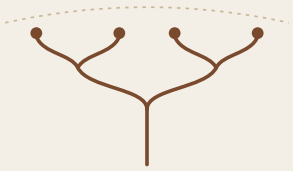
SAPIENS

A Brief History of Humankind

Yuval Noah Harari — first published 2011



PART ONE OF ELEVEN

The Animal Nobody Would Have Bet On

Who Harari is · what the book claims
Chapter 1: An Animal of No Significance

"We are the only human species left, and we are not used to thinking of that as strange."

The idea underneath Chapter 1, in my words

READ AND EXPLAINED BY LOVEPREET SINGH

I read the whole book myself. This is what I understood,
written the way I'd explain it to a friend.

BEFORE WE START

Why I made this

A minute on what this is, and the promise I am making you.

I picked up **Sapiens** for the same reason most people do. Everyone talks about it. It sits on shelves in houses where nobody has opened it. And the bits of it that reach you second-hand — *money is a fiction*, *farming was a mistake* — sound either brilliant or annoying depending on who is repeating them.

So I read the whole thing, slowly, with a pen. Then I read the arguments against it, which took longer than the book did.

This is my own reading of it. Not a summary I lifted off the internet. Not notes from a video. I went chapter by chapter, worked out what Harari is actually claiming, and wrote it down in the plainest English I could manage — the way I would explain it to a friend over chai.

It is a much easier book than Darwin's. Harari is a wonderful writer. That turns out to be the problem, and it is the thing I keep coming back to across these eleven parts. Beautiful sentences make weak evidence feel strong. You can finish a page feeling like you have learned something settled when what you have actually read is one scholar's best guess, delivered with total confidence.

So I am doing two jobs at once here. Explaining what he says, simply and completely. And telling you, every single time, where the ground under a claim is softer than the sentence sounds.

WHAT I AM PROMISING YOU

No word bigger than it needs to be. Every time a technical term turns up, I stop and explain it before moving on — not in a glossary at the back, right there on the spot.

Every big number gets turned into something you can picture. A number you cannot picture is decoration.

When Harari is guessing, I will say he is guessing. When specialists disagree with him, I will give you their case at full strength, not a weak version I can knock over.

And where I am giving you my own opinion rather than his, I will make that obvious.

I am not a historian. I am a person who read a book carefully and then went and checked it.

Which book I read, and a word about the quotes

One honest difference between this series and my Darwin one.

Sapiens: A Brief History of Humankind came out in Hebrew in 2011 and in English in 2014. It has four parts and twenty chapters. I read the English edition.

Now the honest bit. In my Darwin series I quoted him constantly, in his own words, at length. I could do that because *On the Origin of Species* was published in 1859 and belongs to everybody now.

Sapiens does not. It is a living book with a living author and a publisher. So I have kept direct quotation short and rare, and I have done something else instead: where a passage matters, I put it in a box labelled **his point, in my words**, and I give you the argument rather than the sentence.

That is a real loss and I am not going to pretend otherwise. You do not get his voice here the way you got Darwin's. What you get instead is his reasoning, laid out so you can check it. If a passage grabs you, the book is easy to find and it is worth your money.

The map: all eleven parts

The whole road. You are standing at the start of it.

PART	WHAT IT COVERS
PART 1	You are here. Who Harari is · what the whole book stands on · Chapter 1, where we are still a nervous animal eating other predators' leftovers
PART 2	Chapter 2: The Tree of Knowledge. The heart of the book. It gets a whole part to itself, the way Darwin's Chapter 4 did.
PART 3	Chapter 3: what life was like before farming · Chapter 4: what happened to every large animal on Earth the moment we arrived
PART 4	Chapter 5: History's Biggest Fraud. His most famous argument — that farming made life worse. Its own part.
PART 5	Chapter 6: how millions of strangers were kept in line · Chapter 7: why writing had to be invented, and why the first writing was a tax record
PART 6	Chapter 8: why every large society ends up with someone on top · Chapter 9: whether history is going anywhere
PART 7	Chapter 10: money · Chapter 11: empire. Two of the three glues that stuck the world together.
PART 8	Chapter 12: religion, the third glue · Chapter 13: why the ideas that won did not win because they were good
PART 9	Chapter 14: the Scientific Revolution, which began with an admission · Chapter 15: science and conquest, which grew up together
PART 10	Chapter 16: capitalism · Chapter 17: energy, industry, and what we did to farm animals
PART 11	Chapters 18–20: family, happiness, and the end of our species · plus what I actually think, now that I have finished it

One last thing before we start. You do not have to agree with Harari to understand him, and understanding comes first. Let us go.

SECTION ONE

Who is this guy, actually?

A medieval military historian who wrote a course for undergraduates, and accidentally sold twenty-five million books.

Yuval Noah Harari was born in Israel in 1976. He trained as a historian at Oxford, and his early academic work was on **medieval and early modern military history** — knights, siege warfare, how soldiers of the period described their own experience of battle. Narrow, careful, specialist work.

Nothing like the book you have heard of.

Then he was asked to teach a first-year course at the Hebrew University of Jerusalem covering the entire history of the human species. Not one country. Not one century. All of it, in one term.

That course became **Sapiens**. It came out in Hebrew in 2011, in English in 2014, and then it did something books almost never do. It sold in numbers usually reserved for novels — well over twenty-five million copies worldwide, translated into more than sixty languages, recommended in public by presidents and by people who run technology companies.

Two things about that are worth holding on to as you read.

The first: he is not a specialist in most of this

Harari's own research training is in a narrow slice of European military history. Sapiens covers human evolution, palaeoanthropology, archaeology, agriculture, economics, comparative religion, colonial history, the history of science, biotechnology and the philosophy of happiness.

Nobody is a specialist in all of that. Nobody could be. So what he is doing is **synthesis** — reading what the specialists in each field have concluded, and stitching it into one continuous story.

A WORD YOU WILL NEED — SYNTHESIS

Synthesis: building a big picture out of other people's research rather than doing new research yourself.

It is a real and valuable job. Somebody has to stand back and connect the fields, because the specialists are too deep inside their own to do it.

Why it matters here: it also means that every time Harari picks one side of a live specialist argument, you are getting his judgement of somebody else's evidence, not his own findings. That is not a scandal. It just changes what kind of confidence the book has earned.

The second: he is a very, very good writer

This sounds like praise and it is also a warning.

Harari writes short, clean, surprising sentences. He is funny. He sets up a paragraph so the last line lands like a punch. That is a rare skill among academics, and it is why twenty-five million people finished a history book.

But good prose has a side effect. A confident sentence and a well-evidenced sentence feel identical while you are reading. There is no signal in the writing itself that tells you *this one is agreed by everybody* and *this one is my guess*. Both arrive in the same beautiful voice.

I noticed this about a hundred pages in, went back, and started keeping two lists. This series is largely built out of those lists.

MY TAKE — WHY I AM NOT JUST GOING TO PRAISE HIM

I want to be clear that I like this book. It changed the size of my thinking and I have not been able to undo that.

But there is a way of writing about Sapiens that treats it as scripture, and there is another way that treats it as rubbish because it is popular. Both are lazy.

What I am doing instead is boring and useful: explaining the argument properly, then telling you where the evidence is thin. You will find, as I did, that the central idea survives that treatment almost completely, and that a lot of the confident details around it do not.

SECTION TWO

The one idea the whole book stands on

If you take nothing else from these eleven parts, take this. Everything after it is an application.

Here is the claim, in one line.

Humans run the world not because we are clever and not because we are strong, but because we are the only animal that can invent things that do not exist — and then get millions of strangers to cooperate around them.

Read it again, because it is easy to nod at and hard to actually absorb.

Money does not exist. Not the way a stone exists. A hundred-rupee note is a rectangle of printed fabric with no more inherent worth than a bus ticket. It buys food because a very large number of people all behave as if it buys food.

Countries do not exist in that hard sense either. You cannot trip over India. There is soil, and there are people, and there is an enormous shared agreement about lines on a map, a flag, a passport, a set of obligations. The agreement is what makes it real enough to fight wars over.

Companies do not exist. Laws do not exist. Human rights do not exist — and I will spend some time in Part 6 on why saying that out loud does not mean they do not matter.

HIS POINT, IN MY WORDS

Two chimpanzees who have never met cannot work together. There is no basis for it. Trust between chimps is built one relationship at a time, by grooming and fighting and sharing, and it does not scale.

Two humans who have never met can hand each other large sums of money, work in the same building for thirty years, or die side by side in a war — because they believe the same stories. The same god, the same nation, the same currency, the same company, the same law.

That is the whole engine. Shared fiction lets total strangers cooperate in unlimited numbers, and no other animal on Earth can do it.

Now, before you object — and you should object — Harari is careful about one thing that most people repeating him are not.

He does **not** say these things are lies.

A lie is when you know the truth and say something else. What he is describing is different. He calls it an **imagined reality**: something that is not physically out there, that millions of people sincerely believe in, and that therefore has enormous real consequences in the world.

A WORD YOU WILL NEED — IMAGINED REALITY

Imagined reality: something that exists because a large group of people jointly believe in it, rather than because it is physically there. Money. Nations. Companies. Gods. Laws. Human rights.

It is not a lie, because nobody is pretending. It is not a delusion, because it works. Believing money has value is exactly what gives money value.

Why it matters: things that are real because we agree can be changed by changing the agreement. That single sentence is where the rest of the book comes from — and it is why this is a hopeful book disguised as a cynical one.

I resisted this argument for about three chapters. It sounded like a clever line rather than a claim. By the chapter on money I had stopped resisting, and I will show you why when we get there in Part 7.

Four floors, and we are only on the top one

The book opens by making you feel very small. I am fairly sure that is deliberate.

Chapter 1 does not start with humans. It starts about 13.5 billion years ago, with matter and energy appearing, and it works forward in four steps.

About 300,000 years after that beginning, matter and energy clumped into atoms and molecules. Call that chemistry.

About 3.8 billion years ago, on one small planet, some molecules started making copies of themselves. Call those organisms. Call that biology.

And about 70,000 years ago, one kind of organism started building elaborate structures out of ideas. Call that culture, and the story of culture is what we call history.

FIGURE 1 *Harari's four floors. Each one only becomes possible once the floor below it is built. History is not separate from biology — it is standing on it, and the ape doing the standing has a bad back.*

That structure is doing real work, and it is worth naming. **History sits on top of biology. It is not beside it.** Every empire, every religion, every argument you have ever had, is being performed by an ape with an unusually large head and a spine that was never designed to stand up. Harari never lets you forget the body. It commits him to explaining everything naturally — no souls, no destiny, no chosen species. If humans did something remarkable, there has to be a physical reason and he has to produce one.

IN REAL TERMS — 13.5 BILLION YEARS

That number means nothing to a human brain, so squash the whole thing into a single calendar year.

The universe begins at midnight on 1 January. Earth forms in early September. The first life appears a few weeks later. Dinosaurs turn up on Christmas Day and are gone by the 30th.

Our species — *Homo sapiens* — appears in the last **eleven minutes** of 31 December.

Farming starts at about eleven fifty-eight and thirty seconds. Everything you have ever read about in a history book — every pharaoh, every empire, every war, the whole of recorded time — happens in the final **ninety seconds** of the year.

The internet arrives in the last quarter of a second.

Now, one honest note on that opening, because it is the first place I want to flag something.

Harari is a historian, not a physicist or a biologist. The four-floor structure is a teaching device, not a discovery. It is elegant, it is broadly right, and it is also the kind of thing that makes a reader feel they have been given a scientific framework when what they have been given is a well-chosen metaphor. Keep hold of the difference. I will be pointing at it a lot.

There was never just one kind of human

This is the bit I had wrong my whole life, and I suspect you might too.

Humans are animals. Not *like* animals. Are.

We have a family the way you have a family, and ours is the great apes — chimpanzees, gorillas, orangutans. Around six million years ago there was one female ape who had two daughters. One became the ancestor of every chimpanzee alive today. The other became your ancestor. That is the whole relationship, and it is closer than most people are comfortable with.

Around 2.5 million years ago our line properly split off in East Africa. These were the first members of the group scientists call **Homo**.

A WORD YOU WILL NEED — HOMO, AND SPECIES

Homo is simply the Latin word for *man*. Scientists use it as a group name — a **genus** — covering us and our closest extinct relatives.

Genus: a group of closely related species. Cats and tigers are different species in related genera. All the *Homo* species are humans of one kind or another.

Species: roughly, a population whose members breed with each other and produce fertile young. Roughly, because the edges are messy, and those messy edges matter a great deal in this chapter.

Why it matters: when I say there were several kinds of human at once, I mean several species inside one genus. Not several races. Several genuinely different kinds of human being.

And here is the part I had wrong. I had a picture in my head, and you probably have the same one, because it is on posters and T-shirts everywhere: a hunched ape, then a less hunched one, then a caveman with a spear, then a man in a suit. A straight line, improving.

That picture is wrong. It was never a ladder. It was a **bush**.

The other humans

For most of the last two million years, several kinds of human were alive on Earth at the same time, in different places, doing different things.

- **Homo neanderthalensis** — the Neanderthals, in Europe and western Asia. Stockier than us, more muscle, better built for cold. And here is the detail that ruins the poster: on average, **bigger brains than ours**.
- **Homo erectus** — East Asia. Survived roughly two million years. That is the record, and nothing else is close. We are about 300,000 years old and already looking unsteady.
- **Homo soloensis** — on the island of Java.

- **Homo floresiensis** — on the island of Flores in Indonesia. Adults reached about one metre tall and weighed around 25 kilograms. Not children. Adults. They shrank because their island was small, and small islands punish big bodies.
- **Homo denisova** — identified from fragments found in a Siberian cave, including a single finger bone.
- **Homo sapiens** — East Africa. Us.

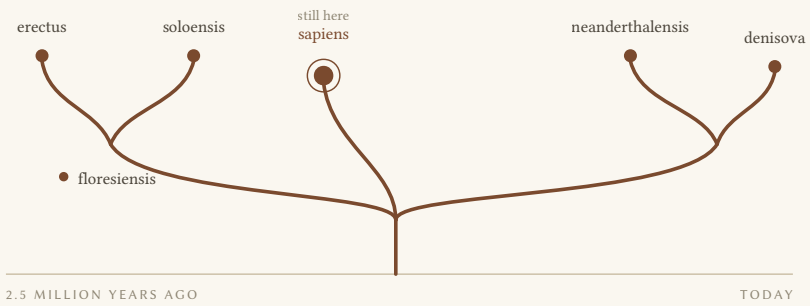


FIGURE 2 *Not a ladder. A bush. For most of the last two million years several kinds of human were alive at the same time, and at least one of them had a larger brain than we do. Only one branch is still standing, and that is the thing the whole book has to explain.*

Picture the planet 100,000 years ago with at least six kinds of human walking about on it. That was the normal state of affairs for a very long time.

We are the weird ones. We are the only human species that has ever been alone, and I do not think most of us have ever sat with how strange that is. Every other kind of human is gone. All of them. And that fact is the engine of the whole book: out of six or more, why is only one still here?

HOW WE ACTUALLY KNOW THIS

Fair question. How does anybody know a species existed 200,000 years ago from a finger bone?

Three kinds of evidence, and they are not equally strong.

Bones and teeth. The oldest and most direct. Skull shape, brow ridges, jaw structure and tooth wear separate the groups. This is good evidence for *what they looked like* and poor evidence for *how many there were* — a species known from three sites might have been everywhere or almost nowhere, and the bones cannot tell you which.

Stone tools. Abundant, because stone survives. This is why the period is called the Stone Age. It is a bias, not a description: they made most things from wood, leather, reed and fibre, and all of that rotted.

Ancient DNA. The newest and by far the most powerful. From about 2010 onwards, geneticists have pulled readable DNA out of bones tens of thousands of years old. Denisovans were identified almost entirely this way — the finger bone told us more than the shape of the finger ever could.

What none of it can show: what they thought, what they said, what they believed, or how they treated each other. That part is simply gone.

Three expensive trades

Every advantage humans have came at a price, and the prices are still being paid out of your body.

Harari's next move is to ask what all these humans had in common. Three things, and he treats each one as a bargain with a cost attached. I found this the most useful framing in the chapter.

Trade one: an enormous brain, paid for in muscle

A modern human brain is roughly two to three per cent of your body weight. While your body is doing absolutely nothing, that brain is burning about **twenty-five per cent** of your energy. For other apes the figure is around eight per cent.

IN REAL TERMS — WHAT YOUR HEAD COSTS

Think of a phone where the screen drains a quarter of the battery while the phone is lying face-down on a table doing nothing at all. You would call that a design fault.

That is your head. And the bill is paid out of somewhere, which is why early humans carried less muscle than other apes of the same size. The energy went upstairs instead of into the arms.

A chimpanzee of your weight would comfortably beat you in a straight fight. It is not close.

And here is the question Harari raises that genuinely had not occurred to me. A big brain is a huge cost. Evolution does not pay costs like that for nothing.

But for around two million years, humans with big expensive brains did… almost nothing. No cities. No art anybody has found. Barely any change in the stone tools across enormous stretches of time. Chimpanzees get along fine with much smaller brains and much cheaper lives.

So why did we buy the expensive model?

His answer is honest: **we do not really know.** He says it plainly and moves on. I appreciated that more than I expected to, and I want you to notice it, because there are later chapters where he does not do this and probably should.

Trade two: free hands, paid for in backs and babies

Standing up on two legs freed the hands. Hands that do not have to walk can carry, throw, point and make things. Enormous advantage.
But we were not redesigned from scratch. We are a four-legged skeleton stood on its end, which is why the human back and neck fail so reliably and so early.

And there is a specific problem for women. Walking upright works best with narrow hips. Narrow hips mean a narrow birth canal. And human skulls kept getting bigger.
Childbirth became genuinely dangerous. Evolution's answer was brutal and simple: women who gave birth **earlier**, while the baby's head was still small, survived more often and had more surviving children. So human babies arrive unfinished.

THE THING NOBODY QUESTIONS

Everybody in this argument — Harari, his critics, all of us — takes it for granted that a helpless newborn is a *problem* that evolution solved badly.

Turn that around and look at it again.

A foal walks within hours of birth. That is impressive and it is also a closed door: a horse's brain is largely finished before it meets the world, so a horse can only become a horse.

A human baby cannot lift its own head. Its brain does most of its wiring **outside** the womb, in whatever world it happens to land in. Which is precisely why the same infant can be raised into a monk, a soldier, a farmer or a software engineer.

The helplessness is not the cost of the deal. It may be the whole deal. We are the species that is born unfinished, and that is why culture can get inside us at all.

I have not seen this stated as a hidden assumption anywhere, and I think it is one. Everything in Part 2 about stories and shared fiction depends on our being teachable — and we are teachable because we are born too early.

Trade three: fire, and the first time a small animal borrowed a big force

Around 800,000 years ago some humans used fire occasionally. By around 300,000 years ago it was a daily tool for *Homo erectus*, for Neanderthals, and for our own ancestors.
This is where the game changes, and the reason is not the obvious one.
Fire gives light in the dark, warmth in the cold, and a weapon. Fine. But here is the thing that makes it different from every other ability any animal has ever had:
The strength of a lion is limited by the size of the lion. Fire is not limited by the size of the human.
One person with a torch can burn down a forest. There is no ceiling. Every other creature on Earth is capped by its own muscle and teeth, and we had just stepped outside that cap.
Hold on to this, because it is the template for everything that follows in the next twenty chapters. Money, empires, engines, bombs, gene editing — every one of them is the same move as fire. A weak animal borrowing a force enormously larger than itself.

And fire cooks, which is bigger than it sounds

Cooking kills germs and parasites. It opens up food we cannot digest raw — wheat, potatoes. And most importantly it does part of the chewing and digesting for you, outside your body.
Chimpanzees spend something like five hours a day simply chewing. We manage on about one. Our guts got shorter and cheaper to run, and some scientists draw a direct line from that saved energy to the expensive brain.

WHERE THE EXPERTS ACTUALLY FIGHT — DID COOKING BUILD OUR BRAINS?

Harari presents this fairly smoothly. It is more contested than he lets on.

The case for. The primatologist Richard Wrangham has argued for years that controlled fire and cooked food are what made a large brain affordable. Cooked food gives more usable energy for less digestive work. Human guts are unusually small for our body size, human teeth and jaws are weak, and both fit a species that has been eating processed food for a very long time. It is a tidy, powerful argument.

The case against. The timings are awkward. Solid evidence for the regular, controlled use of fire is patchy before roughly 400,000 years ago, and some of it is disputed — a burnt layer in a cave can be a hearth or it can be a lightning strike or bat guano catching fire. Brain size in the *Homo* line was already climbing well before that. Critics argue other factors did the work: more meat, more marrow, better tools for processing food without heat.

Where it stands. Almost everyone accepts cooking mattered enormously once it was established. The fight is about whether it was the *cause* of a big brain or a *consequence* of already having one.

What would settle it. Better dated evidence of controlled fire from between one million and 500,000 years ago. Hearths are hard to distinguish from accidents, which is exactly why the argument has lasted.

A nutcracker for leftovers

The most humbling fact in the chapter, and the one that stayed with me.

Put all three trades together — the enormous brain, the free hands, the fire — and ask what humans actually did with them for the next two million years.

We were not the kings of anything. We sat somewhere in the **middle of the food chain**.

Our standard trick was this. Wait for the lions to bring down a giraffe. Wait for the lions to eat. Wait for the hyenas and the jackals to have their turn. Then walk in, when everything dangerous has left, and use a stone to crack open the long bones and get at the marrow — the one part of the animal nothing else could reach.

Our first great invention was a nutcracker for other people's leftovers.

I love that, and I also hate it, and I think that is the correct response. Everything we tell ourselves about being natural hunters, apex predators, born to dominate — none of it describes the overwhelming majority of our existence. For most of our time on this planet we were nervous, and we were second in line, and we ate last.

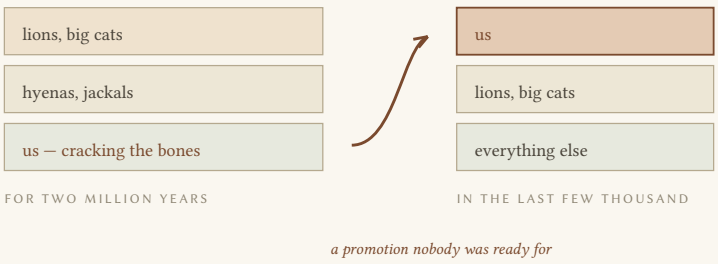


FIGURE 3 *For roughly two million years we sat in the middle. The jump to the top happened in a geological blink, and Harari's argument is that nothing had time to adjust to it — including us.*

Then, very recently, we shot to the top

And Harari's point about that is the emotional core of the chapter.

Other top predators arrived at the top slowly. A lion's ancestors spent millions of years becoming lions, and the whole ecosystem grew up around them — prey animals evolved the right fears, the right speeds, the right numbers. The predator's own confidence grew at the same pace.

We did it in a geological blink. Middle of the pack to top of the food chain in a few tens of thousands of years. Nothing around us had time to adjust.

And, he argues, neither did we.

HIS POINT, IN MY WORDS

We are the top predator that still thinks like prey.

Millions of years of being hunted, of sleeping badly, of watching the treeline — and then a sudden, enormous promotion. The fear did not have time to drain out of us.

His suggestion is that a great deal of human cruelty comes from exactly this. Insecure things that suddenly acquire power tend to be brutal with it, because they have not stopped expecting to be attacked.

It is one of the most quoted ideas in the book. It is also, as far as I can tell, completely untestable. More on that in a moment.

SECTION SEVEN

Where I think he is wrong in this chapter

Being honest about this makes the good parts more believable, not less. It did for me.

I said at the start that I would flag the soft ground. Here is Chapter 1's.

1. The anxious-predator theory is a story, not a finding

The line about jumping to the top too fast and never losing the fear is beautiful. It explains something we all recognise. And there is no observation anybody could make that would show it to be false.
That is the problem. A theory that explains human cruelty, human kindness, human war and human peace equally well is not doing any work. Psychologists and historians are trained to be suspicious of exactly this kind of neat, unfalsifiable explanation, and I think they are right to be.
I noticed, reading it, that I *wanted* it to be true. That is usually the moment to slow down. When a claim flatters your sense that you have finally understood something, check whether anything is actually holding it up.

2. "Big brains gave us nothing for two million years" is overstated

Harari uses this to build a genuine mystery, and there is a real mystery there. But the flat version is stretched. Stone tools did improve over that period, in ways specialists can date. Humans spread out of Africa across several continents and several very different climates, which is not nothing. Fire was mastered. Surviving at all, in that world, without claws or speed, took something.
"Not spectacular" would be fair. "No benefit" is not.

3. The species list is tidier than the evidence

Reading the chapter, you come away with six neat human species like six neat boxes. The real picture is messier and more interesting.
Where one species ends and another begins is genuinely argued over — and the discovery that our own ancestors interbred with Neanderthals and Denisovans, and produced fertile children whose DNA is in us today, has made the boundaries even blurrier. Some specialists now argue that several of these "species" would be better described as regional populations of one very variable, very widespread human.
Harari mentions the interbreeding later, in Chapter 2, and it is a good passage. But the crisp list in Chapter 1 sets up a picture that the evidence in Chapter 2 partly dissolves, and he does not go back and adjust it.

WORTH REMEMBERING

History sits on top of biology. Four floors — physics, chemistry, biology, history — each built on the one below. Every empire in this book is being run by an ape with a bad back.

There was never one kind of human. For most of the last two million years several human species were alive at the same time, and at least one had a bigger brain than we do. Our being alone is new, and it is strange, and explaining it is what the rest of the book is for.

Everything we gained, we paid for. A brain that eats a quarter of your energy. A spine that fails. Babies born unfinished — which turns out to be the thing that makes us teachable, and therefore the thing that makes culture possible at all.

Fire was the first time a small animal borrowed a force much bigger than itself. That single move is the template for money, empire, industry and everything else still to come.

And for nearly all of it, we were in the middle of the food chain, cracking bones for the marrow nothing else could reach. Whatever we are now, we were not born to it.

REFERENCE

Words from this part

Everything I stopped to explain, in one place, in case you want it later.

WORD	WHAT IT MEANS
GENUS	A group of closely related species. *Homo* is our genus.
HOMO	Latin for *man*. The group name covering us and our closest extinct relatives.
SPECIES	Roughly, a population that breeds within itself and produces fertile young. The edges are messy, and the mess matters.
HOMO SAPIENS	Us. About 300,000 years old. The only surviving human species.
NEANDERTHALS	*Homo neanderthalensis.* Europe and western Asia. Stronger than us, with larger brains on average. Gone by roughly 30,000 years ago.
DENISOVANS	*Homo denisova.* Known mainly from DNA out of fragments in a Siberian cave.
IMAGINED REALITY	Something real because a large group jointly believes in it — money, nations, laws, gods. Not a lie, because nobody is pretending.
SYNTHESIS	Building a big picture out of other people's research rather than doing new research yourself.
COGNITIVE REVOLUTION	Harari's name for the change in the Sapiens brain around 70,000 years ago. All of Part 2.

The timeline so far

Only what Chapter 1 covers. It grows as the series goes on.

WHEN	WHAT
13.5 bn years ago	Matter and energy appear. Physics.
3.8 bn years ago	Molecules start copying themselves. Biology.
6 m years ago	The last common ancestor of humans and chimpanzees.
2.5 m years ago	The genus *Homo* appears in East Africa. Stone tools.
2 m years ago	Humans spread out of Africa. Different populations become different species.
800,000 years ago	Occasional use of fire.

WHEN	WHAT
300,000 years ago	Daily use of fire. *Homo sapiens* appears in East Africa.
70,000 years ago	The Cognitive Revolution. **Part 2 starts here**.

COMING NEXT

Part Two

Chapter 2: The Tree of Knowledge — the most important chapter in the book, and it gets a part to itself.

Everything in Part One was setup. We are still, at the end of Chapter 1, an unremarkable animal with an expensive head and a nervous disposition, sharing a planet with several other kinds of human who are doing just as well as we are. Better, in some cases.

Part Two is where that changes, and it changes fast.

Around 100,000 years ago, our species tried to move out of East Africa into the Middle East. Neanderthals were already living there. **We lost**. We were pushed back.

Around 70,000 years ago we tried again — and this time we did not just win, we swept the board. Within a few tens of thousands of years every other kind of human on Earth was gone.

Same bodies. Same brain size. Same species that had failed the first time. So the question Part Two has to answer is simple and enormous: what changed in between?

Harari's answer is that something rewired the inside of the Sapiens brain, and gave us a kind of language no animal had ever had. Not just the ability to say *careful, a lion.* The ability to say things that are not true, and to get other people to act on them.

Here is what Part Two takes on:

- What actually changed 70,000 years ago — and how much of that is evidence and how much is a guess with a good name
- Why the first job of human language was almost certainly gossip, and why that is not an insult
- Why there is a hard ceiling of about 150 people on any group held together by personal relationships, and where that number really comes from
- How a story lets two complete strangers cooperate, and why that is the single most powerful thing our species does
- Why a car company is a ghost, and what that has to do with gods
- And why the Neanderthals — stronger, larger-brained, better adapted to the cold — never stood a chance once we had this

End of Part One of Eleven · The Animal Nobody Would Have Bet On

My own reading of Sapiens — Lovepreet Singh

Sapiens: A Brief History of Humankind, Yuval Noah Harari, 2011