An Examination and Re-Evaluation of Human Genetic Evolution, Intellect, Anatomy, Behavior, and Adaptations for Existence on Earth

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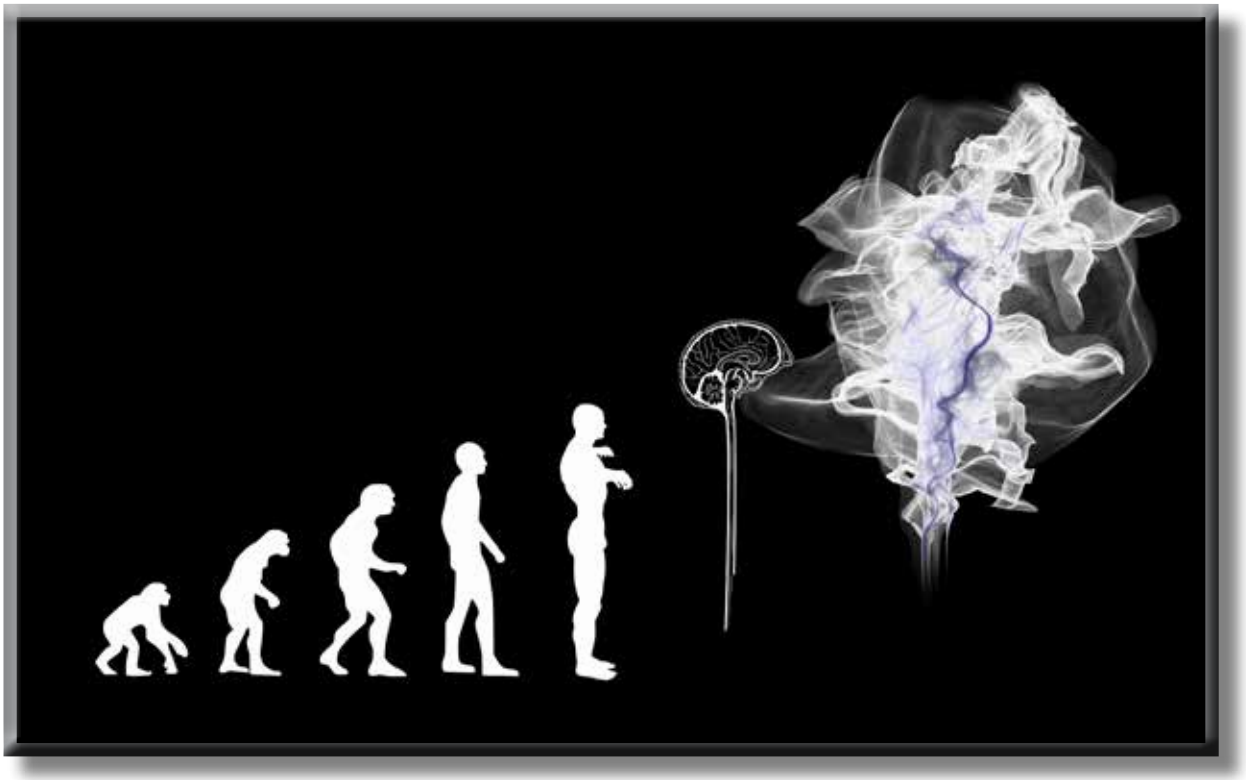

ABSTRACT

Recently published information and data have presented new insights into human evolution and origins. Drawing from interdisciplinary research in biology, anthropology, genetics, and comparative physiology, one can argue that certain components of human development may be uniquely different from the components of development found in any other species that have ever existed on Earth. Even current-day components of human development show signs of idiomatic modifications. Various anomalies in human biology, such as unique anatomical problems, physiology, diet, reproduction, disorientation with the sun and environment, and mental health concerns are indicative of a questionable divergence in evolution.

INTRODUCTION

Research for this paper began after a subcommittee was launched within the Council on Interdisciplinary Advancement to investigate historical, ethical, adaptational, economic, and biological advantages and motivators for environmental manipulation. During research and deliberation, the term *invasive species* was repeatedly heard during the discussion regarding environmental manipulation. Thus, the subcommittee reached the consensus that *invasive species* was a recurring item of focus among the most widely accepted factors affecting environmental change and jeopardization. As an example of a typical definition of *invasive species*, the National Ocean Service defines an invasive species as "… an organism that causes ecological

or economic harm in a new environment where it is not native."[1] Oddly, the mention of "economic harm" applies to any ecosystem, even those that may be completely free of humans.

Also noted by the subcommittee, *economics* is a factor that pertains specifically to humans. Thus, the consideration of *economic* factors poses a challenge when defining creatures as invasive; among those creatures are humans themselves. In addition, it is difficult to define the *economic* standards by which a species is to be considered "harmed" due to the introduction of a new species. Humans are, after all, the architects of economic systems. Therefore, the classification of humans as "invasive" within habitats they demonstrably alter or destroy *for economic gain* presents a stark paradox, perhaps even hypocrisy. The persistent framing of threats to nature through the lens of *economics* raises a fundamental question: Why is an *economic* factor being applied to something so overtly *natural*? When examining threats to nature, it would be more objective to exclude such human factors so that the term "invasive" may be applied to organisms and entities within a *natural* habitat only. This concept will be discussed further throughout the paper.

According to an article by *Scientific American*, humans are Earth's most prolific (and only) influencer of unnatural evolution/adaptation of plants and animals.[2] In any environment, if plants, animals, or other living creatures fail to evolve or adapt over time and thus cannot successfully navigate their environment for survival, they will cease to exist. Human beings have been the most significant cause of environmental displacement to other species and will become the only species in the history of planet Earth to cause a mass extinction, according to the World Wildlife Foundation.[3]

The objective of this research paper is to examine why *Homo sapiens sapiens* is the only species on this planet which constantly displaces other species, permanently alters its own environments, and fails to instinctively display behaviors that would indicate symbiosis with its given environment.

This paper presents hypotheses and invites open discussion regarding the possibility of unnatural origins of the human species. Conclusions and discussion points are based on a synthesis and analysis of existing scientific literature, observations, and anecdotal evidence across various disciplines.

METHODS

The following methodological approaches were employed:

Literature Review: A comprehensive review was conducted of the scientific literature in fields including, but not limited to, evolutionary biology, paleontology, anthropology, genetics, psychiatry, and psychology. This review focused on identifying anomalies, inconsistencies, and areas of debate within the current understanding of human evolution and adaptation to Earth's environment.

Genetic Analysis Interpretation: Existing genetic research on human origins and migrations was examined. Focus was placed on interpreting findings related to the emergence of *Homo sapiens sapiens*, such as the unique genes that influence intellectual development and function, signs of idiomatic genetic anomalies, the presence of ORFan genes, and the Rhesus D (RhD) factor (which has potentially inconsistent origins).

Comparative Anatomy and Physiology: Detailed comparisons were made between the anatomy/physiology of humans and that of other species on Earth, both present and extinct. Particular attention was paid to unique human traits, such as the Rhesus factor, intelligence, sensitivity to the environment, environmental orientation, structural efficiency, diet, and difficulties during childbirth.

These traits were analyzed in the context of their adaptive advantages or disadvantages within Earth's environment. Research was used to highlight the historical and current mental dispositions and fixations of *Homo sapiens sapiens*. These traits were cross-examined against existing evidence found in anthropologic research regarding the mental health of the ancestors of *Homo sapiens sapiens*.

Important to note is that the methodology employed in this paper relies primarily on the interpretation and synthesis of existing information rather than on the generation of new empirical data. The conclusions drawn may, therefore, be considered speculative and are intended to stimulate further scientific inquiry into the origins of the human species.

LITERATURE REVIEW

Human Anthropology and Genetic Data

No predecessors of *Homo sapiens* are known to have caused the endangerment or extinction of other living creatures or to have altered (or even destroyed) their own environments as drastically as *Homo sapiens sapiens*.[4] To understand the root of this unique and arguably destructive trait of *Homo sapiens sapiens*, it is crucial to examine the main factor that sets humans apart from all other life on this planet: intellect. This article examines research and insights from some modern-day anthropologists, molecular biologists, and neuropsychologists who study the main differentiators between modern-day humans and their evolutionary ancestors, fellow mammals, and closest cousins within kingdom Animalia. This paper will also argue not only that the most significant separator between *Homo sapiens* and any creature known to have existed on planet Earth is intelligence but also that biological evolution as the contributing factor for the intellectual advancement of *Homo sapiens sapiens* is within reasonable doubt.

GENETIC ANALYSIS INTERPRETATION

Intellectual Expression Through Genetics Within *Homo Sapiens Sapiens*

Delving deeper into the biological basis of the exceptional human intellect, the work of Dr. Richard Haier, the world's leading neuropsychologist in the study of intelligence, provides valuable insights. In his book, *The Neuroscience of Intelligence*, Dr. Haier wrote that intelligence into adulthood is absolutely linked to hereditary genes.[5] Hereditary genes are responsible for less than 50% of the development of intelligence before age 10. The influence of genes on intelligence increases to about 64% at age 12, and to 80% by age 18. Environment and health play a prolific role in intelligence in early life. An extensive study of identical twins raised in completely separate environments found that genetic influences on their intelligence resulted in very similar intelligence scores and capabilities as adults even though the twins had been raised apart and continued to live separately as adults.[6] Genetically, the development of human intellect is unique, complex, and follows a specific and timed trajectory.

The process of activation or deactivation of genetic expression is known as methylation. Methylation can be influenced by environmental factors, and the patterns of methylation change as an individual reaches adulthood. In a sense, these changes in methylation could serve as a genetic indicator of reaching "adulthood" for a given individual. For purposes of simplicity in government and society, general, simple, quantifiable age markers are used, including terms such as *childhood*, *adolescence*, *teenager*, *adulthood* (age 18 or older in the United States and select other countries), and *elder* (65 and older in the United States and select other countries). However, genetic methylation could serve as a more accurate indicator of the stages of life for *Homo sapiens sapiens*.

Intelligence is often divided into two defined categories: *crystallized* and *fluid*.[7] *Crystallized*

intelligence pertains to the absorption and memorization of given facts, such as geographical locations or statistics of sports teams. *Savants* are individuals who display superior crystallized intelligence.[8] *Fluid* intelligence refers to the ability to process information or to exercise "inductive" and "deductive" reasoning. Simply put, fluid intelligence is associated with problem-solving. Dr. Haier points out that fluid intelligence is often associated with the likes of Albert Einstein and Sir Isaac Newton.[9] The point could be made that, while *Homo sapiens sapiens* possess superior crystallized and fluid intellect compared with other animals on this planet, our intellect uniquely allows us to assess our environment, self-evaluate our own needs and desires, and calculate ways to cater to those needs and desires through or from our environment. This ability to innovate is vastly different from the abilities of other creatures. Within *Homo sapiens sapiens*, widely varying degrees of intellect have been observed.

Dr. Haier's lifelong study of the neuroscience of intelligence also focuses on how intelligence tests (IQ tests) have evolved significantly since they were first introduced. His work also reveals that various scans of brain activity have shown that particular intelligence-test questions stimulate the exact regions of the human brain that are known to be associated with the specific problem-solving abilities that the test questions intended to assess.[10] Thus, a hypothesis could be proposed that, for an adult whose intelligence-related genes have experienced cessation of methylation, the most stable and indicative gauge of that individual's true consanguineal genetic intellectual expression is the *intelligence score* not the *intelligence quotient* (IQ), because the age quotient does not apply to adults. Another possible hypothesis that could be drawn from these data is that the IQ scores (applied to children, primarily) of humans who have not reached intellectual genetic methylation cessation will not be accurate in determining the ultimate intellectual ability and standing of those individuals, both because environmental factors still play significant roles and also because neuroplasticity is still optimal for early developmental crystallized and fluid learning. While there are between 19,000 and 22,000 genes that constitute *Homo sapiens sapiens*, many have yet to be identified in terms of their roles in human development and existence. Dr. Haier identified a synaptic receptor gene, N-methyl D-aspartate (NMDA), as having a significant role in the human ability to learn and to form and retain memories.[11] Another gene, known as NR2B, assists in NMDA's receptor functionality. In one experiment, NMDA and NR2B genes were introduced into the DNA of mouse embryos, and those mice were later able to process, learn, and execute tasks more quickly than the controlled, unaltered mice.[12] Other genes have been studied and identified as having influence on intellectual development, such as brain-derived neurotrophic factor (BDNF). The BDNF gene maintains synapses in the nervous system and specifically promotes healthy cognitive function. Val66Met, another gene with ties to BDNF, is involved with neural repair and regeneration.[13]

Certain aspects of human intelligence and genetics may not have arisen through purely natural evolutionary processes on Earth. While this is a highly debated notion, this paper presents evidence which is drawn from specific research that challenges mainstream evolutionary theory. For example, some genes that specifically and significantly influence human intelligence (including some of the genes previously mentioned) appear to be unique to *Homo sapiens sapiens*. Some exclusive and significant genes, such as HYDIN2, seemingly never existed in any other creature, living or extinct, that has existed on this planet.[14] HYDIN2 is exclusive to *Homo sapiens sapiens*. It is a copy of the HYDIN gene, which is found in select other animals. Both HYDIN and HYDIN2 primarily focus on neuronal communication and efficiency.[15] However, the head and tail of the constituent telomere structure of the HYDIN2 gene have been very unnaturally "stripped off." In place of the head of the HYDIN2 gene is an identical-length, original head section of a completely different gene. This unusual structure allows HYDIN2 to be far more efficient than HYDIN.[16] Select genes even show what some

researchers interpret as signs of unnatural gene manipulation, which would have been possible only within the last two decades; yet, these signs are found in the DNA of *Homo sapiens*, which is over 300,000 years old.[17]

Hominins, as a tribe, can be traced back to about 2.8 million years ago,[18] when the brains of early hominins were roughly the same size and volume as those of modern-day chimpanzees.[19] For another 800,000 years, hominin brain sizes remained unchanged.[20] From about 800,000 years ago until about 200,000 years ago, fossilized records show that a rapid and unexplained growth in the size of hominin brains occurred along with an increase in complexity, a phenomenon which still cannot be explained beyond theory. The constituents of the hominin group during that time period included *Homo erectus*, *Homo neanderthalensis*, *Homo denisova*, and other smaller groups. The brains of members of these groups were on par with, if not larger than, human brains today. As *Homo sapiens* appeared toward the end of that period, brain sizes were, by default, as large as they are today and far larger than the early hominins that existed prior to this 600,000-year period.[21]

Many accredited researchers hypothesize that the volatile climate change during that period forced adaptive rapid development[22] of the hominin brain in order to improve the problem-solving skills needed to cope with the constantly evolving environment and to independently choose to migrate for survival.[23] However, most of the previous studies and research on biological evolution mandate at least several million years for such complicated advancements in neurophysiology to occur, though evolutionary biologists propose that changes at a genetic level can occur more quickly than the resulting phenotypic changes, such as a larger brain.[24] Gene duplication events (such as that of the HYDIN2 gene) or subtle mutations in key regulatory genes (such as FOXP2), can provide the raw material for rapid, yet still gradual, evolutionary change.[25] These genetic advancements may have set the stage for the dramatic neurophysiological changes seen in the fossil record.[26]

Various theories regarding how HYDIN2 came into existence follow:

- **Gene Duplication:** Around 3.2 million years ago, a large segment of the HYDIN gene (located on chromosome 16) was duplicated, and the duplicated segment then moved to a new location on chromosome 1.[27]

- **Truncation and Fusion:** During the transfer, the duplicated segment was incomplete, losing its original promoter and some other parts. It then fused with a different gene at its new location, acquiring a new promoter and new exons.[28]

- **Neofunctionalization:** With the new arrangement, the HYDIN2 gene began to be expressed in a new way and in different tissues (particularly in the brain), which is a departure from the role of original HYDIN gene that is primarily involved in ciliary function. This process, known as neofunctionalization, means that the new gene took on a new, distinct function from its parent gene.[29]

The scientific consensus is that HYDIN2 is a product of natural evolution.[30] While the modifications that altered the HYDIN gene in order to produce HYDIN2 may appear to be anachronistic, the CRISPR-Cas9 system (a gene-splicing technology in use today) is itself derived from a natural, ancient defense system found in bacteria and archaea.[31] Although the components of this system have existed for millions of years, there is no evidence that this system was used by any organism, certainly not an intelligent one, to intentionally engineer the HYDIN2 gene in the way that a modern scientist could engineer it. The timeline of 3.2 million years ago also places the event well before the emergence of anatomically modern humans, making any theories of deliberate engineering untenable.[32]

In researching the influence of bacteria and archaea on genetics, further findings on anomalistic genes were uncovered. The Human Genome Project (HGP) specifically documents 223 genes of the 19,000–22,000 ORFan genes (also called orphan genes) that are found only in humans. In fact, these ORFan genes have never occurred in any other species on which DNA analysis has been able to be performed, whether fossilized or currently living.[33] Some of these ORFan genes have come into existence via *de novo* origination (non-coding sequences of DNA), and others may have arisen through mutation and divergence during rapid evolution.[34] A third, more fringe hypothesis focuses on natural or artificial "horizontal transfer" from other organisms, meaning that the ORFan genes have been passed to organisms through viral and/or bacterial processes.[35] Even more controversial (and decidedly outside the accepted academic consensus) is the idea that artificial scientific manipulation, similar to that of CRISPR/Cas9 (even as early as the first arrival of *Homo sapiens sapiens*), could also technically achieve the creation of ORFan genes.[36] However, the HGP has already mapped all known genes that were influenced by viruses and bacteria, as well as other known organisms; and strikingly, none of the 223 ORFan genes have been attributed to viruses, bacteria, or other known organisms.[37]

According to the National Human Genome Research Institute, the findings of the HGP suggested that "All humans are 99.9% genetically identical, and only 0.1% of genetic variations are responsible for the phenotypic differences, such as physical traits (e.g., height, intelligence, hair, and eye color), disease susceptibility, and drug responses, among individuals in populations."[38] The primary cause of this 0.1% variation is single nucleotide polymorphisms (SNPs). An SNP is a variation at a single position in a DNA sequence, where one nucleotide (A, T, C, or G) is replaced by another. For instance, a person might have an "A" at a specific location, while another person has a "G." While each SNP is a tiny difference, millions of them occur throughout the human genome, and their collective effect is what creates the vast range of human diversity.[39] This genetic variation of 0.1% is significant in determining genetic differences between individuals of the same species as well as of different species. One such genetic factor influenced by SNP variations is the presence or lack of the D antigen.[40]

Common terms for the D antigen include *Rhesus (D) negative blood* or *RhD negative*. According to multiple sources, including studies cited by the National Center for Biotechnology Information (NCBI), the prevalence of RhD-negative blood types is approximately 7–10% of the world's population.[41] In Caucasians/Europeans, the percentage is significantly higher, at around 15–17%. For example, one NCBI table lists a 15% prevalence for the RhD-negative phenotype in Caucasians, while other sources confirm a prevalence of 17% in Europe.[42] Interestingly, 30–36% of the Basque population of Europe lacks the D antigen, a rate significantly higher than the European average of 15% and the global average of 7–10%.[43] Most *Homo sapiens sapiens* (85–92%) possess the Rhesus factor.[44] It is a genetic anomaly that no species other than *Homo sapiens sapiens* in the history of this planet has ever had the RhD-negative antigen.[45]

Deletion of the RhD gene is considered a very rare event in nature, most commonly caused by unequal crossing over during meiosis (the process of exchange of genetic material between two chromosomes). For a deletion to occur, the chromosomes must first misalign.[46] The RhD gene is flanked by two nearly identical sequences called *Rhesus boxes*. During meiosis, a chromosome's upstream Rhesus box can accidentally align with the downstream Rhesus box of its homologous chromosome. When the genetic material is exchanged, the misaligned segment, which includes the entire RhD gene, is cut out and deleted from the chromosome.[47] The rarity of this event is due to the low probability of two chromosomes misaligning in this specific manner. While other genetic mutations, such as single nucleotide polymorphisms (SNPs), can occur at a higher rate, the large-scale, precise

nature of a gene deletion makes it a much less frequent event. The deletion is also a very efficient mechanism for eliminating the gene. Once it occurs, the trait is passed down as an inheritable genetic condition. An RhD-negative female who is pregnant with an RhD-positive child must be administered an "anti-D" injection during the first pregnancy to ensure the health and stability of subsequent pregnancies.[48] Otherwise, the mother's autoimmune response to the presence of the Rhesus factor would lead to rejection of a subsequent fetus through attack on the fetus's red blood cells, causing hemolytic disease, anemia, and jaundice.[49]

COMPARATIVE ANATOMY AND PHYSIOLOGY

Adaptations to Habitat

Homo sapiens sapiens is the only species on the planet that chooses primarily to live in and travel to ecosystems where the sun may brightly shine, even though the species is ill-equipped (apart from intellectual advancements) to prevent sun damage. *Homo sapiens sapiens* is also the only species without adaptations to safeguard against being blinded by the sun without use of technological advancements.[50] The involuntary reflexes to close eyelids and reduce pupil size are insufficient for effective protection and visual function in these environments.[51] Because modern humans are exposed to the sun during extended periods of the day, solar retinopathy is a risk.[52] Many animals have protection to assist with control of sun exposure, such as the *nictitating membrane* (a.k.a. the "third eyelid"), pigmentation designed to regulate heat absorption, physical barriers (fur, fat, blubber, etc.), or behavioral strategies.[53] Members of *Homo sapiens sapiens* have the *plica semilunaris*, an evolutionary vestigial remnant of a nictitating membrane. However, this is another idiomatic anomaly whereby the species devolved (as opposed to evolved), thus losing a crucial adaptation for surviving in sunlit environments.[54] Despite being out in the sun all day, most animals do not get cataracts unless they have a congenital condition or serious injury; but *Homo sapiens sapiens*, as a species, is highly susceptible to cataracts due to prolonged exposure, even without congenital conditions and/or series injuries.[55] *Homo sapiens sapiens* is the only species whose members specifically seek out sunny environments in which to live, while knowing that the sun damages our skin (due to a lack of adequate natural adaptive protection). In addition, some members intentionally prolong their exposure to the sun.[56] *Homo sapiens sapiens* appears to have devolved, because fur (or body hair) has substantially decreased in density and volume from that of our ancestors, thus making us even more susceptible to sun damage. Furthermore, the skin of *Homo sapiens sapiens*, as mentioned prior, is not adequate to protect us from UV rays.[57] Current land-dwelling animals (and their ancestors) in the *Homo* genus that typically have (or have had) natural prolonged exposure to the sun also have naturally adapted fur that adequately protects against continuous sunlight and provides temperature regulation in both cold and hot environments. Animals that roam over sun-exposed terrain, such as deserts, often rely on fur which prevents the scorching solar radiation from reaching their skin. Furthermore, many desert animals have light-colored fur which reflects a significant amount of solar radiation and reduces the amount of heat absorbed by the body. Such fur is a far more sophisticated and effective mechanism of protection than bare skin.[58]

Sun exposure is one of the most prolific natural ways to maintain healthy vitamin D levels for many animals.[59] *Homo sapiens sapiens*, whether light or dark-skinned, cannot sustain prolonged periods of sun nor effectively synthesize vitamin D from sunlight, due to the adaptation of melanin.[60] In order for human bones to remain fortified, vitamin D is required to aid calcium absorption. Other animals, even those that avoid the sun, have no issues with vitamin D levels (if applicable) unless there is a genealogical anomaly or serious injury/defect.[61] Even in direct sunlight, the vitamin D levels and calcium absorption of *Homo sapiens sapiens* are always deficient.[62]

In regard to calcium intake, *Homo sapiens sapiens* are the only mammals on the planet that consume milk to supplement and maintain calcium levels through adulthood.[63] No other animal on this planet *needs* to continue drinking milk into adulthood to maintain bone density; and barring direct human intervention, no other adult animal drinks milk out of dietary necessity or preference, especially not the milk of other species.[64] Other animals have well-adapted calcium-absorption mechanisms through their natural diets.[65] Humans, however, suffer constant physiological problems as they age, many of which problems are linked to bone-density loss and calcium deficiencies resulting in weaker bones and increased susceptibility to fractures.[66]

Adaptations in Locomotion

The bipedalism of *Homo sapiens sapiens* also presents what some interpret as contradictions to advantageous evolution on Earth.[67] Our evolutionary ancestors, such as Neanderthals, reportedly possessed excellent and sufficient musculature and skeletons that effectively supported their bipedalism.[68] The modern bipedalism of *Homo sapiens sapiens*, in contrast, seems to have devolved in some aspects, whereby human bones frequently require calcium supplements, an issue that is also referenced in the research regarding vitamin D acquisition.[69] Some members of *Homo sapiens sapiens* experience degenerating discs within the spinal column (even during early adulthood) and are prone to easily inflicted muscle tears and swelling, experience constant joint degeneration through rigorous physical activity, and often suffer from a narrowing spinal column (even in early adulthood).[70] Digitigrade legs (walking on toes) are arguably the most efficient and well-suited for active lifestyles and the gravitational forces on Earth.[71] Human plantigrade legs (walking on the soles of the feet) appear to be somewhat compromised under our environmental conditions; and even a hybrid, evolved form of digitigrade and plantigrade (or even unguligrade legs) would be more suitable for sustained walking (nomadic lifestyle) along with bursts of quick speed.[72] Arguments have been made that plantigrade legs are more suitable for very long-distance walking or running; but biologically, animals with long migration patterns have digitigrade or hybrid digitigrade legs that are efficient for conserving energy and minimizing stress on the body.[73] Research shows that, at present, only modern athletes take advantage of plantigrade legs, with physical exertion of athletes being comparatively greater than that of the hunter-gatherers.[74] The only potential benefit of plantigrade legs would seemingly be for a creature that could never properly adapt to a given region and would desire to constantly migrate, which is not what other land-dwelling animals do.[75] For a more sedentary lifestyle with less walking or running, or even a set migration pattern, even across hundreds of miles, *Homo sapiens sapiens* should have either adapted digitigrade legs[76] or retained the bone strength and density of predecessors of the *Homo* genus.[77]

In analysis of the instincts and adaptation essential for long-distance traveling, it is evident that many animals that partake in extensive migration have the instinctive ability to detect weather patterns. However, *Homo sapiens sapiens* cannot instinctively and consciously detect changes in the weather or atmosphere without being trained to interpret signals.[78] A large majority of species of fauna that are in danger of adverse weather changes have been observed by researchers to possess some level of natural, instinctive orientation that allows them to detect atmospheric changes that can precede adverse weather.[79]

Physiology for Diet

As hunter-gatherers who travel long distances, members of *Homo sapiens sapiens* are omnivores but are not, according to scientific analysis of their physiology, optimally equipped to process meat.[80] Even with an omnivorous diet, we still frequently fail to acquire all the nutrients needed for a healthy lifestyle, often requiring supplementation.[81] Animals that are well-adapted to an omnivorous diet typically have claws and/or serrated teeth

to accompany their molars; however, both pure herbivores and humans lack serrated teeth, and humans also lack claws.[82] In addition, carnivores have a short intestinal tract, roughly three to six times as long as their bodies, facilitating the rapid processing of meat.[83] Omnivores possess an intestinal tract 10 to 15 times the length of their bodies.[84] Herbivores have significantly longer intestinal tracts, averaging 15 to 25 times the length of their bodies, which is better suited for plant digestion.[85] Humans, however, have intestinal tracts more akin to pure carnivores, averaging 3.5 to 4 times the length of their bodies.[86] To aid in digestion, the gastric-acid pH levels of carnivores are typically below 1.0; the levels of herbivores range between 5.5 and 7.0; that of omnivores typically range between 1.0 and 2.0; and the gastric-acid pH levels of humans range between 1.5 and 3.5.[87] Carnivores lack ptyalin (also known as salivary amylase) in their saliva, which is an enzyme present in herbivores, omnivores, and humans that aids in the initial digestion of carbohydrates.[88] Intestinal-length ratios and gastric-acid pH levels for *Homo sapiens sapiens* seem to suggest more efficiency for processing both plant and animal substances. However, this research appears to contradict the natural lack of serrated teeth and claws,[89] the fact that humans cannot naturally process raw flesh without health consequences,[90] and the presence of ptyalin in human saliva. In the examination of some extraneous characteristics of fauna that are being characterized by their primary diet, carnivores have few or no skin pores and cannot sweat to address overheating, whereas herbivores, omnivores, and humans do sweat.[91]

Physiology for Reproduction

Childbirth in *Homo sapiens sapiens* also presents an unusually high number of natural inefficiencies, and human infants are born remarkably helpless, lacking many basic survival instincts.[92] No other natural animal on planet Earth that gives birth to offspring and has the ability, as a species, to independently thrive, appears to have inherent issues with sufficient internal space for unobstructed birth.[93] Bipedalism, especially plantigrade legs, is a major cause of difficulty with human birth in regard to space, which is scientifically referred to as *dystocia*.[94] Biologists have even determined that the human female pelvis could potentially be wider and still allow for a range of motions equal to what women are currently capable of.[95] Furthermore, when human offspring are born, their brains are only about 30% of their adult brain size.[96] In comparison, chimpanzees, which do not experience the same labor complications as *Homo sapiens sapiens*, give birth to offspring with brains that are approximately 40% of their adult size.[97] Yet, the offspring of chimpanzees and many other animals are precocial, quickly able to gain the ability to walk, cling to their mothers, and exhibit instinctive behaviors to avoid detection by predators and other threats.[98] Human babies, on the other hand, are altricial, typically taking many months, at best, to even begin to coordinate their movements.[99] Other altricial animals, such as rabbits, birds, and marsupial offspring, have parents that are instantly and instinctively equipped to support their offspring directly after birth until the offspring can begin to gain independent coordination and movement.[100] Human babies require constant neck support in their early months, a vulnerability not commonly observed in other species.[101] Regarding threats, a human child will often continue to cry and make noise with no apparent perception of danger, even when remaining silent would be an advantage for survival.[102] This is a clear evolutionary and adaptational disadvantage that is not displayed by other animals.

Neurological Physiology

Some members of *Homo sapiens sapiens* suffer from mental disorders, including depression, seasonal affective disorder, and a multitude of anxieties.[103] Anthropologists and psychiatrists have determined that our ancestors also suffered from these ailments, suggesting they aren't solely manifested by the modern advent of chemicals, technologies, or lifestyles.[104] Other animals suffer from depression and other mental

disorders only when exposed to unnatural stimuli, including captivity (by *Homo sapiens sapiens*); however, genetically inheriting such disorders is a phenomenon specific to *Homo sapiens sapiens*.[105]

Biologists also observe that no other fauna on planet Earth exhibit anything remotely similar to the spectrum of mental disorders that our species experiences when in their natural environment and apart from human contact.[106] In addition, no other known species besides *Homo sapiens sapiens* has ever faced maladjustment issues due to the changing of the seasons in their respective natural habitats.[107] And uniquely, when a member of *Homo sapiens sapiens* faces genetic issues or debilitating disorders, reproduction is still a conscious choice and often a viable option. In stark contrast, most species of fauna and flora on this planet typically do not and cannot reproduce when they suffer significant disorders.[108]

Members of *Homo sapiens sapiens* also exhibit an unusual obsession with their sexuality and reproductive organs.[109] Our sense of self and perception of our self-image are also seemingly unique to our species.[110] We frequently reflect on our thoughts, engage in philosophical inquiry, and focus intently on various details of our bodies.[111] As a society, humans often display narcissistic tendencies to a degree not observed in other animals, including our purported ancestor species.[112] We also have a unique sense of feeling awkward or unfamiliar with our own bodies at times.[113] A striking example is that members of *Homo sapiens sapiens*, even after hundreds of thousands of years of existence, still often find their own exposed bodies and genitalia to be strange and a subject of great interest (whether positive or negative).[114] In modern culture, society continues to find sexual anatomy offensive, intriguing, or a source of humor, depending on the context. Humans are also remarkably preoccupied with the concept of sexuality and intercourse, evidenced by the age-old adage in marketing and advertising that "sex sells."[115] No other species on the planet appears to be as self-conscious of its own sexual anatomy, nor as seemingly disoriented by it, as are *Homo sapiens*.[116]

Violence, in the context of revenge, greed, and destruction in mass quantities, appears to be unnatural to all other living species on the planet that exist in their natural environments, especially when considering the scale, motives, and psychological complexity applied to violence and aggression among *Homo sapiens sapiens*.[117] The violence practiced by *Homo sapiens sapiens* is distinctive in its scope and motivation. While animals often fight for territory, mates, or food, humans have historically engaged in organized warfare and conquest motivated by abstract concepts such as greed, ideology, or a desire for subjugation. This level of mass-scale, premeditated violence is unique to our species.

Furthermore, humans are capable of aggression that is completely unrelated to survival, such as the destructive behavior seen in road rage; and we have developed a unique cultural fascination with violence through media and games.[118] Even that fascination with violence through media and games (which provides a form of vicarious violence even for the most outwardly "peaceful" individuals) is arguably a phenomenon not observed as naturally occurring in other species.[119] Some animals may engage in the practices of mass murder or infanticide in the context of complex social strategy and not just as an act of survival.[120] However, studies of those behaviors often show that they are attributed to the core desires for territory, mates, access to food, and natural selection.[121] The same cannot be said of motives for violence by *Homo sapiens sapiens*, especially for the multitude of *modus operandi* to commit violent acts.

DISCUSSION

Summary of Key Findings

Extensive citation of accredited and distinguished research and publications has illuminated and reinforced the concept that *Homo sapiens sapiens*,

as a species, has struggled and continues to struggle with developing a natural symbiotic relationship with any natural habitat on Earth.[122]

A conclusion from the findings of this research paper is that, with a degree of certainty, human tendencies and motivations for the often drastic manipulation of environments, habitats, and the world around us are, perhaps, best described as idiomatic and unique to *Homo sapiens sapiens*. What can be stated with greater certainty is that the exceptional intellect of the *Homo sapiens sapiens* species being its most significant differentiator from all other life on this planet, present and historically, holds the ultimate power to dictate whether we continue down a path of environmental alteration or strive to forge a true and sustainable symbiosis with this planet. At present, the human capacity to control environments on Earth has led to the current biodiversity crisis, and the behavior of the *Homo sapiens sapiens* species is in direct conflict with a sustainable relationship with nature.[123]

Interpretation of Results

When reviewing the research, data, and insights presented in this paper, a compelling, albeit controversial, hypothesis emerges: the only creature that might consistently exhibit behavior so fundamentally contradictory to natural evolutionarily advantageous traits and behaviors would be an invasive species that was never truly intended to belong to that given environment. *Homo sapiens sapiens* is a species whose primary instinct is to do whatever is necessary to ensure its immediate survival, even at the expense of the existing ecosystem, thus transcending beyond the bounds and limitations of any other organism that has ever existed on Earth. Given its massive and unprecedented intellect coupled with a suite of seemingly foreign biological traits, such an organism might very well begin to radically manipulate its environment to make it more accommodating to its unique needs.

Certain factors, such as the HYDIN2 gene, ORFans genes, RhD-negative factors, unprecedented anatomical and adaptational contradictions, and unique psychological dispositions, appear to be idiomatic to *Homo sapiens sapiens*; and evidence is inconclusive regarding how these factors could have been derived from evolution, genetic drift, or the founder effect. It is extremely difficult to prove beyond reasonable doubt that the genetic components and the evolutionary design of the *Homo sapiens sapiens* species are wholly endemic and "natural" to Earth.

Relationship to Previous Research

This research-paper review expands upon previous research and studies that are included in this paper as supporting material. This paper does not refute any of the research, insights, or facts presented by the supporting material. Instead, it derives new questions regarding the true nature behind human evolution and the origins of our most unique, idiomatic factors.

Limitations of the Study

This research paper was severely limited by the author's incomplete insight into the academic realms of genetics, psychology, evolutionary biology, and academic research. Another limitation includes the difficulty in uncovering peer-reviewed publications and research that pragmatically and reasonably offer alternative hypotheses regarding the origins and evolutionary theories surrounding HYDIN2, ORFans genes, and the RhD-negative blood factor.

To successfully present the accredited research and data that was relied on to support this paper, the format of exposition and careful narration was employed to allow for respectful and rational inferences, hypotheses, pontification, and questions for future research on the subject.

Not possessing a physician's degree in any of the aforementioned academic categories, the author

embodies the very meaning of the word *amateur*. This research paper was written out of pure interest and love of the topic being discussed, with the view that passion and unequivocal interest can yield meaningful insights and results when paired with a default endowment of intellect, proclivity, and tenacity.

Implications and Broader Significance

The theoretical implication realized by this research paper is that further research, introspection, and examination of human evolution, genealogy, and behavior should continue to be conducted with a broader lens.

Suggestions for Future Research

Homo sapiens sapiens could be viewed within a unique framework in which researchers and scholars allow certain traits of *Homo sapiens sapiens* to be classified as idiomatic and individualized to the species. Doing so could potentially spur a more specialized investigation into the true origins of particular anatomical, behavioral, genetic, and psychological characteristics of *Homo sapiens sapiens*. This method may also avoid some of the mistakes previously made in some of the cited research papers, which may have focused too heavily on correlating components of human anatomy, physiology, genetics, and behaviors with those of other animals.

CONCLUSION

The determination made after reviewing accredited research and data is that there are components of the genetic development of *Homo sapiens sapiens* that are idiomatic and that these components may not be *natural* based on existing and previous biological iterations of similar genes.

The claim that all components of human development are *natural* products of their environment goes beyond reasonable doubt. More investigation is certainly warranted into the origins of the following:

- the HYDIN2 gene
- ORFans genes
- anatomical structures including but not limited to the loss of adaptations compared to predecessors from the genus *Homo*
- maladaptation to frequent environmental exposures and hazards
- digestive-system configuration
- psychiatric and psychological dispositions

The findings may present a stark contrast between the biological endowments and adaptations of *Homo sapiens sapiens* and the very environments that the species is supposedly intended to live in.

About the Author

Harish Vallury is the executive chairman and founder of the Council on Interdisciplinary Advancement, an exempt 501(c)(3), charitable 509(a)(2), educational non-profit think tank for networking, education, and cooperation, which services global business professionals and leaders. Mr. Vallury is a graduate of Washington University in St. Louis with an MBA focused on business psychology, strategy, and behaviors. In addition, Mr. Vallury is a Senior Research Fellow of the International Society for Philosophical Enquiry, a member of American Mensa, and a Mensa Foundation Scholarship Judge and Chairman. Mr. Vallury has served over 20 years in the private corporate sector, first in financial fixed-income security pricing and valuation, later in digital advertising trading exchanges and consumer psychology/behavior, and most recently in the field of non-profit professional think tanks and corporate strategy consulting.

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"I really think this species
is a foolish, failed species
that has organized itself poorly."
—George Carlin