

# Introduction

An epic story began around four and a half billion years ago. The main character is a small and inconspicuous planet called Earth. It orbits an average-sized star along with seven other planets, a couple of dwarf planets, and many asteroids and comets.

There are billions and billions of planets. And billions and billions of stars too. There are around a hundred billion stars in the Milky Way Galaxy alone. And more than a hundred billion other galaxies in the known universe. The universe itself is probably one among billions and billions of others too.

In the beginning, Earth was nothing more than a ball of molten rock floating in space. It remained a hot barren satellite for a thousand million years. But its unique position and composition held a secret potential.

Eventually, it cooled down, clouds formed, and rain started to fall. Comets, asteroids and other celestial bodies continued to bombard the planet. They delivered more water and other organic molecules. The surface became covered in chemically rich oceans that ebbed and flowed in harmony with tidal friction from a nearby moon.

Then, an interesting phenomenon started happening. This phenomenon was life; an interconnected web of organisms that change and adapt to the environment over successive generations.

The origin of life is still a mystery. It started out on a very small scale and stayed that way for a long time. Then it became larger and more diverse, radically changing the surface and atmosphere of the planet.

Life became more and more complex. It weaved itself into a rich tapestry of ecosystems and turned the planet into a vibrant living

biosphere filled with all kinds of different lifeforms. Today, there are around half a million species of plants and eight million species of animals.

A peculiar species appeared sometime in the past 200,000 years. It was a small bipedal primate that didn't seem all that special. But like the planet, it held a secret potential.

This primate developed unprecedented levels of intelligence and pattern recognition. It hunted, gathered, prospered, and multiplied. And it eventually learned how to communicate, create and use tools, cultivate land and plants, and breed other animals for consumption. From there, it went on to create a civilization. And the rest is history – literally.

This animal named itself 'homo sapiens' which means 'wise man' in an ancient language. But in the modern world, they refer to themselves as humans. They don't really like to think of themselves as animals, which is understandable. But the fact of the matter is they are an animal. And a lot of their behaviour is based on animalistic tendencies, whether subconscious or otherwise.

It's important that humans see themselves in this way. It can help them better understand themselves as individuals. And it can help them better understand their connection with other lifeforms and the planet that conceived them.

A good place to start is the closest living relative to humans; another species of ape called the chimpanzee. They share around 98 percent of their DNA, which is a molecule that holds a genetic blueprint for growth, development, functioning and reproduction.

The relationship between humans and chimpanzees is much closer than chimpanzees and other apes. But their behaviour is different in a lot of ways. It's not often you'll see a human publicly throwing faeces around for a laugh. Although that probably happens from time to time.

Still, there are many similarities worth mentioning. Like humans, chimpanzees have different cultural practices depending on their environments, and they pass on that culture as learned behaviour. Some

use twigs to fish for termites, while others use branches against flat surfaces to crack nuts. They have also demonstrated reasoned thought, abstraction, generalization, symbolic representation, a concept of self, and grief.

Of course, humans are more complex and intelligent than chimpanzees. But they are still a mere strand in the web of life; an ancient process that existed and evolved long before humans were around.

The problem is a lot of humans have forgotten that. They reached a point where their collective behaviour threatens not only their own future but the health and stability of the planet too. Problems include global warming, ecological destruction, incessant pollution, excessive consumption, and alienation from the natural world.

But there is a solution. And the sooner it happens, the better. Individually and culturally, humans need to re-attune themselves with nature and the greater web of life. Only then can they remain players in the greatest story ever told.

# Sex

Natural selection is how evolution happens. Organisms with traits that benefit survival and reproduction will reproduce more successfully than those without them. Those traits become more common in successive generations and the species becomes more adapted to their environment over time.

For many animals, it continues into a process called sexual selection. Males compete to validate themselves as capable and desirable mating partners, while also weeding out the competition. Females evaluate the physical and behavioural traits of males to determine an ideal potential mate.

Most animals have sex during a short period of the year. In that time, they are very active but when that season passes, they don't have sex again until the next season. Sex hormone levels drop and egg and sperm production stop. But humans don't have a breeding season. They can have sex all year round and egg and sperm production are constant until it diminishes with age.

Not all animals have sex for survival and reproduction. Bonobos are a good example. Nicknamed 'hippie chimps', they spend a lot of time having sex. Sometimes it's for pleasure, and other times it's to disarm conflict. And they don't really care too much about gender. The entire species is virtually bisexual. In fact, homosexuality has been observed in at least 1500 other species too.

Sex is pleasurable for other animals too. Otherwise, they wouldn't masturbate. It's common in many species and not exclusive to humans. Culprits include but are not limited to dolphins, elephants, horses, penguins, porcupines, squirrels, turtles, and walruses. And like humans, they sometimes use objects to make the process easier.

Oral sex has been seen in other species too. Some examples include fruit flies, spiders, brown bears, macaques, wolves, goats, hyenas, bats, squirrels, sheep and primates. It's hard to imagine how that is even possible for some of them, but they made it happen.

Human sexual behaviour is not all that different from other animals. But they do have sex more often, more intimately and for longer periods of time than any other animal. It's much different than the quick, impersonal, eight-second intercourse of a typical primate.

The human body is hard-wired to enjoy sex. Females can have intense orgasmic climaxes, which is unique among primates. Other species can experience mini-orgasms but nothing that comes close to a female human. This is largely due to the clitoris, a tiny lump of flesh lying above the genital opening that is lavishly filled with nerve endings. It becomes erect during sexual arousal and repeated stimulation is very pleasurable.

The human penis is also much larger compared to other apes. Not only in length but also in width. Other primates have a penis bone that keeps it stiff for penetration. But human penises become erect by thickening with engorgement of blood. That makes it highly flexible, which enhances pleasure for women. These characteristics did not develop for the benefit of male humans. Rather, female humans directed the evolution of the penis, based on choice and preference over many generations.

The sexual selection process for humans has primitive roots. But it has become more sophisticated. There can be many factors between an initial meeting and the moment of sexual intercourse. It could happen in minutes, hours, days, weeks, months and even years.

In some cultures, sexual activity is only acceptable within marriage. Families also sometimes arranged marriages for their children. This was more common in the past but does still happen in some parts of the world today.

The first step for any human is finding a mate, which often happens unintentionally as part of ordinary social life. But it also happens purposefully in social gatherings where unattached humans make themselves available and evaluate others doing the same.

This is usually done in combination with other activities such as dancing, which helps overcome any initial awkwardness and increases the chances of success while making failure less noticeable.

This process happens with other animals too. A lot of birds dance socially to impress potential mates. Examples include albatross, bowerbirds, cranes, flamingos, peacocks, pheasants and many more. In fact, Red-Capped Manakins used the moonwalk to swoon, potential mates, long before humans did.

Humans often use intoxicants as a social lubricant. They ease social tension and allow interaction to flow more freely. Alcohol is a popular choice due to its legality as a mass-produced and culturally acceptable product. It is a colourless liquid produced by the natural fermentation of sugars. But alcohol is more harmful than alternatives and too much can be very unhealthy, especially over time.

But other animals use intoxicants too. Some examples include wallabies getting high on opium, reindeer seeking and fighting over magic mushrooms, and jaguars gnawing on the bark of hallucinogenic vines. Dolphins even squeeze puffer fish in their mouths to release a small burst of neurotoxin that puts them into a trance-like state. Once they're high, they pass it to the next dolphin in line. It's entirely possible that they were the first animals to come up with a 'puff, puff, pass' method.

Not every human wants to dance and drink to find a mate. There are simpler and more comfortable ways too. And the creation of the internet, a communication network that connects devices around the world, has made it easier. Social network platforms allow humans to communicate with each other anywhere, anyplace and anytime by posting information, comments, messages, and images.

A good example is Tinder, which was created specifically to make it easier for humans to meet and connect. It is a location-based application that lets humans upload pictures of themselves, as well as a brief description of who they are and what they are interested in. They can also search through other human's profiles, and either like or dislike them. When two humans have liked each other's profiles, they are considered a match and given an opportunity to chat.

Humans are somewhere between monogamous and polygynandrous when it comes to relationships. Generally, they like to have one partner at a time. Sometimes they stay together with their entire lives. Other times it might not work out. Many have different partners throughout a lifetime, but never two at the same time. Although that happens sometimes too.

Humans are more sophisticated than other animals when it comes to sex and finding a mate. But there are still many similarities. That's because sex is an important part of life and has been for a very long time.

# Language

Animals communicate with each other to share information; usually through signs, signals and sounds. It helps them survive and function in a world filled with danger and uncertainty. There are many different examples. And some are more creative than others.

Ants use chemical trails and pheromones to share information with other members in their colony. Bees do a quirky dance to let others know about the distance and direction of nearby flowers. Bats make thirty-three different sounds and combine them in different ways to communicate different things. Prairie dogs make different alarm calls for different predators, and they vary depending on the size, colour, and speed of the predator. Caribbean reef squid changes colour, shape, and texture to communicate with each other. And there are many more examples too.

Dolphins are wicked smart and worth a special mention. They use combinations of whistles, squeaks, squeals and clicks to communicate different things. This includes but is not limited to social interaction, calling out peers when they are separated, asking others to play, and letting others know when they are excited. Each dolphin also has a unique voice they use to identify each other.

Communication between humans is more even more complex than dolphins. They still use signs, signals and sounds. But they use all sorts of different sounds in a structured and conventional way and combine them into different words, phrases, and sentences to communicate an infinite number of different things.

Nobody knows exactly when human language first developed. But it most likely started with early humans in Africa and spread into Mesopotamia. From there, it branched out into different languages and spread across the world. Today, there are more than five-thousand

languages, and they can be divided into twenty language families connected by shared words, sounds and grammatical constructions.

Indo-European is the most widespread language family. It started from a nomadic tribe around 3000 BC and is spoken by half the world's population. It includes Greek, Latin, Spanish, English, Persian, Sanskrit and Hindi. Ural-Altai started around the same time and includes Mongolian, Turkish, and Hungarian.

Semitic is another common language family, which spread throughout the Middle East and North Africa. It played an important part in early civilization and includes Arabic and Hebrew.

Sino-Tibetan is not as widespread as other language families but is spoken by 1.5 billion people today. It includes Chinese and Tibeto-Burman and can be broken down into more than three-hundred different dialects.

Languages have intertwined with each other throughout history. This happened because of conquest, trade, religion, and technology. A good example is a divide between Romance and Germanic languages caused by the Roman Empire. The former includes Italian, French, Spanish, Portuguese and Romanian. The latter includes English, Dutch, Flemish, German, Danish, Norwegian, Swedish and Icelandic.

Italy, France and Spain deeply integrated into the empire and kept a lot of the social and cultural influences. Germanic countries didn't integrate as much and kept a lot of their own culture and language.

Modern English is a combination of Germanic and Romance language. This happened during the Norman conquest of England. They adopted French and brought it with them to England, where it influenced the local language. For example, French contributed the name of meats (veal, mutton, beef, etc), how the food was prepared (boil, fry, roast, stew), and words related to nobility (prince, princess, baron, baroness, etc.). There are many other examples too.

There is an evolutionary process behind language too. Like genetic traits, words need to be useful to stay relevant and carry on in time.

There is a history behind every word, which includes where it came from, how it formed, and how its meaning has changed over time.

An interesting example is 'snob' which became popular in the late eighteenth century. It came from the Latin word 'sine nobilitate' which means 'without nobility' and was eventually abbreviated to 'snob'.

Originally, it described a person who didn't belong to an upper class and was often used to describe shoemakers and cobblers.

That changed in the nineteenth century, and it was used to describe a person who imitates, admires, or desperately wants to associate with people they consider superior. That changed again, and it was used to describe a person who snubs people they consider inferior. And that's what it means today.

Other animals can use more complicated language systems too. A famous example is a gorilla named Koko. Humans trained her to understand at least two thousand human words, and how to use all kinds of different hand signs to express them. She learned how to combine them to create new words on her own. Of course, she didn't develop that skill by herself. But humans weren't all that different once upon a time and look what happened.

# Writing

Humans developed a way to use spoken language in a physical form. They invented sometime around 3000 BC in an ancient civilization known as Sumer. Cities were growing and resources were lacking. The population couldn't keep up and started trading goods with other human settlements, some of which were quite far away. That fixed the problem. But there was a growing need to communicate across these long distances. And that led to the creation of writing.

In its earliest stages, symbols were drawn to represent information about the contents and quantities of a delivery. They were impressed into wet clay with a reed tool and dried. Symbols eventually became more complex and started representing sounds and word-signs too. That made it possible to write in a more detailed and meaningful way.

A few hundred years later, that system was used to write economic, religious, political, literary and scholarly information. It was also used to write about other things too, such as important events and religious beliefs. And eventually, humans used it to write about other things too.

The first writer in history to write something and include a name on it was a priestess named Enheduanna who lived between 2285 BC and 2250 BC. She wrote about a planet (which she believed was a goddess) and her thoughts about its destiny in the universe.

The Sumerian civilization went on to collect more than 30,000 clay tablets. They stored them in the first-ever library, which helped preserve their heritage, culture and history. This allowed human communication to transcend time and pass on to successive generation, which became an important part in the next chapter of human evolution.

But humans developed a creative way to use and enjoy writing too. The Epic of Gilgamesh was written sometime around 2150 BC. It was the first story ever written and told the story of a king and his search for the

meaning of life. Storytelling has remained in human culture ever since, and the premise in the very first story is still used today.

It's worth mentioning that writing developed independently in other areas too. Sumerians can't take all the credit. Ancient Egyptian hieroglyphics were created around the same time. Chinese and Mesoamerican systems were created much later around 1200 BC.

Chinese writing started from a practice known as divination, where mystics etched marks on bones or shells that contained predictions about the future. They would heat them until they cracked and interpret patterns in the cracks to determine which prediction would come true.

Writing became more diverse and accessible in time. Around 1050 B.C, a system was created where symbols were used to represent consonants (speech sounds). This system was popularized by travelling merchants who used it to record their transactions and became known as the Phoenician alphabet. It developed into other alphabets including Aramaic, Greek and Latin, which are still used in many languages today.

Like humans, writing started out as something basic and became more refined in time. It is an important part of life and is still used to document knowledge, express thoughts and feelings about the world, and tell stories.

# Work

When humans were hunters and gatherers, there was only one occupation. And it was survival. Everyone played a part in keeping the community safe and well-fed. But in time, humans became smarter and communities became larger. They started growing plants and taming animals. And this opened the door to new kinds of work.

Agriculture played an important role in helping communities develop into early civilizations. There were more humans in any given community. And that meant there were more roles and responsibilities that needed to be fulfilled. Social classes started to emerge. And the powerful ruling class, who earned their place from conquest or were born into it, made all the important decisions. They considered themselves beyond work. And they outsourced it to slaves and peasants.

Civilization continued to expand, and society became more complex. There were more work opportunities than ever before. Some humans started specializing in certain fields. And the craft stage of work was born. In Ancient Greece and Ancient Rome, men in the lower class often became craftsmen, farmers, fisherman, merchants, and soldiers. Men in the upper class often became artists, doctors, lawyers, philosophers, politicians, and teachers.

Sadly, females were confined to housekeeping and cooking. Others became prostitutes, having sex in exchange for money. The human species has always been somewhat patriarchal. But equality has come a long way and will continue to get better in time. There have been many exceptional women throughout history who have left an undeniable mark. And they helped pave the way for many others to follow.

New philosophies changed the overall attitude towards work. In the Middle Ages, hard work became an important part of life and

synonymous with being a good human. But who created those philosophies? Probably someone who never worked a day in their life.

In the eighteenth century, the industrial revolution happened mass production was brought into the world. A lot of hand production was replaced with machinery, new chemical manufacturing and iron production processes were created, machine tools were developed, and the factory system was born. They created new kinds of work where humans operated and maintained machinery.

The next workforce revolution happened when computers and the internet became a part of daily life. They created new work opportunities but made many disappear too. And now humans are on the verge of another workforce revolution with automation and artificial intelligence around the corner. The human species will need to adapt once again.

# Money

Humans work for many reasons. But let's be honest, the acquisition of money is an important one. Money is a particularly strange phenomenon. It's a system where small pieces of metal and compressed wood fibre are passed around and exchanged for goods, services, and anything else it can buy. And in the modern world, it doesn't need to have a physical form at all.

Before money existed, humans used a system of barter. A farmer would trade leftover crops with clothes from a tailor. A brewer would trade excess beer with meat from a butcher. It was a simple system. And it worked well.

Money seems to have developed independently in different areas. In Ancient China, humans started carrying small tokens around which represented the items they wanted to trade. It was easier and more practical than carrying the items themselves. Around the same time, humans in Lydia used a similar system with coins made from a naturally occurring mixture of gold and silver.

Woodblock printing was invented in Ancient China sometime around 700 AD. It replaced the tokens with paper money. And it was an easier and more convenient system. A human named Marco Polo visited China in 1200 A.D. He was fascinated with their paper money system and took the idea back to his homeland. But it took another four-hundred years late for it to become popular.

Banks are institutions that receive, lend, exchange, and safeguard money. They had already been around for a long time. But in the seventeenth century, they started handing out written notes that were a promise to pay someone a sum of gold. Humans in those areas found it easier to swap notes rather than carry gold around. And that eventually became the norm.

Money became plastic when the first charge card was created in 1946. This paved the way for modern-day credit cards, which are still popular to this day. But money transcended a physical form altogether when humans entered the digital age in the 1980s and Automatic Teller Machines were invented. They let humans access a digitized representation of their money and withdraw an amount in a physical form.

The internet continued to evolve, and different electronic money services became more common. A new phenomenon called cryptocurrency became popular recently. It is the first decentralized currency that is stored on the internet and isn't owned by a human or organization.

A lot has changed since the simple days of bartering. Banks dominate the economy in the modern world. But in time, it's entirely possible for them to become less important and lose their power. After all, there was no physical money at the dawn of civilization. And it could be heading that way again. Nobody knows what will happen next. But it will certainly be interesting.