the Japanese Hayabusa2 spacecraft) announced they had identified **dozens of amino acids** in the asteroid's material ¹⁶. This marked the first direct detection of amino acids on an extraterrestrial body. The implication is profound: the ingredients for life's chemistry – amino acids, nucleic acid bases, sugars, etc. – form readily in space and can be delivered to young planets by meteoritic bombardment ¹⁷ ¹⁸. Our own Earth may have been "seeded" with such prebiotic ingredients early in its history, helping life get started. If that is the case, then any other Earth-like planet likely received a similar chemical toolkit from comets and asteroids. The cosmos is essentially stocked with the raw materials of biology. This strengthens the view of a *life-friendly universe* – one in which life's emergence might be a common, almost expected, outcome given the right environmental conditions ¹⁹.

In sum, the findings of astrobiology paint a picture in which **life is not limited by scarcity of materials or even by extremely specific conditions**. The basic chemicals of life pervade the galaxy, and life on Earth demonstrates adaptability to a wide range of habitats. Therefore, it seems increasingly plausible that *many* planets have seen life arise. Some of those life forms might remain at the microbial stage (as most life on Earth did for billions of years). But on a subset of those worlds, life could evolve greater complexity and intelligence, just as it did here. This brings us to the next step of the discussion: if advanced, intelligent life exists elsewhere, could we (or will we) ever know about it?

Reaching Out to the Stars: SETI and the Search for Intelligent Life

Given the multitude of potentially habitable planets and life's propensity to adapt, scientists reason that **intelligent life** may have arisen on some fraction of those worlds. Human beings are one example of intelligence evolving on a once-microbial world; might there be others, perhaps far more advanced than us, orbiting distant stars? To investigate this exciting possibility, researchers have engaged in what is known as **SETI** – the Search for Extraterrestrial Intelligence. SETI efforts typically involve scanning the skies for **technosignatures**: signals or evidence of technology that no natural process is likely to produce. The classic technosignature is a patterned radio transmission, which could be picked up by our radio telescopes if an

alien civilization is broadcasting (even unintentionally, as a leakage of their communications or radar). Other technosignatures could include laser pulses, exotic wavelengths of light, or unusual chemical tracers (like pollutants) in a planet's atmosphere that might indicate industrial activity 20 21.

Radio telescopes, such as the Allen Telescope Array shown above, continuously scan the skies for signals that might betray the presence of alien technologies 22. These giant listening posts symbolize humanity's quest to find fellow intelligent beings in the cosmos.

The modern SETI enterprise began in earnest in 1960 with **Project Ozma**, when astronomer Frank Drake used a large radio telescope in West Virginia to listen for signals from two nearby Sun-like stars. Although that initial search (and many since) turned up silence, it inspired decades of increasingly sophisticated listening campaigns. In 1977, a famous incident occurred: a strong, narrow-band radio signal was received at Ohio State University's "Big Ear" telescope. The signal was so anomalous that a researcher scribbled "Wow!" next to the readout - and it has since been known as the "Wow! signal." It appeared to come from the direction of the Sagittarius constellation and had the hallmark of an artificial transmission, though it lasted only 72 seconds and has never been detected again 23 24. To this day, the Wow signal remains unexplained, a tantalizing "maybe" in the search for extraterrestrial broadcasts. Since then, SETI has expanded significantly. Projects like the Allen Telescope Array (a dedicated SETI facility in California, funded in part by private donors including the tech philanthropist Paul Allen) can observe many stars simultaneously, searching for radio emissions that cannot be attributed to natural cosmic sources 22. On the optical side, some researchers conduct Optical SETI, looking for ultra-short laser flashes that an advanced civilization might use for communication across space. More speculative search ideas include looking for the infrared glow of enormous engineering projects (like hypothetical Dyson spheres that encircle stars) or detecting odd chemical signatures in exoplanet atmospheres (for example, CFC gases or other pollutants that might indicate an industrial society).

So far, despite several intriguing leads, **no confirmed technosignature** has been detected. The "Great Silence" – often encapsulated by physicist Enrico Fermi's famous question "Where is everybody?" – remains an open puzzle. This apparent contradiction between the high probability of civilizations (argued by the numbers) and the lack of evidence for any is known as the **Fermi Paradox** ²⁵. There are many possible resolutions to this paradox, ranging from the suggestion that intelligent civilizations are exceedingly rare or short-lived, to the idea that they are out there but deliberately quiet or unrecognizable to us. It's worth noting, however, that our search has been very limited in scope. By one common analogy, we have so far examined only a "glass of water" from the vast ocean of the universe for signs of life ²⁶. The radio searches have sampled only a tiny fraction of the millions of star systems in our galaxy (and typically only across certain frequency bands). We have hardly begun to look at all the ways intelligent life might be detectable. Therefore, the absence of evidence is emphatically not evidence of absence – it may simply reflect the immaturity of our efforts to eavesdrop on the cosmos. As one SETI scientist put it, if galaxy-wide civilizations were fish in a sea, our current methods are equivalent to dipping a cup in the ocean; not catching a fish in the cup doesn't mean the ocean is lifeless.

Interestingly, some recent statistical studies bolster the case that intelligent life likely exists elsewhere *despite* the silence so far. A 2020 study in the journal *Astrobiology* used a Bayesian statistical approach incorporating what we know about planet formation and the timing of life's emergence on Earth. It concluded that, even using very conservative assumptions, the odds strongly favor that **we are not the only time and place intelligence has arisen**. The study suggested there could be on the order of *dozens* of active civilizations in the Milky Way right now (though they might be very far apart in space) 27. Another

analysis considered the entire observable universe's 2×10²² stars and reasoned that for humanity to be truly alone, the processes that lead to intelligent life would have to be extraordinarily rare, far rarer than our current understanding indicates ⁸. In plain terms, unless the development of life and intelligence is virtually impossible, it *should* have happened many times over the history of the universe. This statistical perspective echoes the sentiment that a cosmos as vast as ours – created by an infinite God – is unlikely to be an empty stage with only one small troupe of actors (humankind). Rather, it is more plausible that the stage is populated by many players across space and time, each known fully to the Director of creation even if they have yet to know of one another.

"In My Father's House Are Many Mansions": Theology and the Plenitude of Creation

Both the Bible and Quran use language that opens the door to a plurality of worlds. In the Bible, Jesus tells his disciples, "In my Father's house are many mansions" (John 14:2). While traditionally interpreted as referring to spiritual dwelling places or realms of heaven, one might also reflect on the phrase in a cosmic sense – that God's "house" (the universe) contains many "mansions" (worlds) prepared for life. More concretely, the Abrahamic scriptures repeatedly emphasize God's sovereignty over **all creation** and do not limit His creative power to Earth alone. For believers, the question is not *could* God have created life elsewhere, but rather *if it pleases Him* to have done so.

In Islamic theology, the Quran encourages a view of God as Lord of multiple worlds. The very first chapter of the Quran, Al-Fātiḥah, praises Allah "Lord of the worlds" (Rabb al-ʿālamīn). The term 'ālamīn (worlds) is plural - which Muslim scholars have noted could encompass worlds beyond our own [3]. The Quran contains verses that tantalizingly suggest the existence of life throughout the heavens. One key verse often cited is Quran 42:29, which states: "And among His signs is the creation of the heavens and the earth and the living creatures that He has dispersed throughout them. And He has the power to gather them together when He wills." 28 . This verse explicitly speaks of living creatures (dabbā in Arabic, meaning creatures that crawl or move about) being spread in both the heavens and the earth - strongly implying that life is not confined to Earth alone 28. Notably, it even hints at a future time (perhaps the Day of Judgment or another divine event) when God could bring together all these creatures from different worlds if He so willed. Early Islamic scholars pondering this verse took it as evidence of other living worlds. For example, the renowned Quranic commentator Allāmah ṬabāṭabāT interpreted 42:29 to mean that there are indeed living beings in the heavens similar to those on earth 29. Likewise, the medieval scholar Fakhr al-Dīn al-Rāzī arqued that it is not implausible for there to be "species in the heavens that move as humans do on earth" 29. These interpretations underscore that the concept of extraterrestrial life is not alien to Islamic thought - it has been contemplated within the scholarly tradition for centuries.

Another intriguing Quranic verse is **65:12** (the epigraph of this article), which speaks of God creating "seven heavens and of the earth the like thereof." Many Quranic exegetes explain that "seven" in Arabic can serve as a figure of speech meaning "several" or "countless," not necessarily the literal number seven ³⁰. The verse thus conveys that God made numerous heavens and earths – potentially an indication of many worlds or planes of existence. Some classical commentators did envisage the seven earths as layered realms, but a few went further to imagine them as distinct worlds, possibly with their own creatures. There is even a report (though of questionable authenticity) attributed to early authorities like Ibn 'Abbās that in each of the seven earths there could be beings like those in ours – "an Adam in each earth, a Noah in each, an Abraham and a Jesus in each". Whether taken literally or metaphorically, such musings reflect a realization that God's

creative scope might be far broader than one world and one human saga. Modern Islamic thinkers continue to discuss these ideas. Some boldly assert that the **vastness of Allah's creation makes the existence of other life forms quite plausible**, seeing no conflict between the Quran and the idea of extraterrestrials ³¹. Others caution that, while possible, we should not claim it as certain without evidence – thus maintaining a balance between openness to scientific possibilities and humility in interpretation ³². In any case, the Quran's *open-ended references* encourage believers to "ponder the mysteries of the universe" ³², exactly as we are doing here. This openness is a beautiful example of faith and reason in dialogue: the scripture gives hints and encouragement to explore, and science provides the tools to investigate God's creation.

Christianity, too, has seen thoughtful engagement with the possibility of extraterrestrial life. Importantly, mainstream Christian doctrine does not exclude the existence of life on other planets. Prominent Christian theologians and writers have entertained the idea for centuries. For example, in the 15th-16th centuries, Cardinal Nicholas of Cusa speculated about inhabitants on other stars, and the Dominican friar Giordano Bruno (though a controversial figure) preached an infinite universe filled with worlds hosting life - an idea for which he paid with his life. In more recent times, writers like C.S. Lewis (in his science-fiction "Space Trilogy") imagined other planets with their own sentient races and even their own relationships with God. Perhaps most strikingly, the Vatican itself has made supportive statements. The Catholic Church's longstanding astronomical research program has produced voices that say belief in aliens is fully compatible with faith. "Just as there is a multiplicity of creatures on Earth, so there could be other beings, even intelligent beings, created by God," affirmed Father José Gabriel Funes, a Jesuit priest and former director of the Vatican Observatory 33. He emphasized, "this is not in contradiction with our faith, because we cannot establish limits to God's creative freedom." 33 In other words, who are we to declare that God only made life here? If God is truly omnipotent and infinitely creative, then creating life on countless worlds is entirely within His power and consistent with His nature. The Vatican's official newspaper even stated that an extraterrestrial, if discovered, "would be our brother in creation" - equally a child of the same God 34 35. The well-known evangelist **Billy Graham** echoed a similar sentiment in a public letter: "If there is life on other planets, then God created that life. ... If there are beings on other planets that have souls and can know God, then God created them in His image, just as He did us." 36 . Graham reassured Christians that while the Bible's focus is on God's relationship with humanity, it doesn't rule out others in God's vast creation. He noted that the Bible doesn't mention aliens, "although I find nothing in the Bible that would exclude the possibility" 37, and that ultimately, whether or not we share the universe with other intelligent creatures, "God has somehow made it possible for them to know Him" 38 . These views from Christian leaders show that the idea of extraterrestrial life is not seen as a threat to faith - rather, it can be embraced as part of the grand creative plan of God, should it be His will.

Jewish tradition, for its part, also contains intriguing clues that align with a multiplicity of worlds. Medieval Jewish scholars such as **Hasdai Crescas** (c. 1400) argued against Aristotelian limitations and maintained there's no theological reason to deny that God could have created other worlds. Crescas even cited the Talmudic teaching that "God flies through 18,000 worlds" (a reference to a vision in the Jewish Talmud, Avodah Zarah 3b) as a hint that those many worlds might be inhabited and under God's providential care ³⁹ ⁴⁰. In the Talmud, the number 18,000 appears in a discussion of God's grandeur, implying an immense number of realms. Some later commentators, like the esteemed Rabbi **Aryeh Kaplan**, interpreted this to mean that **Judaism does not preclude extraterrestrial life** – in fact, it may assume it in some form. Kaplan wrote that after analysis, "there is nothing in Jewish theology to preclude the existence of other worlds" and that since God's presence "flies" through these 18,000 worlds, "we may assume that they are inhabited." ³⁹ ⁴⁰. Some rabbinic writings speculated that those other worlds might contain beings who, unlike humans, have no evil

inclination – hence they remained sinless and closer to God ⁴¹ ⁴². While such ideas are not mainstream doctrines, they show that within Jewish thought, the door has always been open to a much wider creation than just Earth. The common thread in Judaism is an acknowledgment that God's oneness and mastery are over the whole universe: "HaShem is the God of the heavens above and the earth below, there is none else" (Joshua 2:11). This majesty isn't confined to a single planet.

Philosophically, the idea of a life-bearing universe connects with the concept of the "principle of plenitude," which suggests that a perfect, infinite God would manifest every creative possibility. The great chain of being, as envisaged by philosophers in history, implied that God's creation is maximal and rich – containing all manner of creatures, not leaving voids where a type of being could have existed. If it is possible for life and mind to exist, why would they occur on only one tiny world? Would an infinite Creator populate an infinite (or extremely vast) universe with only barren rocks aside from Earth? Many thinkers have found it more consistent that the cosmos is teeming with life, a flourish of divine creativity, rather than lifeless except for us. In a way, discovering extraterrestrial life – especially intelligent life – would be a confirmation not of humanity's insignificance, but of God's greatness. It would mean God's creative word "Be!" has echoed in many places. As the Quran says, "His command when He intends a thing is only that He says to it, 'Be,' and it is" (Quran 36:82). That command could have sparked life on innumerable worlds. Each alien civilization (if they exist) would reflect another facet of God's artistry, just as each species on Earth does. They too would be part of the "all things" that God's knowledge encompasses and that were created for His glory ⁴³.

Faith and the Cosmic Community: A Devotional Reflection

Considering the likelihood of other intelligent beings in the universe is not just a cold scientific exercise – for people of faith, it can be a profoundly **spiritual and humbling experience**. It expands our perception of creation and prompts us to reevaluate humanity's role. Are we the sole children of God, or part of a much larger family of sapient creatures? If one day we make contact with another civilization, how would that shape our understanding of God's plan? These questions, while speculative, drive us back to our scriptures and theological principles with fresh eyes. They can actually deepen our appreciation for certain truths: that God's love and mercy are boundless, that pride in our exclusive importance is misguided, and that creation is filled with divine purpose everywhere.

From an Islamic perspective, the Quran already conditions believers to accept the existence of beings beyond humans. Apart from potential biological extraterrestrials, Islam affirms the existence of **angels** and **jinn**, intelligent entities that inhabit unseen realms of light and smokeless fire, respectively. Thus, Muslims are in a sense *philosophically predisposed* to accept non-human intelligences. The possible existence of earthly-life-based aliens would just add another category to the vast inventory of God's creatures. It is notable that the Quranic verse 42:29, after mentioning creatures in the heavens and earth, immediately reminds us that "He (God) has the power to gather them together when He wills." Some commentators believe this could allude to the Day of Resurrection, where all beings from all worlds would be assembled by God for judgment ²⁸. If so, it presents a majestic vision of a cosmic meeting of civilizations in the presence of their Creator. Humanity's story would be but one thread in a grand tapestry of stories, all culminating in the same place – the throne of God – for evaluation. In that sense, acknowledging a populated universe can reinforce the Islamic ethos of **tawhīd** (the unity of God and the unity of creation under God). It highlights that whatever their differences, *all intelligent creatures are subject to the same God and moral order*. As Quran 49:13 teaches, God could have made us into different nations and tribes (and perhaps species on other planets!) so that we may come to know one another, and that the most honored in God's sight is the most

righteous. Such principles would extend naturally to how we ought to treat any "neighbors" in the universe if we ever encounter them – with peace, curiosity, and the intention of recognizing them as fellow creations of the Almighty.

Christianity and Judaism likewise would see any ET beings as part of creation, not outside of God's dominion. A devotional outlook might consider the *incarnation* and salvation narrative in Christianity: Did Jesus's redeeming sacrifice on Earth cover sins of creatures on other planets, or did they never fall into sin, or have their own covenants? These are open theological questions, but several Christian thinkers (like C.S. Lewis in one of his novels, or contemporary theologians) have imagined that perhaps other species did not rebel against God as humans did, thus they remained in harmony with the divine (an idea somewhat mirrored in the Jewish text we saw, which speculated other worlds might be sinless ⁴¹). If that were so, encountering them would be like meeting unfallen beings – "aliens" who could even teach us about a purer relationship with the Creator. On the other hand, if they too have struggled with evil, then perhaps God has provided for them in ways akin to how He provided for us. Billy Graham once remarked that if other intelligent races need redemption, "Jesus Christ could visit them too, or God could find other ways to not leave them in darkness." Ultimately, he said, such details are known only to God, but we can trust in God's goodness and justice for all His creatures ³⁶ ³⁸.

For all three Abrahamic faiths, one thing is certain: the discovery of alien life would magnify the scope of creation and, by extension, magnify the Creator in our hearts. Standing under a sky filled with countless stars already prompts praise – "The heavens declare the glory of God" 4. How much more would knowing of living worlds around those stars deepen our awe? We would come to realize that God's attention and providence span not just billions of humans on Earth, but perhaps billions of beings on myriad planets. And yet, the scriptures assure us that not even a sparrow falls to the ground without God's knowledge (Matthew 10:29), and that God is "Most Caring" and "All-Knowing." Whether you are a farmer on Earth or a creature swimming in an alien sea lightyears away, you are seen and sustained by the one Divine King. This understanding can lead to a kind of cosmic humility. Humanity would no longer view itself as the sole focus of the divine plan, but as part of an expansive fellowship of creation. It is analogous to when we first discovered that Earth is not the center of the physical universe – it was humbling, but it led to a greater understanding of God's work. Similarly, finding we are not the only intelligent children in God's family would be humbling, but could lead to a greater appreciation of God's grandeur and the deeper unity of all life.

Conclusion: Wonder and Anticipation in a Living Universe

Current scientific knowledge provides a compelling rationale to suspect that we live in a **living universe**. We have learned that planets abound across the cosmos, and many are *Earth-like and situated in habitable zones* 6 2. We have discovered that life's basic ingredients are everywhere and that life can take hold in extreme environments, suggesting that where conditions allow, life often *finds a way* 9 10. We have begun listening for voices in the dark and formulating the probability mathematics that tell us, statistically, it would be astonishing if we were truly alone 8 27. We have not yet, as of 2025, detected an alien signal or found microfossils in a Martian rock. The universe has not yielded its secrets easily – which makes sense if the cosmos is God's artwork, to be unveiled on His timetable. But with each year, our telescopes peer a little farther, our rovers dig a little deeper, and our receivers listen a little longer. Each new **exoplanet discovery** or each mysterious radio burst adds to the growing sense that the cosmic dark might be full of life, not empty. The famed physicist Paul Davies said, *"It would be astonishing to find we are alone, given the numbers. The onus is on proving we are unique, not on proving we're not."* The balance of evidence, tentative as

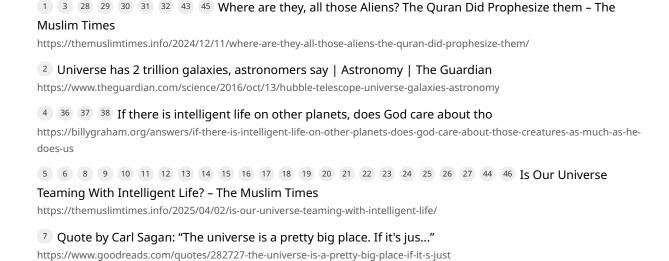
it is, **leans toward optimism** that we are *not* alone – that Earth is not an anomaly but one life-bearing world among many ⁸ ⁴⁴ .

People of faith can embrace this possibility without fear. Far from diminishing humanity's significance, a life-filled universe would further exemplify God's infinite glory. It would mean the divine creativity and love that gave us life has also given life generously elsewhere. Perhaps one day, in this world or the next, we may meet our cosmic neighbors. The Quran alludes to God's ability to "gather them together when He wills" 28, and some commentators (old and new) even view this as a subtle **prophecy** that one day the communities of the universe could come into contact. One author mused that if one believes the Quran indeed hints at extraterrestrials, "one could also conclude that humanity and our planet will last at least until we meet such life." 45 In other words, our story is not destined to end until that chapter is fulfilled. Whether or not that interpretation is correct, it speaks to a hopeful outlook: that there is more for us to discover in God's creation before the final day dawns.

In closing, the prospect of a universe teaming with intelligent life beckons us to walk in both humility and wonder. Humility, because we recognize we are but one intelligent species among possibly many, and we must shed any arrogance that the cosmos was made solely for us. Wonder, because all those potential lives and civilizations are a reflection of the same God we worship - each would have its own experience of the divine, its own role in the cosmic chorus singing the praises of the Creator. The scriptures tell us that "whatever is in the heavens and whatever is on the earth glorifies God" (Quran 57:1). Perhaps somewhere out there, alien tongues or strange luminescent creatures are glorifying God in ways we cannot fathom, yet the song is harmonious. Until we know for sure, we continue to explore with our telescopes and probes, and we continue to pray and marvel. The silence of the stars should not be mistaken for lifelessness; rather, it is a canvas of possibilities placed before us to ignite our curiosity and amplify our faith. As we await answers, we do so with trust in God's wisdom. Whether the first discovery is a microbe under an ice cap on Mars or a distant radio whisper from another sky, it will be a day that humanity will never forget - a day that fulfills our age-old longing to know "Are we alone?" with the joyous answer: we are part of a much larger family of life. And on that day, perhaps we will look up and, like the Psalmist, exclaim anew: "O Lord, our Lord, how majestic is Your name in all the earth!" - now knowing that "all the earth" extends to countless other worlds, all crafted by the same Majestic Hand.

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³⁹ ⁴⁰ ⁴¹ ⁴² masecheth avodah zarah - 18,000 worlds under the protection of Hashem! - Mi Yodeya https://judaism.stackexchange.com/questions/135605/18-000-worlds-under-the-protection-of-hashem