



Human Origins—Part 2: Evolution and the Failures of Naturalism

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Abstract

The concept of human evolution and whether it is compatible or irreconcilable with religious doctrine has been frequently debated, but all too often the popular discourse fails to provide a sound academic study of the philosophy of science and matters of theology and scriptural exegesis. This article explores how the explanatory scope of Islamic theology far exceeds that of philosophical naturalism in accounting for the empirically evident distinctions of humankind and its origins.

Introduction

Human beings share many resemblances with other species on this planet; “There is no animal that walks upon the earth nor a bird that flies with its two wings except that they form communities like you” (Qur’an 6:38). Yet there are also tremendous differences which afford human beings the unique capacity for civilization; “surely We have honored the children of Adam” (Qur’an 17:70). Any rational account of human origins must be able to satisfactorily explain not just the similarities but also the differences. While an ample amount has been written with respect to religious views on evolution, what is missing is a critical evaluation of the failures of philosophical naturalism in accounting for human origins.

In a preceding article, it was demonstrated that a sound understanding of Islamic theology and the philosophy of science removes any presumption of a conflict between empirical knowledge and theological conclusions. However, the mere absence of a contradiction is not the same as showing the conclusions of science and faith to be harmonious. The present article takes the discussion further to demonstrate that empirical knowledge about uniquely human capacities can only be properly rationalized according to a metaphysical foundation that grants human uniqueness, something that philosophical naturalism fails to do. Philosophical naturalism entails a rejection of anything beyond the realm of physical experimentation and observation, and consequently the human being is examined as a biological organism entirely reducible to Earthly physicochemical processes, fundamentally no different from other animal species. On the other hand, the

philosophical outlook that emerges from a theology of Divine revelation and special creation necessarily accords humanity a unique position. The competition between these viewpoints can be seen historically in the wake of the European enlightenment:

The contemporary tendency to deny that the human mind differs categorically from the minds of other animals is not without precedent: it is arguably a legacy of British Empiricism. Thus, although Locke defines Reason as “that Faculty whereby Man is supposed to be distinguished from beasts,” he also says of beasts that “if they have any Ideas at all, and are not bare Machins (as some would have them) we cannot deny them to have some Reason.”¹ In a similar vein, Hume remarks that “no truth appears to me more evident, than that beasts are endow’d with thought and reason as well as men.”² We differ from brutes, according to these philosophers, not in the fundamental nature of our mental states, but merely in the complexity of the contents our minds can entertain and the sophistication of the operations we can perform on such contents.

There is another tradition in modern philosophy, however, which adheres more closely to the Aristotelian position described above. The great figure in this tradition is Kant, who follows Aristotle in holding that, although brutes are capable of sensation and appetite, they are not capable of thought and judgment.³

The significance of these two competing philosophical stances extends beyond mere intellectual curiosity or edification. It actually has the potential to sway the course of scientific investigation. That may seem surprising to readers accustomed to view science as a neutral enterprise entirely independent of philosophy, however where we as scientists search for answers is heavily influenced by the connections we already presume to be of significance. A tremendous amount of research

¹ Essay concerning Human Understanding, IV, XVII, 1 (1975, p. 668) and II, XI, 11 (1975, p. 160), as cited in Boyle, Matthew Brendan (2006) *Kant and the Significance of Self-Consciousness*. Doctoral Dissertation, University of Pittsburgh. (Unpublished), 3.

² Treatise of Human Nature, I, III, XVI (1978, p. 176), as cited in Boyle, 4.

³ Boyle, 3-4.

concentrates on understanding human psychology, including conditions like depression and anxiety, through animal models using mice, rats, and monkeys, for instance, justified in part because of expected similarities with humans on the basis of biological evolution.⁴ And undoubtedly, without such animal trials a tremendous amount of valuable and beneficial scientific investigation could not take place. At the same time, it is undoubtedly also the case that no matter how many studies are conducted on zebrafish, there will remain many, many important unanswered questions about autism or schizophrenia in humans.⁵ For this reason, researchers are right to point out that failure to consider the disparities between humans and other species can pose a significant obstacle to research and lead to models with little predictive value for translation to humans.⁶

Discussions over the topic of evolution and Islam tend to place all the scrutiny on religious interpretations, attempting to delineate the maximum limit to which interpretations of scripture can be taken to accommodate the conclusions of biological evolution. While there is merit to improving our understanding of what theology does and does not entail, this approach is unbalanced because it neglects to analyze the coherence and integrity of the philosophical underpinnings of evolutionist arguments about human origins. The available empirical knowledge is entirely assumed to be on the side of evolutionists, while the religious believer's rationality stands on trial and under cross-examination. The fact of the matter however is that the advances of scientific research have turned the tables. As scientists, the more we learn about the distinctive features of human nature, the more we recognize a massive gulf that separates humanity from the rest of biological species on this planet. Failure to acknowledge the differences not only leads to an impoverished understanding of human origins but also has the potential to constrain and mislead scientific research. When carefully considered, the

⁴ Capitanio, J. (2017, January). Animal studies in psychology. Psychology Student Network. <http://www.apa.org/ed/precollege/psn/2017/01/animal-studies>

⁵ Kalueff AV, Stewart AM, Gerlai R. Zebrafish as an emerging model for studying complex brain disorders. *Trends Pharmacol Sci.* 2014 Feb;35(2):63-75; Meshalkina DA, N Kizlyk M, V Kysil E, Collier AD, Echevarria DJ, Abreu MS, Barcellos LJG, Song C, Warnick JE, Kyzar EJ, Kalueff AV. Zebrafish models of autism spectrum disorder. *Exp Neurol.* 2018 Jan;299(Pt A):207-216.

⁶ Bolker JA. Animal Models in Translational Research: Rosetta Stone or Stumbling Block? *Bioessays.* 2017 Dec;39(12). doi: 10.1002/bies.201700089. Epub 2017 Oct 20. PMID: 29052843.

available empirical data requires a more robust ontological narrative of human origins than that offered by naturalism.

The great divergence—understanding the fundamentals of human nature

The world of academe is currently in the grip of a strange and worrying epidemic of biologism, which has also captured the popular imagination. Scientists, philosophers, and quite a few toilers in the humanities believe—and would have the rest of us believe—that nothing fundamental separates humanity from animality.⁷

By virtue of its nature, evolutionary biology adopts a comparative approach which focuses on biological similarities between species.⁸ But this approach on its own is incomplete; an equally important empirical project is to understand what makes human beings unique and to account for the vast gulf that separates humans from the other species with whom they share the planet. Human beings are the only creatures to have developed full-blown civilization, government, law, education, culture, language, philosophy, art, entertainment, science, and so forth. And these achievements arise from some uniquely human capacities related to our consciousness (including meta-cognition and sustained self-awareness), language, moral values, and other qualities that have characterized humankind even in hunter-gatherer societies long before the modern era. All correlates with animal species in this regard have been found to be so rudimentary and primitive, so

⁷ Tallis, Raymond. Rethinking Thinking. *The Wall Street Journal*. Nov 12, 2011.

<https://www.wsj.com/articles/SB10001424052970204618704576642991109496396>

⁸ Even manifest differences must be originally rooted in similarities undergoing incremental variation, as in transformational homology. Rieppel, O. (1994). Homology, topology, and typology: The history of modern debates, in Hall, B.K. (ed.) *Homology: The Hierarchical Basis of Comparative Biology*, (San Diego: Academic Press), p. 88. It has been argued that the Modern Synthesis (MS) Theory, the orthodox paradigm in evolutionary biology, is insufficient in accounting for evolutionary novelties. Refer to Pigliucci, Massimo (2008). What, if anything, is an evolutionary novelty? *Philosophy of Science* 75 (5):887-898. Pigliucci writes:

...while the MS has been very successful at expanding Darwinism to account for genetics and population biology, it has failed to sensibly incorporate both developmental biology and ecology; while the MS has given us an account of genetic variation and of how it changes in populations over time, it has reached an impasse on the question of the origin and evolution of phenotypic novelties and organismal body plans (p. 895).

categorically inferior, as to preclude any reasonable comparison with human abilities. As British author John Hands notes:

*The claim that a single chimpanzee using a stone to crack open a nut is the same kind of thing as a large international team of scientists cooperating to invent and construct the Large Hadron Collider in order to discover how fundamental particles interact is, I suggest, somewhat less than valid.*⁹

Denying this empirically obvious difference impedes scientific progress and yet has unfortunately become commonplace among even the most well-intentioned writers, including “a large majority of primatologists, anthropologists, and evolutionary biologists.”¹⁰ As neurologist and philosopher Raymond Tallis writes:

*Some writers, as we have seen, try to bridge the gap between us and apes by arguing that it is not as big as it looks and that it is ultimately not real. Others, however, are aware that the gap is a yawning gulf and seek an explanation that is proportionate to the scale of what has to be explained.*¹¹

This denial of the obvious is part of what Tallis critiques as the over-extension or ‘inflammation’ of Darwinian thought in accounting for humanity, for which he coins the term ‘Darwinitis.’ The attempt to reduce everything to biological processes, to claim that human beings are nothing more than bags of chemical reactions, the amalgamation of blind physical forces (which Richard Dawkins dubbed ‘the blind watchmaker’), leaves unanswered many of the fundamental facts about the human condition, and how we have come to be sentient beings able to rise above such physical processes to contemplate the reality of our condition, and the intricacies of those very laws of physics.¹²

⁹ Hands, John. *Cosmosapiens: Human Evolution from the Origin of the Universe*. (Overlook Books, 2016). pp. 536-537.

¹⁰ Ibid., p. 532.

¹¹ Tallis, Raymond. *Aping Mankind: Neuromania, Darwinitis and the Misrepresentation of Humanity*. (Acumen Publishing 2012), p. 214. It should be noted that Tallis prefaces his discussions with numerous disclaimers that he affirms the biological evolution of human beings and is an atheist humanist—the fact that he feels the need to even spell this out demonstrates the unfortunate extent to which the subject has become politicized in the public discourse such that to even raise intelligent questions about the assumptions of the mainstream scientific community is deemed academic heresy.

¹² Another aspect of the problem

Darwinism, therefore, leaves something unaccounted for: the emergence of people like you and me who are indubitably sighted watchmakers.

...something rather important about us is left unexplained by evolutionary theory. We are not mindless and yet seem to do things according to purposes that we entertain in a universe that brought us into being by mindless processes that are entirely without purpose. To deny this is not to subscribe to Darwinism but to embrace Darwinitis.¹³

Why are humans special? Why is there such a massive gulf between humans and non-human primates? From an evolutionary perspective, the question entails accounting for why the ecological niches or the magnitude of selection pressures were so divergent between the species, and tremendously more significant in advancing the capacities of humankind. This has been the subject of considerable debate among evolutionists and opinions on the matter remain largely conjectural. Any potential empirical answer to this question (identifying a possible discrepancy in the evolutionary opportunities or environments of humans versus non-human primates) will always seem inadequate without an accompanying ontological foundation to justify the presence of said radical discrepancy in the first place. The Qur'an mentions, "Verily, We have created the human being in the best of molds" (95:4). Ibn Atiyyah (d. 541 H) notes that this verse is inclusive of several unique characteristics ranging from physical form (*surah*), senses (*hawas*), and having one's intellect (*'aql*) and perception (*idrak*) adorned with discernment (*tamyiz*).¹⁴ What follows is an examination of the unique dimensions of human nature, and an exploration of the scriptural and scientific discussions that pertain to them.

First: Language

The gift of language is one of the most fascinating features of the human species. In the Qur'an, it is mentioned immediately after the creation of the human being, as a Divinely endowed faculty: "The Most-Merciful; He taught the Qur'an, created the human being, and taught him language (*bayan*)" (55:1-4).

¹³ Tallis, Raymond. *Aping Mankind*, pp. 212-213.

¹⁴ See *Tafsir ibn Atiyyah* (Qatar: Ministry of Awqaf 2007), vol. 8, p. 647.

By stringing together a few sounds or written symbols, a human being can produce an infinite range of meanings. Despite being a massively complex system of meaning with hundreds of grammatical rules, human toddlers are able to acquire such knowledge naturally with astoundingly minimal instruction—an observation which led to the description of an innate faculty called the ‘language acquisition device’ (one of Noam Chomsky’s pioneering conceptual innovations in the field of linguistics).¹⁵ Many of these rules are actually quite complex and difficult to ascertain even with considerable study, and yet native speakers can identify them instinctively.¹⁶ The human mind’s preparedness to learn language in distinction to all other animals is now commonly acknowledged, but was articulated in the classical work of Ibn al-Qayyim who argued that God is the One “who prepared the mind of the human by making it amenable to learning language in contrast to all other animals (*man hayya’ dhihnu li qubul hadha ta’lim duna sa’iri’l-hayawanat*).”¹⁷

Many people make the error of considering language to be a system of communication that is simply a few orders of magnitude superior to animal communication. However, the communicative aspect of language is peripheral to its primary function as a system of thought, serving to analyze and clarify concepts, construct ideas, explicate and pose questions, and elaborate meaning.¹⁸ Linguistic conceptions are intrinsic to our mental activity, and our internal train of thought cannot dispense with words (e.g., try to think a thought without any words). The Qur’an identifies this as the fundamental character of language and

¹⁵ Chomsky, N. *Aspects of the Theory of Syntax* (MIT Press 1965), p. 47. Like all pioneering observations, this raised criticisms from opponents and responses from proponents. See Legate, Julie & Yang, Charles (2002). Empirical re-assessment of stimulus poverty arguments. *The Linguistic Review*, 18, 151–162.

¹⁶ For instance, consider the following sentence (a Chomskyan adaptation): ‘The man who is leading the prayer is knowledgeable.’ If one were to convert this into a question, one is required to transpose the second instance of the word ‘is’ to the front of the sentence and not the first: ‘Is the man who leading the prayer is knowledgeable?’ versus ‘Is the man who is leading the prayer knowledgeable?’ People can instinctively identify the incorrect speech without any knowledge of the underlying structural syntactic determinants, and children readily identify such structure-dependence when they learn language. For more discussion on this subject, and examples of scalar implications and polarity in everyday language use, the interested reader may refer to Chierchia, Gennaro. *Logic in grammar: Polarity, free choice, and intervention* (OUP Oxford, 2013).

¹⁷ Ibn al-Qayyim. *Miftah Dar al-Sa’adah*, (Mecca: Dar ‘Alam al-Fawa’id 2010) vol. 2, p. 792.

¹⁸ Asoulin, Eran. (2016). Language as an instrument of thought. *Glossa: A Journal of General Linguistics*, 1(1), 1-23.

also distinguishes between the language faculty itself and individual languages.¹⁹ The Qur'an uses the word *bayan* (which means clarification of meaning) for the human language faculty (55:5), *lisan* (which means tongue) for various human languages (30:22),²⁰ and *mantiq* (which means utterances) for animal communication (27:16).²¹

How vastly different are animal screeches, roars, croaks and grunts, from the human language faculty which permits conceptualization of the laws of physics, or philosophizing about the nature of our existence? As American linguist and philosopher Ray Jackendoff notes, animal communication is at best analogous to human gestures and body language, as animals “*typically have at most a few dozen distinct calls, and they are used only to communicate immediate issues such as food, danger, threat, or reconciliation.*”²² Even attempts at teaching human language to primates through intensive instruction and training have demonstrated only a modest ability to acquire limited communicative expression, the extent of which is surpassed by a three-year old child.²³ Animal species naturally cannot go

¹⁹ Linguistic theorists often capitalize ‘Language’ to distinguish the faculty that all humans possess from the non-capitalized ‘language’ which refers to things like Arabic, English, French, Urdu, Turkish, etc.

²⁰ There is an ongoing debate amongst linguists about whether all modern languages go back to a single ancestral language (linguistic monogenesis) or several languages (polygenesis), a question which has been said to be “difficult if not impossible to determine using the evidence of the present.” See Schreyer, Christine (2002) “A Proto-Human Language: Fact or Fiction,” *Totem: The University of Western Ontario Journal of Anthropology*: Vol. 10: Iss. 1, Article 9. From the perspective of Muslim scholars, debates over the origin of human languages (*asl al-lughah*) have also been diverse: the linguist Ibn Faris (d. 395 H) was of the view that they were all given by God, while Ibn Jinni (d. 330 H) believed they were invented by humans. Ibn Taymiyyah (d. 728 H) held that languages were part given and part developed.

²¹ The Qur'an never uses *bayan* to describe communication in non-human creations. One may wonder about what we may learn about language capacity from the example of Prophet Sulaiman's knowledge of animal speech, most notably the ant and the hoopoe in Surah al-Naml. However, Al-Qurtubi comments in his exegesis of 27:16, “People are in agreement that Sulaiman understood the speech of that which did not speak (*kalam man laa yatakallam*), and speech was created even in plants, so that a plant would say ‘I am such-and-such tree, with this comparative benefit and harm.’ So what then do you suppose about animals?” Similarly, on the Day of Judgment, God will make a person's skin speak just as “He makes everything speak” (41:21). Therefore, one must avoid taking these as normative biological descriptions about animal cognitive capacity, but rather instances wherein God elevates the generic primordial sentience found in any creation to the level of meaningful communication that might be apprehended, as in the case of a talking wolf (*Sahih Bukhari*), a crying tree trunk (*Sahih Ibn Hibban*), and even the entirety of the heavens and earth (41:11).

²² Jackendoff, R.. How Did Language Begin? Linguistic Society of North America.
<https://www.linguisticsociety.org/content/how-did-language-begin>

²³ Limber, J. (1977). Language in child and chimp? *American Psychologist*, 32, 280-295.

beyond a limited predefined set of available messages, while humans can express complex messages that have never been previously expressed in human history.²⁴

The language faculty is thought to have emerged in evolutionary history between 70, 000 to 100, 000 years ago, but identifying a mechanism has been a tremendous stumbling block. One approach has been to reduce language to just one fundamental capacity, namely that of recursion (basically words referring back to other words), in order to explain how it could have suddenly emerged through a single genetic alteration in an individual.²⁵ Biological anthropologist Terrence Deacon has argued that this appeal to such a solitary “lucky genetic accident” is tantamount to an argument for miracles.²⁶ Moreover, it has been argued that this neglects other relevant unique human linguistic capacities (such as phonology, morphology, or the massive lexicon humans acquire)²⁷ and that some form of incremental process must have taken place—although this of course reduces language to its communicative functions while its central function of elaborating thought becomes a mere incidental bonus. Ongoing empirical investigation and debate on this subject is healthy and necessary while also acknowledging that part of this question will forever lie beyond our epistemic horizons, since the object of study is the emergence of a capacity which existed in the minds of humans hundreds of thousands of years ago and has left little in the way of tangible artifact or fossil.²⁸

²⁴ Even after intensive instruction, the bonobo Kanzi failed to show comprehension of the hierarchical structures in language, outperformed by a human toddler between 18 to 24 months of age. See Truswell, R. (2017). Dendrophobia in Bonobo Comprehension of Spoken English. *Mind Lang*, 32, 395-415.

²⁵ Hauser, M. D., Chomsky, N., & Fitch, W. T. (2002). The faculty of language: What is it, who has it, and how did it evolve? *Science*, 298, 1569-1579.

²⁶ Terrence Deacon. Language and complexity: Evolution inside out. 37th International Systemic Functional Congress. Irving K. Barber Learning Centre. Webcast Aug 25, 2010. Accessed on YouTube (<https://www.youtube.com/watch?v=OT-zZ0PMqgI#t=17m30s>). He goes on to note, “The intelligent design people ought to love this stuff because we had this extravagant mutation 60 thousand years ago according to Richard Klein and suddenly we’re human! This is exactly the kind of miracle story that we don’t want, I think, in biological theory.”

²⁷ Pinker S., & Jackendoff, R. (2005). The faculty of language: what’s special about it? *Cognition*, 95, 201–236. See also the response of Fitch W. T., Hauser, M. D., & Chomsky, N. (2005). The evolution of the language faculty: clarifications and implications. *Cognition*, 97, 179–210.

²⁸ Dunbar R. I. M. “Why only humans have language,” in *The Prehistory of Language* eds. Botha R., Knight C. (Oxford: Oxford University Press 2009) p. 14.

The fact that we humans have come to possess this extraordinary gift of language, this incredible capacity for limitless expression and understanding, cries out for explanation. Language is an articulation of meaning, and meaning is immaterial and metaphysical, reaching beyond the confines of our physical realm to latch on to universal truths and conceptualize reality. Why on earth would a biological organism have the capacity to conceptualize cosmic truths? Islamic theology uniquely provides the ontological grounding and metaphysical context within which to situate this capacity. In the first story mentioned in the Qur'an, the angels ask God why place human beings on earth when they will inevitably spread bloodshed and corruption while the angels glorify God. Human beings would not be directly in God's presence like the angels, and hence subject to an epistemic distance between them and God (they do not witness God directly), and prone to worldly temptations. The response later in the passage is seen when God favors Adam over the angels with an extraordinary gift: "And He taught Adam the names of all things" (Qur'an 2:31). Exegetes have pondered this phrase and interpreted it in various ways, but one understanding that encompasses the others has been connecting this with humankind's unique capacity for language,²⁹ furnishing a capacity for conceptualization and abstraction that stretches the epistemic horizons of the most knowledgeable human beings beyond even those of the angels.³⁰ Thus, despite being on Earth, human beings are able to understand and appreciate the Divine names and attributes—that God is Merciful and loves those who show mercy, they understand the abstract concepts of good and bad, truth and falsehood, and so on.³¹ This all emerges from the natural capacity for conceptualization rooted

²⁹ Ibn Taymiyyah mentions it as proof of God teaching humans language (*bayan*). *Majmu' al-Fatawa* (al-Mansura: Dar al-Wafa' lil-Taba'a wal-Nashr, 1998), vol. 9, p. 36.

³⁰ See the discussion in Abu Su'ūd, Muhammad ibn Muhammad. *Irshad 'Aql Salim ila Mazaya al-Kitab al-Karim*. (Riyadh 1974). Vol. 1, pp. 144-147. Learning "the names of all things" goes beyond simply acquiring vocabulary, for many reasons. First, where is the unique virtue in teaching Adam something that the angels could just as easily have learned? And how would that address the angel's question about the human potential for bloodshed? Evidently, it relates to a unique capacity for conceptualization, for discerning the meanings of the unknown based upon what is known, which ties into humankind's spiritual journey.

³¹ In this connection, consider also the *hadith* which mentions that the angels report to God about witnessing His human servants glorifying Him, seeking Paradise, and seeking refuge from Hellfire despite this being unseen to them, whereupon God announces His forgiveness for them (*Sahih al-Bukhari* 6408). Language allows human beings to understand realities they have not witnessed, thus providing them the means of traversing the epistemic distance between them and God.

in the primordial nature of human beings.³² Language is thus not some unintended “lucky accident,” but a critical part of the spiritual apparatus that defines human purpose in life.

Second: Consciousness

One of the most obvious ways in which human beings transcend animal capacities is with regards to their mental activities and the content of their thoughts. Ibn al-Qayyim points out that while animals have basic discernment (*tamyiz*) and perception (*idrak*), they are devoid of the uniquely human features of mind (*dhihn*) and intellect (*‘aql*).³³ Unlike the rudimentary awareness of elephants and dolphins recognizing themselves in the mirror, humans have a self-awareness that is *sustained* and *productive*, driving the course of their mental activity and the content of their internal train of thoughts.³⁴ We have the capacity for metacognition, that is, thinking about thinking, contemplating the content of our own thoughts. And we can direct our contemplative activity to external reality to comprehend the intricacies of the universe we inhabit. As cosmologist Paul Davies notes, “Other animals observe the same natural phenomena as we do, but alone among the creatures on this planet, *Homo sapiens* can also *explain* them.”³⁵

Why should the laws of nature have bequeathed humans with minds that are capable of comprehending those very laws? In a universe comprised of nothing more than collections of particles, why would one expect the emergence of conscious minds capable of pondering their own existence? As often asked, how can something as immaterial as the mind emerge from something as mindless as matter? Naturalism fails to provide a sufficient account in this regard and a more solid ontological foundation is needed.³⁶ Another problem consciousness poses for naturalism is the breakdown of its normal causal explanatory apparatus. How do

³² Language is intimately connected with the Islamic concept of the *fitrah* as discussed in Khan, N. *Fitrah - The Primordial Nature of Man*. (1/1/15). <http://spiritualperception.org/fitrah-the-primordial-nature-of-man/>

³³ Ibn al-Qayyim. *Miftah Dar al-Sa’adah*, (Mecca: Dar ‘Alam al-Fawa’id 2010), vol. 2, p. 666.

³⁴ Cf. Tallis, Raymond. *Aping Mankind: Neuromania, Darwinitis and the Misrepresentation of Humanity*, pp. 217, 230.

³⁵ Davies, Paul. *The Goldilocks Enigma: Why Is the Universe Just Right for Life?*, (NY: First Mariner Books 2008) p. 5.

³⁶ Nagel, Thomas. *Mind and Cosmos: Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False*, p. 35.

we account for the fact that one thought caused the next thought in my 'train of thought' while simultaneously acknowledging that it was one electrochemical impulse which caused the next electrochemical impulse? This leads to a problem of overdeterminism and causal exclusion.³⁷

Humans are fundamentally spiritual beings who possess bodies that constantly change; our cells get replaced, we can transplant our organs, our bodies decompose when we die and are re-created when we are resurrected. But our soul remains the same.³⁸ The Qur'an (17:85) states of the soul, "And they ask you concerning the soul (*ruh*). Say, 'The soul is from the affairs of my Lord, and you have been given but little knowledge of it.'" The soul is a metaphysical reality that is incorporated in the body, and many of the discussions in Islamic theology on the subject have interesting implications for questions on the nature of consciousness.³⁹ In a sense, there is a first-order basic sentience that pervades all existence, which is that of *tasbīh* (glorifying God): "And there is nothing in existence except that it glorifies Him in praise, but you cannot comprehend its manner of glorifying (*tasbīh*) Him" (Qur'an 17:44).⁴⁰ Meanwhile, the second-order consciousness associated with moral accountability and moral choice is something that the Qur'an states was entrusted specifically to human beings: "We presented the Trust (*amanah*) to the Heavens, the Earth, the Mountains, but they refused to bear it, being afraid thereof, but man assumed it. Verily, he has proven unjust and ignorant" (Qur'an 33:72).⁴¹ Shah Waliullah al-Dehlawi (d. 1176 H) distinguishes between vital life forces common to all living organisms (e.g., *al-ruh al-hawa'i*) and the conscious soul which makes an individual who he or she is (*al-nafs al-natiqa*).⁴² Spirituality raises

³⁷ See Kim, Jaegwon. *Mind in a Physical World*. Cambridge: MIT Press, 1998, p. 38.

³⁸ Badr al-Din al-Ayni (d. 855 H) writes, "The human soul is that which each individual refers to with the pronoun, 'I'." *Umdat al-Qari*, (Beirut: Dar al-Kotob al-Ilmiyah 2001), vol. 2, p. 303.

³⁹ Brown, Jihad. The Problem of Reductionism in the Philosophy of Mind and its Implications for Theism and the Principle of Soul: Framing the issue for further Islamic inquiry. Tabah paper series. no. 7 (2013). <http://www.newdualism.org/papers/J.Brown/Brown-Reductionism-Tabah-2013.pdf>

⁴⁰ There are many similar passages, such as the verse which mentions the devout voluntary obedience of the Heavens and the Earth to God (41:11).

⁴¹ The Trust (*Amanah*) refers broadly to moral accountability, to follow the commandments of God by one's volition. Qur'anic exegesis mentions that inanimate entities (*jamadat*) were given understanding (*fahm*) and discernment (*tamyīz*) to make a choice regarding carrying the trust (*khuyirat fi'l-haml*); see Abu Hayyan al-Andalusi, *Bahr al-Muhit*, (Beirut: Dar Ihya al-Turath al-Arabi, nd) vol. 7, p. 253.

⁴² Hermansen, Marcia. *The Conclusive Argument from God: Shah Wali Allah of Delhi's Hujjat Allah Al-Baligha*. (Islamic Research Institute, 2003), p. 54.

the human being to elevated states of consciousness, until one “becomes witness to other realities and matters of which one was not conscious before.”⁴³

Consciousness is a very difficult subject to pin down. On the one hand, there is the empirical *objective consciousness* which pertains to how the mind responds to stimuli, what information is available to the mind, what occupies the mind’s attention, one’s level of wakefulness, and so on. These are observable to the outsider and can be studied and analyzed by empirical scientific means. It is sometimes referred to as the ‘third-person’ perspective.

On the other hand, there is the subjective experience that accompanies thoughts, sensations and feelings, the internal experience of what it is like to see the color red or feel surprise, and so on. This first-person perspective, often termed *phenomenal consciousness*, is beyond our empirical lens.⁴⁴ How and why we have this rich inner experience is the question that philosopher David Chalmers famously described as the ‘hard problem of consciousness.’⁴⁵

There is still perhaps an even deeper abstraction than this, which one could term the *metaphenomenal consciousness*: setting aside the content of sensations, emotions, and thoughts that are projected in the mind, what is the nature of the projection itself?⁴⁶ Consciousness itself is an internal arena which the human being chooses to populate with all manner of thoughts, ideas, beliefs, judgments,

⁴³ Ibn al-Qayyim, *Tarīq al-Hijratayn wa bab al-sa’adatayn*. (Cairo: Dar al-Salafiya 1394 H). vol. 1, p. 15.

Alternatively, the absence of any spiritual inclination can cause one to be lost in the senseless pursuit of materialistic distractions and heedlessness (*ghaflah*), debasing oneself to the level of creatures who possess minds but do not benefit from them (Qur’an 25:44,47:12).

⁴⁴ Some classic examples have been used to illustrate phenomenal consciousness and how it is independent of physical perception, including the case of philosophical zombies, inverted color vision, Mary the color-deprived scientist, among others. Refer to Tye, M. Philosophical Problems of Consciousness. In *The Blackwell Companion to Consciousness*. eds M. Velmans and S. Schneider. (Wiley-Blackwell 2007), 23-35.

⁴⁵ Chalmers, D. J. *The Conscious Mind: In Search of a Fundamental Theory*. (Oxford: Oxford University Press 1996).

⁴⁶ This analogy can be helpful: “This aspect of consciousness can be likened to the light from a film projector. The projector shines light onto a screen, modifying the light so as to produce one of an infinity of possible images. These images are like the perceptions, sensations, dreams, memories, thoughts, and feelings that we experience—the forms arising in consciousness. The light itself, without which no images would be possible, corresponds to this ability of consciousness to take on form. We know all the images on a movie screen are composed of light, but we are not usually aware of the light itself; our attention is caught up in the images that appear and the stories they tell. In much the same way, we know we are conscious, but we are usually aware only of the many different perceptions, thoughts, and feelings that appear in the mind. We are seldom aware of consciousness itself.” Peter Russell. *The Primacy of Consciousness*. <https://www.peterrussell.com/SP/PrimConsc.php>

emotions, questions, and so forth. This arena can be spiritually purified or polluted: “Successful is one who purifies the soul; ruined is one who pollutes it” (Qur’an 91: 9-10). As Ibn al-Qayyim explains in his work *Wabil al-Sayyib*, it is through the path of spiritual purification that the soul becomes the receptacle for Divine Light (Qur’an 24: 35), thereby altering the nature of its perceptions and elevating the very nature of its consciousness.⁴⁷

From the perspective of evolutionary biology, the presence or absence of an organism’s phenomenal consciousness, or its nature, cannot be determined by an external observer, and thus, it does not lend itself to empirical investigation. It remains a metaphysical question, and it is entirely plausible that the emergence of humankind was associated with a particular distinctive phenomenal consciousness.

Other differences

It is beyond the scope of this paper to elaborate on the other fundamental qualities of humankind that are exclusive to this species. Many more have been hypothesized in the works of Islamic theology,⁴⁸ and their metaphysical implications are worth exploring further (for instance, moral choice, emotional intelligence, the ability to wonder and contemplate, and so forth).

Given that the philosophy of science demands parsimony in our explanations, there is a tendency to extrapolate all data from animals and apply them to humans, presuming that all creatures belong to the same historical narrative. But this provides very poor accounts of matters like language, moral reasoning, metacognition and so forth. The empirically evident massive divergence between humankind and other species warrants an explanation that stands on firmer ontological footing than that afforded by naturalistic explanation alone. The idea that humans are special in some non-trivial way has no place within the paradigm of naturalism which countenances only blind physical processes without purpose or

⁴⁷ Ibn al-Qayyim. *Wabil al-Sayyib min al-Kalim al-Tayyib*. (Makkah: Dar 'Alam al-Fawa'id), p. 119.

⁴⁸ For instance, when discussing verse 17:70 “Verily We Have honored the children of Adam,” Ibn al-Qayyim presents a long list of such unique distinctions of humankind which includes cognitive, aesthetic, and moral features. *Miftah Dar al-Sa'adah*, (Mecca: Dar 'Alam al-Fawa'id 2010), vol. 2, p. 748.

intention which somehow seems to result in creatures with tremendous purpose and intention.⁴⁹

Beyond polemics: Evolutionary science vs. Evolutionist dogma

Evolutionary science is an area of tremendous advancement and achievement. Evolutionist dogma, unfortunately, is not. What is the distinction? Evolutionary science includes research and investigation into genetic mechanisms of speciation and population diversity, which have led to exciting developments in biology and ecology. Evolutionist dogma, on the other hand, refers to the zeal to transform evolution into an anti-religious ideology that obviates the need for theistic and metaphysical accounts of beauty, unity, utility, complexity, and humanity. This overly enthusiastic zeal has propelled some evolutionists to present biological evolution as a grand unifying theory in biology, which has the explanatory scope to solve all our problematic causal connections with a simple story tied to reproductive fitness. This thinking however, is unfortunately pseudo-science and its harmful repercussions on empirical investigation are manifold.

First, evolutionary science is robbed of its contextual value and denied its unsolved complexities. Biological evolution is not a catch-all theory that has answered everything. In fact, it is not even a single theory. It is a field of ongoing scientific research that encompasses numerous competing theories and contains many critical questions that remain unsolved. Like all fields of investigation, it has several limitations and debates.

Secondly, many anti-religious arguments are introduced by evolutionists that are not 'scientific' by any means but rather stand on dubious reasoning. These include arguments claiming 'bad design' of a particular anatomical structure (such as the retina or the recurrent laryngeal nerve) predicated on unsubstantiated presuppositions about what structural arrangement would be optimal, a present

⁴⁹ Midgley, Mary. (2011). Why The Idea Of Purpose Won't Go Away. *Philosophy*, 86, 545-561.

lack of knowledge,⁵⁰ and a hasty dismissal of the potential for further empirical research to identify physiological benefits⁵¹ or relevant developmental constraints,⁵² as it readily has in the aforementioned cases.

Third, we have the overzealous construction of often mutually conflicting evolutionary “just-so” stories about how a particular trait emerged or was selected for which are often based on conceptual misunderstandings regarding the different categories of explanation, mechanism, constraints, and causation.⁵³ There is a critical need to solve problematic conceptions of mechanisms, such as conflicting notions of exaptations versus adaptations,⁵⁴ problems with the dominance of methodological adaptationism,⁵⁵ and unscientific explanatory adaptationism.⁵⁶ These paradigms have resulted in the proliferation of “just-so” story-telling, picking a trait, and speculating a creative linkage between its function and survival or reproductive fitness. The problem with so many highly contrived and conjectural explanations is precisely that alternative stories are drawn up so easily,

⁵⁰ Ironically, the anti-religionists claiming ‘bad design’ are guilty of precisely the same fallacy they call the “God-of-the-gaps” fallacy wherein a claim is staked on a present gap in knowledge, dismissing the possibility for empirical research to close the gap.

⁵¹ For instance, the physiologically obtuse presumption that the retina is backwards, because the photoreceptors are situated behind axons, has been shown erroneous by the functional benefits conferred by this optical arrangement which permit spectral waveguiding and situating photoreceptors closest to the highly vascularized choroid. See Labin, A. M., & Ribak, E. N.. (2014). "Color sorting by retinal waveguides," *Opt. Express*, 22, 32208-32213; and Nickla, D. L., & Wallman, J. (2010). The multifunctional choroid. *Prog. Retin. Eye Res.*, 29 (2), 144-168.

⁵² For instance, the argument about the recurrent laryngeal nerve (RLN) fallaciously looks only at the adult organism to presume that a shorter course is optimal. However, this ‘bad design’ argument entirely neglects the embryological sequence of events, and what is most efficient based on the process by which the anatomical structures in a creature are assembled during embryogenesis and organogenesis. Thus, ontogeny may provide a more relevant explanation than phylogeny. Moreover, the course of the RLN is not incidental; rather, there exist sensory and autonomic fibers to the cardiac plexus and connections with sympathetic cardiac nerves, which have recently been better characterized as a result of fetal cadaveric research: B De Gama et al. (2014). The recurrent laryngeal cardiac nerve in fetuses. *International Journal of Morphology*, 32 (2), 415-419.

⁵³ Take for instance the causal confusions and conflation of categories of explanation for why humans have acquired big brains: instrumental hypothesis (we became smarter so we could eat better), Machiavellian intelligence hypothesis (we became smarter so we could steal better), cultural intelligence hypothesis (we became smarter so we could learn better), Vygotskian intelligence hypothesis (we became smarter so we could cooperate better), Scheherazade hypothesis (we became smarter so we could mate better), social brain hypothesis (we became smarter so we could have more friends), etc. See Dunbar RIM, Shultz S. (2017). Why are there so many explanations for primate brain evolution? *Phil. Trans. R. Soc. B*, 372: 20160244.

⁵⁴ Lloyd, E. A. & Gould, S. J. (2017). Exaptation revisited: Changes imposed by evolutionary psychologists and behavioral biologists. *Biological Theory*, 12, 50-65.

⁵⁵ Lloyd, E. A. (2015). Adaptationism and the logic of research questions: How to think clearly about evolutionary causes. *Biological Theory*, 10 (4), 343-362.

⁵⁶ Boucher, S. C. (2015). Functionalism and structuralism as philosophical stances: van Fraassen meets the philosophy of biology. *Biology & Philosophy*, 30(3), 383-403.

which illustrates that they fail to meet the criterion of *invariance*—a key component of a good scientific explanation. If too many elements in the story can be modified and altered without any impact on its relationship to the data, it fails as a scientific explanation.⁵⁷

Fourthly, the naturalistic presumptions end up dominating the interpretation of empirical data in order to construct a story about human origins that conforms to preconceived notions about progress from ancient primitive species, for instance. The interpretations of what hominin species were like historically becomes incredibly fluid and speculative. This has been witnessed in research concerning ‘neanderthals’:

During the past decades, our image of *Homo neanderthalensis* has changed dramatically. Initially, Neanderthals were seen as primitive brutes. Increasingly, however, Neanderthals are regarded as basically human. New discoveries and technologies have led to an avalanche of data, and as a result of that it becomes increasingly difficult to pinpoint what the difference between modern humans and Neanderthals really is. [...] Recent genetic evidence and archaeological data show that Neanderthals and their modern humans contemporaries were very similar in biological and cultural capacities (Roebroeks and Soressi 2016), and the predominant opinion now appears to be that, yes, Neanderthals were people like us, ‘our equal in humanity’ (Papagianni and Morse 2015: p. 13).⁵⁸

Importantly, competing philosophical attitudes lead to diametrically opposed interpretations of the empirical data.

By way of illustration consider the positions of Zilhão and Wynn et al. The two parties disagree about the cognitive differences between modern humans and Neanderthals: whereas Wynn and colleagues claim that differences in the cognitive abilities of modern humans and Neanderthals were visible to

⁵⁷ See James Woodward, *Making Things Happen: A Theory of Causal Explanation*. (Oxford: Oxford University Press, 2003) and discussion in Humphreys, P. (2006). Invariance, Explanation, and Understanding. *Metascience*, 15 (1), 39-66.

⁵⁸ Peeters S, Zwart H. Neanderthals as familiar strangers and the human spark: How the 'golden years' of Neanderthal research reopen the question of human uniqueness. *Hist Philos Life Sci*. 2020 Jul 21;42(3):33.

natural selection, Zilhão believes that the two species were indistinguishable. It could be the case that, as Zilhão believes, such a difference of opinion has its roots in a difference of opinion about human progress; it could be that, as Zilhão writes, there exists “a persistent, if subconscious influence in academia of Victorian-age ideas of evolution-as-progress and ancient-as-primitive” (p. 52). On Zilhão’s account, claims that Neanderthals are not quite like us betray an outdated form of hierarchical thinking. On Wynn et al.’s account, claims that Neandertals were indistinguishable are rooted in extreme anti-science versions of contemporary social justice theory. However, whether an archaeologist’s scientific views reflect his or her socio-political views or latent psychological motivations remains to be seen.”⁵⁹

Evidently, if researchers are not cognizant of such biases, their conclusions will become equally suspect.

Conclusion

Human beings, endowed with the faculties of reason and sensory perception, are able to accumulate a great amount of knowledge through observation and examination of the natural world. Indeed, the Qur’an draws attention to this, stating, “And Allah has extracted you from the wombs of your mothers not knowing a thing, and He made for you hearing and vision and intellect that perhaps you would be grateful” (Qur’an 16:78).

The human faculties of reason (*‘aql*) and perception (*hiss*) are tremendously powerful, and the Qur’an emphasizes the need for intellectual investigation no less than 750 times.⁶⁰ The natural sciences are based upon this very synthesis of reason and perception into a comprehensive methodology of empirical investigation. “For every true science must have supporting proofs (*barahīn*) that are ultimately rooted

⁵⁹ Vaesen K, Dusseldorp GL, Brandt MJ. Author Correction: An emerging consensus in palaeoanthropology: demography was the main factor responsible for the disappearance of Neanderthals. *Sci Rep*. 2021 Apr 13;11(1):8450.

⁶⁰ Abdul-Latif ibn Abdul-Aziz al-Rabah. *Makanat al- ‘Ulum al-Tabi’iyyah fi ‘l-tarbiyyah Islamiyyah*. Doctoral dissertation. p. 267.

in either sense perception (*hiss*) or the dictates of reason (*daroorat al-‘aql*),” the famous Muslim theologian Ibn al-Qayyim (d. 751 H) noted.⁶¹

Far from seeing religion and science as opposing forces, Muslim scholarship testifies to the perfect harmony between empirical knowledge and scriptural knowledge. It has long been falsely presumed that empirical science is the mode of knowledge that belongs to the naturalists. However, in this article we witness how empirical knowledge of human nature reinforces a perspective in consonance with theology and antithetical to the presumptions of naturalism. The distinctions of humankind warrant a solid ontological foundation that philosophical naturalism fails to provide. An integrative approach to studying both scriptural and scientific signs (*ayat*) furnishes precisely such a foundation and yields a deeper appreciation of who we are and to Whom we shall return.

“And above all with knowledge is One More Knowledgeable.” (Qur’an 12:76).

And Allah knows best.

⁶¹ Ibn al-Qayyim. *Miftah Dar al-Sa’adah*, (Mecca: Dar ‘Alam al-Fawa’id 2010) vol. 3, p. 1190. He makes this comment in the course of addressing why astrology cannot be considered a true science due to its lack of substantiating logical and empirical evidence. Similarly, in his discussion on embryology, Ibn al-Qayyim considers anatomic dissection (*tashrīh*) and empirical research to be sound and impenetrable evidences (*Tuhfat al-Mawdud fi Ahkam al-Mawlud*. Mecca: Dar Alam al-Fawa’id, p. 376).