Preface

There is no grail more elusive or precious in the life of the mind than the key to understanding the human condition. It has always been the custom of those who seek it to explore the labyrinth of myth: for religion, the myths of creation and the dreams of prophets; for philosophers, the insights of introspection and reasoning based upon them; for the creative arts, statements based upon a play of the senses.

I Why Does Advanced Social Life Exist?

1. The Human Condition

Religion: Since Paleolithic times each tribe—of which there have been countless thousands—invented its own creation myth. The creation myth was the essential bond that held the tribe together. It provided its believers with a unique identity, commanded their fidelity, strengthened order, vouchsafed law, encouraged valor and sacrifice, and offered meaning to the cycles of life and death. No tribe could long survive without the meaning of its existence defined by a creation story.

Science: The creation myth is a Darwinian device for survival. Tribal conflict, where believers on the inside were pitted against infidels on the outside, was a principal driving force that shaped biological human nature.

Can these two worldviews ever be reconciled? The answer, to put the matter honestly and simply, is no. They cannot be reconciled. Their opposition defines the difference between science and religion, between trust in empiricism and belief in the supernatural.

If the great riddle of the human condition cannot be solved by recourse to the mythic foundations of religion, neither will it be solved by introspection. Unaided rational inquiry has no way to conceive its own process. Most of the activities of the brain are not even perceived by the conscious mind. The brain is a citadel, as Darwin once put it, that cannot be taken by direct assault.

Within a generation, we likely will have progressed enough to explain the physical basis of consciousness. But—when the nature of consciousness is solved, will we then know what we are and where we came from? No, we will not.

II Where Do We Come From?

EUSOCIAL—meaning group members containing multiple generations and prone to perform altruistic acts as part of their division of labor. In this respect, Homo sapiens are technically comparable to ants, termites, and other eusocial insects.

2. The Two Paths to Conquest

Invertebrates: Overall, the pace of evolution of ants and termites was slow enough (over 100 million years) to be balanced by
counter-evolution in the rest of life. As a result, these insects were not able to tear down the rest of the terrestrial biosphere by force of numbers, but became vital elements of it. The ecosystems they dominate today are not only sustainable but dependent on them.

**Mammals:** In sharp contrast, human beings of the single species Homo sapiens emerged in the last several hundred thousand years and spread around the world only during the last sixty thousand years. There was not time for us to coevolve with the rest of the biosphere. Other species were not prepared for the onslaught. This shortfall soon had dire consequences for the rest of life.

To summarize to this point on the two social conquerors of Earth, the physiology and life cycle in the ancestors of the social insects and those of humans differed fundamentally in the evolutionary pathways followed to the formation of advanced societies. The insect queen could produce robotic offspring guided by instinct; the prehumans had to rely on bonding and cooperation among individuals. The insects could evolve to eusociality by individual selection in the queen line, generation to generation; the prehumans evolved to eusociality by the interplay of selection at the level of individual selection and at the level of the group.

### 3. The Approach

In every game of evolutionary chance, played from one generation to the next, a very large number of individuals must live and die. The number, however, is not countless. A rough estimate can be made of it, providing at least a plausible order-of-magnitude guess. For the entire course of evolution leading from our primitive mammalian forebears of a hundred million years ago to the single lineage that threaded its way to become the first Homo sapiens, the total number of individuals it required might have been one hundred billion.

**Latest Research:** Human/Chimp split occurred 7 – 13 million

**Author's Conclusion:** A Homo sapiens level of intelligence can arise only on land, whether here on Earth or on any other conceivable planet.

### 4. The Arrival

Carnivores at campsites are forced to behave in ways not needed by wanderers in the field. They must divide labor: some forage and hunt, others guard the campsite and young. They must share food, both vegetable and animal, in ways that are acceptable to all. Otherwise, the bonds that bind them will weaken. Further, the group members inevitably compete with one another, for status of a larger share of food, for access to an available mate, and for a comfortable sleeping place. All of these pressures confer an advantage on those able to read the intention of others, grow in the ability to gain trust and alliance, and manage rivals. Social intelligence was therefore always at a high premium. A sharp sense of empathy can make a huge difference, and with it an ability to manipulate, to gain cooperation, and to deceive. To put the matter as simply as possible, it pays to be socially smart. Without doubt, a group of smart prehumans could defeat and displace a group of dumb, ignorant prehumans, as true then as it is today for armies, corporations, and football teams.

No other eusocial species has the combination of essential advantages human have, and that's why they have not continued to evolve as human have. (Brains big enough to store lots of info, control of fire, hands to make and use tools, a slow maturation requiring years of protection and training, …)

### 5. Threading the Evolutionary Maze

Overall, it seems now possible to draw a reasonably good explanation of why the human condition is a singularity, why the likes of it has occurred only once and took so long in coming. The reason is simply the extreme improbability of the pre-adaptations necessary for it to occur at all.
• Existence on the land.
• Large body size, of a magnitude attained in Earth’s history only by a minute percentage of land-dwelling animal species.
• Grasping hands tipped with soft spatulate fingers that were evolved to hold and manipulate detached objects.
• A diet to include a substantial amount of meat, either from scavenged carcasses or from live animals hunted and killed, or both.
• Controlled use of fire.

By the time of Homo erectus, all of the steps that led this species to eusociality, save the use of controlled fire, had also been followed by modern chimpanzees and bonobos. Thanks to our unique preadaptations, we were ready to leave these distant cousins far behind. The stage was now set for the biggest-brained of African primates to make the truly defining leap to their ultimate potential.

6. The Creative Forces

Multilevel selection consists of the interaction between forces of selection that target traits of individual members and other forces of selection that target traits of the group as a whole. The new theory is meant to replace the traditional theory based on pedigree kinship or some comparable measure of genetic relatedness.

In summary, the human condition is an endemic turmoil rooted in the evolution processes that created us. The worst in our nature coexists with the best, and so it will ever be. To scrub it out, if such were possible, would make us less than human.

7. Tribalism Is a Fundamental Human Trait

The elementary drive to form and take deep pleasure from in-group membership easily translates at a higher level into tribalism. People are prone to ethnocentrism. It is an uncomfortable fact that even when given a guilt-free choice, individuals prefer the company of others of the same race, nation, clan, and religion. They trust them more, relax with them better in business and social events, and prefer them more often than not as marriage partners. They are quicker to anger at evidence that an out-group is behaving unfairly or receiving undeserved rewards. And they grow hostile to any out-group encroaching upon the territory or resources of their in-group.

8. War as Humanity’s Hereditary Curse

The struggle to control vital resources continues globally, and it is growing worse. The problem arose because humanity failed to seize the great opportunity given it at the dawn of the Neolithic era. It might then have halted population growth below the constraining minimum limit. As a species we did the opposite, however. There was no way for us to foresee the consequences of our initial success. We simply took what was given us and continued to multiply and consume in blind obedience to instincts inherited from our humbler, more brutally constrained Paleolithic ancestors.

9. The Breakout

The Homo sapiens populations that spread from Africa into the Middle East and beyond took long journeys of the kind routine for modern-day travelers. Generation upon generation, the bands slogged cautiously on foot into the strange lands that lay before them. The pattern they appeared to follow was to venture a few tens of miles, settle, increase in numbers, then divide into two or more bands, capable of moving on into new territory. Apparently the initial invaders pressed north in this manner along the Nile Valley to the Levant, then spread out north and east. Quite possibly the first pioneers into the corridor made up only one or a very few bands. Within a few thousand years their descendants became a net of loosely connected tribes cast up on nearly the whole of the Eurasian continent.

Approximately 3,000 years ago, the ancestors of the Polynesian people began colonizing the Pacific archipelagoes. Starting at Tonga and proceeding stepwise eastward with large canoes designed for long voyages, they reached, by AD 1200, the extreme reaches of Polynesia, a triangle formed by Hawaii, Easter Island, and New Zealand. With this achievement of the Polynesian voyagers, the human conquest of Earth was complete.

10. The Creative Explosion

In a very early time, from the Late Paleolithic period through the Mesolithic period, the cultural evolution of humanity ground forward slowly. At the beginning of the Neolithic period, 10,000 years before the present, with the invention of agriculture and villages and food surpluses, cultural evolution accelerated steeply.

A pivotal change—ultimately important not only for humanity but also for the rest of life—was the new conceptions of the
environment formed in the minds of the fledgling farmers and villagers. Natural habitats were no longer wild places in which to hunt and gather food, and occasionally burn over with ground fires. The habitats instead became land to be cleared for agriculture. This particular conception, that wildland is something to be replaced, has been a mental fixation of most of the world’s population to this day.

For the immediate future, however, emigration and ethnic intermarriage have taken over as the overwhelmingly dominant forces of microevolution, by homogenizing the global distribution of genes. The impact on humanity as a whole, even while still in this current early stage, is an unprecedented dramatic increase in the genetic variation within local populations around the world. The increase is matched by a reduction in differences between populations.

11. The Sprint to Civilization

Why call the evolution of human societies into civilization cultural as opposed to genetic? There exist multiple lines of evidence to support this conclusion. Not least is the fact that infants of hunter-gatherer societies raised by adoptive families in technologically advanced societies mature as capable members of the latter— even though the ancestral lines of the child have been separated from those of its adoptive parents by as long as 45,000 years— in, for example, Australian aboriginal children raised by white families.

Do major personality difference exist between cultures, e.g., are Italians different from Germans in terms of their personalities? No. A 2005 study conducted by 87 researchers concluded that: The degree of variation in personality scores was similar across all of forty-nine cultures measured. The central tendencies of the five domains of personality differed only slightly from one to the next, in a way that was not consistent with prevailing stereotypes held by those outside the cultures.