

1

00:00:00,275 --> 00:00:05,278

Right now, we are inventing all these different technologies

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00:00:05,278 --> 00:00:08,279

with which we could actually make ourselves superhumans

3

00:00:08,279 --> 00:00:10,280

with superintelligence.

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00:00:10,280 --> 00:00:12,281

The potentials are quite extreme.

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00:00:12,281 --> 00:00:15,283

You could eventually have printable noses,

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00:00:15,283 --> 00:00:18,284

ears, lungs, kidneys.

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00:00:18,284 --> 00:00:20,285

The big question is immortality.

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00:00:20,285 --> 00:00:24,287

Dying, is it something we have to do?

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00:00:24,287 --> 00:00:27,289

I'm convinced that the engineers at MIT

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00:00:27,289 --> 00:00:32,291

are looking back into the ancient examples of the gods.

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00:00:32,291 --> 00:00:37,294

You've got to wonder, are extraterrestrials somehow guiding us

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00:00:37,294 --> 00:00:40,295

and manipulating us into this new future

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00:00:40,295 --> 00:00:44,297

and this new human that we are destined to be?

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00:00:44,297 --> 00:00:47,299

Since the dawn of civilization,

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00:00:47,299 --> 00:00:51,301

mankind has credited its origins to gods

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00:00:51,301 --> 00:00:54,302

and other visitors from the stars.

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00:00:54,302 --> 00:00:57,304

What if it were true?

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00:00:57,304 --> 00:01:03,307

Did extraterrestrial beings really help to shape our history?

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00:01:03,307 --> 00:01:07,309

And if so, might their ultimate plan be revealed

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00:01:07,309 --> 00:01:11,311

with the rise of the next humans?

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00:01:24,318 --> 00:01:32,322

MUSIC

22

00:01:44,328 --> 00:01:49,330

Mountain View, California, August 1962

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00:01:49,330 --> 00:01:52,332

At NASA's Ames Research Center,

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00:01:52,332 --> 00:01:57,334

the newly formed Division of Biotechnology and Human Research

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00:01:57,334 --> 00:02:01,336

begins a study on the possibility of exploring space

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00:02:01,336 --> 00:02:04,338

with technologically enhanced humans,

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00:02:04,338 --> 00:02:07,339

otherwise known as cyborgs.

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00:02:07,339 --> 00:02:10,341

Ten months later, they release a report

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00:02:10,341 --> 00:02:15,344

called the Cyborg Study, Engineering Man for Space.

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00:02:15,344 --> 00:02:18,345

In it, they propose that astronauts

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00:02:18,345 --> 00:02:22,347

will require artificial organs and pharmaceuticals

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00:02:22,347 --> 00:02:26,349

to survive in the harshest environments of deep space

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00:02:26,349 --> 00:02:30,351

as we explore beyond our solar system.

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00:02:30,351 --> 00:02:34,353

While the program was quickly abandoned

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00:02:34,353 --> 00:02:37,355

due to the lack of available technology,

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00:02:37,355 --> 00:02:41,357

it helped usher in a new era of scientific research

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00:02:41,357 --> 00:02:44,358

focused on augmenting the human species

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00:02:44,358 --> 00:02:47,360

into a new stage of evolution.

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00:02:47,360 --> 00:02:50,361

The Transhuman

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00:02:51,362 --> 00:02:55,364

Transhumanism is the use of technology by humans

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00:02:55,364 --> 00:02:58,365

to enhance their physical, psychological,

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00:02:58,365 --> 00:03:02,367

and most of all, intellectual capabilities.

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00:03:04,368 --> 00:03:08,370

We transhumanists want to use science and technology

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00:03:08,370 --> 00:03:11,372

to self-direct our evolution.

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00:03:11,372 --> 00:03:13,373

There are lots of transhumanists now

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00:03:13,373 --> 00:03:15,374

that don't even consider themselves transhuman.

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00:03:15,374 --> 00:03:17,375

For example, people who have pacemakers

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00:03:17,375 --> 00:03:20,377

or cochlear implants or hip replacements.

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00:03:20,377 --> 00:03:23,378

These are technologies that we're using,

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00:03:23,378 --> 00:03:26,380

and that is beyond human.

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00:03:27,380 --> 00:03:30,382

The idea of there being a transhuman

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00:03:30,382 --> 00:03:32,383

is actually a very old notion.

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00:03:32,383 --> 00:03:35,384

It stems from our longing for immortality,

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00:03:35,384 --> 00:03:39,386

so there were attempts to extend human life.

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00:03:39,386 --> 00:03:42,388

Transhumanism has been thought of for a very long time

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00:03:42,388 --> 00:03:44,389

throughout mythology.

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00:03:46,390 --> 00:03:49,391

From Gilgamesh's search for immortality

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00:03:49,391 --> 00:03:52,393

to alchemy

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00:03:52,393 --> 00:03:55,394

to the search for the fengen of life.

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00:03:55,394 --> 00:03:59,396

Really, the quest to overcome what it means to be human,

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00:03:59,396 --> 00:04:01,397

to see if we can live forever,

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00:04:01,397 --> 00:04:04,399

that has been the quest for a very long time.

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00:04:04,399 --> 00:04:08,401

Although the notion of modifying the body with technology

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00:04:08,401 --> 00:04:11,402

has been around for thousands of years,

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00:04:12,403 --> 00:04:15,404

transhumanists say the 21st century

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00:04:15,404 --> 00:04:19,406

will radically change what it means to be a human.

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00:04:20,407 --> 00:04:23,409

When we begin to genetically engineer

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00:04:23,409 --> 00:04:27,411

an entirely new generation of humans.

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00:04:32,413 --> 00:04:36,415

April 22, 2015.

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00:04:36,415 --> 00:04:38,416

Guangzhou, China.

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00:04:39,417 --> 00:04:42,418

Geneticists at the Sun Yat-sen University

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00:04:42,418 --> 00:04:45,420

make history as the first team in the world

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00:04:45,420 --> 00:04:48,421

to genetically modify a human embryo.

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00:04:49,422 --> 00:04:53,424

Using a gene editing technique known as CRISPR-Cas9,

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00:04:53,424 --> 00:04:57,426

the scientists were able to correct the gene defect

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00:04:57,426 --> 00:05:01,428

that causes beta thalassemia, a blood disease,

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00:05:01,428 --> 00:05:04,429

by snipping out and replacing portions of the DNA

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00:05:04,429 --> 00:05:07,431

in the fertilized egg.

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00:05:09,432 --> 00:05:12,433

By using a new technology called CRISPR,

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00:05:12,433 --> 00:05:16,435

scientists are able to actually cut into the DNA

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00:05:16,435 --> 00:05:21,438

and replace parts of the DNA with genetically modified proteins.

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00:05:21,438 --> 00:05:25,440

This allows us to literally transform who we are.

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00:05:27,441 --> 00:05:29,442

When we look at DNA changing,

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00:05:29,442 --> 00:05:33,444

it can be used not just to overcome problems,

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00:05:33,444 --> 00:05:35,445

but to improve your looks,

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00:05:35,445 --> 00:05:38,447

maybe change the color of your hair or your eyes,

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00:05:38,447 --> 00:05:40,448

or perhaps even more importantly,

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00:05:40,448 --> 00:05:43,449

change your intellectual or physical abilities.

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00:05:48,452 --> 00:05:51,453

Will the modification of human embryos

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00:05:51,453 --> 00:05:55,455

soon lead to a wave of what futurists call designer babies?

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00:05:56,456 --> 00:06:00,458

Children whose physical features and mental capabilities

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00:06:00,458 --> 00:06:03,459

were selected by their parents.

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00:06:05,460 --> 00:06:08,462

Many believe that not only is this a possibility,

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00:06:08,462 --> 00:06:10,463

but that the very definition of a parent

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00:06:10,463 --> 00:06:13,464

may soon change as well.

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00:06:13,464 --> 00:06:15,465

UK is on its way to becoming the first country

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00:06:15,465 --> 00:06:19,467

to legalize the creation of babies from three different people.

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00:06:19,467 --> 00:06:22,469

In a large majority, the House of Commons voted in favor

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00:06:22,469 --> 00:06:25,470

of the controversial Three Parent in Vitro Fertilization,

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00:06:25,470 --> 00:06:27,471

or TPI VF.

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00:06:27,471 --> 00:06:30,473

The British government officially declared it legal,

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00:06:30,473 --> 00:06:33,475

so actual children that have been born

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00:06:33,475 --> 00:06:37,477

that have DNA from three different parents.

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00:06:38,477 --> 00:06:41,479

I think it is quite possible in the future

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00:06:41,479 --> 00:06:46,481

that it won't be just two or three parents that a child has,

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00:06:46,481 --> 00:06:48,482

but could be any number.

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00:06:49,483 --> 00:06:51,484

That sounds like science fiction,

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00:06:51,484 --> 00:06:53,485

but it's actually something that Japanese scientists

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00:06:53,485 --> 00:06:55,486

are working on right now.

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00:06:55,486 --> 00:06:58,487

And what that would entail is using an artificial womb,

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00:06:58,487 --> 00:07:02,489

actually gestating the child within that artificial womb.

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00:07:02,489 --> 00:07:04,490

You can imagine if we can get to this stage,

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00:07:04,490 --> 00:07:06,491

it doesn't matter who the parents are.

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00:07:06,491 --> 00:07:09,493

You could have a community of people with the best genes

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00:07:09,493 --> 00:07:12,494

contributing to making that child,

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00:07:12,494 --> 00:07:15,496

and that is really the future that is in front of us.

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00:07:18,497 --> 00:07:22,499

Is it possible we could synthetically create human beings,

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00:07:22,499 --> 00:07:26,501

picking and choosing genetic traits from any number of donors?

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00:07:28,502 --> 00:07:30,503

Could the characteristics of a person

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00:07:30,503 --> 00:07:34,506

soon be limited only by our imaginations?

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00:07:34,506 --> 00:07:37,507

Ancient astronaut theorists say yes,

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00:07:37,507 --> 00:07:41,509

and suggest an even more incredible possibility

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00:07:41,509 --> 00:07:45,511

that we are not the first to do this.

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00:07:52,515 --> 00:07:54,516

Luxor, Egypt.

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00:07:54,516 --> 00:07:58,518

Here, in the Deir el-Bahari Mortuary Temple,

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00:07:58,518 --> 00:08:01,519

lies the burial chamber of Hatshepsut,

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00:08:01,519 --> 00:08:05,521

one of the only queens to ever become a pharaoh.

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00:08:06,522 --> 00:08:09,523

And on the frescoed walls of this tomb

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00:08:09,523 --> 00:08:12,525

is a scene portraying Hatshepsut's conception

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00:08:12,525 --> 00:08:15,526

at the hands of divine beings.

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00:08:19,528 --> 00:08:22,530

On the walls of Queen Hatshepsut's Mortuary Temple,

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00:08:22,530 --> 00:08:26,532

it says that long time ago,

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00:08:28,533 --> 00:08:32,535

God Eamon came to Hatshepsut's mother, Ahmose,

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00:08:32,535 --> 00:08:35,536

in her sleep, and with the power of God Khanoum,

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00:08:35,536 --> 00:08:38,538

and with the key of Ankh in his hand,

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00:08:38,538 --> 00:08:41,540

he created baby Hatshepsut.

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00:08:44,541 --> 00:08:47,543

He uses the Ankh,

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00:08:47,543 --> 00:08:53,546

that key-shaped tool to give life to create a human.

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00:08:54,546 --> 00:08:57,548

Any device that can give life

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00:08:57,548 --> 00:09:02,550

upon something would have to appear as magical.

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00:09:03,551 --> 00:09:05,552

So you have to wonder,

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00:09:05,552 --> 00:09:08,553

who are these gods that they were talking about?

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00:09:08,553 --> 00:09:10,554

What we have in this story is actually

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00:09:10,554 --> 00:09:14,556

the immaculate conception of Hatshepsut.

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00:09:14,556 --> 00:09:16,557

And it is clear that this is the story

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00:09:16,557 --> 00:09:18,558

of an extraterrestrial intervention

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00:09:18,558 --> 00:09:22,560

in the creation of a star child, Hatshepsut.

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00:09:22,560 --> 00:09:25,562

So we appear to be dealing with some sort of a technology,

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00:09:25,562 --> 00:09:28,563

a DNA-based technology,

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00:09:28,563 --> 00:09:32,565

that can manifest human bodies or alter human DNA.

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00:09:36,567 --> 00:09:39,569

Kodhatshepsut have been genetically engineered

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00:09:39,569 --> 00:09:42,570

by other worldly beings.

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00:09:43,571 --> 00:09:48,574

And is it possible that humans are just now starting to unlock

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00:09:48,574 --> 00:09:51,575

the incredible potential hidden within us

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00:09:51,575 --> 00:09:54,577

by our extraterrestrial creators,

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00:09:54,577 --> 00:09:57,578

as ancient astronaut theorists propose?

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00:09:59,579 --> 00:10:01,580

Perhaps further clues can be found

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00:10:01,580 --> 00:10:03,581

in our own attempts,

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00:10:03,581 --> 00:10:05,582

not in creating life,

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00:10:05,582 --> 00:10:08,584

but in reversing death.

161

00:10:21,590 --> 00:10:23,591

Song Chen and a team of biologists

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00:10:23,591 --> 00:10:27,593

from the Life Sciences Department at Penn State University

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00:10:27,593 --> 00:10:31,595

reveal research on a cocktail of specialized drugs

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00:10:31,595 --> 00:10:35,597

designed to convert non-neuronal cells in the brain,

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00:10:35,597 --> 00:10:38,599

called glial cells, into neurons.

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00:10:41,600 --> 00:10:45,602

90% of our brain is made up of what's called glial cells.

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00:10:46,603 --> 00:10:48,604

These cells are just a support mechanism

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00:10:48,604 --> 00:10:51,606

for the neurons themselves.

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00:10:51,606 --> 00:10:53,607

What we can do at the moment

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00:10:53,607 --> 00:10:56,608

is to take glial cells from the brain

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00:10:56,608 --> 00:10:59,610

and to use different chemicals, essentially,

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00:10:59,610 --> 00:11:03,612

to alter the functioning of the glial cells.

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00:11:03,612 --> 00:11:08,614

Chemicals will cause them to become fresh neurons.

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00:11:09,615 --> 00:11:11,616

Gong Chen's belief for this research

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00:11:11,616 --> 00:11:14,617

is that things like severe brain trauma,

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00:11:14,617 --> 00:11:16,618

Parkinson's disease, and Alzheimer's

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00:11:16,618 --> 00:11:20,620

could actually be effectively transformed and healed.

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00:11:25,623 --> 00:11:27,624

Could degenerative brain disorders

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00:11:27,624 --> 00:11:29,625

like Parkinson's and Alzheimer's

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00:11:29,625 --> 00:11:33,627

be cured by a simple chemical injection?

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00:11:35,628 --> 00:11:38,629

And if so, could we eventually rid the brain

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00:11:38,629 --> 00:11:41,631

of neurological diseases entirely?

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00:11:42,631 --> 00:11:45,633

Transhumanists believe the therapeutic use

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00:11:45,633 --> 00:11:47,634

for this incredible discovery

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00:11:47,634 --> 00:11:51,636

are only a small part of the bigger picture.

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00:11:53,637 --> 00:11:57,639

In the future, we could see using that technology

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00:11:57,639 --> 00:12:01,641

to increase our intelligence to a superhuman state.

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00:12:01,641 --> 00:12:05,643

Now, imagine, because the brain is only 10% neurons,

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00:12:05,643 --> 00:12:10,646

imagine if we could increase the brain's capacity to 35%.

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00:12:10,646 --> 00:12:13,647

That could change everything.

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00:12:13,647 --> 00:12:16,649

I mean, we could become a superintelligent species.

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00:12:18,650 --> 00:12:22,652

Could you, in fact, advance the human IQ,

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00:12:22,652 --> 00:12:24,653

perhaps to such a degree

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00:12:24,653 --> 00:12:26,654

that you might have people walking around now

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00:12:26,654 --> 00:12:29,655

with a 1,000 IQ?

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00:12:29,655 --> 00:12:31,656

Could Dr. Chen's research

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00:12:31,656 --> 00:12:35,658

lead us to an exponential increase of the human intellect?

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00:12:36,659 --> 00:12:39,660

And if so, will we seem like primates

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00:12:39,660 --> 00:12:41,661

to the people of tomorrow?

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00:12:42,662 --> 00:12:46,664

Transhumanists suggest that if we can create new brain cells,

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00:12:46,664 --> 00:12:50,666

we could potentially reproduce all of the body cells,

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00:12:50,666 --> 00:12:53,667

which would have profound implications.

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00:12:57,669 --> 00:12:59,671

The big question is immortality.

204

00:12:59,671 --> 00:13:03,673

Dying, is it something we have to do?

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00:13:03,673 --> 00:13:08,675

Cells die away, but if we can start replacing the cells

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00:13:08,675 --> 00:13:11,677

and if we can replace brain cells

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00:13:11,677 --> 00:13:14,678

and keep the functioning of the brain going,

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00:13:14,678 --> 00:13:18,680

then it does potentially really extend life,

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00:13:18,680 --> 00:13:20,681

in theory, forever.

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00:13:20,681 --> 00:13:24,683

Some people, like Ray Kurzweil, have suggested by 2045

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00:13:24,683 --> 00:13:26,684

we'll be able to do that.

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00:13:28,685 --> 00:13:31,687

Ray Kurzweil is Google's director of engineering,

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00:13:31,687 --> 00:13:36,689

a transhumanist, prolific author, and inventor.

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00:13:37,690 --> 00:13:39,691

He believes in the near future,

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00:13:39,691 --> 00:13:43,693

humans will be able to extend their lives indefinitely.

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00:13:44,693 --> 00:13:47,695

To reach that point, he maintains a daily diet

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00:13:47,695 --> 00:13:51,697

of over 100 different body and mind enhancing pills

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00:13:51,697 --> 00:13:54,698

called Neotropics.

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00:13:54,698 --> 00:13:57,700

Neotropics are essentially drugs of one kind

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00:13:57,700 --> 00:13:59,701

or another, chemicals, if you like,

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00:13:59,701 --> 00:14:03,703

that can change the way both the body functions

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00:14:03,703 --> 00:14:06,705

but particularly how the brain functions.

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00:14:08,706 --> 00:14:11,707

Colline, for example, helps with memory,

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00:14:11,707 --> 00:14:13,708

and so people are using these Neutropics

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00:14:13,708 --> 00:14:16,710

to enhance their memory, to have better recall,

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00:14:16,710 --> 00:14:19,711

to have better focus.

227

00:14:19,711 --> 00:14:21,712

You're starting to see Neutropics pop up everywhere,

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00:14:21,712 --> 00:14:23,713

especially in Silicon Valley.

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00:14:23,713 --> 00:14:27,715

In the future, the idea of enhancing the cognitive ability

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00:14:27,715 --> 00:14:30,717

in the human being is going to be sort of commonplace.

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00:14:33,718 --> 00:14:36,720

Kurzweil and others predict Neotropics

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00:14:36,720 --> 00:14:39,721

will become a new multi-billion-dollar industry

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00:14:39,721 --> 00:14:43,723

as people turn to supplements to enhance their bodies

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00:14:43,723 --> 00:14:45,724

and prolong their lives.

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00:14:46,725 --> 00:14:48,726

But ancient astronaut theorists believe

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00:14:48,726 --> 00:14:50,727

that like genetic manipulation,

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00:14:50,727 --> 00:14:55,729

evidence of Neotropic use can be found thousands of years ago.

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00:14:56,730 --> 00:14:59,731

Dating back to the 5th century BC,

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00:14:59,731 --> 00:15:02,733

the Hindu Sanskrit epic known as the Mahabharata,

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00:15:02,733 --> 00:15:06,735

tells the story of Samudra Manthana,

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00:15:06,735 --> 00:15:09,737

a celestial battle between the gods

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00:15:09,737 --> 00:15:12,738

for a rare substance that grants immortality.

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00:15:16,740 --> 00:15:22,743

The Samudra Manthana means the churning of the ocean,

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00:15:22,743 --> 00:15:27,746

and in this case, the ocean is visualized as a cosmic sea of milk.

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00:15:27,746 --> 00:15:31,748

It is, in essence, the Milky Way itself.

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00:15:32,748 --> 00:15:36,750

There were two primary forces and odds in the universe.

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00:15:36,750 --> 00:15:38,751

There were the Asuras,

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00:15:38,751 --> 00:15:44,754

and they were at odds with a new order of gods, the Davas.

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00:15:46,755 --> 00:15:49,757

The gods went to Lord Vishnu and Vishnu said,

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00:15:49,757 --> 00:15:51,758

why don't you try to cooperate with them?

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00:15:51,758 --> 00:15:54,759

At the very depths of the ocean,

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00:15:54,759 --> 00:15:58,761

there is a substance called Amrita,

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00:15:58,761 --> 00:16:00,762

a divine nectar of immortality.

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00:16:00,762 --> 00:16:03,764

It will churn the cosmic ocean of milk,

255

00:16:03,764 --> 00:16:06,765

and it will yield forth the nectar of immortality,

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00:16:06,765 --> 00:16:08,766

and you can share it.

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00:16:08,766 --> 00:16:12,768

The gods and the demons start churning in the heavens,

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00:16:12,768 --> 00:16:14,770

the Milky Way,

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00:16:14,770 --> 00:16:17,771

and what is produced by this is an elixir,

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00:16:17,771 --> 00:16:20,773

an elixir that can grant immortality.

261

00:16:20,773 --> 00:16:24,775

Well, it was a terrible war now because everyone wanted this.

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00:16:25,775 --> 00:16:28,777

In order to win the battle for the gods,

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00:16:28,777 --> 00:16:32,779

they decided they need this Amrita, this elixir of life.

264

00:16:32,779 --> 00:16:37,781

So you have to wonder if this story isn't about some kind of

265

00:16:37,781 --> 00:16:40,783

extraterrestrial war in heaven,

266

00:16:40,783 --> 00:16:44,785

where aliens are fighting over new tropics.

267

00:16:49,787 --> 00:16:52,789

Could the story of the Samudra Manthana

268

00:16:52,789 --> 00:16:55,790

be an ancient account of a celestial battle

269

00:16:55,790 --> 00:16:58,792

over a highly advanced new tropic?

270

00:16:59,792 --> 00:17:02,794

Ancient astronaut theorists say yes,

271

00:17:02,794 --> 00:17:07,796

and point to legends of immortality elixirs throughout antiquity.

272

00:17:10,798 --> 00:17:13,799

The ancients had many stories of immortality,

273

00:17:13,799 --> 00:17:16,801

that it was touchable or reachable.

274

00:17:16,801 --> 00:17:21,804

The Chinese had the peaches of immortality.

275

00:17:21,804 --> 00:17:24,805

The Greeks had ambrosia.

276

00:17:24,805 --> 00:17:28,807

The Mesopotamians had the idea of soul mind.

277

00:17:28,807 --> 00:17:32,809

In the biblical tradition, there is the tree of life.

278

00:17:32,809 --> 00:17:36,811

There is something that you can ingest and gain immortality.

279

00:17:38,812 --> 00:17:41,814

This quest has been going on for thousands of years

280

00:17:41,814 --> 00:17:45,816

around the world by many different cultures.

281

00:17:45,816 --> 00:17:49,818

This quest for these smart drugs that will enhance

282

00:17:49,818 --> 00:17:52,819

our lifestyle and our mental clarity.

283

00:17:52,819 --> 00:17:57,822

So you have to wonder, was this new tropic drug

284

00:17:57,822 --> 00:18:00,823

some kind of extraterrestrial elixir

285

00:18:00,823 --> 00:18:03,825

that was well known in ancient times?

286

00:18:07,827 --> 00:18:11,829

Could ancient accounts of elixirs of immortality

287

00:18:11,829 --> 00:18:15,831

really be descriptions of extraterrestrial new tropics?

288

00:18:16,831 --> 00:18:21,834

And might it soon be possible to unlock our full human potential

289

00:18:21,834 --> 00:18:24,836

simply with the right potion or pill?

290

00:18:25,836 --> 00:18:30,839

Perhaps fulfilling a destiny to become like our alien ancestors.

291

00:18:31,839 --> 00:18:34,841

Ancient astronaut theorists say yes

292

00:18:34,841 --> 00:18:40,844

and suggest molecular chemistry is only the beginning of the human upgrade.

293

00:18:45,846 --> 00:18:47,847

Coming up...

294

00:18:47,847 --> 00:18:51,849

Nanomachines could actually heal the wounds in our bodies.

295

00:18:51,849 --> 00:18:57,852

The possibility of reversing human aging is not a very big stretch.

296

00:19:17,862 --> 00:19:21,864

The nanomachines are the most driven submersible nanomachines ever created.

297

00:19:24,866 --> 00:19:31,870

Molecular nanotechnology is the idea of building devices, machines,

298

00:19:31,870 --> 00:19:34,871

at a molecular scale.

299

00:19:35,872 --> 00:19:40,874

Nano refers to a billion of a meter, so very, very small.

300

00:19:40,874 --> 00:19:43,876

We're getting down to atomic scale.

301

00:19:44,876 --> 00:19:48,878

Measuring only 244 atoms across,

302

00:19:48,878 --> 00:19:53,881

these miniature robots are designed to deliver specialized medicines

303

00:19:53,881 --> 00:19:56,882

throughout the body using the bloodstream.

304

00:19:56,882 --> 00:20:00,884

Scientists have created bio-bots that are the first of its kind.

305

00:20:00,884 --> 00:20:06,887

These tiny little bio-hybrid semi-bots are capable of driving to viscous material through our bodies.

306

00:20:06,887 --> 00:20:10,889

They take submersible nanomachines that can be controlled with UV light,

307

00:20:10,889 --> 00:20:16,892

and using the UV light they can control where these nanomachines take nutrients

308

00:20:16,892 --> 00:20:19,894

and take medicines into the body.

309

00:20:19,894 --> 00:20:23,896

As long as we have a way of controlling them from the outside,

310

00:20:23,896 --> 00:20:27,898

they can move around very, very quickly, perform a function.

311

00:20:27,898 --> 00:20:30,899

If we're looking at operating on a cancer,

312

00:20:30,899 --> 00:20:35,902

then potentially they could do that operation for you from within.

313

00:20:40,905 --> 00:20:47,908

This could lead to huge advances in medicine, in healing,

314

00:20:47,908 --> 00:20:53,911

leading to nanomachines that could actually heal the wounds in our bodies,

315

00:20:53,911 --> 00:20:58,914

close things up much faster, repair damaged tissue,

316

00:20:58,914 --> 00:21:05,917

extend our lifespan, and literally bring us into a new level of human evolution.

317

00:21:06,918 --> 00:21:14,922

Transhumanist believe our bodies will soon be home to swarms of nanomachines

318

00:21:14,922 --> 00:21:18,924

that will both heal and also warn of disease.

319

00:21:21,925 --> 00:21:25,927

And some propose this technology is advancing so rapidly

320

00:21:25,927 --> 00:21:31,930

that it will not just be future generations that will live tens or even hundreds of years longer,

321

00:21:31,930 --> 00:21:34,932

but people who are alive today.

322

00:21:36,933 --> 00:21:42,936

The possibility of reversing human aging as opposed to just slowing it down

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00:21:42,936 --> 00:21:44,937

is not a very big stretch.

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00:21:44,937 --> 00:21:52,941

So if you understand aging and the fundamentals of the processes that are leading to it,

325

00:21:52,941 --> 00:21:58,944

it would be quite possible both to slow it and it would also be possible to reverse it.

326

00:21:59,945 --> 00:22:05,948

An example of this is a study that has gone on at Harvard

327

00:22:05,948 --> 00:22:08,949

by reversing the muscle tissue and mice.

328

00:22:09,950 --> 00:22:13,952

We have actually reversed the age in these mice.

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00:22:14,952 --> 00:22:18,954

And so if we can do that in the laboratory setting,

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00:22:18,954 --> 00:22:23,957

it's only a matter of time before we're able to reverse our own aging process.

331

00:22:24,957 --> 00:22:29,960

Could millions of microscopic robots soon be swimming in our bloodstreams,

332

00:22:29,960 --> 00:22:31,961

augmenting our immune system,

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00:22:31,961 --> 00:22:37,964

and even reversing the aging process entirely, as transhumanists believe?

334

00:22:39,965 --> 00:22:44,968

Ancient astronaut theorists suggest that if such a transformation does occur,

335

00:22:44,968 --> 00:22:50,971

it may be a sign that we are evolving to become more like our alien race.

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00:22:50,971 --> 00:22:55,973

As evidence, they point to the Sumerian King List,

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00:22:55,973 --> 00:23:01,976

a series of stone tablets that are believed to be over 4,000 years old,

338

00:23:01,976 --> 00:23:09,980

and record the reigns of ancient Mesopotamian kings that ruled for upwards of 43,000 years.

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00:23:09,980 --> 00:23:13,982

The Sumerian King List was handed down to humanity by the gods.

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00:23:13,982 --> 00:23:18,985

What's extraordinary is that the reigns of these kings last into the thousands of years.

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00:23:18,985 --> 00:23:21,986

These people weren't making allegorical or metaphorical statements,

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00:23:21,986 --> 00:23:24,988

these were accurate historical records.

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00:23:26,989 --> 00:23:28,990

Ancient texts,

344

00:23:28,990 --> 00:23:30,991

and ancient texts,

345

00:23:30,991 --> 00:23:32,992

and ancient texts,

346

00:23:32,992 --> 00:23:34,993

and ancient texts,

347

00:23:34,993 --> 00:23:36,994

and ancient texts,

348

00:23:37,994 --> 00:23:41,996

Ancient texts, including the Bible and the Sumerian texts,

349

00:23:41,996 --> 00:23:48,000

talk about ancient kings and other people living incredibly long lifespans.

350

00:23:49,000 --> 00:23:53,002

Methuselah, who was supposedly the father of Noah,

351

00:23:53,002 --> 00:23:56,004

was said to have lived for 969 years.

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00:23:59,005 --> 00:24:01,006

When we look into the past,

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00:24:01,006 --> 00:24:05,008

there's a clear record of people who have lived a much longer lifespan than we have today.

354

00:24:06,009 --> 00:24:11,011

We have to wonder if these beings weren't given or had access to some type of nanotechnology,

355

00:24:12,012 --> 00:24:18,015

that fuels the idea and understanding in our drive today to be like the gods.

356

00:24:20,016 --> 00:24:30,021

And this important nanotechnology is something that extra-terrestrials and other advanced civilizations would already have.

357

00:24:31,021 --> 00:24:36,024

And it would only make sense that if extra-terrestrials are coming to our planet,

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00:24:36,024 --> 00:24:40,026

they would have brought this nanotechnology with them.

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00:24:45,028 --> 00:24:47,029

Might our research into nanotechnology,

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00:24:47,029 --> 00:24:50,031

new tropics, and genetic engineering

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00:24:50,031 --> 00:24:57,035

ascend us to the level of extra-terrestrials that came to earth thousands of years ago,

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00:24:57,035 --> 00:25:00,036

as ancient astronaut theorists suggest.

363

00:25:04,038 --> 00:25:08,040

Perhaps further clues can be found by examining the technology

364

00:25:08,040 --> 00:25:12,042

that is being developed to upgrade not just our blood,

365

00:25:12,042 --> 00:25:15,044

but even our flesh.

366

00:25:17,045 --> 00:25:18,045

Coming up...

367

00:25:19,046 --> 00:25:23,048

We can use the power of our thoughts to control avatar robots.

368

00:25:24,048 --> 00:25:29,051

The engineers at MIT are looking back into the ancient examples of the gods.

369

00:25:36,054 --> 00:25:41,057

New York City, May 4th, 2015

370

00:25:43,058 --> 00:25:48,060

At TechCrunch Disrupt New York, an annual new technologies conference,

371

00:25:48,060 --> 00:25:55,064

U.S. biotech startup BioBots launches a desktop 3D printer for biomaterials,

372

00:25:56,064 --> 00:26:00,067

which they use to print a replica of Van Gogh's ear.

373

00:26:03,068 --> 00:26:07,070

Instead of plastic, special ink is combined with biomaterials,

374

00:26:07,070 --> 00:26:13,073

like collagen and cultured cells, to build living tissue and human organs.

375

00:26:13,073 --> 00:26:20,077

So right now, we're just at the beginning of understanding how to 3D print organs.

376

00:26:22,078 --> 00:26:25,079

It's a process called biofabrication.

377

00:26:25,079 --> 00:26:32,083

So BioBots has created a biofabrication 3D printer that can print artificial tissue and small organs.

378

00:26:34,084 --> 00:26:41,087

In the future, what we're going to see are 3D printers that are biofabricating our bodies and our organs.

379

00:26:44,089 --> 00:26:52,093

You could eventually have printable noses, lungs, ears, kidneys,

380

00:26:52,093 --> 00:27:01,097

and in certain ways, this technology is so extreme that it could make it democratic, it could make it inexpensive.

381

00:27:02,098 --> 00:27:08,101

So in the hands of skilled trained medical professionals, it could be possible in the future

382

00:27:08,101 --> 00:27:13,104

to 3D print organs for people out of their own genetic material.

383

00:27:19,107 --> 00:27:25,110

Transhumanists believe we may soon transcend our biological limitations

384

00:27:25,110 --> 00:27:29,112

as we embed machines directly into our own bodies.

385

00:27:31,113 --> 00:27:35,115

DARPA, the agency of the U.S. Department of Defense,

386

00:27:35,115 --> 00:27:40,117

responsible for the development of emerging technologies for use by the military,

387

00:27:41,118 --> 00:27:48,121

is currently designing neural implants that will improve cognitive speed and memory retention in soldiers.

388

00:27:50,122 --> 00:28:00,127

And in 2014, scientists at Seoul National University in South Korea unveiled research on synthetic smart-skin,

389

00:28:00,127 --> 00:28:06,130

life-like ultra-thin crystalline silicon designed to cover prosthetic limbs,

390

00:28:06,130 --> 00:28:10,133

giving the user all of the sensations of a natural limb.

391

00:28:13,134 --> 00:28:22,139

They've now developed a skin which has touch sensors embedded in it with a very fine matrix,

392

00:28:23,139 --> 00:28:26,141

which can be put around a prosthetic.

393

00:28:26,141 --> 00:28:31,143

So you can actually feel what that arm is feeling,

394

00:28:31,143 --> 00:28:36,146

or you can touch the floor, feel whether it's hot or cold or applying pressure.

395

00:28:37,146 --> 00:28:42,149

Future artificial limbs will look just like our skin, look just like our hands and our legs.

396

00:28:42,149 --> 00:28:44,150

It's going to affect the entire world.

397

00:28:44,150 --> 00:28:49,152

We're going to see people using smart prosthetics that are added to the body,

398

00:28:49,152 --> 00:28:53,154

that can be controlled directly through the brain.

399

00:28:53,154 --> 00:28:57,156

And that really is the future of prosthetics.

400

00:28:59,157 --> 00:29:02,159

I can speak from experience because I've had one myself.

401

00:29:02,159 --> 00:29:08,162

Our implants that link either into the brain or into the human nervous system,

402

00:29:08,162 --> 00:29:17,167

and what I had was 100 small electrodes fired into my nervous system

403

00:29:17,167 --> 00:29:20,168

to link my nervous system with a computer.

404

00:29:20,168 --> 00:29:26,171

It was a bit like plugging a plug into an electric socket, but the socket was my nervous system.

405

00:29:26,171 --> 00:29:32,174

So I went to Columbia University in New York, we plugged my nervous system into the internet,

406

00:29:32,174 --> 00:29:36,176

and I controlled a robot hand from my brain signals.

407

00:29:36,176 --> 00:29:41,179

You can extend your nervous system by simply plugging into it.

408

00:29:42,179 --> 00:29:49,183

If we can use just the power of our thoughts to control artificial limbs,

409

00:29:49,183 --> 00:29:56,186

we can eventually one day use the power of our thoughts to control avatar robots.

410

00:29:59,188 --> 00:30:04,190

I think we're going to see that kind of technology used to control avatars on the moon.

411

00:30:04,190 --> 00:30:09,193

We're going to see that kind of technology to control robotic humanoid avatars on Mars.

412

00:30:12,194 --> 00:30:16,196

Could we one day venture into the cosmos?

413

00:30:16,196 --> 00:30:22,200

Not with our bodies, but by wirelessly controlling robotic avatars.

414

00:30:24,201 --> 00:30:29,203

And is it possible that extraterrestrials have utilized these same technologies

415

00:30:29,203 --> 00:30:33,205

to explore Earth in the distant past?

416

00:30:34,206 --> 00:30:42,210

Ancient astronaut theorists say yes, and point to technologies currently in development at MIT

417

00:30:42,210 --> 00:30:49,213

that strongly resemble those in ancient accounts of gods who descended from the sky.

418

00:30:51,214 --> 00:30:56,217

At the Massachusetts Institute of Technologies Institute for Soldier Nanotechnologies,

419

00:30:56,217 --> 00:31:00,219

they are developing a new smart skin for our soldiers.

420

00:31:01,219 --> 00:31:05,221

It would make them resistant to ballistic attack or chemical attack,

421

00:31:05,221 --> 00:31:08,223

and also would instantly self-repair.

422

00:31:09,223 --> 00:31:14,226

This is absolutely extraordinary because in the ancient texts we learn of the gods

423

00:31:14,226 --> 00:31:19,228

who wore a similar skin that seemed to make them impervious to any kind of human weaponry.

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00:31:19,228 --> 00:31:21,229

They couldn't die.

425

00:31:23,231 --> 00:31:29,234

Now when I hear stories of semi-divine beings such as Hercules

426

00:31:29,234 --> 00:31:33,236

with his impenetrable lion skin,

427

00:31:33,236 --> 00:31:40,239

or in the Sanskrit Mahabharata, the story of Karna and his impenetrable armor,

428

00:31:40,239 --> 00:31:46,242

I have to ask the question whether or not these were all misunderstood technologies.

429

00:31:49,244 --> 00:31:55,247

Could the self-repairing skin being developed at MIT be the same technology

430

00:31:55,247 --> 00:32:01,250

our ancestors wrote about when they described divine beings that were invincible?

431

00:32:02,250 --> 00:32:09,254

And are we on the verge of this incredible biological and evolutionary leap ourselves?

432

00:32:09,254 --> 00:32:15,257

Some believe that mankind's next step is not in augmenting our bodies with machines,

433

00:32:15,257 --> 00:32:19,259

but in becoming the machines ourselves.

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00:32:20,259 --> 00:32:21,260

Coming up.

435

00:32:21,260 --> 00:32:26,263

We can download every connection that we have in our brain onto a computer.

436

00:32:27,263 --> 00:32:32,266

These are the kinds of powers that would have been viewed as godlike at one previous time.

437

00:32:51,275 --> 00:32:57,278

A lot of people are really excited about the idea of if we could map out the structure of the human brain,

438

00:32:57,278 --> 00:33:00,280

neuron for neuron, and every connection,

439

00:33:00,280 --> 00:33:04,282

then we can download every connection that we have in our brain.

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00:33:04,282 --> 00:33:09,284

And we can also create a new system of human brain.

441

00:33:09,284 --> 00:33:12,286

We can create a new system of human brain,

442

00:33:12,286 --> 00:33:15,287

and we can create a new system of human brain,

443

00:33:15,287 --> 00:33:18,289

and we can create a new system of human brain,

444

00:33:18,289 --> 00:33:22,291

then we can download every connection that we have in our brain,

445

00:33:22,291 --> 00:33:25,292

all that information onto a computer.

446

00:33:29,294 --> 00:33:34,297

The Human Brain Project is only one of a number of brain mapping ventures.

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00:33:34,297 --> 00:33:39,300

The next great American project, and that's what we're calling the Brain Initiative.

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00:33:39,300 --> 00:33:48,304

In 2013, President Barack Obama unveiled a \$4.5 billion project called the Brain Initiative.

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00:33:50,305 --> 00:33:59,310

And Microsoft co-founder Paul Allen has invested over \$500 million in the Allen Institute for Brain Science.

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00:34:00,310 --> 00:34:07,314

Futures speculate that if these initiatives are successful, the implications could be profound.

451

00:34:09,315 --> 00:34:17,319

Imagine having every piece of knowledge that every human has ever collected.

452

00:34:19,320 --> 00:34:27,324

And if you crunch that down into a digital consciousness, that's going to unlock everything.

453

00:34:28,324 --> 00:34:40,331

We can't know things about the world and about life that no individuals have ever previously known.

454

00:34:41,331 --> 00:34:48,335

Because they're all from the aggregation of all of human knowledge that's going together.

455

00:34:48,335 --> 00:34:54,338

So these are the kinds of powers that would have been viewed as godlike in previous eras.

456

00:34:58,340 --> 00:35:07,344

Could we be on the verge of creating a superhuman intelligence, able to outperform a human at any task?

457

00:35:08,345 --> 00:35:14,348

And if so, are we at risk of being replaced by machines entirely?

458

00:35:16,349 --> 00:35:23,352

Transhumanists believe what lies ahead could actually be emerging of man and machine.

459

00:35:28,355 --> 00:35:41,362

If we can map the human brain into technology, then I could take your brain or somebody else's brain and copy it into a computer.

460

00:35:42,362 --> 00:35:46,364

A technological one that could potentially live forever.

461

00:35:46,364 --> 00:35:59,371

What happens if we gain the ability to upload our consciousness into some sort of cloud virtual internet technology?

462

00:36:00,371 --> 00:36:11,377

It's not that far from the spectrum of a realizable goal, because we're already seeing neurological implants that can be put into the brain,

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00:36:11,377 --> 00:36:16,379

that can be used to control the movement of an artificial arm.

464

00:36:17,380 --> 00:36:24,383

What happens if those neural implants can actually take the true essence of what it means to be conscious?

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00:36:25,384 --> 00:36:31,387

And break that down into some sort of pure information that could live apart from a biological substrate?

466

00:36:32,387 --> 00:36:40,391

It could make itself far more massive, far more intelligent than any human ever had been before.

467

00:36:45,394 --> 00:36:53,398

Could extraterrestrials have steered our evolution towards technology so that we may merge men directly with machine?

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00:36:54,399 --> 00:36:58,401

Eliminating our biological restraints?

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00:36:59,401 --> 00:37:06,405

And if so, might our futures lie entirely in a digital realm of silicon and bits of code?

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00:37:07,405 --> 00:37:13,408

Many believe the answer lies not in what we are becoming, but where we are going.

471

00:37:14,409 --> 00:37:27,415

It won't be long before mankind has reached a point where we have the technology and the artificial intelligence to leave our planet and go into space.

472

00:37:28,416 --> 00:37:30,417

Just like extraterrestrials before us.

473

00:37:33,418 --> 00:37:44,424

You've got to wonder, are extraterrestrials somehow guiding us and manipulating us into this new future and this new human that we are destined to be?

474

00:37:48,426 --> 00:37:57,431

Is it possible that extraterrestrials have led us to a post-biological future so that we can rejoin them in the cosmos?

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00:37:58,431 --> 00:38:05,435

And if so, might they have used these same technologies to visit Earth in the distant past?

476

00:38:08,436 --> 00:38:17,441

Ancient astronaut theorists say yes and look to NASA's own attempts at re-engineering man for space.

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00:38:17,441 --> 00:38:26,445

New York City, 1961.

478

00:38:27,446 --> 00:38:42,453

Psychopharmacologist Nathan S. Klein and cybernetic mathematician Manfred Klein co-publish a paper about human space travel entitled Drugs, Space and Cybernetics.

479

00:38:42,453 --> 00:38:54,459

The two coined the term cyborg, an enhanced human being specifically doctored to survive in extraterrestrial environments without a space suit.

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00:38:56,461 --> 00:39:10,468

In their paper, they detailed various ways in which to modify the human body for survival beyond Earth and later served as the inspiration for NASA's study, Engineering Man for Space.

481

00:39:13,469 --> 00:39:21,473

Our bodies are not suited for living in space. After only a few days, we experience muscle and bone loss.

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00:39:22,474 --> 00:39:28,477

One has to wonder if extraterrestrials experience the same type of problems.

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00:39:29,477 --> 00:39:41,483

I do think that any beings that are able to cross the cosmos and visit this planet will have learned how to self-direct their evolution.

484

00:39:42,484 --> 00:39:56,491

To survive in deep space for extraordinarily long periods of time, those beings more than likely

will be at least biodigital, meaning that they have merged with their technologies, or they will be pure digital beings.

485

00:39:57,491 --> 00:40:00,493

These may be robots or cyborgs.

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00:40:01,494 --> 00:40:14,500

Could extraterrestrials have used the same cyborg technologies we are just now developing?

487

00:40:15,501 --> 00:40:27,507

If so, might our push towards transhumanism really be inspired by an innate desire to travel further into space and seek out our creators?

488

00:40:31,509 --> 00:40:47,517

There has been a consistent path towards the fusion of human and machine. Throughout all of our history, this idea that we could somehow advance ourselves for the betterment of humankind through this merger of technology and biology.

489

00:40:48,517 --> 00:41:04,525

I think that what will happen is that our biological bodies will be able to be perfected. Any imperfections corrected, our mental abilities and lifespan will be enhanced considerably.

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00:41:05,526 --> 00:41:12,530

And we will be ready, ourselves, to go into space and ultimately join our creators in the start.

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00:41:17,532 --> 00:41:25,536

Is it possible extraterrestrials left us with the tools to mold ourselves into a truly transhuman species?

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00:41:27,537 --> 00:41:33,540

One, without any limits, capable of traveling the stars at will?

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00:41:34,541 --> 00:41:42,545

Or could nanomachines, artificial intelligence and the digital revolution render humans obsolete?

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00:41:42,545 --> 00:41:49,548

Our lives and the very nature of our existence may balance on this choice.

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00:41:50,549 --> 00:41:55,551

A choice that is coming much sooner than we think.