INTELLIGENCE•S

Documentary film script

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INT. TV STUDIO

A television studio vibrating with energy. Futuristic images are shown in the background.

TONY, black bobo suit, perpetual smile, steps forward to anchor:

>   TONY
>   Welcome to the Super Mind Challenge! Today it's
>   time for our long-awaited contest: Artificial
>   Intelligence vs. Nature!

Flashes and applause.

>   TONY
>   Here are our two opponents for the day: Cerebra,
>   the muse of A.I., and Sylvia, the embodiment of
>   Intelligence in Nature.

We discover the women facing each other. CEREBRA is wearing a space grey outfit. She has a connected watch on her wrist and a laptop in front of her.
SYLVIA wears a turquoise "roots chic" dress. A lush green plant is deployed in front of her.

>   TONY
>   We don't know much about either of you. Sylvia,
>   most people think you just don't exist.

Big smile from Sylvia.

>   TONY
>   Is there really intelligence in the wilderness
>   around us? That's what we're going to find out in
>   our exciting confrontation.
>   As for AI, everyone talks about it, but very few
>   people know what it really means or how it
>   works...
>
>   CEREBRA (abruptly interrupting)
>   I was invented by human beings to be smarter than
>   them.
>
>   TONY
>   And you think you are?

CEREBRA
                    Of course I am. I've beaten the greatest
                    champions at chess, Jeopardy, and Go.

                    TONY
                    I'm no good at those games... but I'm willing to
                    challenge you to a game of tennis!

Cerebra grins.

                    TONY
                    Meanwhile, tell us who you really are, dear
                    Cerebra.

Cerebra rushes to her laptop and types on ChatGPT, "What is
artificial intelligence?"

The answer begins to appear on the screen:
"Artificial Intelligence (AI) is a branch of computer science that
aims to create programs and systems capable of performing tasks
that normally require human intelligence...."

Fade in a **TV report** consisting mainly of cross-examinations of
specialists explaining what AI is. These interviews are
illustrated with images (labs, screenshots, etc.). Commentary is
narrated by Cerebra and kept to a minimum. The **TV report** unfolds
as follows:

*November 30th, 2022. The ChatGPT application breaks all
records with 100 million users in less than two months.
By making itself tangible and accessible to everyone,
artificial intelligence has suddenly been democratized. What
remained an abstract concept for many has become a reality,
inspiring both enthusiasm and fear. Some see it as a new
Eldorado, others as the decadence of our civilization.*

*Often unbeknownst to us, AI has already entered our daily
lives through various means, such as predictive writing,
automated translation, or product suggestion.*

But who really knows what is behind the acronym AI?

In fact, it's not an isolated technique, but a set of applied theories aimed at creating machines capable of simulating some functions of the human brain.

This is achieved by mathematically modeling certain functions of the human brain. The most obvious approaches are: computer vision, human language processing (speech recognition, chat bots…), and machine learning, a technology that allows devices to learn on their own from data and experience without being explicitly programmed.

This self-education of machines leads to them being able to make decisions. Siri or Google Assistant already suggest them.

The first danger is the amount of data required. It takes a hundred thousand photos for a machine to recognize what a cat is. But this information has to come from somewhere. There is a danger that there will be more and more intrusion into our private lives. Data is the gold of new technologies. Whether within a legal framework or on the Darknet, this market will flourish and become increasingly difficult to control.

Like all inventions, AI brings both benefits and problems:
- AI can automate repetitive, tedious, and low-value-added tasks, freeing humans to focus on more creative and strategic tasks
- AI can perform tasks with consistent accuracy and consistency, minimizing human error. For example, it can enable mass screening for diseases.

At the same time, governments and other entities can use it to spy on our private lives, not always for democratic purposes.

Based on probabilities, the distinction between civilians and combatants by "robot killers" is legally indefensible.

AI is characterized by its reliance on exponentially increasing computing power. Automatic machine learning can lead to the dangerous amplification of errors or biases made by humans in the first place.

The risk of this "superintelligence" exploding has been expressed by some of those involved in its development. Elon

Musk even raises the possibility of a third world war if AI is not controlled in time.

The question now is whether it is possible to master AI as it is already expanding exponentially. The stakes are colossal. Decisions made today will inevitably shape our future.

INT. TV STUDIO

The camera pans across the green plant towards Sylvia.

>   SYLVIA
>   On my side,I don't need control, I regulate
>   myself. I don't produce anything that can't be
>   reused.
>
>   TONY
>   How do you do that?
>
>   SYLVIA
>   Everything in me is harmony.
>
>   TONY
>   Tell that to a farmer whose sheep have been
>   slaughtered by the wolf!

Sylvia turns sharply to face Tony.

>   SYLVIA
>   Under natural conditions, a wolf kills only to
>   feed its family. It recycles carcasses entirely
>   by digesting the bones it has crushed with its
>   sharp teeth. It eliminates deer, whose
>   proliferation threatens certain trees.
>
>   TONY
>   And since you're so smart, prove to us that you
>   exist!
>
>   SYLVIA
>   I don't need proof... I'm the one who is.
>
>   TONY
>   Just that?

SYLVIA
                    Nothing more, nothing less... and that for 3.8
                    billion years!
                    (turning to Cerebra) You'll never equal me.

                    CEREBRA
                    We'll see!

                    SYLVIA
                    See you in 3.8 billion years!

                    TONY
                    It's on, girls!… Well, dear Sylvia, let's find
                    out who you really are.

A series of images of nature, forests, ecosystems...
Overlaid with this quote from Leonardo da Vinci:

          "Human subtlety... will never devise an
          invention more beautiful, more simple or more
          direct than does nature, because in her
          inventions nothing is lacking, and nothing is
          superfluous."

Second **TV report** in the same style as the previous one: interviews
and minimal narration voiced by Sylvia. The illustrations are
mainly nature images.

How intelligent is nature?

*It's taken for granted that the human brain is the highest form of
intelligence in the world. The principle of AI is to imitate it in
order to multiply it.*
*For a long time, man believed himself to be the center of the
universe. Copernicus proved otherwise.*

*The assumption that nature is driven by purely mechanical
processes is increasingly being challenged. Many scientists agree
that non-human life forms are inhabited by intelligence. The
results of their experiments confirm the intuition of indigenous
peoples. We're all part of the same biosphere, where everything
has a purpose.*

Animals like primates and dolphins show clear signs of high-level intelligence. It can be found elsewhere:
- Crows can make tools and use them to get food.
- Spiders weave extremely sophisticated and remarkably strong webs.
- Octopuses can decipher mazes, escape from hermetically sealed containers, and metamorphose into other animals.

These abilities can be highly developed, but remain limited to the needs of each individual specimen. More fundamentally, the intelligence of nature lies in the systems that make it up. We speak of emergence when a whole exhibits qualities or behaviors that are not present in the individual parts.
Examples:
- Acephalous ants move quickly and extremely densely, but there's never a traffic jam in an anthill!
- Birds find their way across continents by flying in flocks. We can only marvel at the elegance and efficiency of their collective flight.
- Trees communicate with each other through a kind of underground Internet that has been called the "Wood Wide Web".

In the wild, every element, every living thing, even the smallest, contributes to the cohesive whole that is our biosphere. If you look at a forest, you'll see majestic trunks, spindly ferns, and tiny mushrooms. But this whole forms a coherent whole in which everything and everyone has its place. The result is a sense of harmony that fills our souls.

INT. TV STUDIO

Tony and the contestants watch the nature footage that continues to play in the background.

> TONY
> (Ironic) How nice it all is!...
> (He turns to Sylvia)
> Nice and sweet. Unfortunately, this harmony is seriously threatened by climate change.

> SYLVIA
> Because of man's disproportionate intervention. I remain the one who is.

> CEREBRA

We know how she responded to another climate
change: by exterminating the dinosaurs!

TONY
Things are hopping again, girls!

SYLVIA
Dinosaurs have become birds.
I'm still the one who is!

CEREBRA
Blablabla... In the meantime, I'm taking concrete
steps to combat global warming.

TV report on the contributions that AI can make to environmental
protection.

*- AI can optimize energy consumption by analyzing habits and
identifying areas where energy can be saved. Smart grids are
electrical networks designed to monitor, control, and
optimize the distribution of electricity. Variable renewable
energy can be better managed. This reduces losses and
promotes more efficient use of electricity.*
*- AI can be used to optimize agricultural practices: using
soil, weather, and crop data to improve yields while reducing
pesticide and fertilizer use, thereby reducing land
degradation and deforestation.*
*- AI can be used to monitor fragile ecosystems, such as
tropical forests or coral reefs, using drones, satellites and
sensors to detect threats and try to prevent them.*
*- AI can improve traffic and transportation management by
analyzing real-time data, optimizing routes, promoting public
transportation, and encouraging the development of autonomous
and shared electric vehicles.*
*- While AI can reduce energy consumption in a number of
areas, it is itself very energy-hungry.*
*On the one hand, we can design machines that use less energy.
On the other hand, we're going to require more and more power
for AI, especially as the world's population continues to
grow tremendously.*

INT. TV STUDIO

Sylvia walks toward the camera.

>SYLVIA
>The energy has to come from somewhere.

>TONY
>From you?

>SYLVIA
>Clearly, you're nothing without me.

>CEREBRA
>We're developing many renewable energies.

>SYLVIA.
>And the materials needed to build the devices
>capable of capturing these energies, where do you
>find them?

>CEREBRA
>Well, where they are.

>SYLVIA
>From me, of course,

>CEREBRA
>Then we recycle.

>SYLVIA
>Recycling processes use a lot of energy.

>CEREBRA Always contradicting... (to Tony) She's
>getting on my nerves!

>TONY
>Calm down, girls... Why don't you try to
>cooperate instead of quarrelling?

The two women stare at each other without saying a word.

New **TV report**: *Can we take inspiration from what already exists in nature to combat global warming?*

- Nature and technology seem in conflict today. In fact, climate change can be seen as the result of a technocratic

rush into the future without regard for the environmental consequences.
But this is debatable. There are ways to combine the two.
- Bionics is the science of finding models in plants and animals for technological achievements that benefit humans. A well-known example is Velcro. It was invented by Swiss engineer Georges de Mestral, who was inspired by burdock seeds he observed while hiking in the mountains.
- Biomimicry goes a step further, analyzing not only individual features, but also natural forms, processes, and systems. By mimicking effective solutions produced by evolution, this approach aims to create products, technologies and methods that are sustainable and adapted to the environment. One could say that biomimicry does with nature what AI tries to do with the human brain.
Examples:
- Tree root networks have inspired more robust and efficient water distribution systems.
- By following the patterns of migrating animals, we can design more reliable, GPS-independent navigation systems.
- Buildings have been designed to mimic the way termite mounds regulate temperature, reducing energy consumption for heating and cooling.
- By imitating photosynthesis, we can design more efficient solar panels without using rare metals that are extremely polluting to extract.

Nature is used to wasting nothing and reusing everything. "Nothing is lost, nothing is created, everything is transformed".

If we accept that there is such a thing as natural intelligence, and that it works thriftily and quite well, why deprive ourselves of this resource and knowledge?

INT. TV STUDIO

Cerebra watches the end of the report on her laptop.

> CEREBRA
> Nature is full of data that could be used to feed me.

TONY (to Sylvia)
                    Are you willing to provide it?

                    SYLVIA.
                    I'm available.

                    TONY
                    The power of AI could help humans finally
                    understand this wild nature they are so ignorant
                    of...

                    SYLVIA.
                    About time!

                    TONY
                    Cerebra, what do you think?

Cerebra returns to her laptop and prompts on ChatGPT:
"*Can artificial intelligence cooperate with intelligence in
nature?*".
<u>Answer: (as retrieved on July 2023):</u>
*The idea of cooperation between artificial intelligence (AI)
and natural intelligence is fascinating, but it raises a
number of conceptual and practical questions...*
*In summary, AI and natural intelligence can potentially
cooperate to address various challenges and opportunities,
but careful consideration is needed to ensure that the
collaboration is ethically sound, respects the complexity of
nature, and takes into account the potential consequences of
AI interventions.*

Gradually, images of natural and artificial networks appear
behind the text that is then superimposed on them.

INT. TV STUDIO

                    TONY
                    Well, it seems the ball is now in the humans'
                    court. Let's hear what our experts have to say!

Interviewees' **cross-conclusions** overlapped with **striking images** of natural systems.