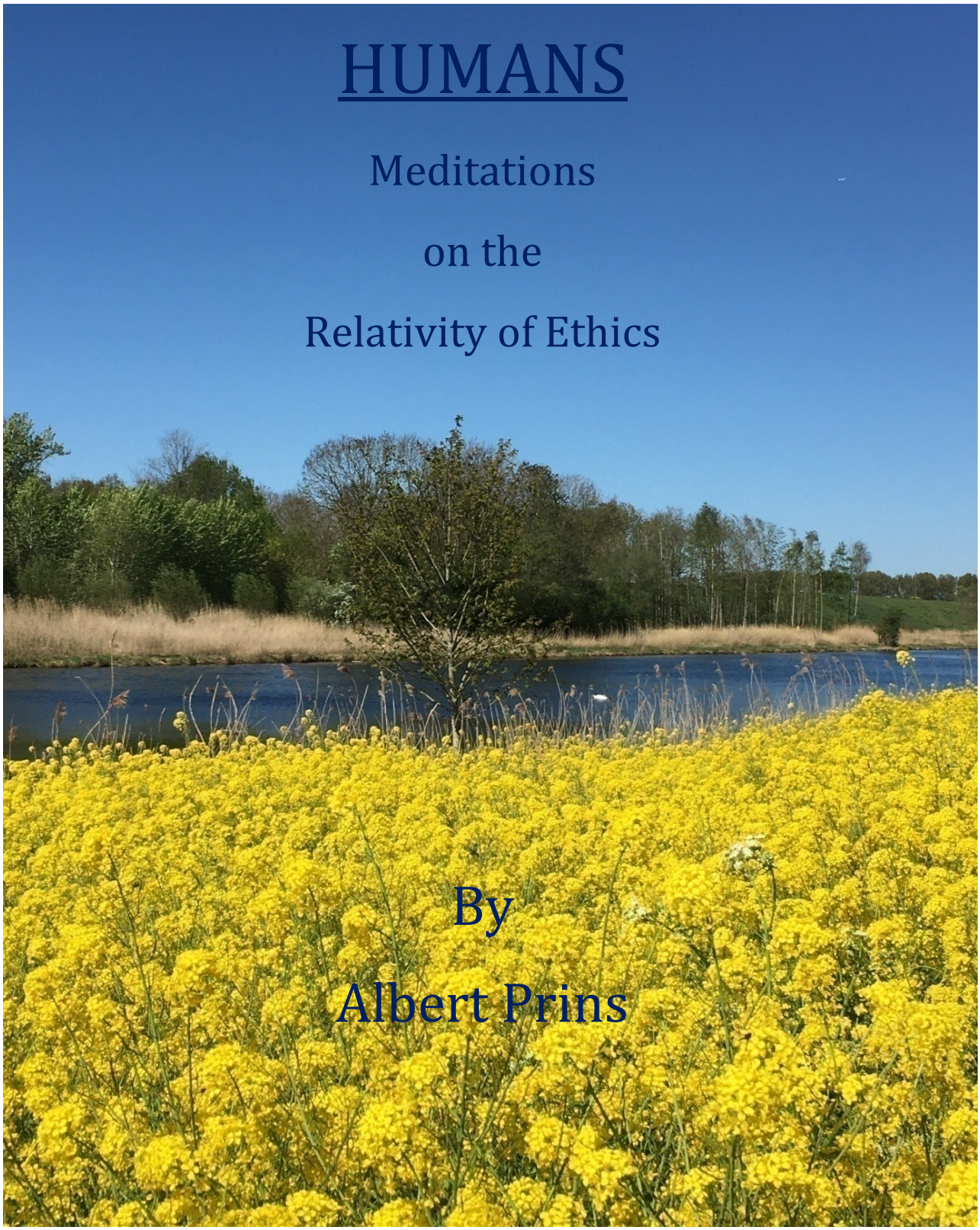
HUMANS

Meditations

on the

Relativity of Ethics



By

Albert Prins

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1. Summary

This document explores the relativity of ethics through a philosophical dialogue between Alex and Trebla. Central to the discussion is the question of whether ethics is universal or relative, and how human morality relates to evolution, culture, and religion. Drawing on scientific insights, practical examples, and reflections on literature, the text argues that moral values are not absolute truths but arise from the human need for survival and coexistence. The text advocates a neutral stance, self-reflection, and an open view of different perspectives on good and evil.

Main themes:

- The necessity of neutrality when studying ethics
- The role of evolution and biology in human behavior
- The influence of religion and culture on moral norms
- The tension between the individual and the group
- Practical dilemmas surrounding overpopulation, sustainability, and collective action

Conclusion:
Ethics is a human construct that is constantly evolving. By stepping back from personal and cultural biases, we create space for a broader, more inclusive perspective on morality and humanity.

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2. Preface

Sometimes I hear people discuss ethics in terms of what is "right" and what is "wrong", and I am surprised by how convinced some are that they know the criteria by which something belongs to one of those categories. Is ethics relative, depending on the culture in which one lives, or is it absolute and universal?

In the following treatise, I would like to share a few reflections on "relative" and "universal" ethics. We will limit ourselves here to descriptive ethics and not delve into the prescriptive: how we *ought* to behave.

To keep the discussion as neutral as possible, I have chosen the dialectical form used by the ancient Greek philosophers.

The document can also be found at:
http://www.prinikx.synology.me/familyprins/Philosophy/philosophy/Species_deliberations_english.pdf

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Albert Prins

Comments are welcome via aprins@hotmail.com

Table of Contents

HUMANS

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Begin

3. Introduction

Key sentence:
A philosophical dialogue explores whether moral thinking is possible without human biases and cultural frameworks.

Start:

TREBLA:
Good morning, Alex.

ALEX:
Good morning, Trebla.

TREBLA:
How are you? I'm glad you're joining me on my daily walk.

ALEX:
It's a beautiful day, let's enjoy the stunning yellow landscape, colored by blooming rapeseed.

TREBLA:
During my daily walks, I often listen to podcasts—on philosophy, science, evolution, and other topics. After listening and reading several books on these subjects, I find it interesting to reflect on what was said and what I've learned. Would you enjoy reflecting on these topics with me while we walk through these rapeseed fields?

ALEX:
Yes, Trebla, I think that would be very interesting to discuss together.

TREBLA:
One of the things that caught my attention was the discussion about good and evil—especially in relation to humanity. Shall we begin by exploring how best to approach the concepts of good and evil, Alex?

ALEX:
Yes, that sounds like an exciting challenge.

TREBLA:
Don't you think one of the problems with this subject is that it's difficult to remain objective, because we belong to the human species and are inclined to think from the human point of view? In other words: we call something good when we believe it benefits us as a human species.

ALEX:
Yes, I think that's true. But what can we do about it, since we can't just set aside our human identity?

TREBLA:
I think it's possible—if we first mentally place ourselves far outside our own species. We would have to zoom out, so to speak, and consider the entire universe as one total system. But to keep things manageable, let's first limit ourselves to the subsystem called planet Earth.

ALEX:
Yes, that seems like a reasonable starting point.

TREBLA:
On Earth, we find animals, humans, vegetation, various landscapes, and so on. We should look at it all as if it were a playground we are observing; as if someone had built a model train set with trees, ski lifts, and railroads, and is now assessing whether everything works properly. And by “properly” we mean that the system functions in such a way that it continues to exist and does not destroy itself.

ALEX:
That sounds like a good starting point.

TREBLA:
So our primary goal is to understand how this subsystem—Earth—functions. We shouldn’t place humanity at the center, but rather Earth itself, of which humanity is just a part. It doesn’t matter if one component functions less effectively, as long as the whole remains balanced enough to continue functioning.

4. Be Neutral

Key sentence:
True objectivity requires letting go of human standards and perceiving behavior as part of a larger, amoral system.

Start:

TREBLA:
Our starting point is the existing reality: the phenomena of the world, in line with the phenomenology of thinkers like Edmund Husserl (1859–1938). As mentioned before, we must switch off our bias and observe the interplay of everything on Earth as neutrally as possible. This is difficult, because we ourselves are part of human society. We must be aware that our thoughts are "clouded" by the norms and values of that society. So first, we must detach from our human self-image and observe the world neutrally from a distance, as if we are not part of the system—like spectators watching an ant colony. This is also how Epictetus, the Stoic philosopher (ca. 50–135 AD), approached his surroundings. He believed we should calmly and soberly accept everything that happens. Our role is to observe the system without passing moral judgment.

We might see living systems in which members help each other survive, or the opposite: systems in which individuals kill each other in order to survive. But we must refrain from judging these systems from a human moral perspective. Instead, we try to understand them from a neutral standpoint and merely observe the outcomes—without interfering or judging. All of this is in the service of understanding how the system evolved into what it is now.

ALEX:
Indeed, we must be as objective as possible and view it as an external system.

TREBLA:
From my experience reading various sources, I’ve noticed that many authors have a biased view of humanity. Some adopt the perspective of Thomas Hobbes (1588–1679), who believed humans are egocentric by nature and only act kindly toward others because they realize they cannot survive without them (the social contract). Others take the view that people are inherently kind and benevolent, like Jean-Jacques Rousseau (1712–1778). They passionately try to argue for one of these two approaches. However, the only way to reach an objective and realistic view of humanity is by stepping back and viewing humans as just another species to be studied.

ALEX:
That indeed should be the approach. It will be a challenge to switch off our empathy for them and see them only as parts of a system.

TREBLA:
The system of Earth, nature, and living beings is constantly changing, but as a whole it continues to exist. So if a system manages to persist, there must be regulatory mechanisms that influence it in such a way that balance is maintained or restored.

Although we want to keep our distance and view the system from afar, it may be easier to start by focusing on the subsystem of human beings. But again, we must remain mentally aware of the need to keep cognitive distance.

When a society thrives and its population grows, shortages of food, materials, or other essentials can threaten its survival. To maintain balance, mechanisms are needed. These can be mechanisms initiated and controlled by humans—or, if such mechanisms are lacking, by nature itself.

In the first case, think of global agreements to limit the number of people on Earth—for example, through birth control. If such human-designed “mechanisms” fail, nature will eventually take over. Overpopulation will lead to famine, wars, disease, or even environmental damage—causing the subsystem either to collapse or to be forced back into a new equilibrium.

ALEX:
I agree that this balance is quite delicate. On the other hand, when something "disastrous" happens at the subsystem level, we should not view it emotionally as disastrous, but rather objectively as something that happens—and that will eventually lead to a new balance for the entire system, with or without humans or any specific subsystem.

5. How Did Humans Become What They Are Today?

Key sentence:
Humans evolved as a species driven by genetic survival, variation, and social cooperation.

Start:

TREBLA:
To understand how humans have become who they are today, we can follow this line of reasoning, which is primarily based on evolutionary theory.

There may have been various paths in the evolution of humans, following different unconscious strategies. Only those strategies — like carrying genes that favor survival — would have led to today’s result. The others would have gone extinct.

Here, we must distinguish between the individual human and the human species. An individual's life is temporary, but the species still survives. The species, therefore, has proven to be more enduring than the individual. So to be as successful as the species, there must be an inherent strategy aimed at its continuation. But the species itself is not a tangible thing — it's a concept. The species consists only of individual humans, who are continuously replaced over time. This principle also applies to all other species, including animals and plants. The mechanisms might differ, but let’s focus now on the human species.

There are several options:

1. Each individual’s main purpose is the survival of the group.
2. Each individual primarily aims to survive personally, with the side effect that the group also survives.
3. The group is a mixture of the two types above.

With the first option, if every person sacrifices themselves for the group, it's likely that they will die early, have fewer or no offspring, and the group will shrink or go extinct.

Rationally speaking, it's more likely that there is a system that "programs" each individual to seek their own survival, while also understanding — perhaps unconsciously — that helping the group improves their own survival chances. A side effect of that is that the group is preserved.

We know that a person's life span is limited, and the survival strategy of each person is not just about physical survival but also about leaving a legacy — for example, their children. These are not conscious actions but part of the motivational system that evolved over time through species selection. It is not a teleological system (with a goal), but one that evolves through random variation.

ALEX:
So it seems that evolution works in the direction of passing on genes to ensure the survival of the species.

TREBLA:
Exactly. And to do that optimally, the main "task" of the individual is to survive and pass on their genes. For that, a partner is needed. Once a person finds a partner to pass on their genes, they may (perhaps unconsciously) realize they must also care for that partner — otherwise, reproduction won't happen. Furthermore, the individual may also — to a lesser degree — care for siblings, since helping them survive also helps preserve related genes.

Even more distant individuals may be important to the individual's survival, and therefore there is a natural obligation to ensure those others function well. The sense of responsibility starts with self-preservation and diminishes the further others are from the individual — all to maximize the chance of passing on the individual's genetic material.

All of this happens unconsciously and is an innate or evolutionarily developed drive within each individual.

This describes the average human, but of course, it differs per person. That's a core feature of evolution: variation between individuals. When conditions change, those most suited to the new situation will thrive and become the new average. Evolution will then proceed along that new line.

If we try to produce "perfect" people through DNA manipulation or breeding for current traits, we create an inbred species doomed to extinction. It might be perfectly adapted to current conditions but vulnerable to change. Nature, left to itself, produces many types of people with different traits — ensuring preparedness for a range of future circumstances. Diversity is essential for continuity.

ALEX:
I see what you mean. But don't you think that when a child is born, their main evolutionary drive is to survive — and to do whatever their instinct tells them is necessary to achieve that? So this "selfish" behavior is innate (nature), but the child quickly learns — through interaction with other children and adults (nurture) — to be part of a group. They develop empathy and adapt to social life. The child's behavior is guided by feelings of happiness or unhappiness — those feelings steer them in the "right" direction. These feelings aren't transcendent but chemical reactions in the brain, triggered by the release of dopamine.

TREBLA:
Yes, Alex, that's exactly how I see it too.

5.1. The Term Good or Evil

Key sentence:
Good and evil exist only from the perspective of the organism — the ecosystem itself holds no judgment.

Start:

As humans, we view certain events or actions by others as good or bad. We use our own moral standards to evaluate these events. Below, we will examine this act of judgment.

5.1.1. The Migration of the Wildebeest

Key sentence:
Nature operates in a functional balance where suffering and death are meaningless outside of human evaluation.

Start:

An example of an ecosystem is shown in the BBC documentary about the migration of wildebeests on the Serengeti in Africa ("The Great Migration"). We see a large herd moving from one place to another in search of enough grass to eat. During this migration, there is constant danger from predators such as lions and hyenas. It is explained that if there were no threats, the wildebeests would eat the grass down so far that it would take a long time to regrow. This would also threaten other grazers. When the grass is too short, it becomes difficult even for the wildebeests themselves to find enough food. So with the continuous threat from predators, the wildebeests are eventually driven away and move on to another area. Thus, they are constantly in motion.

By eating grass, the wildebeests absorb nutrients that are also useful to predators who cannot eat grass themselves due to their digestive system. In this way, lions, crocodiles, hyenas, and others obtain the necessary nutrients indirectly through the grazers. The herd of wildebeests, then, acts like a migrating pantry. This gives us a sense of how the system functions: the wildebeests mow the grass to a manageable level, and the lions drive them off — unwittingly giving the grass time to regrow. In the meantime, the lions get enough meat with the right nutrients. The same applies to all predators involved in the process.

Eventually, the wildebeests return, and the ecological cycle continues. It appears to be a "beautiful" continuous system, maintaining equilibrium. The fact that wildebeests provide meat and nutrients to predators — and that predators hunt and kill grazers — is not a matter of good or evil. It can simply be viewed as an effective system. That said, we might ask whether a mother wildebeest would be just as impressed by this "beautiful" system when her baby is devoured.

So, from the ecosystem's point of view, everything is fine. But from the grazers' point of view, there may be serious doubts. "Beautiful," "good," and "evil" are all relative terms.

When the system works well, there is balance across the whole. But for the subsystems — like the wildebeests or the lions — each wildebeest calf devoured, or each lion cub that starves, represents a disruption. These subsystems, too, try to regain balance. For example, after losing her cub, the lioness becomes fertile again and the cycle continues.

If we now scale this system up to the entire world, including humanity, we can reflect on the following:

To ensure the continuation of the world as it is, balance is necessary. In the past century, this balance seems to be in danger. The world population is growing enormously and starts to exert a large influence on that balance, due to the increasing need for food, energy, raw materials, and the resulting pollution. In earlier centuries, wars or pandemics helped control the human population, preserving balance. It appears that evolution did not 'anticipate' that humans would develop traits like negotiation, compromise, and the ability to cure diseases. But if humanity fails to reach a

peaceful solution to limit population growth, then eventually the natural consequences of overpopulation — such as war, famine, or pandemics — may restore the necessary balance.

As Nietzsche (1844–1900) said, there is no universal good or evil. Moral values such as good and bad are human constructs.

5.2. Pandemic and Diversity

5.2.1. A World in Confusion

In 2019–2020, a pandemic broke out that shook the world to its foundations: COVID-19, a virus that presumably originated in China and spread across the globe at a staggering pace. The early images from Italy were shocking — dozens, then hundreds of people dying every day, as the virus steadily moved northward through Europe.

What followed was a unique experiment in crisis management. Nobody knew how to deal with this virus. There was no medicine, no vaccine, no playbook. European cooperation seemed the obvious path, yet even at that level, people were groping in the dark. And so a remarkable situation emerged: every country chose its own course. Some governments shut down everything that was not strictly necessary — restaurants, cinemas, shops — and asked citizens to stay home. Other countries opted for a freer approach and largely allowed social life to continue.

5.2.2. Unity or Diversity of Approach?

One can debate this. A central, coordinated approach carries the strength of unity and consistency. But if that approach turns out to be wrong, the consequences are enormous and universal. The fragmented approach we witnessed in reality could, in hindsight, also be read differently: as a series of national laboratories, each with its own method, each with its own results.

Only in hindsight do we know which approach saved the most lives — and that is precisely the tragedy, because decisions had to be made in the heat of battle, not from the comfort of retrospect.

Here we see what we described earlier: the system as a whole strives for equilibrium, but for the subsystems — countries, peoples, individuals — every disruption causes its own shock. Just as with the migration of wildebeest on the Serengeti, where lions and grazers each experience the system from their own perspective, no country in a pandemic can stand neutral toward the choices it makes. And yet: the whole benefits from variation.

> *"If the system works well, there is balance across the entire system, but for the subsystems, every loss causes a disruption."*

5.2.3. The Vaccine and the Unexpected Opponents

When vaccines were eventually developed that appeared to be effective, something remarkable arose: a considerable group of people refused to be vaccinated. Some believed in conspiracy theories; others had religious or principled objections. Many people found this frustrating. If we all pull together, people reasoned, we can suppress this virus more quickly. Why won't everyone cooperate?

But upon further reflection, a different perspective presented itself. One that is not political or ideological in nature, but evolutionary.

5.2.4. The Evolutionary Logic Behind Stubbornness

Imagine that a vaccine — despite all due diligence, despite all testing — contains an unforeseen, fatal flaw. A flaw that only manifests itself years later. If the entire world population takes this vaccine, the outcome is catastrophic: humanity goes extinct. No individual, no system of quality control is infallible enough to completely exclude that risk.

Evolution, however, is not a system that targets individuals — it operates at the level of the species. And the species does not survive through uniformity, but through diversity. Through variation. Through the fact that not everyone ever does the same thing.

This connects precisely to our proposition: that when one strives, through DNA manipulation or other techniques, for a uniform, 'optimized' species, a vulnerable system is created instead. A species that is perfected for current conditions, but becomes fragile the moment those conditions change. Variety and diversity are of the utmost importance for continuity.

> *"If we strive to make every person perfectly suited to the prevailing average characteristics, an inbred species emerges that is doomed to disappear."*

Seen from this perspective, the group that refused to be vaccinated — for whatever reason, well-founded or not — was unwittingly an insurance policy for humanity as a whole. If the vaccine works perfectly, the vaccinated survive and protect society. If the vaccine proves fatally flawed, it is precisely the unvaccinated who preserve the species from extinction — those who can reproduce and continue the human line.

Evolution has, over the centuries, planted within us a drive to survive — not as individuals, but as a species. And perhaps skepticism, distrust, stubbornness even, is one of the instruments through which that drive expresses itself. Not elegantly, not consciously, but effective in the most fundamental sense of the word.

5.2.5. Good and Evil Are Human Constructs

This brings us to a deeper question: was it 'wrong' of anti-vaccination advocates to resist? From a medical perspective, the answer seems clear. But we must be wary of exactly that self-evidence. Ethical judgments such as 'good' and 'bad' are, as argued in the tradition of Nietzsche, human constructs. They do not exist as universal truths, but flow from what at any given moment appears beneficial to the survival of the individual and the group.

Nietzsche held that no universal good or evil exists. And we can add: moral values are contextual, pragmatic, and variable. What in one situation is regarded as dangerous obstructionism may, in another situation, prove to be the salvation of the species.

This changes nothing about the science behind vaccines, nor does it justify unfounded conspiracy theories. But it does invite a different kind of understanding — and humility in our moral judgment.

5.2.6. The Paradox of Equality — and the Power of Difference

There is yet another dimension that is relevant here, and which we discuss at length below in chapter: the paradox of equality. Humanity continually strives for more uniformity, more consensus, more unity. That striving is understandable and in many respects valuable. But a fundamental law of nature applies here: energy always flows from inequality toward equality. Without difference, no movement. Without tension, no life.

Two rain barrels that are equally full do not flow. Wind arises from differences in air pressure. Rivers flow because one point lies higher than another. Life itself depends on gradients and energy differentials. Complete equality — however noble as an ideal — would in practice mean stagnation.

Seen in this light, the division surrounding the vaccine is not merely a problem. It is also an expression of the fundamental diversity that keeps the species alive. Humanity does not survive in spite of its internal divisions, but sometimes precisely because of them.

> *"Perhaps wisdom lies not in achieving equality, but in continuing to strive toward it, consciously and courageously."*

5.2.7. Conclusion: Humility in Judgment

The COVID pandemic confronted us with the limits of our knowledge. We did not know which approach was best. We did not know whether the vaccine was absolutely safe. We did not know why people resisted. And yet we had to act — quickly, collectively, under pressure.

What we can perhaps learn from it in retrospect is this: the system as a whole — humanity as a species — has developed mechanisms to protect itself, even when those mechanisms appear irrational or even harmful at first glance. Diversity in behavior, variation in response, resistance to uniformity — these are not shortcomings of human nature. From an evolutionary perspective, they are its most fundamental survival strategies.

We should not judge people who think differently from us solely on the correctness of their reasoning. We may also acknowledge that their deviant behavior — however unintentional — fits a pattern that nature has applied for millions of years: make sure that never all eggs are in one basket.

Humanity does not survive in spite of its internal divisions, but sometimes precisely because of them.

5.3. Origin of Ethics and Religion

Key sentence:
Ethics and religion are cultural strategies that emerge from humanity's need for guidance and group cohesion.

Start:

Next, we look at the influence of religion on the formation of ethics and moral values. And to what extent — as some claim — religion is the sole source of norms and values, that is, of what is good and bad. That without religion, a good society could not exist.

Plato (427–347 BC) and Aristotle (384–322 BC) lived around the 3rd century BCE and were not influenced by Christianity, which didn't yet exist. Still, Aristotle wrote his work *Ethica*. In this work, virtues and vices are described that closely resemble Christian teachings. This isn't surprising, since Thomas Aquinas (1225–1274 AD), 1500 years later, studied Aristotle's work and tried to integrate those ideas into Christian doctrine — perhaps with the addition of the concept of God, the Trinity, etc. Aristotle based *Ethica* mainly on his view of humanity, apart from religious frameworks.

Plato often refers to a god or gods, but the Greek gods — according to Greek religion — had both good and bad traits. What was good or bad seems to have been determined by Plato himself; he needed gods, and then shaped them to fit

his view. He also criticized poets for portraying the gods with both virtues and flaws. Plato believed poets should only show the good side of the gods to set a proper example for the youth. Again, one may ask: by what standard did Plato determine what was “good” or “bad”?

Confucius (551–479 BC, China) also focused on morality without being religiously inspired. His famous saying — “Do not do to others what you would not want done to you” — appears in various forms across religions and ethical systems.

This supports the idea that humans have an intrinsic sense of good and evil. Most likely, this is an evolutionary trait, where “good” means beneficial for our survival as individuals and groups, and “bad” means threatening to that survival.

Plato:

“For no one can truly understand how God is to be worshipped and served unless he first knows who and what God is. Nor can we see the Divine Sun unless the sun itself first reveals itself.”

According to Plato, we can gain insight into God’s laws and rules through Apollo — that is, divine light. “But that insight,” he says, “is not obtained through words, but through a pure and serene mind.”

ALEX:
Many people believe that a god created the world and humanity. They see the idea of evolution as conflicting with the idea of creation. What’s your view on this, Trebla?

TREBLA:
Even if there is a God who created the universe, I think it’s very likely that He also incorporated the mechanism of evolution into creation — because that would simplify the process of generating a variety of living beings. But as Plato already suggested, if we have no clear idea who or what God is, what His influence is on living beings, and what He expects from them, then I think it’s better to leave that question aside.

Hume argued in his work *An Enquiry Concerning Human Understanding* (1748) that a rational person adjusts their beliefs according to the available evidence. The more improbable an event is, the stronger the evidence must be in order to believe it.

Benedict de Spinoza (1632–1677) saw God as equivalent to nature — a God without special concern for humanity. Perhaps it would have been better if Spinoza hadn’t made that comparison, since the word “God” is so loaded with the historical meaning of a deity who has a direct relationship with living beings. That easily leads to confusion.

ALEX:
But why do so many people believe in a religion, and why does almost every group worship a god and follow His rules?

TREBLA: That is also a mystery to me, but the only logical explanation I can think of is that it is very difficult for most people to accept phenomena they do not understand. So they invent something, such as the idea that it is the work of a god or gods.

Take the phenomenon of thunder and lightning: impressive, unpredictable and sometimes deadly. The Vikings attributed this to Thor, the god of thunder, the Germanic peoples to Donar, the Greeks to Zeus and the Romans to Jupiter. All these peoples lived far apart from one another, yet independently arrived at the same solution: a powerful

deity must be behind it. Today we know that thunder and lightning are the result of electrical discharges between clouds and the earth, a phenomenon that is fully explainable without any divine intervention.

The same applies to the northern lights. This overwhelming natural spectacle, in which the sky lights up in waves of green, red and purple, was seen by the Norsemen as the reflection of the shields of the Valkyries, the divine warrior women who carried fallen heroes to Valhalla. The scientific explanation, charged particles from the sun interacting with the earth's atmosphere, is at least equally fascinating, but requires no god.

We see this pattern time and again: earthquakes were attributed by the Greeks to Poseidon, diseases to the wrath of the gods, the position of the stars to divine will. Whenever science found an explanation, the god retreated. The gods thus filled the gaps in human knowledge, which the philosopher Dietrich Bonhoeffer later aptly described as the "God of the gaps." And for leaders it is easier to tell people that they must behave according to the rules of god, than to try to convince people through logic that they must obey the rules of the leader. God is thus used, for practical reasons, as a bogeyman (Thomas Hobbes 1588-1679 used the Leviathan for this purpose). So in essence, religion and God are human constructions.

ALEX:
I understand your point. Indeed, if we can't properly define God — what He looks like, what He expects from us, what His intentions are, or what we can expect from Him/Her/It — then if something is so vaguely defined, we're likely to just live our lives without adjusting our behavior to any religious dogma. Especially if there's no empirical evidence for the existence of a higher being.

TREBLA:
As far as ethics and morality are concerned, I see these as human constructs as well. There is no universal goodness or badness. It simply depends on the group. It makes sense for a group to try to survive and create rules to that end — but this can be done with many different rules. And those rules change over time. Slavery was once "normal," but now many historical practices are viewed in a completely different light.

Christians have their rules, as do Muslims, Hindus, Buddhists, atheists, and even ISIS followers. "Do not kill fellow humans" seems to be a near-universal rule — though even here there are exceptions, such as euthanasia for people suffering unbearably, or the death penalty in some countries for severe crimes against humanity.

However, if we look at the killing of humans — as in the above examples — from an earthly or holistic perspective, overpopulation with all its negative consequences might be prevented by such actions, and in that sense, they may be considered "good" behavior. We should therefore be careful in seeing our ethical rules as something given by God or universally valid. Rather, they are a social contract that applies only among humans.

Just like driving on the left or right side of the road — it's not inherently good or bad. It is just an agreement to make coexistence easier

6. Focus on Group or Individual

Key sentence:
Humans are evolutionarily driven toward self-preservation, but subconsciously recognize that serving group interests enhances their own survival.

Start:

TREBLA:
Earlier, we considered the human species as part of the overall system. Sometimes one gets the impression that human

beings are somehow responsible for the entire system. But if we observe human behavior, it seems that, as mentioned before, evolution has merely wired humans to strive for their own survival — and consequently, if everyone does that, for the survival of the group.

ALEX:
How is the balance struck between striving for individual survival and supporting the group?

TREBLA:
A person focuses both on themselves and on the group to which they belong. What is their relationship to the group? Do they value the group as a concept or as the individuals within it?

In primary school, a person is part of a group and tries to be accepted by it — meaning, by most of the individuals in it. Then they move to secondary school, where they are part of a new group, and again, they will try to be accepted by its members. Is the bond with the first group, from primary school, still strong enough to last? It could be, but generally, the person will do their best to become an accepted member of the new group. The same happens at university or in the workplace. They might even migrate to another country — and once again, there will be a group they try to integrate into.

Therefore, we can hardly deny that the focus lies on oneself and on being part of — and accepted by — a group, largely independent of the specific individuals in it. The person tries to optimize their survival chances and instinctively "understands" that, as they are wired, they must belong to a group. They are not evolutionarily developed to survive alone, like a tiger; they need a group to assist them. And, of course, this applies mutually to all members of the group.

We must bear in mind that this applies to the average person. Evolutionarily, there is a spectrum of behavior, as some people have more difficulty switching groups than others, or tend toward a more solitary lifestyle.

ALEX:
And what about their relationship with animals, nature, and the Earth?

TREBLA:
Let's assume there are more "Earth-like" planets in the universe, with everything necessary to provide humans with a comfortable environment. Do we love Earth and its animals so much that we would never migrate to another Earth, even if conditions here greatly deteriorated? And if we did migrate, would we, like Noah, take all animals with us? In many cases that would be practically impossible, and people would limit themselves to taking only themselves and their closest loved ones. I expect that once conditions worsen — or even before that — people will migrate, perhaps with their loved ones, to the other planet and start over as if they were migrating to another country. And, as we discussed earlier, this would be done despite Earth and its animals. So again, the focus is on the survival of the individual, and secondarily on their desire for a particular group.

ALEX:
Don't you think that people take animals with them for very different but evolutionarily explainable reasons? Some will take pets; others a collection of reptiles; still others, livestock — for example, as a precaution, as a food reserve. At first glance, this may seem like personal preference or sentiment, but perhaps everyone is unconsciously playing a role that benefits the group.

Take attachment. The tendency to bond with others gives people the advantage of cooperating and living together in groups. Attachment to animals also had evolutionary value: dogs helped with hunting, domesticated animals made migration unnecessary, and pack animals like horses made agriculture and transport easier.

Even taking a reptile collection may seem strange, but it can be functional. Someone with knowledge of venomous animals might know, for example, that the toxin of a toad can be used to make an arrow more lethal. Such specific knowledge could prove crucial in a survival scenario.

And the people who take livestock? They choose certainty. Risk-averse behavior can, in many circumstances, guarantee the survival of a group — just as in other situations, reckless action might be what makes the difference. Each behavioral variant can offer a survival advantage at the right moment.

TREBLA:
You may be right, but ultimately, when a person's survival is at stake, that person will generally make decisions in their own interest. If they don't, they will perish — and only those who make decisions primarily for their own benefit will survive and pass on their genes to the next generation. This will likely cause a shift in the average survival instinct, with self-interest becoming more strongly emphasized.

ALEX:
I think we humans have much in common, but on an individual level, we also vary a lot — and are aware of it. In ants, the queen produces different types: caretakers, workers, guards, etc. Physically, the types differ as well, even though they all have the queen as their mother. I think the same applies, more or less, to humans. A number of basic abilities are generic to all humans — such as the ability to imitate behavior, see, hear, speak, walk, and so on. There will be exceptions, of course, since it may have once been useful for someone to be deaf or blind, but I suspect that a group cannot have too many of those individuals, because in most situations that would be more of a disadvantage than an advantage.

7. Is the Human Being Also a 'Group'?

Key sentence:
What we consider a single human being is, in essence, a cooperative system — just like groups are.

Start:

In the previous chapter, we more or less stated that a human is a tangible, physical entity, while the concept of a group is an abstract idea and therefore intangible. But even here, we can add some nuance.

As we will argue later in *"The Mortality of Humans,"* from an evolutionary perspective, the transmission and preservation of genes appears to be more important than the preservation of the individual human being. Humans are mortal and serve primarily as vehicles for passing genes from one generation to the next.

If we examine a human at the microscopic level, we find that a person consists of a collection of organs. All of them serve the purpose of allowing the human vehicle to preserve itself long enough to transmit enough genes. We have legs to flee in times of danger; eyes and hands to obtain and evaluate food; and internally, various organs and systems work together to make the body function. These organs and systems form an integrated whole necessary for the survival and functioning of the individual.

But can we also view a single individual as a system of organs, systems, and limbs that together form a group? Just as we said in the previous chapter that a group is a concept — merely a collection of separate entities — perhaps we should ask to what extent an individual human is also a group composed of elements like organs.

When we look at a large flock of starlings swirling in the sky, they regularly have to evade threats like birds of prey. They use a collision-free strategy: each bird monitors up to seven nearby neighbors and ensures it doesn't crash into them. If a few starlings change direction, that movement ripples through the entire flock as each bird quickly adjusts to its seven closest neighbors. From a distance, the group appears to be one single, flexible organism.

It seems as if there is a force between the starlings that holds the group together. This appears to be a programmed instruction within each bird to stay close to the others — but not too close — to maintain flight. Through the shifting

patterns of the flock, a bird may be on the outside one moment and back inside the next. It's unclear whether this is genetically hardwired and evolutionarily developed or whether it's learned behavior — for instance, copied from the mother.

In the case of humans, all internal components at the microscopic level are held together by atomic forces — electrical interactions between atoms. So here we're not talking about virtual forces, but actual physical ones.

Other kinds of virtual forces also exist. Consider two people playing tennis: their movements are largely determined by the ball, which travels back and forth, essentially pulling the players around the court. It looks as if they are connected by an elastic cord.

Or take two separated parents with a child: they remain connected through the existence of the child — another form of mutual, virtual force.

In human groups, there are also virtual, psychological forces that act attractively between members to keep the group cohesive and functional.

All these forces are virtual in nature — mentally programmed through innate or learned behavior. As the English say: "nature or nurture."

The difference between these group forces and the structure of an individual is that within the individual, physical forces exist between the components — electrical, atomic forces. So perhaps we should not view a human as a group of organs, but rather as a singular entity physically bound by internal forces.

By contrast, in groups — two or more individuals — the forces that hold them together are more virtual. These virtual forces stem from an innate or learned drive in humans.

We might define a group as a collection of entities that can also function independently. For instance, if we separate a flock of starlings into individual birds, those birds can still survive. The same applies to a human — who may survive alone, albeit with a reduced survival chance. But if we split a human into separate organs, their survival ends immediately.

Therefore, while it's an interesting analogy, it may be a bit far-fetched to consider the individual human as a group in itself.

8. What is a Human Being?

Key sentence:
Being human is primarily defined by the capacity to think — by the brain more than by the physical body.

Start:

As described above, a human being consists of various organs, systems, and limbs. If one of these organs is removed, does the person remain the same, or do they become slightly different? How do we define what a person is, and what determines one's humanity? Is it defined by behavior or by appearance?

If a person receives an artificial hip, do they change as a person? If they are known as an Olympic athlete, then yes — their athletic performance may change, but do we also consider them to have changed as a human being? The same applies to a heart transplant, and so on. How many body parts and organs can be replaced before someone is no longer the same person?

If something is altered in the brain — through surgery or otherwise — it often leads us to say the person has fundamentally changed. So it depends on what we regard as the defining feature of that individual.

One major difference between animals and humans is often said to lie in how the brain is used. Thanks to the brain, humans can think about the future and the past, perform calculations, write, and communicate in intelligible sounds. In most of these skills, humans are more advanced than other animals. All of these capabilities are first controlled by the brain and then carried out using various organs: arms, hands, voice, eyes, and so on.

So the primary distinction between humans and animals seems to be the brain.

Let's take the example of Stephen Hawking, the British physicist who suffered from amyotrophic lateral sclerosis (ALS), which left almost his entire body paralyzed — except for his cognitive abilities. Even in that condition, Hawking was still regarded as the same person he had been before the illness — apart from, of course, his physical characteristics. Perhaps that is because Hawking's defining feature was his intellect.

Would the same have applied to Usain Bolt, the Jamaican sprinter, if his cognitive function had severely deteriorated but his athletic performance had remained intact?

All things considered, it appears that a person is primarily defined — as a human being — by their brain. Or, as the title of Dutch neuroscientist Swaab's book puts it: *"We are our brain."*

Reflecting on that, I'm reminded of an anecdote told by a philosopher, which goes as follows:

An elderly man, physically weakened to the point that he does not have long to live, but whose mind is still sharp, has a conversation with a young, athletic man. The old man says:

"I don't have much time left to live, but you are still young, strong, attractive, and have your whole life ahead of you. You're almost perfect — except for one small flaw: through no fault of your own, your intellect is not particularly strong. Since I am at the end of my life, my brain is of little further use to me. Therefore, I offer you this proposal: let's transplant my brain into your head, and yours into mine. That way, your quality of life will improve significantly — and for me, it makes no difference anymore."

What the young man replied is unknown, but it's a useful thought experiment (Einstein: *Gedankenexperiment*) for considering the question:
Who is the person after the transplant?

9. The Mortality of the Human Being

Key sentence:
Mortality is evolutionarily advantageous for the species because the transmission of genes is more important than the survival of the individual.

Start:

Here we pose the question: why is the human being mortal, and how does this process work?

An important aspect of human aging is the aging and decline of cells. Throughout a person's life, cells — both inside the body and on its surface — are damaged by various factors. The body then produces new cells to replace the damaged ones, which are supposed to fulfill the same functions. The functionality of the new cell is essentially copied from the damaged cell.

With each copy, there is a chance of error, and after many replications, the cells no longer function properly. This applies to the entire body, and over time, the body becomes “worn out” and eventually dies.

More information on the aging process is provided in *Appendix 4.2: Aging Process in Humans*.

Still, the body theoretically has the potential to be immortal — or at least to survive much longer. Consider the situation in which a woman gives birth to a baby: the baby has the potential to live a long life, even though the mother may already be over forty years old and her body’s cells have long been subject to aging.

This is likely due to the woman’s stem cells, which remain “undamaged” and can replicate to form a new being. In principle, the body could also use this system to renew its own cells — without accumulating damage — and thus extend its lifespan significantly.

So why hasn’t human evolution taken advantage of such a system?

Apparently, from an evolutionary point of view, it is more advantageous for the survival of the species to pass on genes to the next generation and then let the transmitter disappear — that is, to be mortal. Perhaps, at an older age, humans become too mentally rigid, too fixed in their ways, and it is therefore simpler to switch to a new, fresh-thinking individual.

The transmission of genes seems to be the true driving force, and human generations are merely the vehicles through which this happens.

Another example of genetic reproduction can be found in organisms such as flatworms, starfish, cnidarians (like sea anemones), and many segmented worms (*see Appendix 5.3: Aging Process in Flatworms*). These organisms are capable of regenerating body parts when vital organs are lost — giving the appearance that they can live forever.

During this regenerative process, genetic changes can occur, influenced by environmental factors. By studying this regeneration system more thoroughly, humans might be able to use this knowledge to extend human life.

We will, for now, set aside the many side effects this would entail — such as overpopulation — and the difficult question of how to manage such consequences.

10. The Paradox of Equality

A Philosophical Reflection

10.1. The Dream of Equality

There is hardly an ideal that occupies humanity as deeply as equality. From the French Revolution to modern social movements — everywhere the call for fairness, justice, and equal opportunity resounds. People experience inequality as an injustice, as something that must be corrected. And yet a question arises: what if that very inequality is the engine that sets everything in motion? What if the dream of complete equality, should it ever become reality, would mean the end of everything we strive for?

This reflection is not about justifying injustice or exploitation. It is about something subtler and more paradoxical: the idea that inequality is not merely a problem to be solved, but the primordial source of all human energy, motivation, and life itself.

10.2. Nietzsche and the Power of Jealousy

The Bible calls jealousy a sin. “You shall not covet” — the tenth commandment forbids us to desire what another has. Jealousy is seen as an ugly, destructive emotion that pulls us downward and tears apart connections. But Friedrich Nietzsche looked at this human phenomenon differently.

Nietzsche saw in what he called “Ressentiment” — the feelings of resentment and envy that the weak harbor toward the strong — not merely a moral shortcoming, but a force. For whoever is jealous acknowledges something in the other that they themselves aspire to. Jealousy points like a compass needle toward a possible destination. It says: “that is where I want to be, that is what I want to achieve.”

Viewed from this perspective, jealousy is not a sin but a signal. It is the inner voice that whispers that a difference exists — an inequality — and that this difference can be bridged. The man who admires his successful neighbor and desires what he has can go one of two ways: he can sink bitterly into resentment, or he can transform the jealousy into ambition and action. Jealousy itself is neutral; it is the person who chooses what to do with it.

And so inequality becomes the fuel for the pursuit of equality. Without the awareness “this person has something I do not”, the motivation to grow, to learn, to work would be absent. It is the differences between people that set them in motion.

10.3. Nature’s Lesson: Energy Flows from Unequal to Equal

Nature shows no mercy for abstract ideals — it operates according to relentless laws. And one of those laws states: energy always flows from a state of inequality toward equality. Nowhere is this more simply seen than in the image of two connected rain barrels.

Imagine two rain barrels standing side by side, connected by a hose. One barrel is full, filled to the brim with rainwater. The other is empty. The moment the connection is made, the water begins to flow — from full to empty, from high to low, from more to less. There is movement, there is energy, there is activity. And all that life owes its existence to one thing: the inequality between the two barrels.

Now imagine that both barrels are exactly equally full. Nothing flows. Nothing happens. The stillness is complete. Equality — perfect, absolute equality — means the end of every current, every exchange, every activity. Thermodynamicists call this the state of maximum entropy: everything is distributed, everything is equal, and for that very reason there is no energy left to accomplish anything.

We see the same principle everywhere in nature. Wind arises because air pressure in one place is higher than in another — inequality drives the storm. Rivers flow because one point lies higher than another — inequality carries the water to the sea. Electric current flows because there is a voltage difference between two points — inequality illuminates our homes. Even life itself, in its most basic biological form, depends on chemical gradients and energy differentials.

Nature constantly strives toward equilibrium, toward equality — but it needs the initial inequality to make that journey. The striving is meaningful; the arrival is death.

10.4. The Great Paradox: Striving for What Would Destroy Us

Here a profound paradox unfolds in human existence. Humanity strives for equality — for justice, for fair distribution, for a world without injustice. This striving is noble and deeply human and deserves every respect. But the paradox is that complete equality — should it ever be achieved — would mean the end of the striving itself.

What would a person still do in a world of perfect equality? Why would they get out of bed, write a book, start a business, enter into a relationship? Every motivation is rooted in a difference: the difference between where you are and where you want to be, between what you have and what you pursue, between the world as it is and the world as it could be. Equality kills difference, and with it kills motivation.

This does not mean we should stop striving for a more just world. On the contrary. It means we must cherish the striving itself, not merely the destination. The road toward equality is where life unfolds. Every step toward greater justice, every victory over injustice — that is the life worth living.

10.5. Conclusion: Inequality as the Condition for Life

The world lives by the grace of inequality. Not because inequality is always just — it is far from that. But because the difference, the tension, the distance between what is and what can be, is the source of all human energy and all life on earth.

Jealousy, when transformed into ambition, is the compass needle that points us to the difference and moves us to bridge it. The full and the empty rain barrel tell us that movement is only possible where inequality exists. And the thermodynamic law of entropy whispers the ultimate secret: when everything is equal, everything is over.

Perhaps the wisdom lies not in achieving equality, but in consciously and courageously continuing to strive for it. In meanwhile savoring the energy that striving generates. In recognizing that life itself — breathing, moving, growing — exists because there is still inequality left to respond to.

And so the most alive person is not the one who has found equality, but the one who is on the way toward it — passionately and with open eyes.

11. Summary of a Number of Reflections

Key sentence:
Our behavior is the result of genetic drives and neurological rewards, with both self-interest and empathy serving evolutionary functions.

Start:

- Everything we do is determined by our brain. It depends on the structure of our brain, and that structure differs from person to person; therefore, everyone behaves somewhat differently. The structure of our brain is determined by our genes, which in turn are shaped by our (fore)parents.
- We experience happiness through a chemical called dopamine, which is produced in the brain, specifically in the hypothalamus. It functions as a kind of reward.
- Everyone strives to feel happy. So we do things that lead to a reward. This results in behavior that is considered desirable by the body. But this can differ from person to person: one may feel better by focusing solely on themselves, while another may feel rewarded by doing good for others, receiving appreciation from group members, and thus producing dopamine — encouraging group-beneficial behavior.
- DNA resides in cells and contains all the programming of our body. DNA is large and stays within the cell, but RNA is the messenger that travels from the DNA of one cell to a new cell to transmit the necessary information to perform the right function.

- Our DNA carries the drive to ensure we persist — both as individuals and as a group. So we can say that we possess both self-serving and altruistic drives — including the capacity for empathy.
- We should not attach moral judgment to these traits. These feelings are necessary conditions for our existence. If beings ever existed that lacked them, they likely went extinct. This is the crucial conclusion of evolutionary theory. Not because we *must* survive — but simply because only those species with survival-enhancing traits are still around.
  Variation is also necessary so that the group can adapt to changing environments through evolution.
- As Swaab says in *We Are Our Brains* (2010): "Life has no purpose."
- In Susan Neiman's *Evil in Modern Thought* (2002), especially in the chapter *Hope*, and in other sections, she repeatedly raises the question of whether humans possess goodness or are fundamentally self-centered, and whether morality exists. The fact that this concern is raised at all suggests a deep hope that morality *does* exist.
- The general belief in morality suggests that people consider it important — and that alone says a lot.
  Perhaps we shouldn't initially speak of good and evil. Humans, both as individuals and as groups, have evolved with instincts for self-preservation. That's why both self-interested behavior and altruism exist. These aren't necessarily good or bad — they're essential traits for increasing the chance of survival as a species. Without both, the group — and thus its members — would have gone extinct.
- Morality does not originate from religion or externally imposed values; it is encoded in our genes and has evolved over time.
  When we do something that gives us a sense of reward, we're encouraged to repeat that behavior, and we reinforce that feeling through experience. We also learn from our surroundings and from the experiences we share with others. But in the end, it always comes down to this: we unconsciously strive for that reward — because it tells us what we are doing feels right. This happens by the brain's reward system, especially through dopamine release in areas such as the hypothalamus and ventral tegmental area. It's more complex than described here; for more detailed information, it's better to read Swaab. But fundamentally, it boils down to a chemical reaction.
- Altruism and morality — following rules — are also observed in other species, such as ape communities and primates, which never read legal codes, the Bible, or the Quran. These traits are also found in dolphins, elephants, and others. It's in their DNA.
  It is essential for the survival of the species. We place too much emphasis on the idea that altruism is good and self-interest is bad.
  If a lion eats a lamb, is he evil? And if he doesn't and his cubs starve — is he then good? These are necessary traits that should be neutrally accepted and dealt with accordingly. I see no reason to dismiss this by saying, *"Are we nothing more than a chemical factory governed by molecules? Don't we have something higher?"*
  So what? We are who we are. We enjoy life, love, happiness, and ideals — even if they are the result of a neurochemical processes. And considering the number of people on Earth, it's clear that this has never been an obstacle — regardless of religious commands or legal codes, or whether life has a purpose at all.
- In his book *Ethics*, Aristotle (384–322 BC) describes human behavior based on his own insights, without religious influence. His views appear to reflect universal human nature.
  He lived long before Christianity and was therefore uninfluenced by it. Thomas Aquinas (1225–1274) is said to have integrated much of Aristotle's work into Christian theology — minus, of course, God, Jesus, etc.

- Humanity is part of the universe. To understand the whole system, one must adopt a universal or holistic perspective. The result of this is that humans must be modest in their views on ethics and morals — on what is right and wrong. These rules are human constructs — decisions about how people might reasonably live together. They do not extend beyond the human domain. From this universal perspective, human ethical norms can even conflict with the survival of the Earth, its resources, or animals. In a universal sense, there are no moral rules. Things evolve as they evolve.
  There is no ultimate purpose — perhaps with one exception: the second law of thermodynamics states that total

entropy never decreases — meaning that nature strives toward equilibrium.
But even that is not exactly rich in ethical significance.

12. How Do We Convince People and Governments to Care for the Earth?

Key sentence:
Sustainable action requires not only rational arguments but also emotional engagement and collective persuasive power.

Start:

The state of our planet is cause for concern. We are facing structural climate change, in which human activity plays a significant role. The question is no longer *if* we should intervene, but *how* we can best do so.

Individual vs. Collective Action

Tackling climate issues on an individual level proves to be insufficient in practice. While every behavioral change helps, the scale and complexity of the ecological crisis can only be addressed effectively at the level of governments — and preferably on a global scale.

However, let us first zoom in on our national situation. In the Netherlands, policy is shaped through a democratic process. Political parties rarely secure an absolute majority, meaning governments are formed through coalitions. New legislation requires approval by both the House of Representatives and the Senate. This means that political change is only possible if the electorate is convinced and offers sufficient support to parties willing to pursue that course.

The Power of Persuasion

The electorate — and ultimately the government — must therefore be convinced of the need for structural action. Here we can draw from a classical source: *Rhetoric* by Aristotle. He argued that a persuasive message rests on three pillars:

- **Logos**: the logical content of the message,
- **Ethos**: the credibility of the speaker or messenger,
- **Pathos**: the emotional appeal to the interests of the audience.

Thus, it is not enough to merely present rational facts about CO_2 emissions or rising sea levels. The speaker must also radiate expertise and trustworthiness (ethos), and make clear what is at stake for the listener personally (pathos). Only then does the message truly resonate.

Survival as an Evolutionary Motive

Human beings are evolutionarily geared toward survival. If we want to motivate people to adopt sustainable behavior, we must link that narrative to their chance of survival — and that of their children and grandchildren.
If we do nothing, we will soon be confronted with severe damage to our living environment, our well-being, and our economy.

Earth's Balance and Vulnerability

Earth is a complex, dynamic system that generally maintains its own balance. Local disruptions — like storms, droughts, or volcanic eruptions — are naturally absorbed. But when disruptions become structural, for example through the human overburdening of ecosystems, the system may lose its resilience.

The Pressure of Population Growth

A major driver of ecological stress is the continued growth of the world population. More people means more food, more energy, more space. Current agricultural methods rely heavily on pesticides, contributing to the disappearance of insects like bees — essential for crop pollination.

Moreover, nature holds a wealth of knowledge: consider medicinal plants or animals used in vaccine research. The biodiversity we are now depleting is simultaneously an invaluable resource.

The Example of the Aboriginals

Traditional cultures, such as the Australian Aboriginals, often lived in close harmony with their surroundings. When they encountered an edible shrub, they would take only a few leaves, allowing the plant to survive. In our consumer society, we seem to have forgotten such care — and at times practice outright exploitation.

Limiting Population Growth?

The idea of limiting the number of people on Earth is a sensitive one, but not without reason. As long as humanity was just one of many species, the ecological balance could be maintained. But now that our presence is globally dominant, we severely disrupt that balance.

This also presents an ethical dilemma: nations that have historically been poor rightly want access to the same comfort and luxury that wealthy countries have enjoyed for generations. Convincing them to embrace ecological restraint requires an honest story — one that not only emphasizes limitations, but also opportunities: such as preserving livability, health, and well-being for future generations.

Moreover, limiting population growth is realistically achievable within one or two generations, as the human lifespan is relatively short. By encouraging voluntary birth control through education, healthcare, and economic incentives, the global population can stabilize — or even decrease — in a humane manner.
Problems like labor shortages or care for the elderly can be addressed through technological innovation and redistribution of labor.

Facts alone rarely move people to action. Although data on CO_2 levels, rising sea temperatures, and biodiversity loss are essential, they often fail to inspire meaningful change. What truly persuades is a compelling story — one that not only presents the facts (logos), but also appeals to our values (ethos) and stirs our emotions (pathos).

A narrative that combines scientific urgency with personal meaning — the well-being of our children, the beauty of nature, the injustice of environmental degradation — has the power to bridge the gap between knowledge and action.

The challenge, then, is not only to inform, but to inspire. We must craft a moral and emotional appeal grounded in reason: a story that helps people see themselves as part of a future worth fighting for.

Final Reflection

The challenge we face is great — but not insurmountable. If we want individuals and governments to act, we must not rely solely on statistics, risk models, or binding climate agreements. Instead, we must share a story — one rooted in logic (*logos*), built on credibility and trust (*ethos*), and infused with urgency and hope (*pathos*).

That story must reveal how the choices we make today will shape the world that future generations will inherit. When people see themselves not as isolated individuals, but as part of an interconnected whole with shared responsibility, meaningful change becomes possible.

Our future depends not only on sound policy and innovation, but also on our shared willingness to believe in, — and act upon that story — such a story.

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13. Appendices with Reflections

Key Sentence:
The appendices deepen and illustrate the discussed themes through personal notes, critical reflections, and additional observations.

Appendix 1 Reacties op Boeken.

Appendix 1.1 "The Revolt of the masses" by Jose Ortega y Gasset (1930).

While reading *The Revolt of the Masses* by Ortega y Gasset, I was struck by the proposition in the preface: that a state should ideally be led by an intellectual elite. At first this idea appealed to me, because for a long time I hoped that the world would naturally be governed by sensible, idealistic people. Institutions such as the United Nations appear to be an attempt at such a world order, but in reality they often turn out to operate as bodies of compromise between national interests and power blocs, rather than as an idealistic compass. The problem here, of course, is whether a universal idealistic compass actually exists.

We also see this tension in our national politics. Political parties proclaim their ideals, but often do so with a populist strategy: they shape their message in such a way that it resonates as much as possible with a broad electorate, rather than remaining faithful to their deepest convictions. To some extent this approach is present in almost all parties.

The central question is: does "the mass" actually have the insight and long-term vision to govern a society sustainably? Or would it be better if leadership were provided by people with knowledge, experience, and integrity—in short, an elite? But that solution immediately raises new questions: who determines who belongs to such an elite? What criteria do we use? And how do we prevent this elite from eventually becoming complacent, distant, or even corrupt?

These questions are thousands of years old. In *The Republic*, Plato (Athens, ca. 427 BC – there, 347 BC) has his characters discuss different forms of government. His preference is for the philosopher-king: a leader trained in justice and wisdom, and therefore uniquely suited to govern. Karl Popper (1902–1994) strongly criticized Plato for this view. According to Popper, it is dangerous to search for the "best ruler." Much more important, he argues, is the design of a system in which bad leaders can be replaced safely without bloodshed. That, in his view, is the true strength of democracy.

This idea is also shared by physicist Sean Carroll. In his podcast *Mindscape*, he emphasizes that elections in themselves are not proof of a functioning democracy. The decisive criterion is whether power can be transferred regularly and peacefully. Russia provides a striking counterexample: elections exist, but the transfer of power itself appears to be systematically made impossible.

Appendix 1.2 "De Meeste Mensen Deugen", by Rutger Bregman (2019).

This dutch title means: Most People Are Good." The book's title immediately raises fundamental questions. What exactly do we mean by "good"? Whose standard are we using: Rutger Bregman's, that of a liberal-democratic society, or perhaps that of a religious or extremist ideology? And if it is true that "most people" are good — what does that mean in practical terms for our behaviour or worldview? Isn't our society already implicitly based on the trust that most others behave decently?

Bregman supports his thesis with historical examples in which people appear to act morally under pressure. But the question remains whether these examples are truly representative of humanity as a whole. There appears to be no solid empirical basis that justifies this claim on a global scale. Are there statistical data per continent or cultural region? And if so, what moral "benchmark" is used to measure this?

A single dramatic exception is sometimes enough to destabilise an entire system. Take the example of an airplane carrying five hundred passengers, one of whom turns out to be a suicide terrorist. Although 99.8% of the people on board are "good", one outlier can lead to disastrous consequences. What are we to do with the comforting claim that "most people" mean well? Does it fundamentally change our choices or attitudes in life?

Bregman resists the idea that altruistic behaviour stems from selfish motives, calling that view cynical. But perhaps it is more useful to reconsider the term "selfishness" itself. It is a heavily loaded word. Instead, we might speak of egocentrism or subjective survival logic. A striking metaphor is the oxygen mask on an airplane: passengers are advised to put on their own mask before helping others. This may seem selfish, but it is in fact a necessary precondition for being able to help others at all. In a broader sense: one can only contribute to the survival of the group if one is first able to function independently.

From an evolutionary perspective, behaviour that we regard as "good" is not necessarily moral or deliberate. It is more likely a programmed tendency in our genetic system — developed to increase the survival chances of both individual and group. What we define as "good" is therefore not absolute, but contextual, pragmatic, and variable. One person is more empathetic than another, but this variation is evolutionarily relevant. In some environments, more cooperative types are more likely to survive; in others, the opportunists prevail. In that sense, it may even be desirable that not everyone is "good".

The popularity of Bregman's book seems in part to stem from a longing for a positive view of human nature — a kind of collective self-affirmation. The message that we, as a species, are "basically good" provides a comforting feeling. That is understandable. But it becomes problematic when this optimism is presented as something radically new or groundbreaking. The idea that people are generally trustworthy has long formed the unspoken foundation of social interaction. If we truly believed that people are *not* trustworthy, we wouldn't trust the mail carrier, walk across a bridge, or even start a conversation. Every day we take countless social risks precisely because the social contract — that most people adhere to basic norms of decency — is already internalised.

Bregman's English title, *Humankind: A Hopeful History*, suggests more humility than the Dutch original. Perhaps in English, they deliberately distanced themselves from the more charged and normative formulation "most people are good." After all, on closer inspection, that is more a value judgment than a factual statement.

In conclusion: the book raises important questions and deserves appreciation for its optimistic tone. But a reflective reader is justified in raising critical notes about the pretension, the burden of proof, and the normative framework in which "decency" is presented.

Appendix 2 **Transport via Digital Coding**

When humanity's survival on Earth is threatened, we might turn to the idea of interstellar migration. The evolutionary drive for self-preservation and reproduction constantly compels us to search for survival strategies. But traveling to planets beyond our solar system is practically unfeasible with current technology. The distances are too vast, our speeds too low, and the required energy is immense.

What if, instead of physical displacement, we opt for informational transmission? Light, carried by massless photons, can travel at the highest known speed. When only information — and not matter — needs to be transmitted, we can make use of this maximum speed.

This raises a fundamental question: **What makes a human who they are?**

If we assume that being human is entirely determined by the configuration of atoms, molecules, neurons, and their interrelations — in other words, the precise structure of body and brain — then, in theory, this information could be recorded. A complete digital scan of a person could then serve as the basis for reconstruction elsewhere in the universe.

This leads to an alternative approach to space travel:

- The body does not travel — only the information about the body does.
- This information is transmitted via light signals.
- At the destination, this data is decoded and possibly converted into a physical equivalent.

Possible scenarios:

1. The receiving planet harbors a civilization with comparable technology capable of decoding the data and virtually reconstructing the individual.
2. This civilization has the capacity to physically build human bodies from locally available atoms based on the received structure.
3. If only basic elements such as hydrogen are available, heavier elements could be synthetically assembled — provided the environment allows for it.

This method offers several key advantages:

- Transmission occurs at the speed of light.
- The required energy is relatively low, especially when using focused laser communication.
- Multiple copies of the same "individual" could be made — raising ethical and philosophical questions.

This principle could be tested on Earth, for instance, by digitally transferring an object or living organism between two terrestrial locations — one as sender, one as receiver — where the object is reconstructed locally from available atoms.

As an illustration: the nearest star system, Proxima Centauri, is approximately 4.25 light-years away. Even with a spacecraft traveling at 100,000 km/h, the journey would take over 46,000 years. In contrast, transmitted information would arrive in just over four years.

This approach confronts us with profound questions: **Would a copy of ourselves on another planet truly be "us"? And if so, what does that mean for our understanding of identity, continuity, and personal consciousness?**

Appendix 3 Putra's Reflections on Selected Podcasts

In this appendix, personal reflections by Putra are presented following two podcasts he listened to: one about Spinoza and one about David Haig. His observations provide valuable illustrations of how classical and modern ideas on consciousness, ethics, evolution, and meaning relate to each other.

1. **Spinoza**: **Substance, Thought, and Impulse Control**

In response to a podcast about Baruch Spinoza (1632–1677), Putra summarizes a few key points, interwoven with personal reflections:

A. According to Spinoza in his *Deus sive Natura* (Ethica), everything consists of one substance. Nature was not created by an external force; it is its own cause. No creator is needed to explain its existence.

B. Thought exists in three forms:
   • Sensory perception,
   • Reason (ratio),
   • Intuition.
   What distinguishes humans from animals and plants is primarily reason. Humans possess intuition too, but to a lesser extent than reason.

C. Those who develop their capacity for reason are less dependent on external influences and impulses. Although Spinoza does not reject impulses, he values rational action above impulsive or intuitive behavior. This is understandable: rational decisions can be reviewed and improved. They offer learning potential that spontaneous reactions do not always provide.

   This reasoning leads to an interesting consideration: are animals truly incapable of learning? Putra points to the example of a dog repeatedly tricked with a ball. After a few attempts, the dog recognizes the deception and resists the impulse. Animal training also shows that animals do, in fact, possess some form of learning capacity. Perhaps Spinoza underestimates them in this regard.

D. According to Putra, meditation is a practical method for distancing oneself from impulses, in line with Spinoza's pursuit of inner freedom through insight and self-knowledge.

2. **David Haig: Genetics, Culture and the Evolution of Meaning**

In a second podcast, David Haig (2020) discusses the evolution of meaning, from Darwin to Derrida. Putra summarizes the main insights as follows:

A. The reason a certain gene still exists today is its past success. For example, a gene that enhances sexual pleasure may have contributed to more offspring. But in today's cultural context, that same gene may lead to its own decline: contraception has disconnected pleasure from reproduction. According to Haig, evolutionary emphasis could shift toward genes associated with nurturing and parenting. Culturally, societies with strong emphasis on reproduction (such as some religious groups) might gain evolutionary advantage — even if they suppress pleasure.
B. Genes are units of information passed on from both parents to the child. When a gene is transferred from father to daughter or mother to son, it must be "translated," so to speak, into the context of the other gender.
C. Not all human choices and meanings can be fully explained through chemistry or physics. The decision to share a podcast — and someone else responding to it — implies a level of meaning that transcends the material.
D. Genes are essentially geared toward their own survival. However, this does not mean that the organism — the gene carrier — behaves selfishly by definition. Paradoxically, altruistic behavior can contribute to the success of genetic material.
E. Thanks to language and intelligence, humans have developed complex cultures. This enables us to frame our natural behavior as desirable or undesirable. It provides an added moral dimension that sets us apart from animals, who act primarily out of instinct and intuition.

Appendix 4 **Reproductive Processes**

Appendix 4.1 Relationship Between DNA, RNA, Cells, and Genes in the Reproductive Process

Reproduction is a complex biological process involving DNA, RNA, cells, and genes. Below is an overview of how these elements work together during reproduction:

1. **DNA and Genes**:
   • DNA (deoxyribonucleic acid) is the genetic material of almost all living organisms on Earth. It consists of two long strands of nucleotides that form a double helix.
   • Genes are specific segments of DNA that contain the instructions for synthesizing proteins, the building blocks of life. Each gene encodes a specific protein.
2. **Reproduction and Genetic Transmission**:
   • The purpose of reproduction is to pass genetic information from one generation to the next. This occurs via sex cells, also known as gametes, which carry specific halves of the genome.
   • Humans have two sets of chromosomes, one inherited from each parent. Sex cells — sperm and egg — each contain only one set of chromosomes, which together form a diploid zygote upon fertilization.
3. **Fertilization**:
   • Fertilization is the process in which a male gamete (sperm) fuses with a female gamete (egg) to form a diploid zygote.
   • During fertilization, the genetic material from both parents combines, resulting in genetic diversity.
4. **Cell Division**:
   • After fertilization, the zygote begins to divide through mitosis. This leads to a growing cluster of cells that eventually develops into an embryo.
   • During this period, the genetic information (DNA) of the zygote remains intact and is copied and distributed to all daughter cells.
5. **RNA and Protein Synthesis**:
   • RNA (ribonucleic acid) plays a crucial role in protein synthesis. There are various types of RNA molecules, including messenger RNA (mRNA), ribosomal RNA (rRNA), and transfer RNA (tRNA).
   • During protein synthesis, the DNA in genes is used as a template to produce mRNA. This mRNA exits the cell nucleus and enters the cytoplasm, where ribosomes assemble proteins using the information from the mRNA and tRNA.
6. **Genetic Inheritance**:
   • As the embryo develops, all body cells of the organism are derived from the same genetic blueprint.
   • Genetic traits from the parents are passed on to their offspring, leading to genetic diversity within the population.

In summary, reproduction involves the transfer of genetic information from parents to offspring via gametes, with DNA serving as the blueprint for building organisms, and genes containing the instructions for producing proteins essential to life. RNA and cellular processes also play a vital role in translating genetic information into proteins during the development of a new individual.

Appendix 4.2 The Aging Process in Humans

The aging process in humans is a complex biological phenomenon influenced by genetic, environmental, and lifestyle factors. Although the exact mechanisms are not yet fully understood, several hypotheses and theories attempt to explain how and why aging occurs.

Here are some key aspects of the aging process:

1. **Genetic Factors**:
   • Inherited genetic factors play a role in how quickly and healthily people age. Some individuals have a genetic predisposition to longer lifespans and a reduced risk of certain age-related diseases.
2. **Cellular Aging**:
   • Cells in our body have a limited lifespan. Over time, cells become damaged due to the accumulation of harm to their DNA, proteins, and organelles such as mitochondria.
   • The **telomere theory** suggests that telomeres — the protective ends of chromosomes — become shorter with each cell division. When they become too short, cells can no longer divide and eventually die, contributing to aging.
3. **Oxidative Stress**:
   • Oxidative stress occurs when free radicals react with cells and tissues, causing damage. This can contribute to aging and age-related diseases.
   • Antioxidants help the body manage oxidative stress.
4. **Changes in the Immune System**:
   • The immune system changes with age, leading to a decreased ability to fight infections and a higher risk of inflammatory diseases.
5. **Hormonal Changes**:
   • Hormonal changes play a role in the aging process. For example, the decline in hormones such as estrogen and testosterone can lead to symptoms of aging in both women and men.
6. **Changes in Tissues and Organs**:
   • Aging often comes with wear and tear on tissues and organs. This can lead to reduced function in organs such as the heart, kidneys, and brain.
7. **Lifestyle and Environmental Factors**:
   • Lifestyle choices such as diet, exercise, smoking, and alcohol use can influence the rate of aging.
   • Exposure to environmental factors like pollution, UV radiation, and stress can also contribute to aging.

In summary, the aging process results from a complex interplay of genetic, cellular, hormonal, immunological, and environmental factors. While aging is inevitable, healthy lifestyle choices — such as a balanced diet and regular physical activity — can help slow the process and improve quality of life in later years. Research into aging and ways to delay it remains an active area of scientific inquiry.

Appendix 4.3 The Aging Process in Flatworms

Flatworms, such as the regenerating flatworm *Planaria*, have a remarkable capacity for regeneration and appear not to exhibit a clear aging process like many other organisms. Here are some characteristics of how the aging process works in flatworms:

1. **Regeneration**:
   • Flatworms are known for their ability to regenerate lost body parts. If a flatworm is injured or even cut into pieces, it can fully regenerate the missing parts and become a complete organism again. This regenerative ability is unique and contrasts with the aging process as observed in other organisms.
2. **Continuous Cell Renewal**:
   • Flatworms maintain a high level of continuous cell renewal. They possess stem cells in their bodies that can differentiate into various cell types. This means that cells are constantly being replaced by new, healthy ones, reducing the accumulation of damaged cells and tissues.

3. **No Telomere-Related Limitations**:
   • Unlike many other organisms, flatworms do not appear to have strict telomere-related limitations on cell division. Telomeres are the protective ends of chromosomes, and in many organisms, they shorten with each cell division. This contributes to aging, as cells eventually lose the ability to divide. In flatworms, this mechanism is less restrictive, supporting their regenerative and cell-renewal capabilities.
4. **Environmental Influences**:
   • The lifespan and aging process of flatworms can be influenced by environmental factors such as nutrition and temperature. Under laboratory conditions, with certain treatments and genetic manipulations, flatworms can even appear to be biologically immortal.

It is important to note that despite their fascinating properties regarding regeneration and aging, flatworms are not directly comparable to humans and other vertebrates in terms of aging processes. Much remains to be discovered about the genetic, molecular, and cellular mechanisms involved in the biology of flatworms and how they avoid aging. However, research into flatworms may offer valuable insights for regenerative medicine and provide possibilities for understanding and treating aging in other organisms.

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Some Interesting Quotes

Nietzsche once said to the cow:
“Why are you so happy?”
The cow replied: **“Because I do not think about the future or the past. I think of nothing at all.”**
But by the time it tried to say this, it had already forgotten what it was going to say.

Übermensch is the name coined by Nietzsche for the courageous human being who is capable of fully embracing life and creating new values independently.
The Übermensch does not seek the meaning of life in a hereafter or in a Platonic world of ideas, but in life itself.
The Übermensch is not a superior race, as it is sometimes misinterpreted, but the human who refuses to create illusions in order to soften existence.
"Man is a rope tied between animal and Übermensch."

Sartre says:
“Life has no goal; the goal is life itself.”

Comments by Kant:

- "One should not teach people philosophy; rather, one should teach them how to philosophize."
- Regarding the Enlightenment movement (17th/18th century), he defined it as:
  “Enlightenment is the emergence from self-imposed immaturity.”

HUMANS

Meditations

on the

Relativity of Ethics

By

Albert Prins

END

Your feedback is welcome at:
aprins@hotmail.com