

★ PERESTROIKA





# MESSENGER



**BASIC UNDERSTANDINGS**



**BASIC SOURCES**

**BASIC CONCEPTS**



## BASIC UNDERSTANDINGS





1. *Em breve, o Digital será Industrial.*





*2. Tudo é tecnologia.*

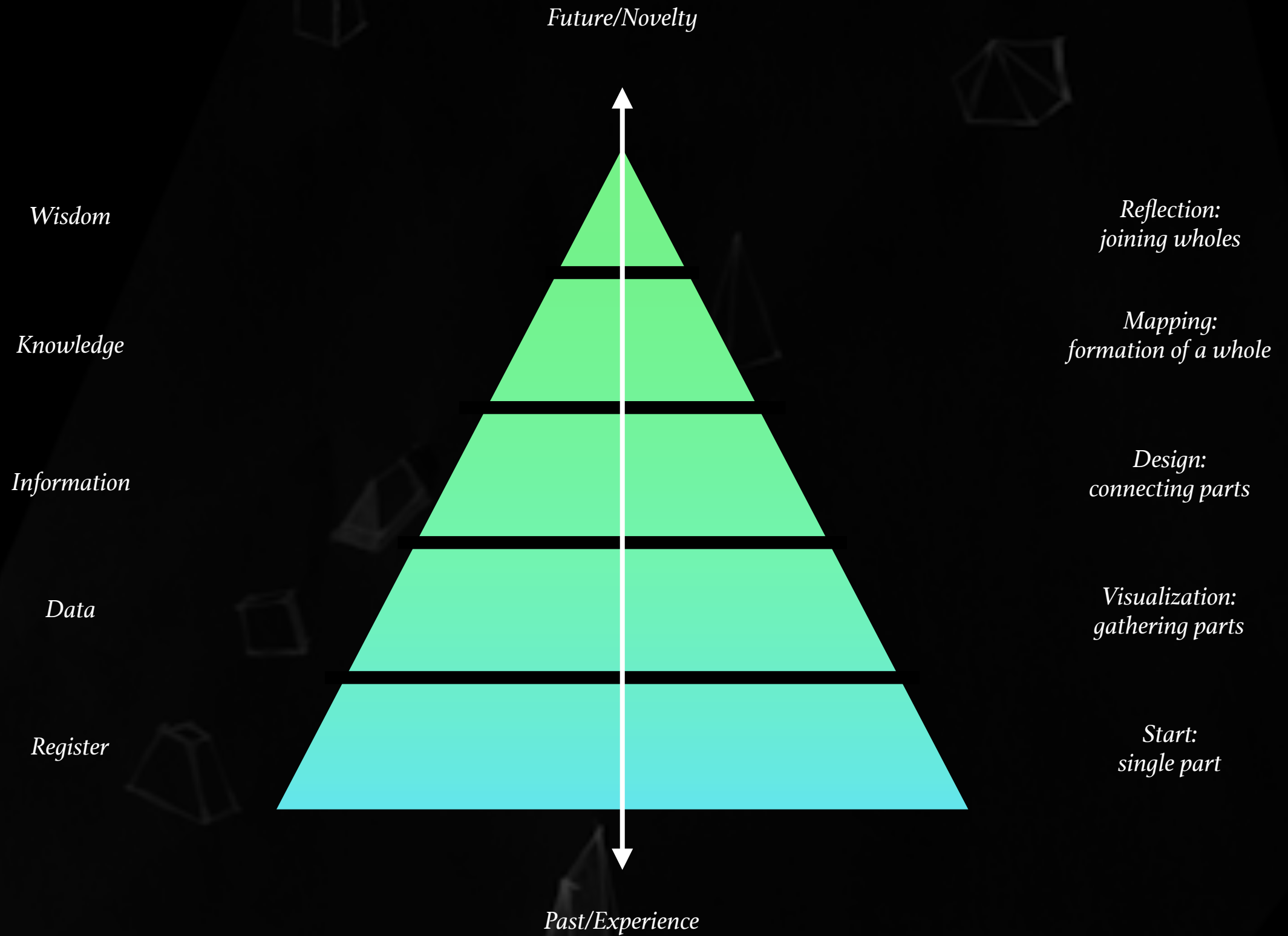


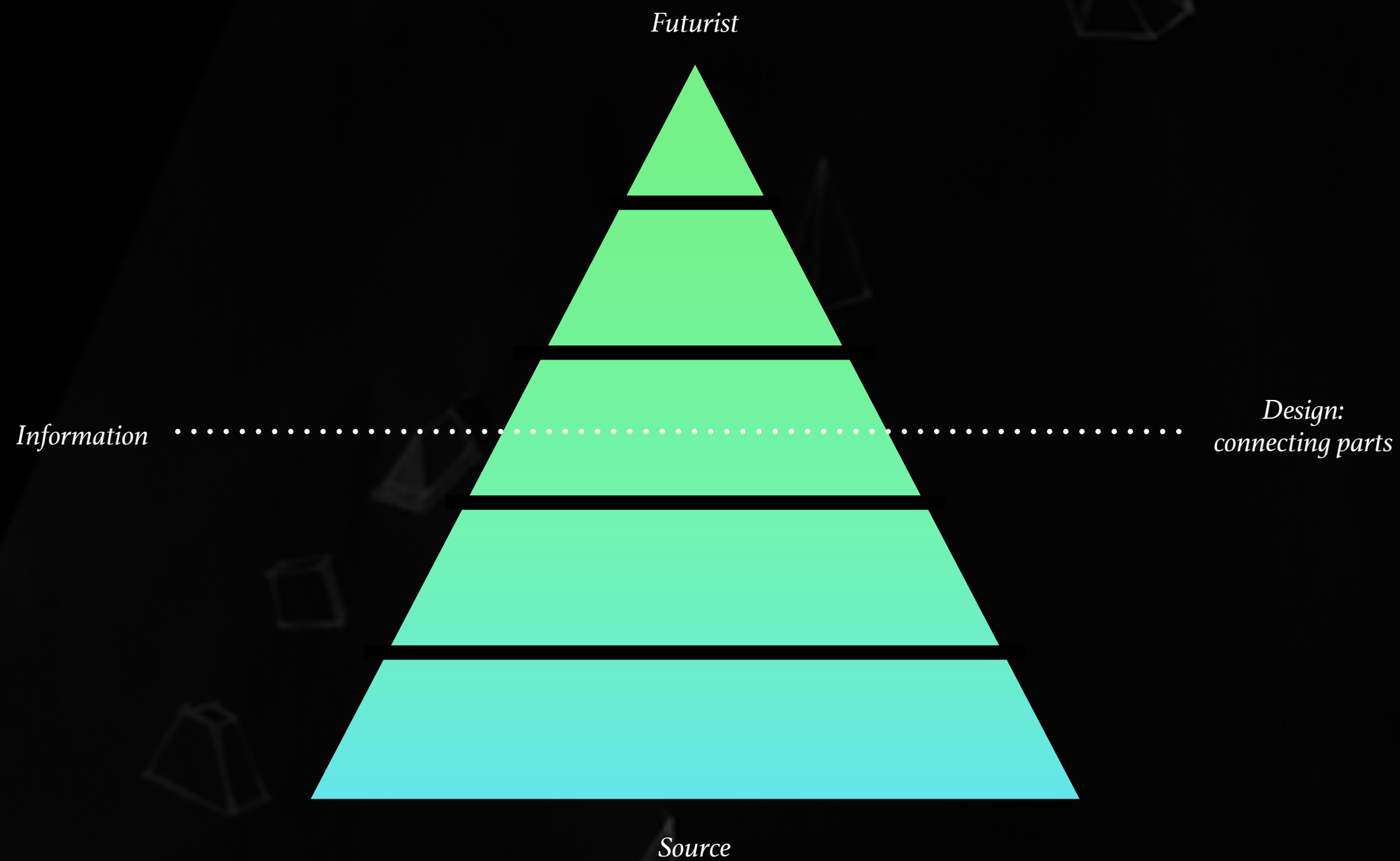
*3. Nem todos temos a mesma orientação temporal.*





**BASIC SOURCES**









## *I. Media*

## *2. Business*

### *3. Futurists*








**BASIC CONCEPTS**



*I. Boas previsões computacionais soam absurdas.*





*2. Previsões computacionais são exponenciais.*





*3. Duas grandes forças evolutivas ao mesmo tempo.*



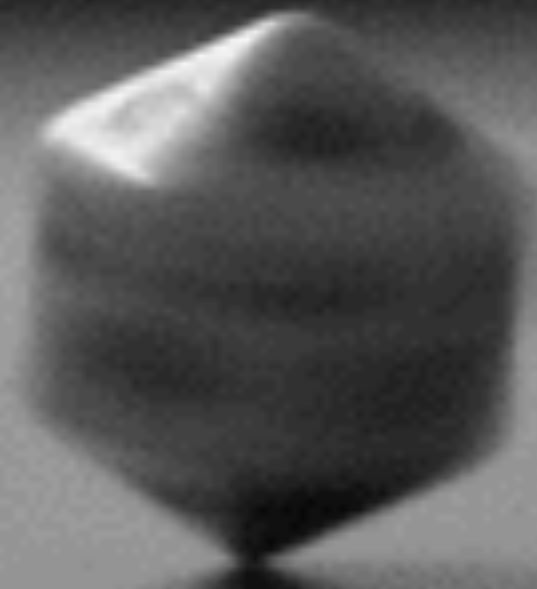


**CONVOCAÇÃO**



NOW

*PRESENÇA ATIVA / EMPATIA / ANOTE / OLHAR POSITIVO / OPINIÃO VS. CONSTRUÇÃO*

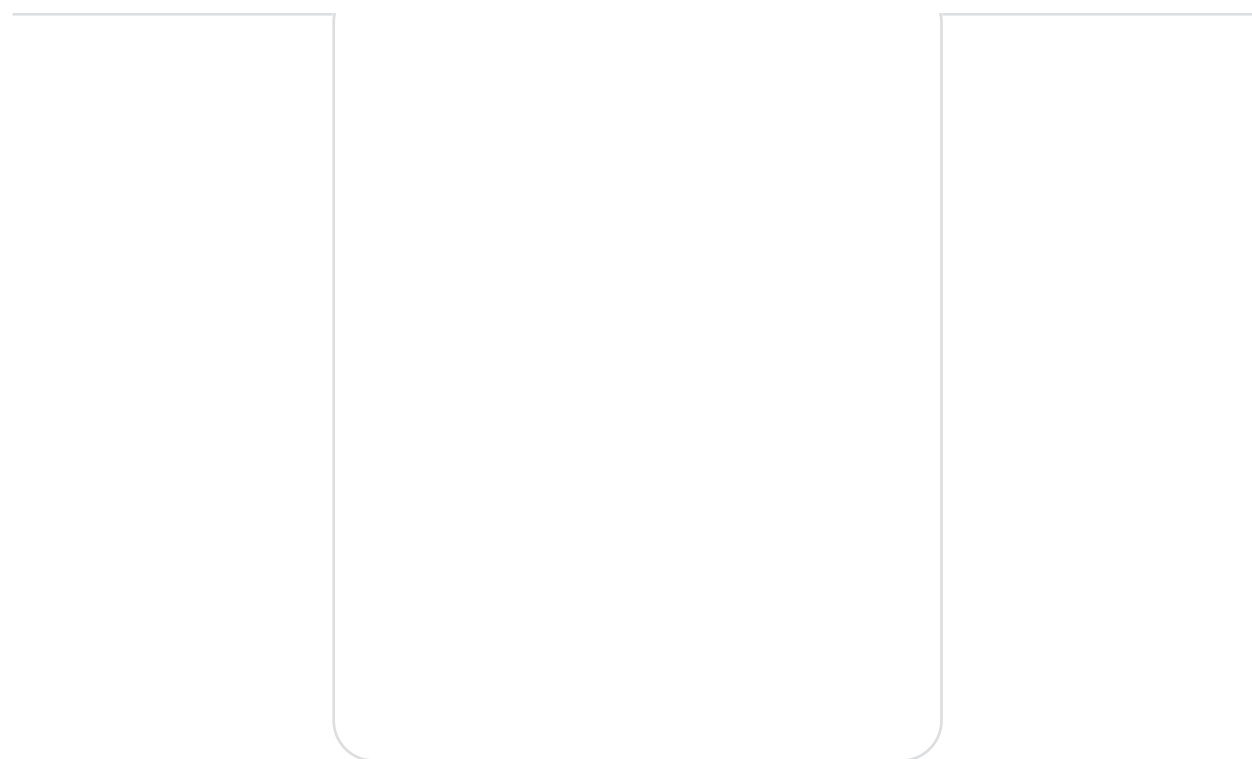




The background of the image is a complex, abstract pattern of black and white wavy lines. These lines form a series of interconnected, flowing shapes that resemble stylized waves or a topographical map. The lines vary in thickness and density, creating a sense of depth and movement. In the center of the image, there is a solid teal-colored rectangular box with rounded corners. Inside this box, the text "Well of Knowledge" is written in a black, serif font, centered horizontally and vertically.

*Well of Knowledge*







*Repetir*



*Referir*

*Revisar*

*Refletir*





*Contexto*  
*Sentimento*  
*Insight*  
*Ação*



*Três minutos  
para cada etapa.*







*Dicas:*  
*Evite conversar.*  
*Não pare de escrever.*  
*Fique focado em você.*





*1. O que aconteceu ontem?*








*2. Como eu me senti?*




*3. Quais foram  
meus maiores insights?*







*4. O que posso fazer amanhã  
para colocá-los em prática?*





*Grupos de três/quatro:  
dois minutos para cada pessoa.*

*Compartilhe o maior insight  
e o que pretende fazer.*

*(Seis minutos  
para toda a atividade.)*





*Opinião vs. Construção*



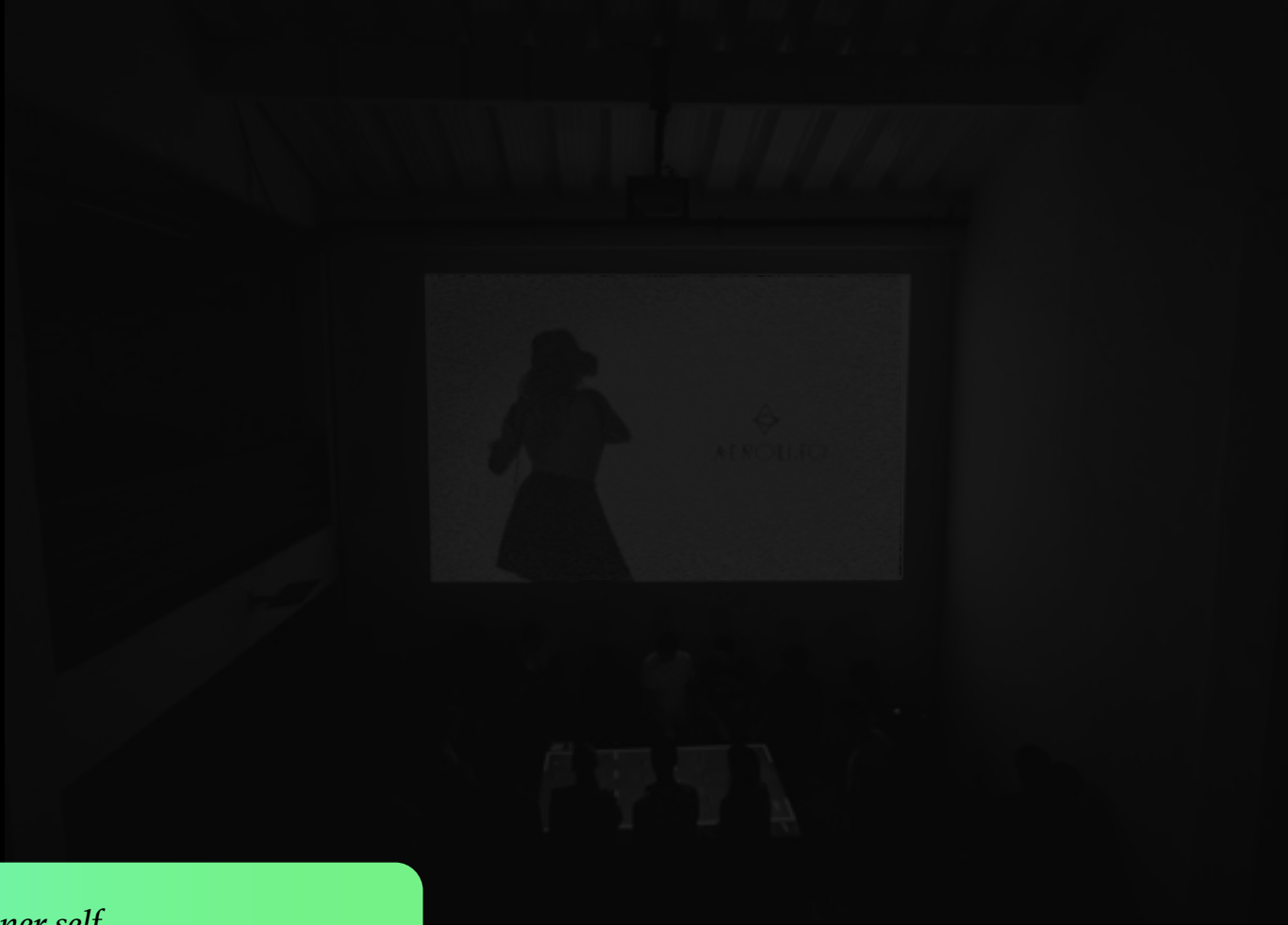
WARM UP



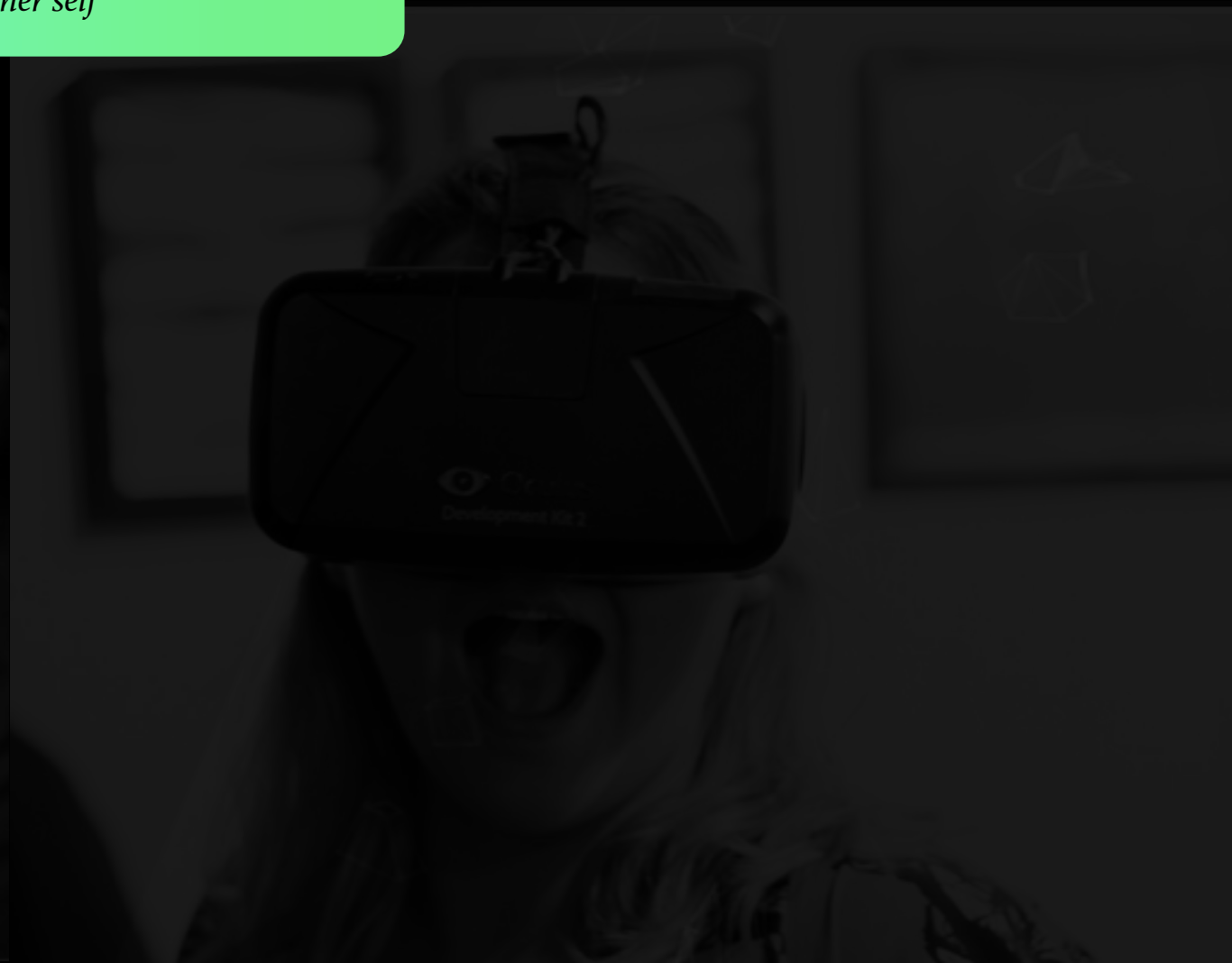
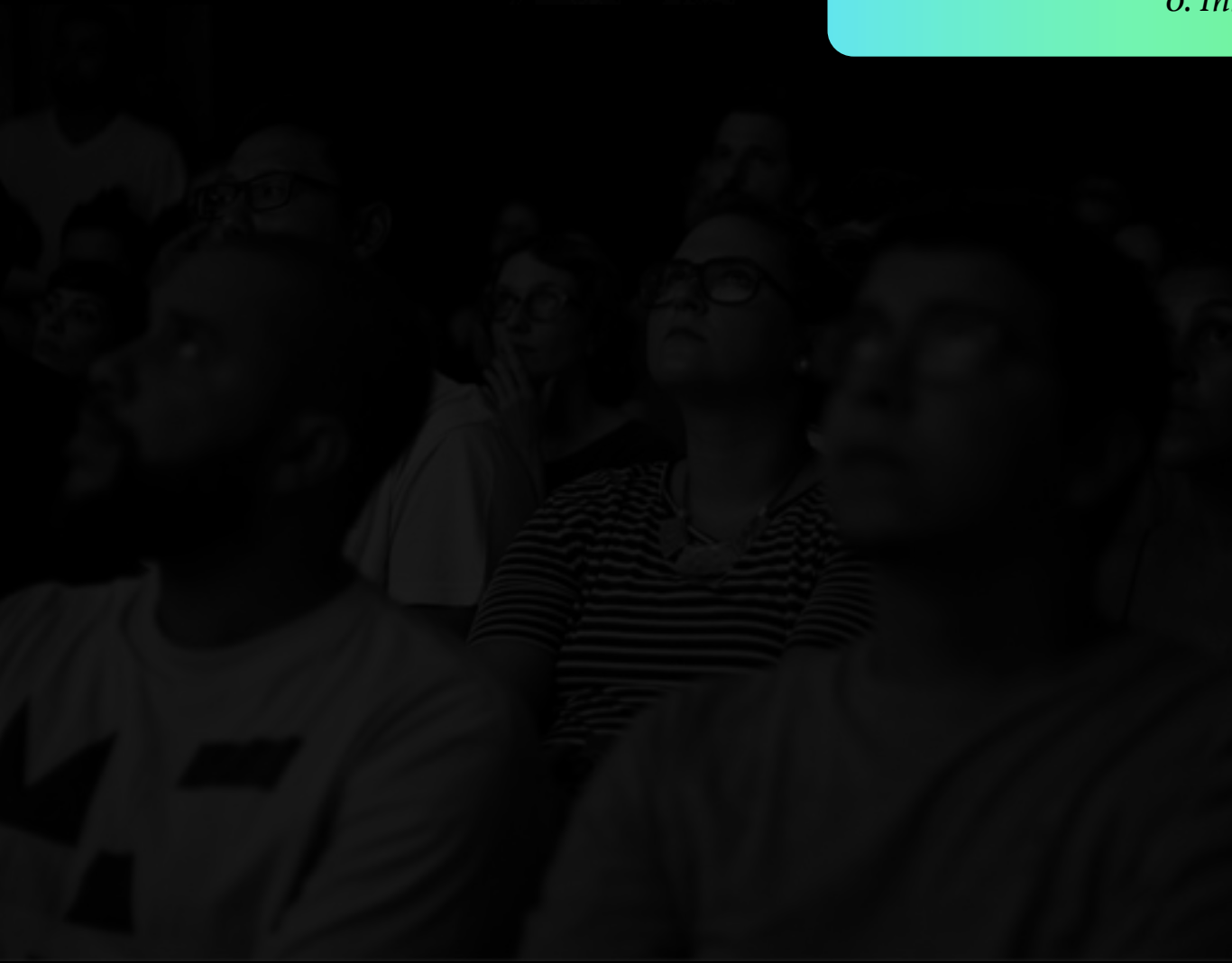




FOON



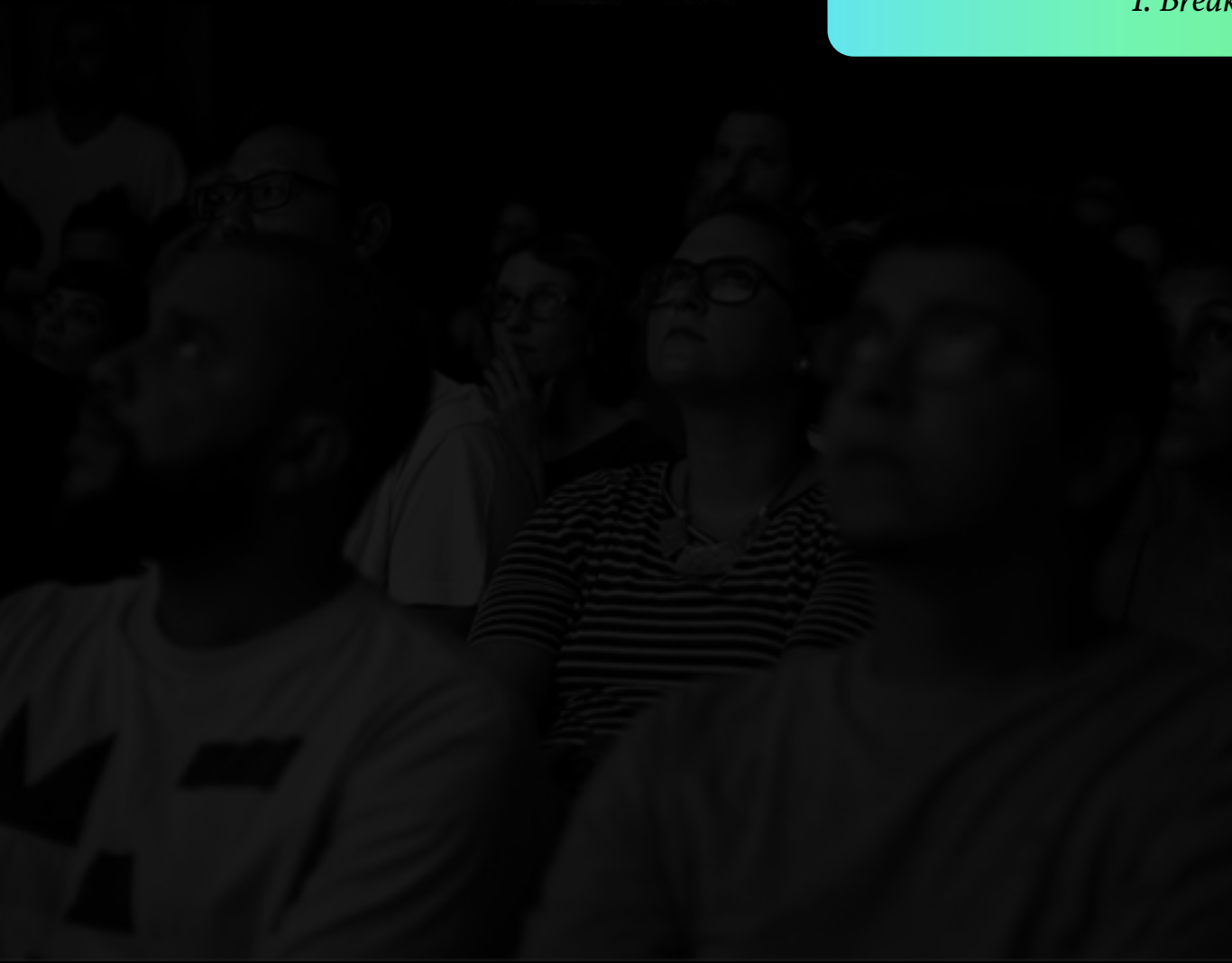
*o. Inner self*

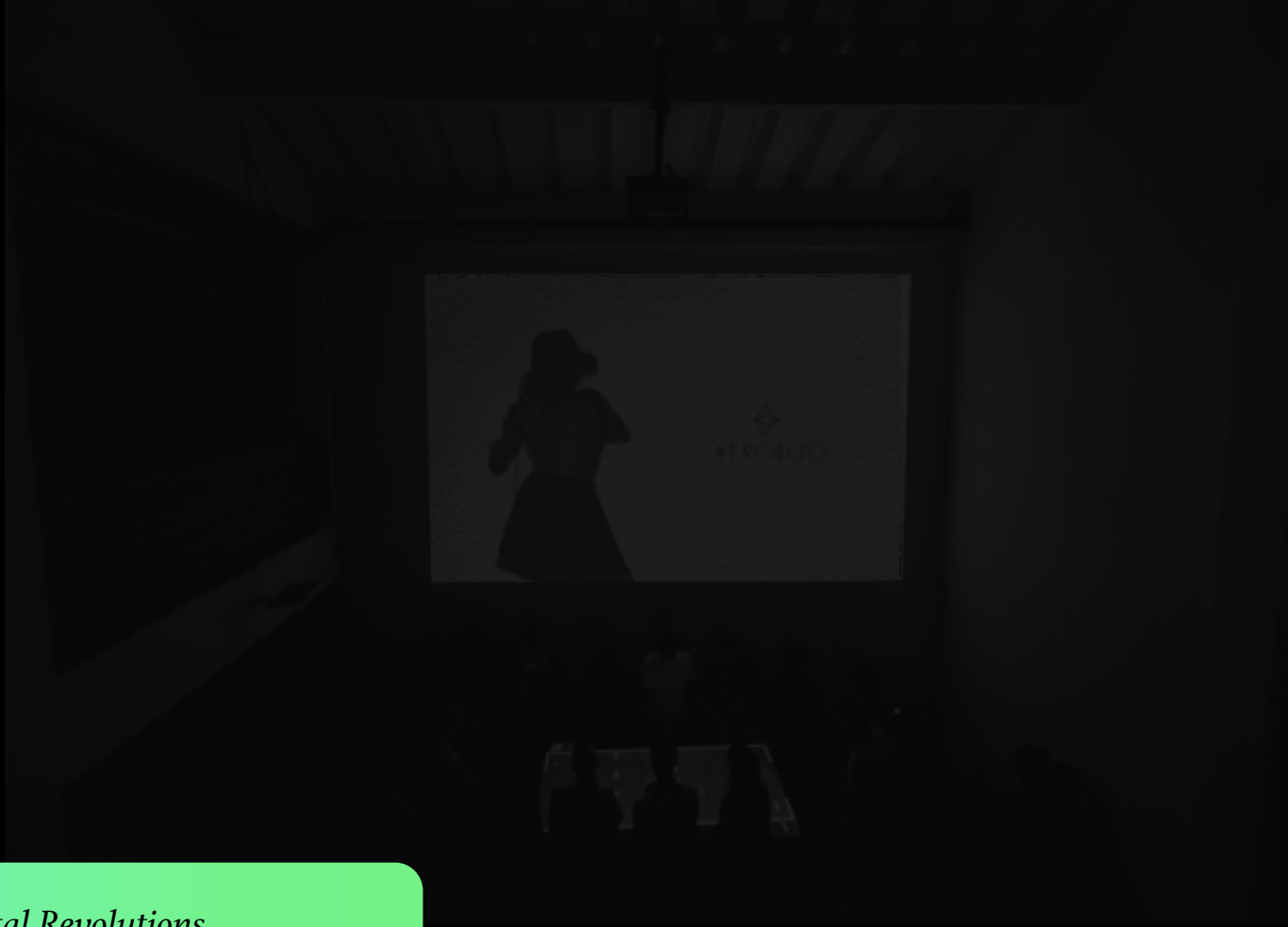




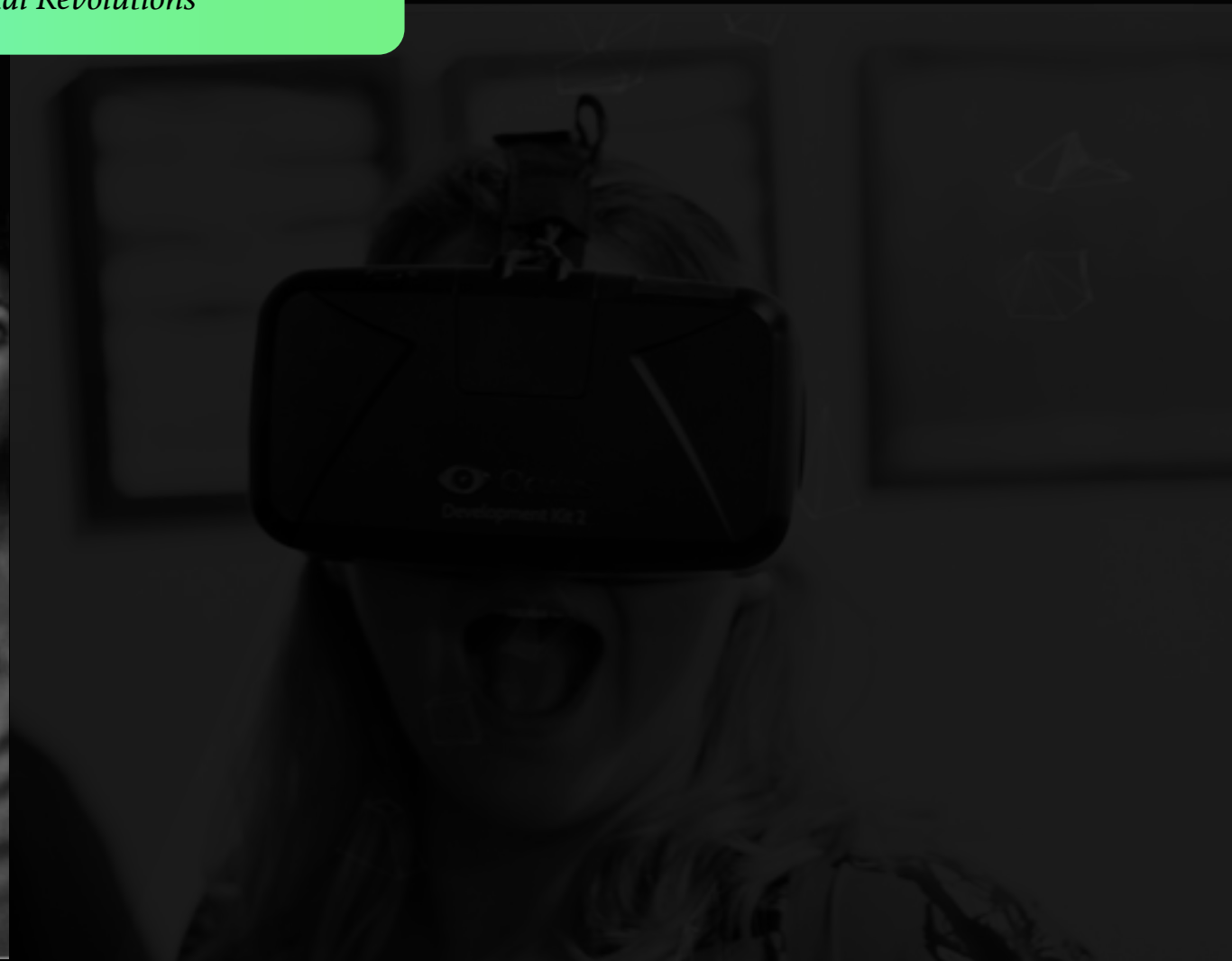


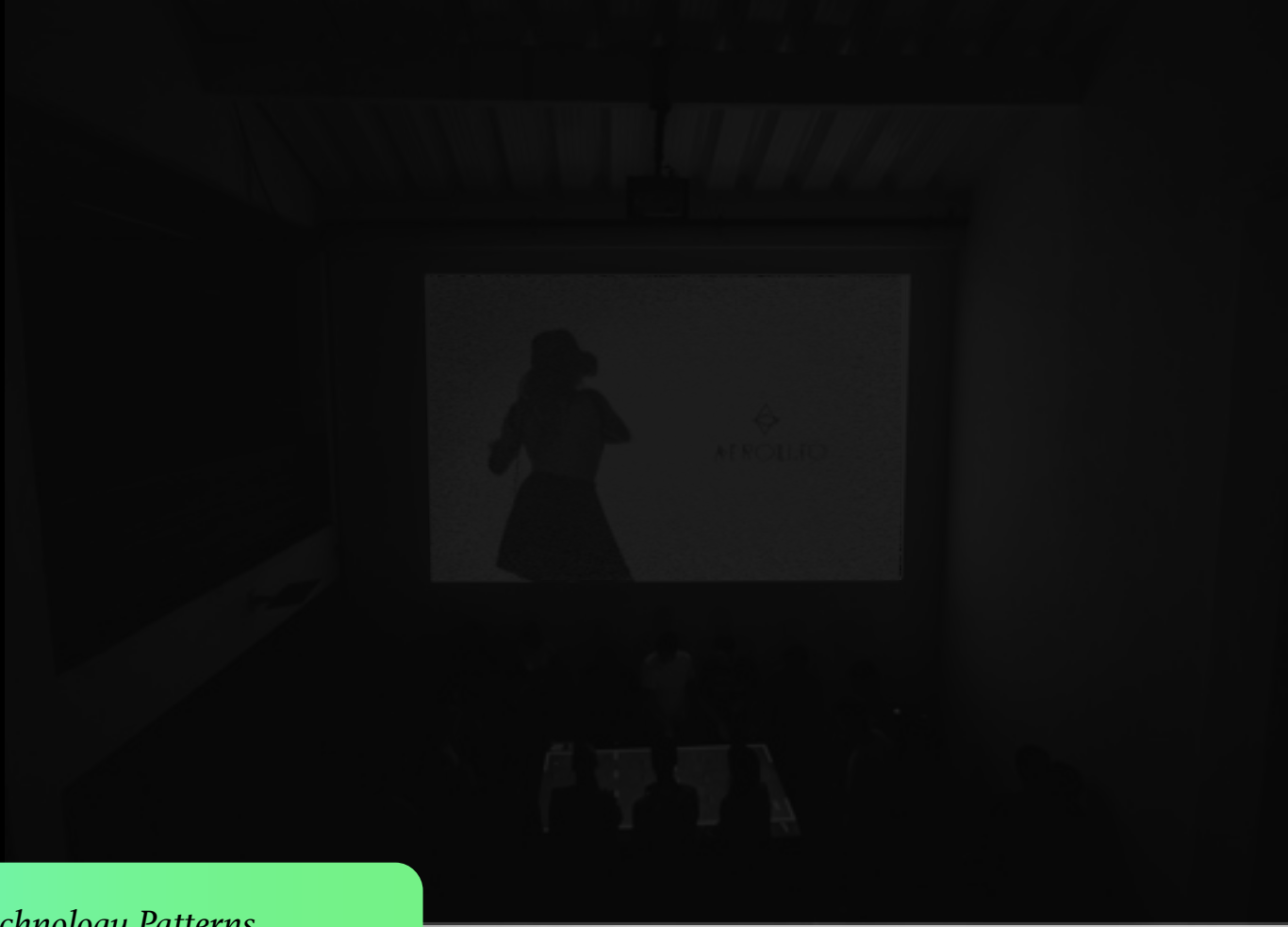
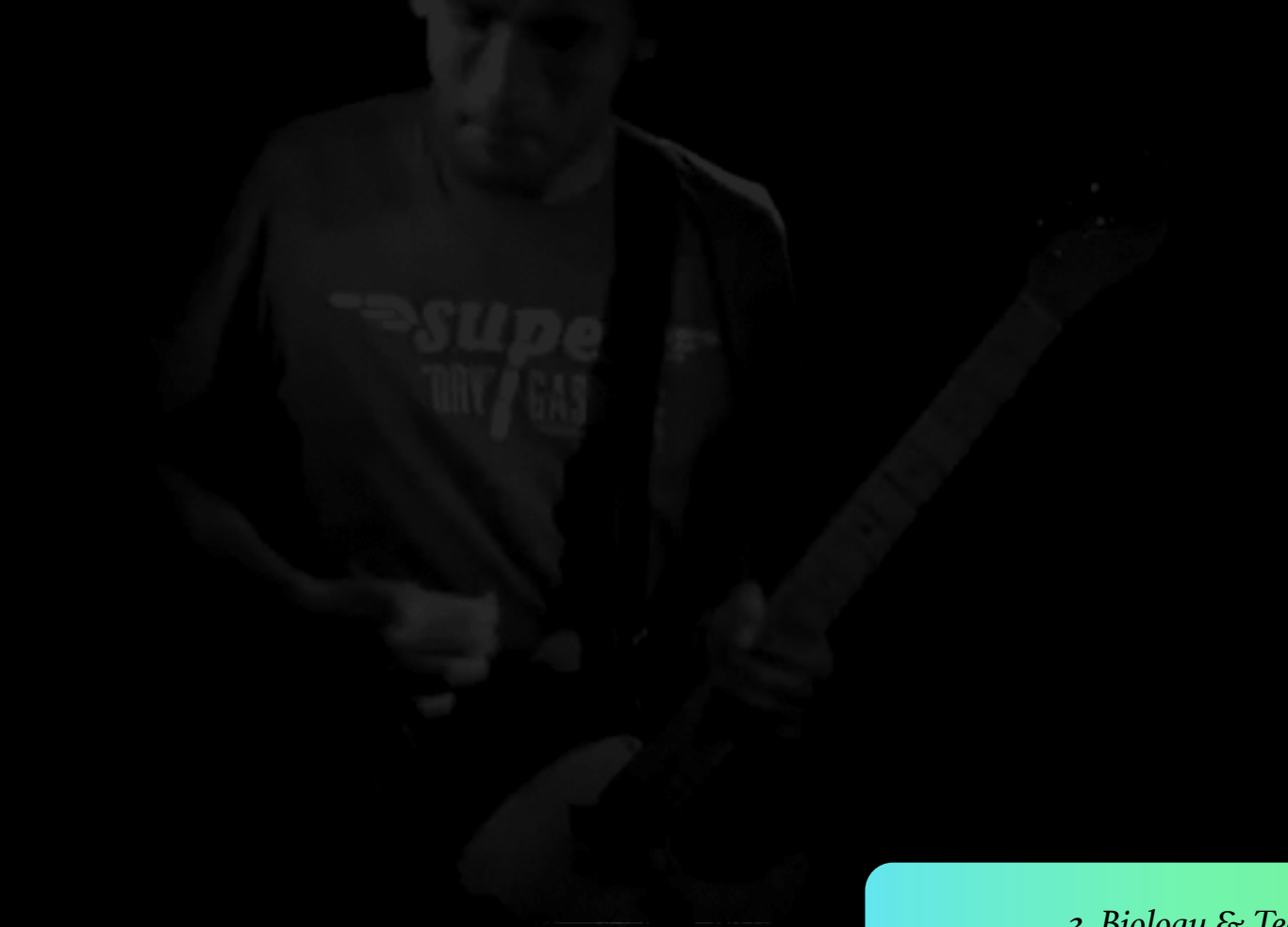
## *I. Breakthroughs*



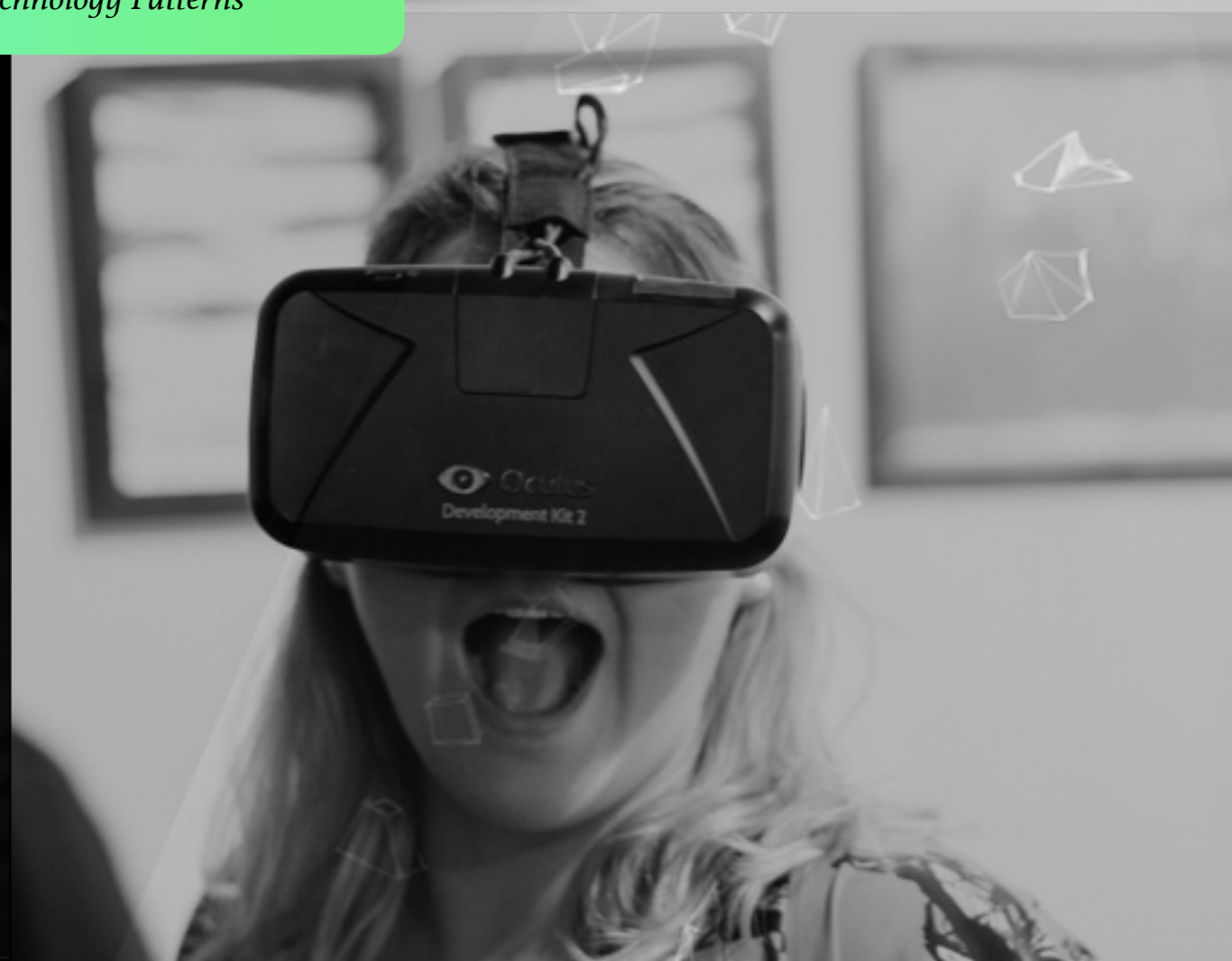
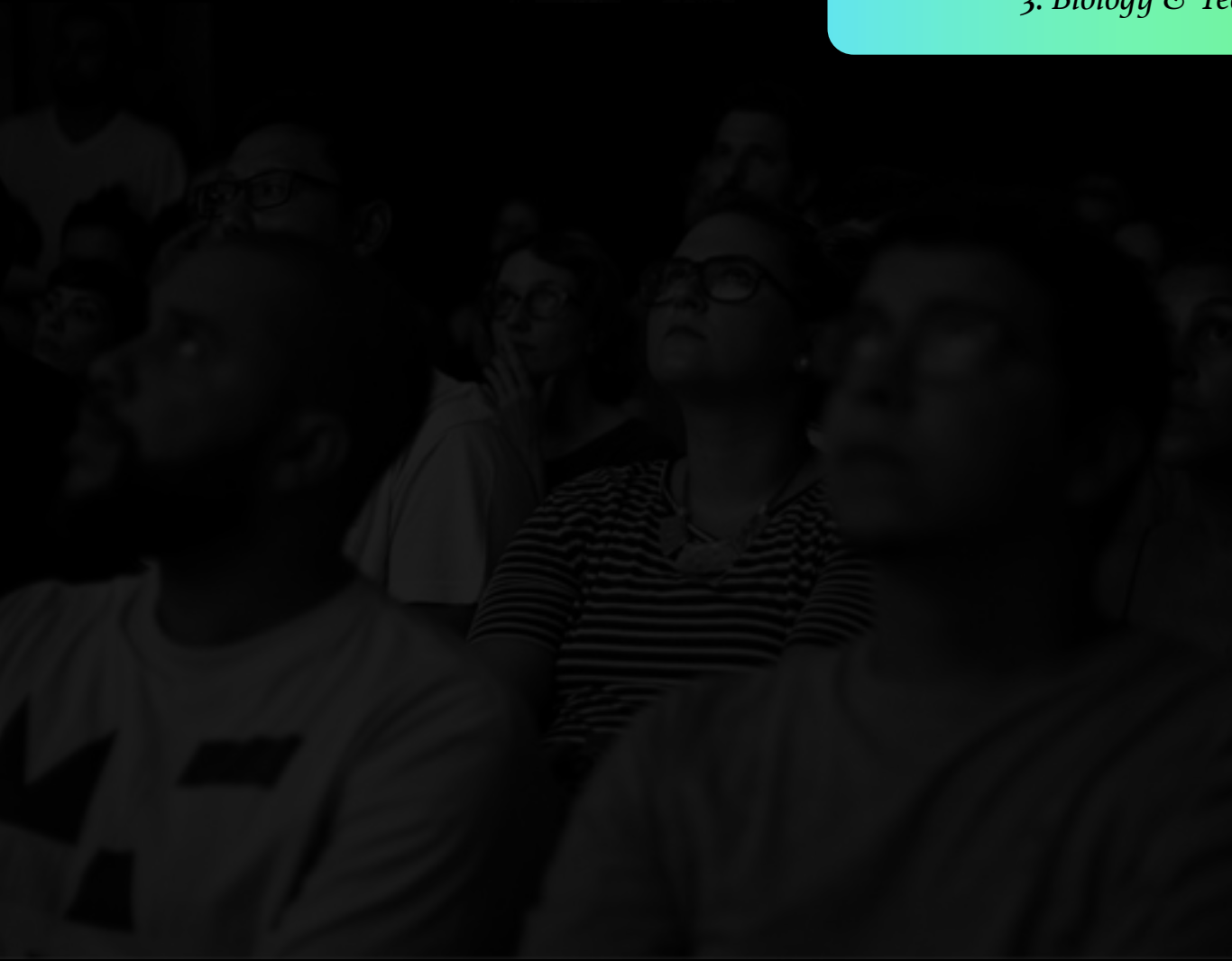


## *2. Post Digital Revolutions*





3. Biology & Technology Patterns







POKE



FOX

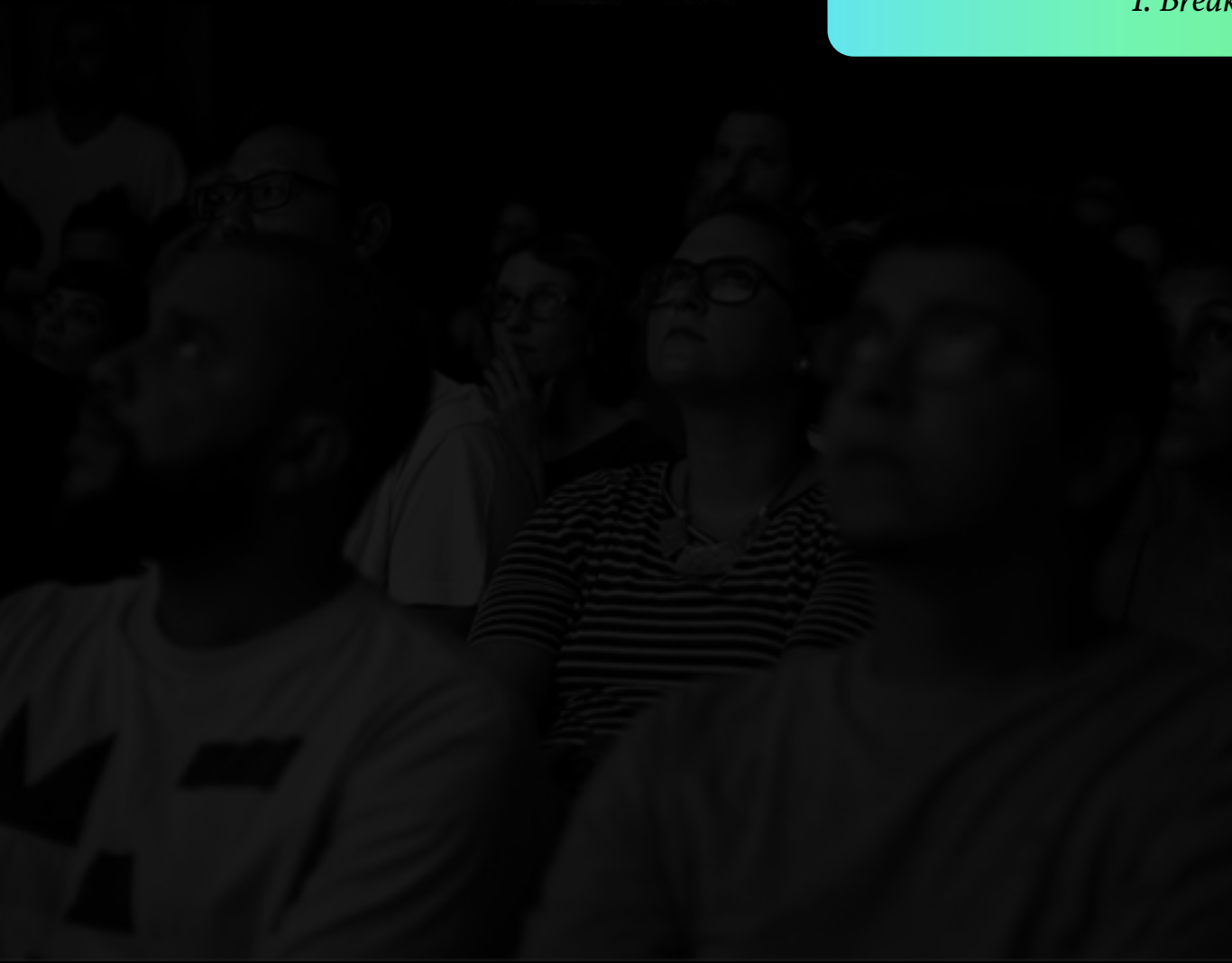
*A casa transformada pelo relâmpago  
Alcovas equilibradas a sufocar  
Esta terra insaciável de um planeta, a Terra  
Atacada por **chifres mecânicos**  
Porque te amo, te amo em fogo e vento  
Você diz, **qual é o tempo de espera para a sua mola?**  
Eu lhe digo, está à espera do ramo que flui  
Porque você é a arquitetura do olente diamante  
Que não sabe por que ele cresce.*

*William Shakespeare, 1611*





## *I. Breakthroughs*





*MIT Breakthroughs*

## 10 Breakthrough Technologies

**Immune Engineering**

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**Precise Gene Editing in Plants**

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**Conversational Interfaces**

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**Reusable Rockets**

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**Robots That Teach Each Other**

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**DNA App Store**

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**SolarCity's Gigafactory**

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**Slack**

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**Tesla Autopilot**

---

**Power from the Air**





## **Immune Engineering**

**Genetically engineered immune cells are saving the lives of cancer patients. That may be just the start.**

**Availability: 1-2 years**

by Antonio Regalado



## **DNA App Store**

**An online store for information about your genes will make it cheap and easy to learn more about your health risks and predispositions.**

**Availability: this year**

by Antonio Regalado





# Robots That Teach Each Other

What if robots could figure out more things on their own and share that knowledge among themselves?

Availability: 3-5 years

by Amanda Schaffer

**M**any of the jobs humans would like robots to perform, such as packing items in warehouses, assisting bedridden patients, or aiding soldiers on the front lines, aren't yet possible because robots still don't recognize and easily handle common objects. People generally have no trouble folding socks or picking up water glasses, because we've gone through "a big data collection process" called childhood, says Stefanie Tellex, a computer science professor at Brown University. For robots to do the same types of routine tasks, they also need access to reams of data on how to grasp and manipulate objects. Where does that data come from? Typically it has come from painstaking programming. But ideally, robots could get some information from each other.

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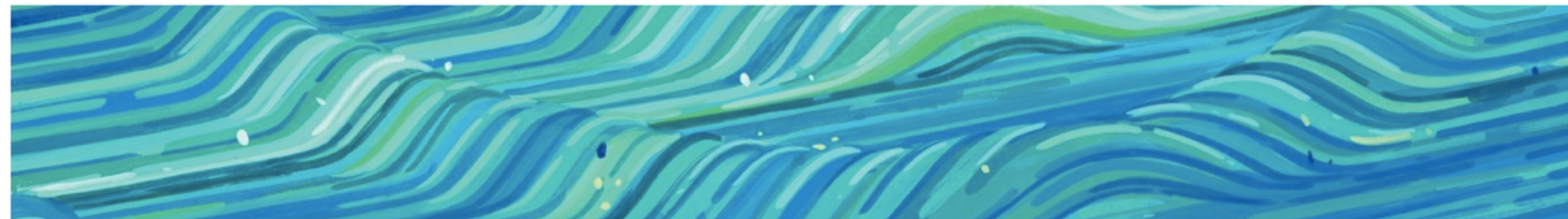
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## Power from the Air

**Internet devices powered by Wi-Fi and other telecommunications signals will make small computers and sensors more pervasive.**

**Availability: 2-3 years**

by Mark Harris

**E**ven the smallest Internet-connected devices typically need a battery or power cord. Not for much longer. Technology that lets gadgets work and communicate using only energy harvested from nearby TV, radio, cell-phone, or Wi-Fi signals is headed toward commercialization. The University of Washington researchers who developed the technique have demonstrated Internet-connected temperature and motion sensors, and even a camera, powered that way.

Transferring power wirelessly is not a new trick. But getting a device without a conventional power source to communicate is harder, because generating radio signals is very power-intensive and the airwaves harvested from radio, TV, and other telecommunication





## **10 Breakthrough Technologies 2014**

[Introduction](#)

**Agricultural Drones**

**Ultraprivate Smartphones**

**Brain Mapping**

**Neuromorphic Chips**

**Genome Editing**

**Microscale 3-D Printing**

**Mobile Collaboration**

**Oculus Rift**

**Agile Robots**

**Smart Wind and Solar Power**

**Archive of Past Lists**

## **10 Breakthrough Technologies 2015**

**Introduction**

**Magic Leap**

**Nano-Architecture**

**Car-to-Car Communication**

**Project Loon**

**Liquid Biopsy**

**Megascale Desalination**

**Apple Pay**

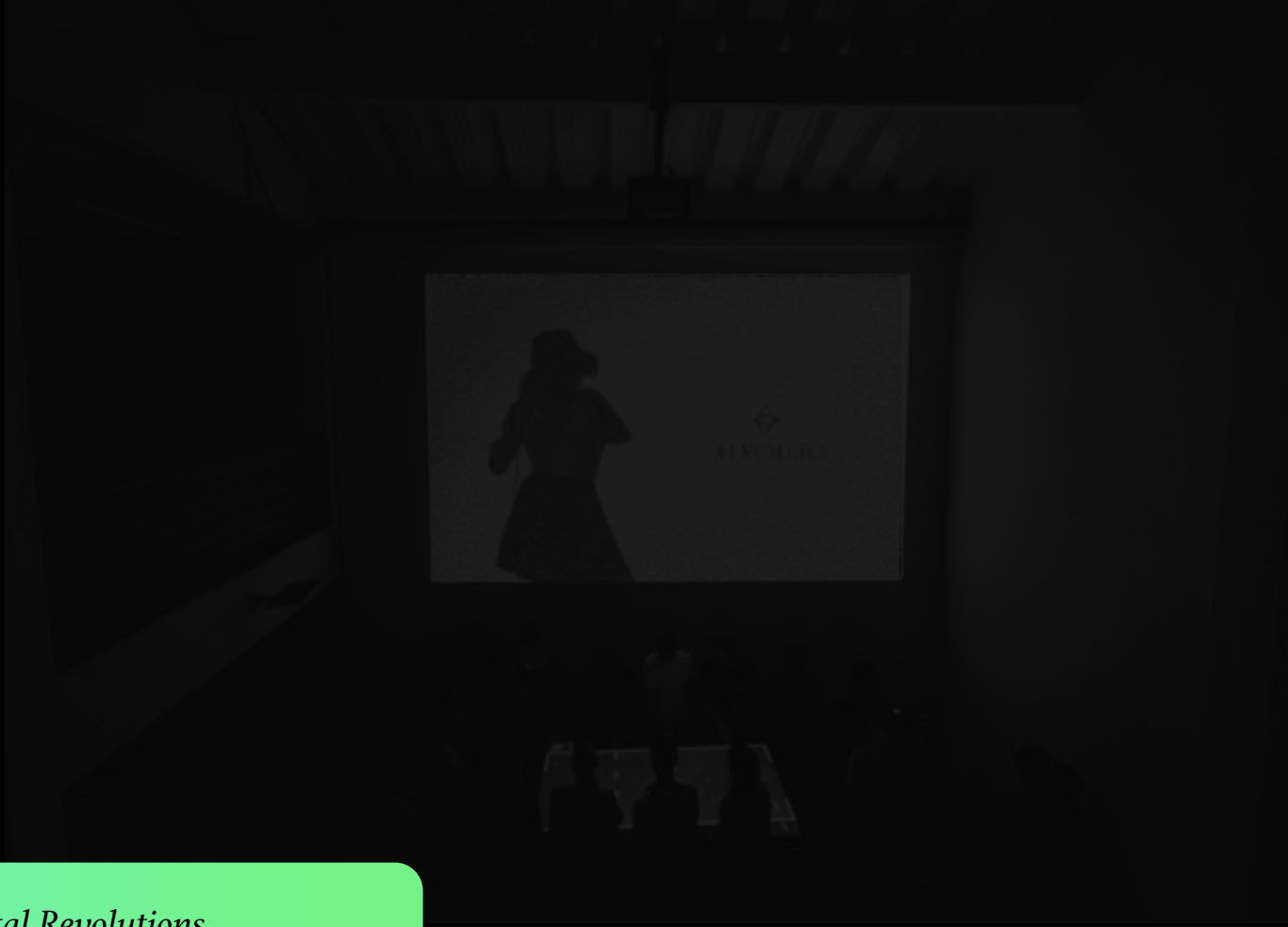
**Brain Organoids**

**Supercharged Photosynthesis**

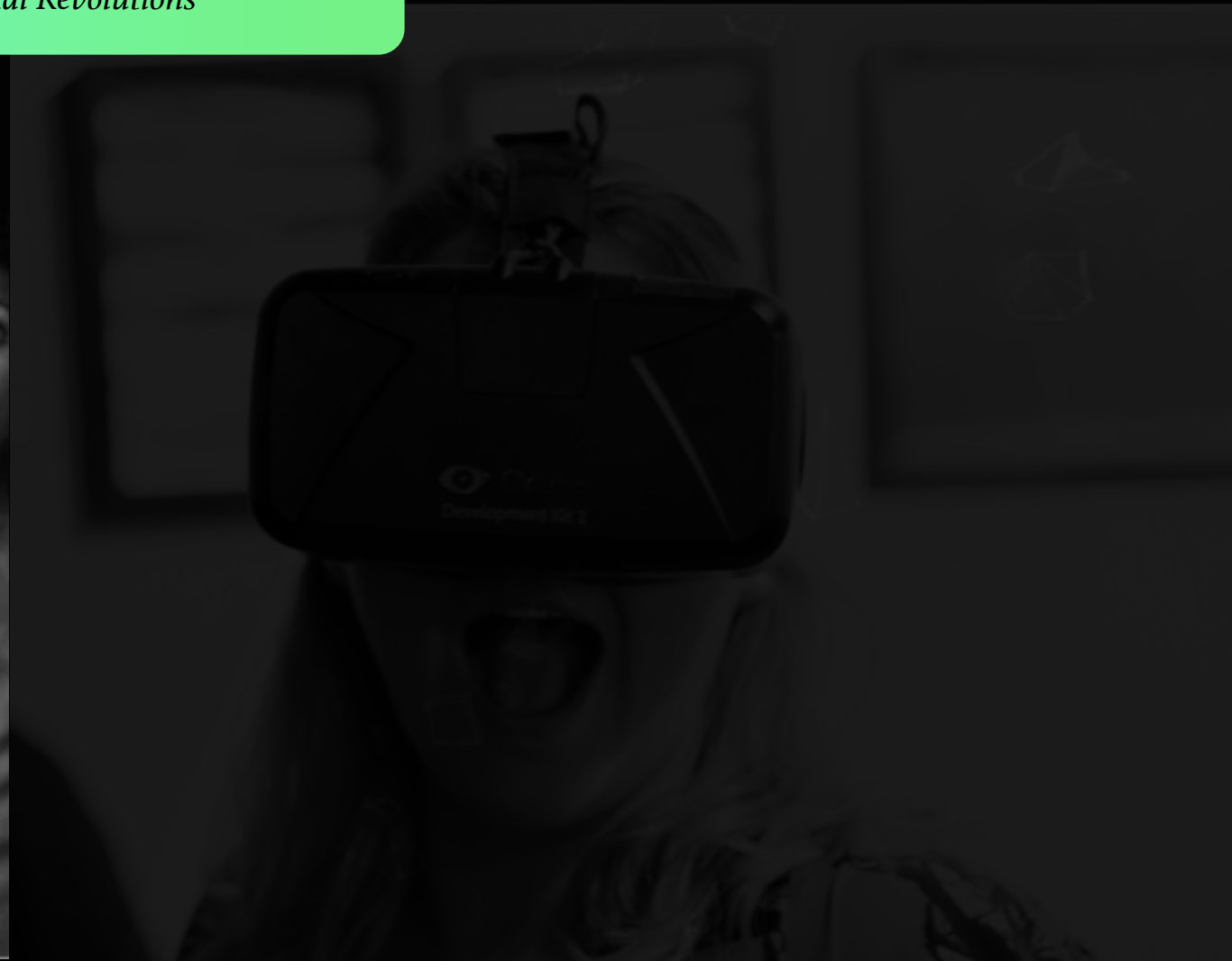
**Internet of DNA**

**Archive of Past Lists**



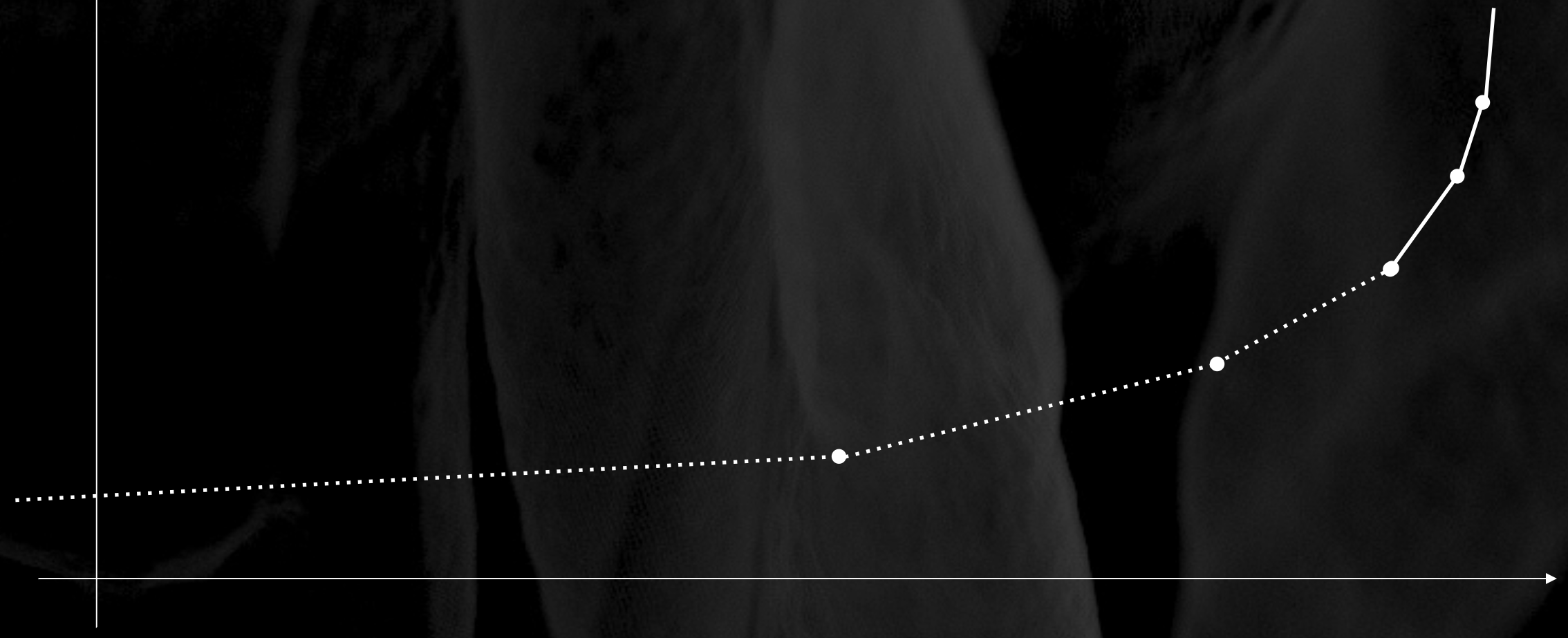


## *2. Post Digital Revolutions*





*Genética/Molecular/Biotech*  
*Nanotech*  
*Robótica/Inteligência Artificial*





*Biotech*

*Biotech: reprogramar a biologia.*







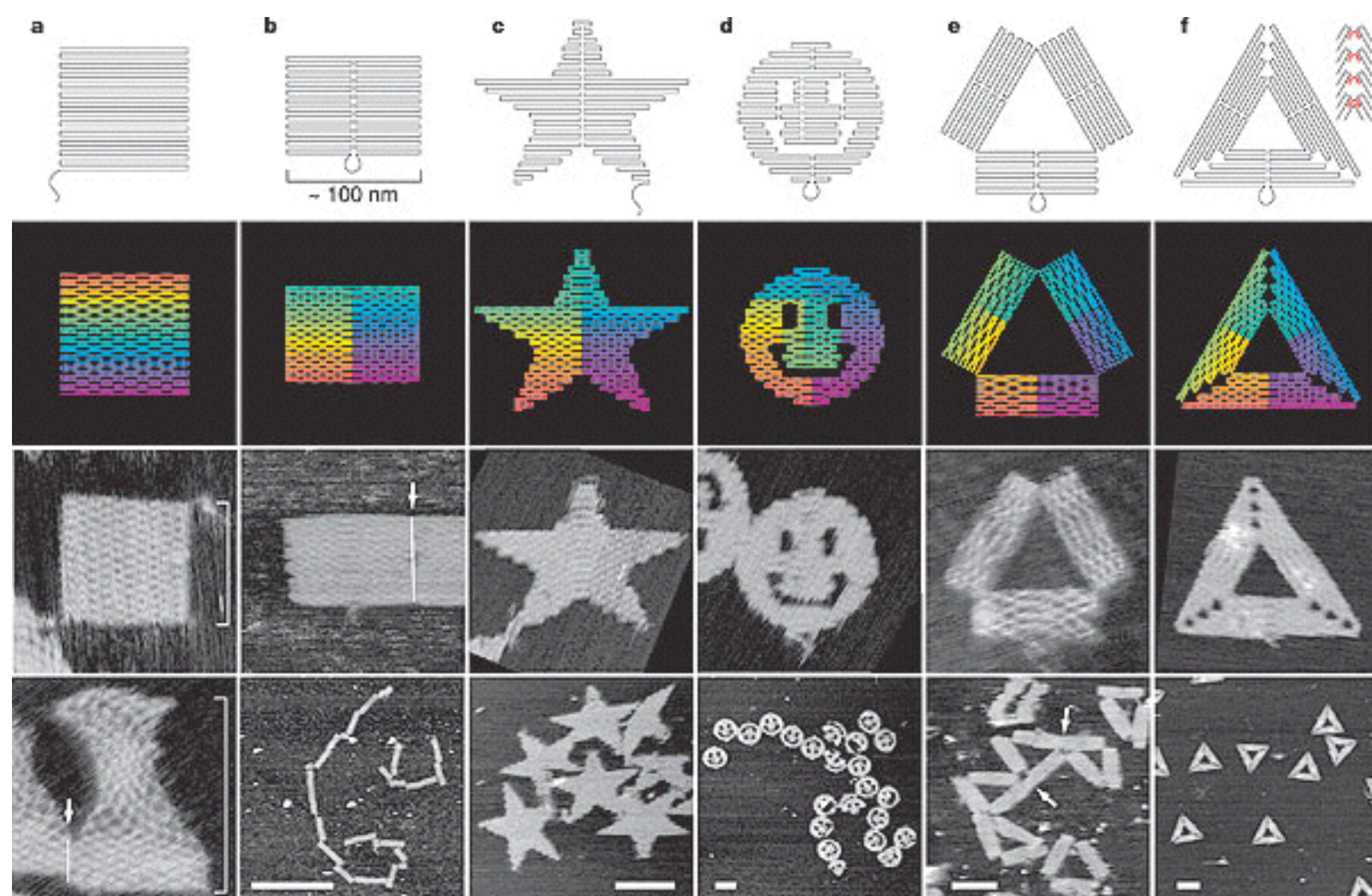
MORNING



AFTERNOON



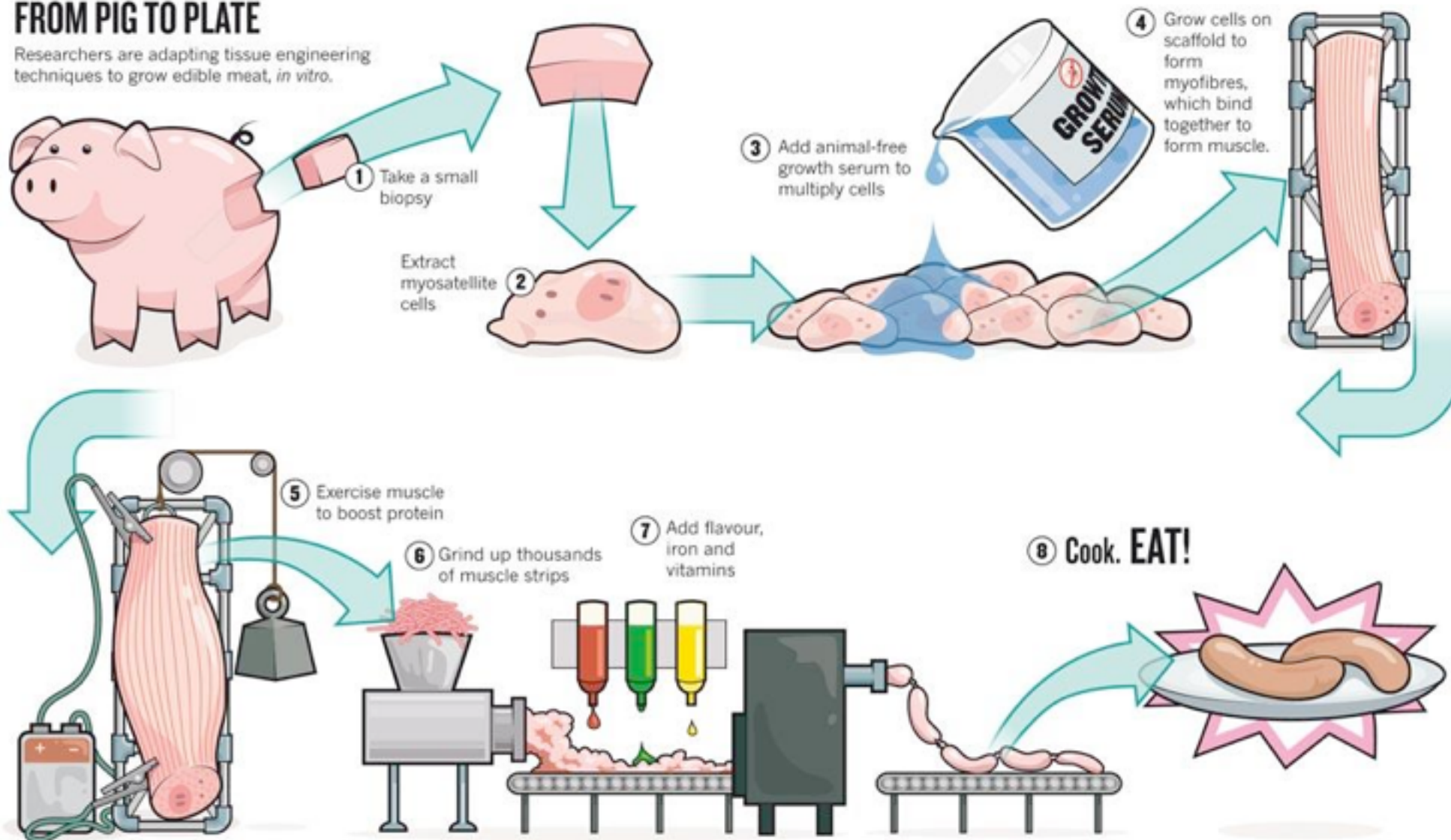
EVENING





## FROM PIG TO PLATE

Researchers are adapting tissue engineering techniques to grow edible meat, *in vitro*.





## GABOR FORGACS PART II

TEDMED 2011

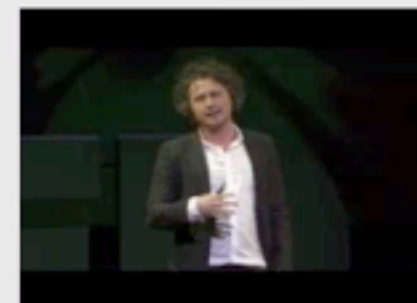
[< Gabor Forgacs at TEDMED 2011 - Q and A](#)



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Sort by **Most Recent** Most Popular A-Z



**Ben Goldacre**  
**TEDMED 2012**

What we don't know can hurt us: Industry bias against negative outcomes means vast amounts of research goes unpublished, Ben Goldacre says.



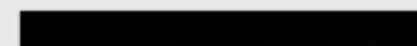
**Todd Park Part 2**  
**TEDMED 2012**

Todd Park talks about our vast stores of unused national health data and its virtually unlimited potential as a resource for new healthcare solutions.



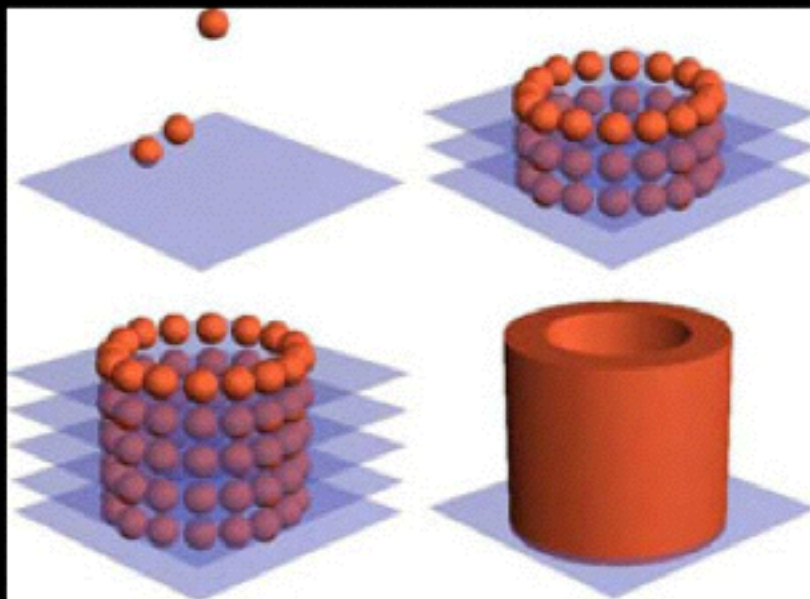
**Stephen Petronio**  
**TEDMED 2012**

Our physical and mental boundaries may be painfully censored. But as Stephen Petronio shows, we can choose to dance brilliantly within them nonetheless.



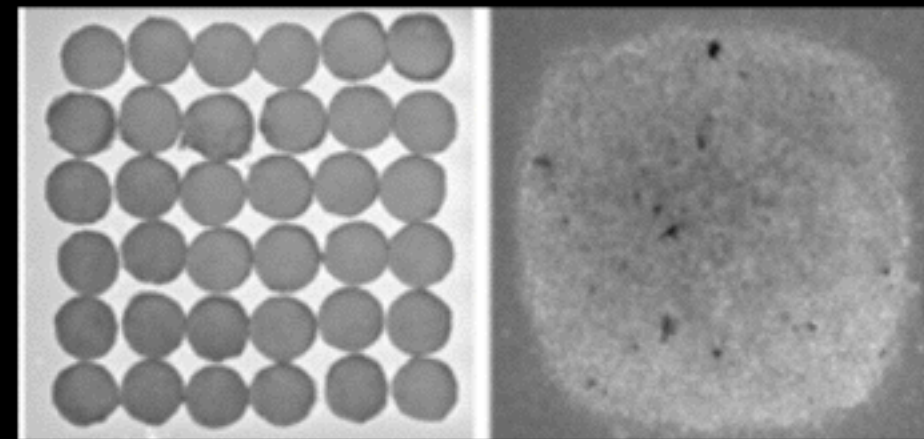
**Chris Price and Jill**

**Bioprinting is machine printing of cells using bio-ink – “aggregates of cells”**



- Start with cells from donor animal, multiplied by cell culture
- Machine places cell spheres into pattern
- Spheres fuse to form final tissue

**...enabling the formation of biological, native tissue**



- Structures entirely made from animal muscle cells with the ability to faithfully reproduce native tissue structure
- Opportunity to further enhance taste, texture and nutritional qualities





1 MINUTE READ

# The \$325,000 Lab-Grown Hamburger Now Costs Less Than \$12

A real burger made without the cruelty and pollution is now within reach.

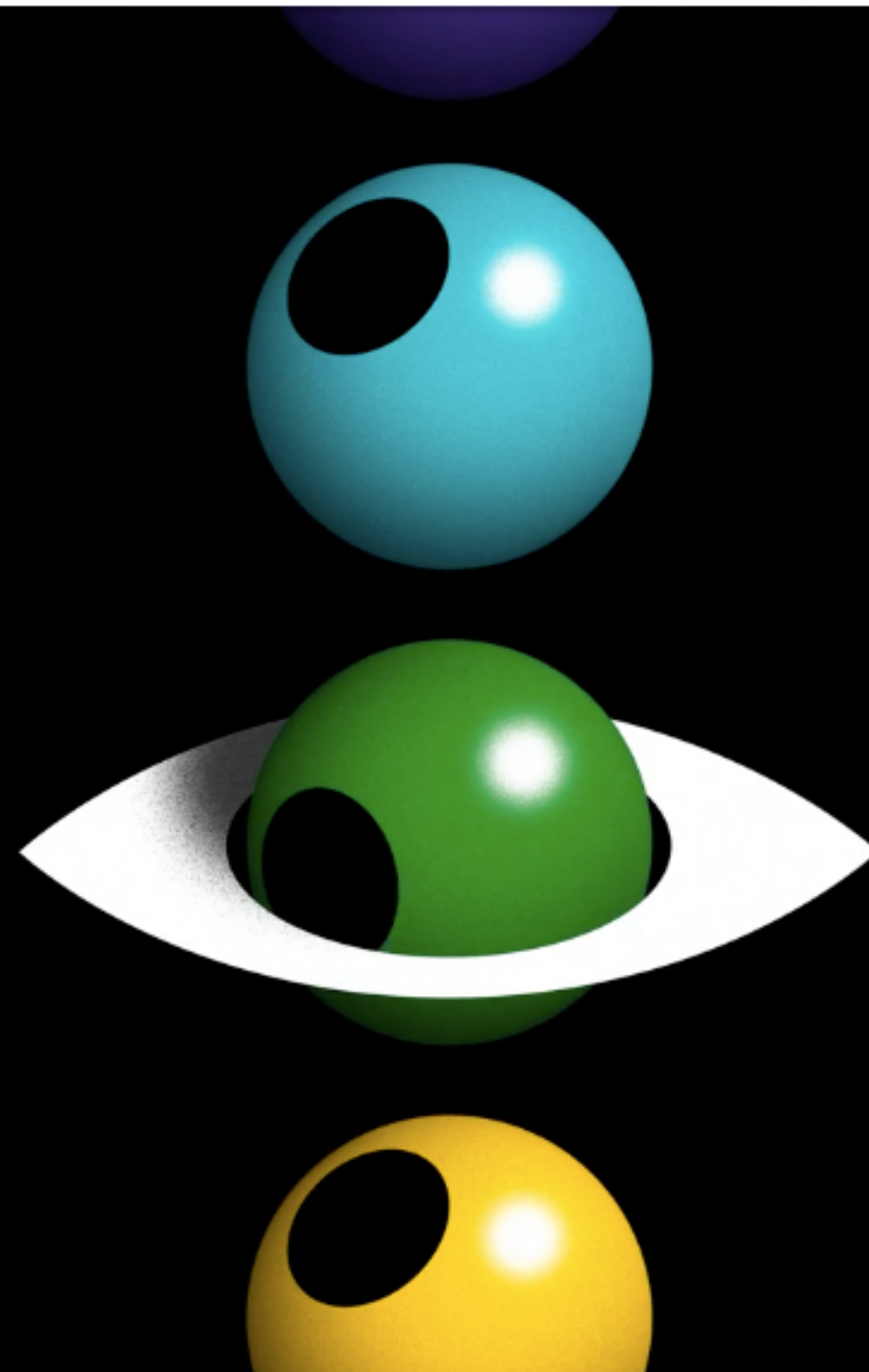




**The Genesis Engine.**

We now have the power to quickly and easily alter DNA. It could eliminate disease. It could solve world hunger. It could provide unlimited clean energy.

It could really get out of hand.  
by Amy Maxmen

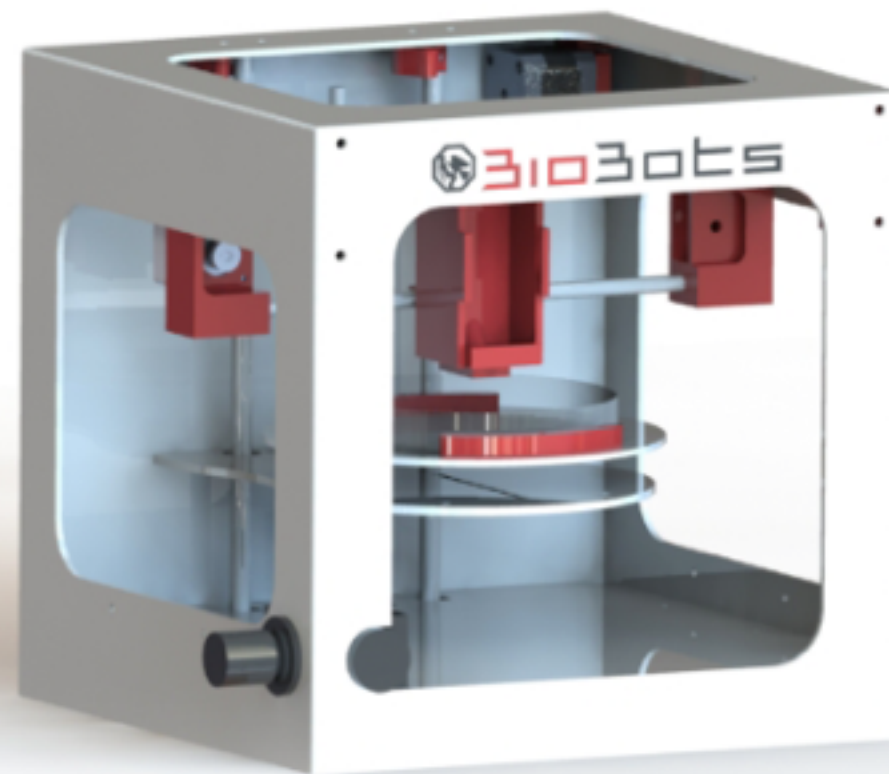


HERE'S HOW

CRISPR

WORKS

# 31030ts



BioBots 1



# BioBots Is A 3D Printer For Living Cells

 [Nicola Mitchell](#)  [May 6, 2015](#)

U.S. biotech startup [BioBots](#) sits at the intersection between computer science and chemistry. Its debut product, a desktop 3D printer for biomaterials, which was just demoed on stage at TechCrunch Disrupt NY — printing Van Gogh's ear in replica, no less — combines hardware, software and wetware. It's the latter area where the core innovation sits, says co-founder Danny Cabrera.

Biofabrication, the process of artificially building living tissue structures, is not a new field — there is more than a decade of research in this area already. But Cabrera and his co-founders believe they have spotted an opportunity to overhaul expensive (circa \$100,000+), large, complex legacy devices — taking inspiration from the small, low-cost desktop 3D printers being used by the maker movement to extrude plastic.

Instead of plastic, BioBots' 3D printer uses a special ink that can be combined with biomaterials and living cells to build 3D living tissue and miniature human organs. The use-case at this point is for research and pre-clinical screening, such as drug testing (as a replacement for animal testing). It's not about 3D printing replacement organs from a person's own cells — albeit developments in this area are heading (incrementally) in that direction. More near term future potential for the tech is to help foster bespoke disease therapies, according to Cabrera.



TOP NEWS

# The Artificial Womb Is Born: Welcome To The WORLD Of The MATRIX

By DNA on February 14, 2015

3733  
SHARES



SHARE



TWEET

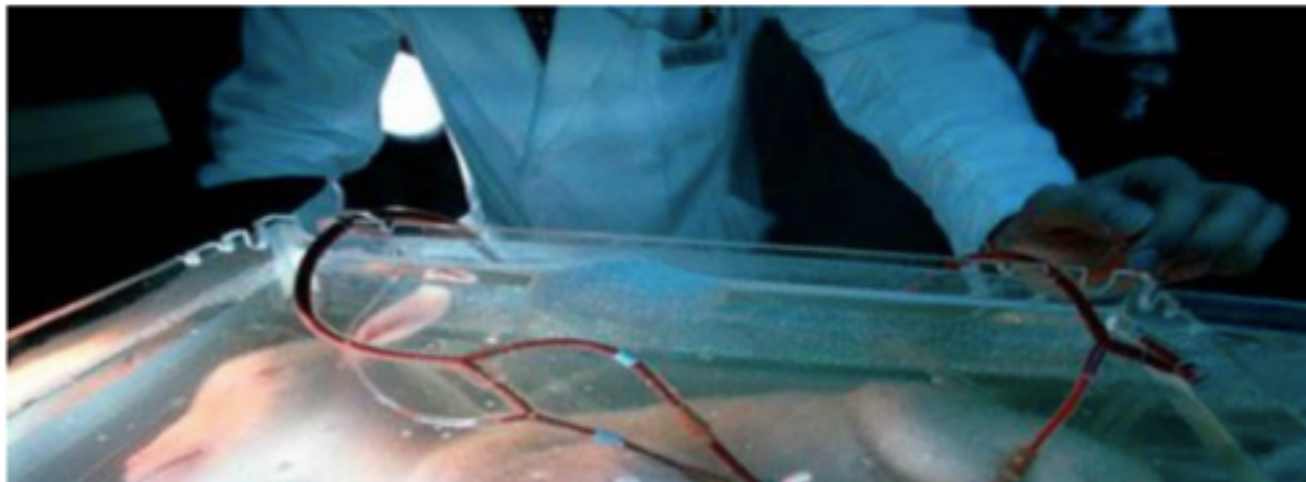


SHARE



SHARE

1 COMMENT



The artificial womb exists. In Tokyo, researchers have developed a technique called EUFI — extrauterine fetal incubation. They have taken goat fetuses, threaded catheters through the large vessels in the umbilical cord and supplied the fetuses with oxygenated blood while suspending them in incubators that contain artificial amniotic fluid heated to body temperature.

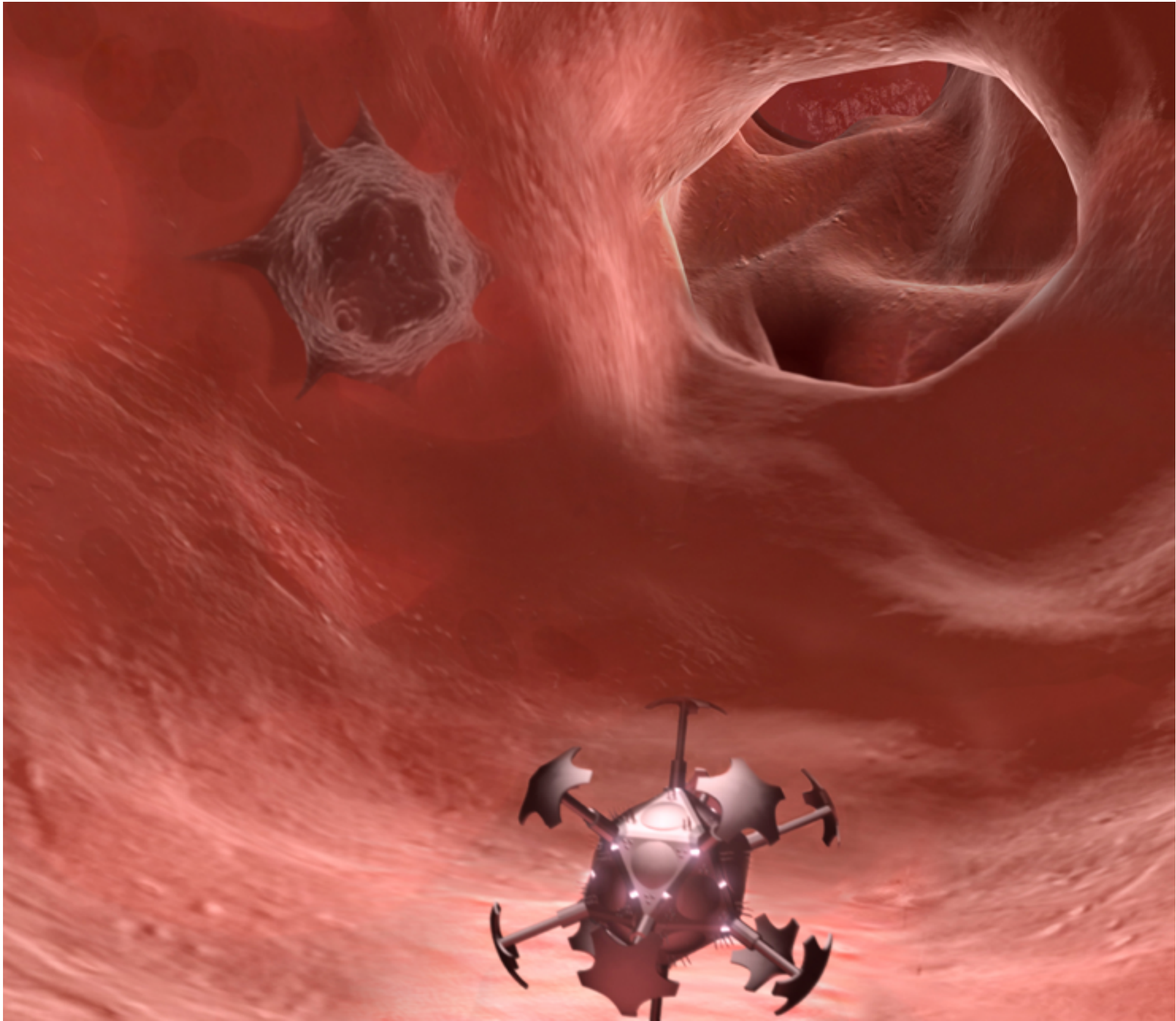


*Nanotech*

*Tecnologia em nanoescala*

*Máquinas em nanoescala*







>>>NANO ROBOTS



**RAW**  
SCIENCE

ADVANCES THAT WILL CHANGE YOUR WORLD

---

AIR & SPACE / WATER / EARTH / BIOLOGY / MIND / DIGITAL / PODCASTS / RAW VIDEOS /

VIDEO-ON-DEMAND

---

BIOLOGY / DECEMBER 29, 2014

# NANOBOTS FIGHT CANCER: FIRST HUMAN CLINICAL TRIAL IN 2015

**T**he first human clinical trial using nanobots to fight cancer will begin in 2015. The technology could later be used to repair spinal chords, improve epilepsy, and diabetes.

Dr. Ido Bachelet (Mina and Everard Goodman Faculty of Life Sciences and Institute of Nanotechnology and Advanced Materials) has led a research team that will inject nanorobots made from molecular DNA that are able to identify and kill cancer cells into patients. This is not expected to affect healthy cells. According to the London Jewish Chronicle, a dozen types of cancer can currently be recognized by the nanobots including leukemias and solid tumors. [See Dr. Bachelet's TEDMED Talk](#) on how nanobots will change everything about medicine.

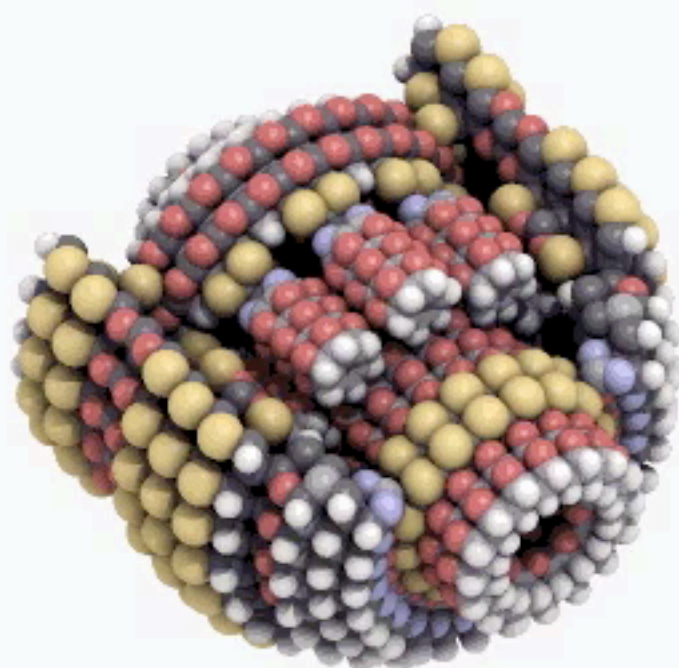


## Molecular Machinery Gallery



### Beware of the stroboscopic illusion!

If molecular machines actually moved as shown in the animations below, they wouldn't work. Don't blame the simulation or the design, though. The problem is that the standard way to render video frames creates a stroboscopic illusion of jerky motion. Atoms typically vibrate hundreds of times per frame, but standard frames capture the position of each atom at a single instant, as if seen by the flash of a stroboscope. This creates the illusion that the atoms all vibrate at the frame rate, which is far too close to the frequency of the machine's moving parts. This gives the false impression that the machine parts are moving at nearly thermal speed, comparable to the speed of sound. At that speed, even if the machine worked, friction would be intolerable.



### MarkIII(k) Planetary Gear

#### Description:

This is the MarkIII(k), a nanoscale planetary gear designed by K. Eric Drexler. A planetary gear couples an input shaft via a sun gear to an output shaft through a set of planet gears (attached to the output shaft by a planet carrier). The planet gears roll between the sun gear and a ring gear on the inner surface of a casing. This animation was rendered with [Qutemol](#) by reading PDB files from a NanoEngineer-1 molecular dynamics simulation. A section of the casing atoms have been hidden to expose the internal gearing assembly.


#### Author:

[K. Eric Drexler](#)  
Nanorex, Inc.

[Read more...](#)

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SRG-Ic



It was made by moving actual  
atoms, frame by frame.



Com a Revolução Industrial



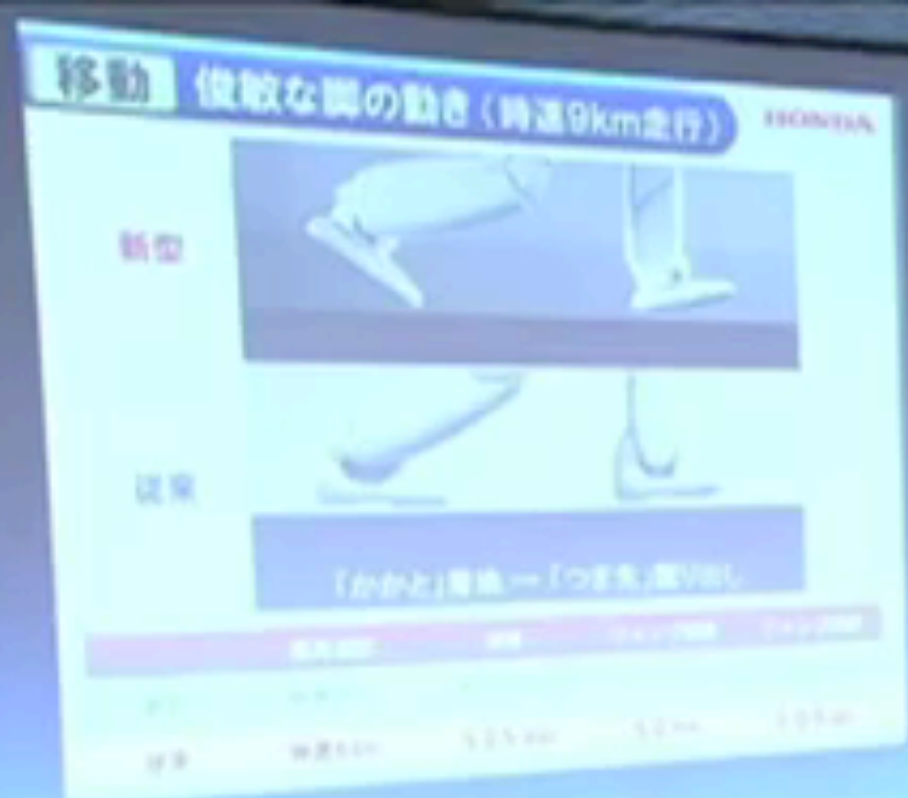
*Robótica/Inteligência Artificial*

*Robôs e seus sistemas inteligentes*

*Robótica*



*Antropomórficos*



HONDA  
The Power of Dreams





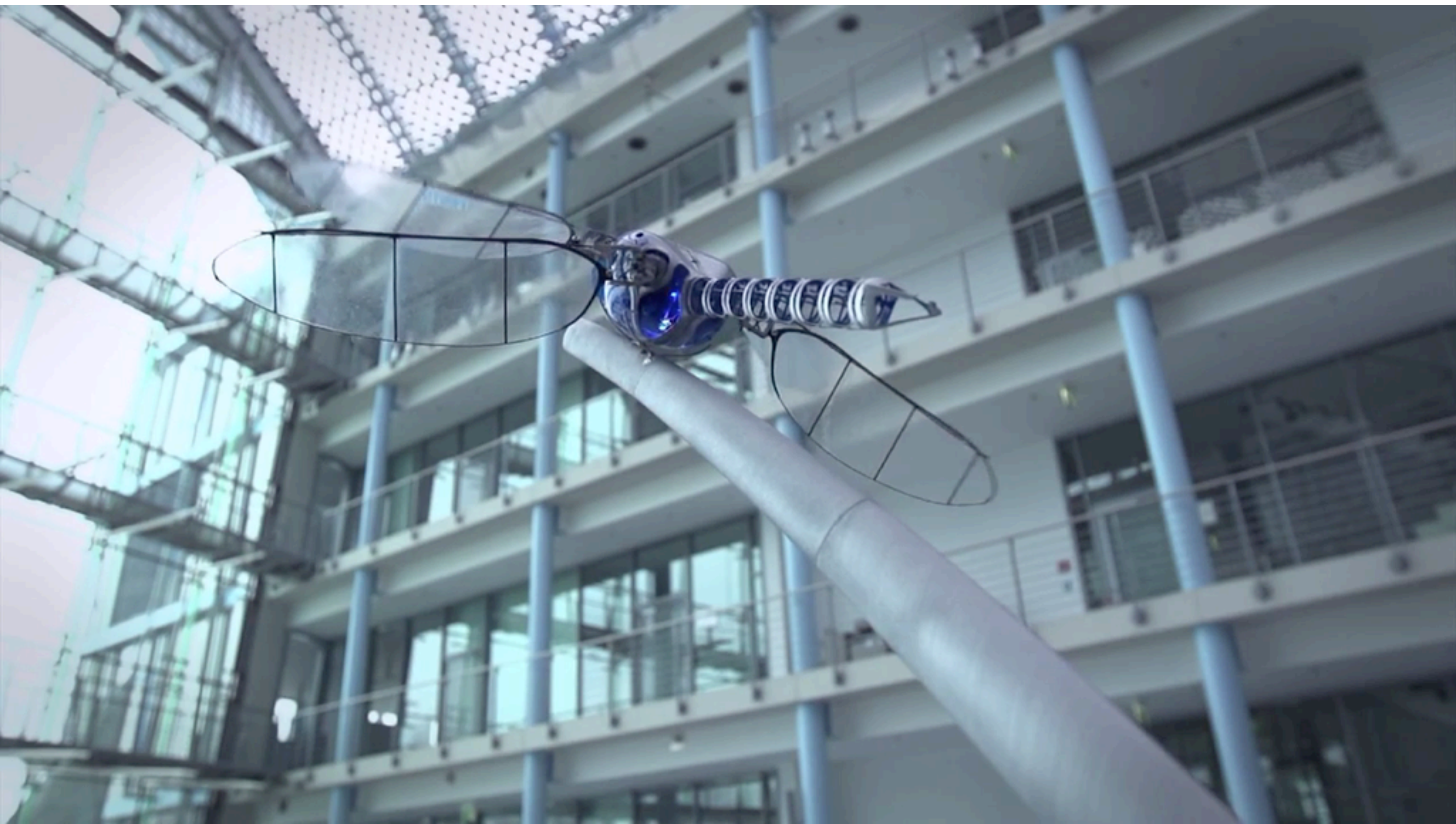
Boston Dynamics



Boston Dynamics



*Zoomórficos*



*Cooperação robôs e humanos*



*Industrial Robots*





## *Companion Robots*



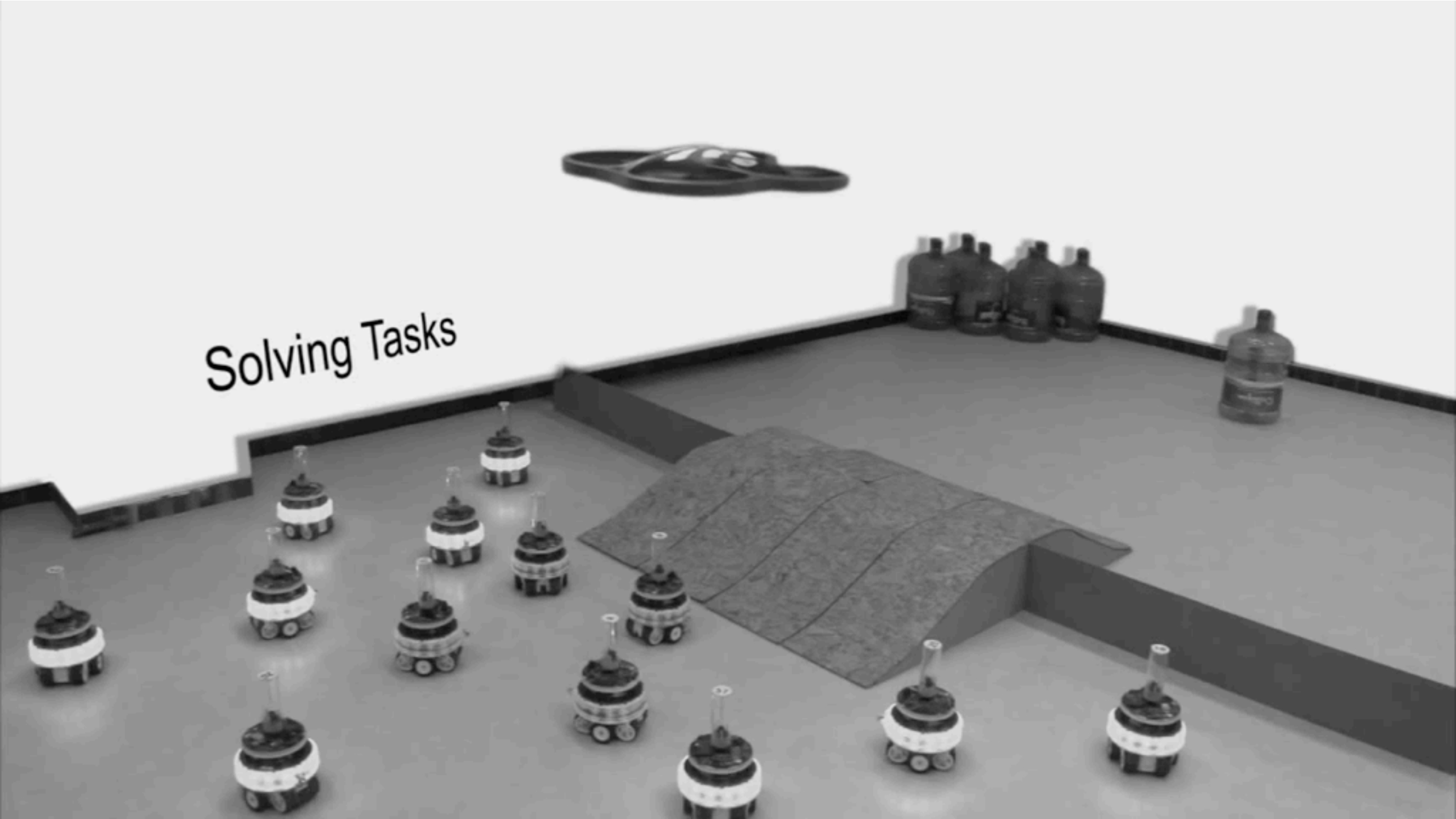




*Cooperação: robôs entre robôs*

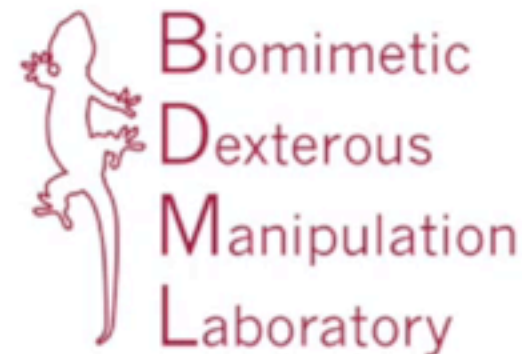


Solving Tasks



# Let's All Pull Together: Principles for Sharing Large Loads in Microrobot Teams

D.L. Christensen, S.A. Suresh, K. Hahm and M.R. Cutkosky  
Stanford University



to solve a common task





*Auto regeneração*



*Auto organização*





*Grande número de organismos isolados de menor complexidade*



*Pequeno número de organismos conectados de maior complexidade*

*Inteligência Artificial*



*Atividades Criativas*



Partner

Narrative  
Science 

## Narrative Science

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Apr 24, 2015 | 23 views

## Hospira Earnings Projected to Drop

Wall Street is expecting lower profit for Hospira when the company reports its first quarter results on Tuesday, April 28, 2015. Analysts are expecting earnings per share of 51 cents

Apr 24, 2015 | 109 views

## Cliffs Natural Resources Expected to Report More Narrow Loss

Apr 24, 2015 | 67 views

## Earnings for Genworth

# We Transform Data into Stories and Insight™

## We Transform Data into Stories and Insight™

### Artificial Intelligence. Human Insight. Real Results.

There is no shortage of data, in fact just about every company we talk to is drowning in data. As the volume of data continues to rise exponentially, companies need a better way to understand, use and monetize the data they already have. Narrative Science helps companies leverage their data by automatically creating easy-to-use and consistent narrative reporting through our artificial intelligence platform, Quill™.

## Recent Press

### MarketWatch

August 31, 2012

[Start-up turns data into plain English](#)

### PR Newswire

August 23, 2012

[The CEC to Honor Glenn Tilton, Michael Ferro, and Three Growth Companies at the 2012 Momentum Awards Dinner](#)

### Investor's Business Daily

August 22, 2012

[Narrative Science Turning Big Data Into Plain English](#)

### Digiday

July 23, 2012

[Robots in the Agency](#)

### Institutional Investor

July 19, 2012

[Artificial Intelligence: The Answer to Wall Street's Data Deluge](#)

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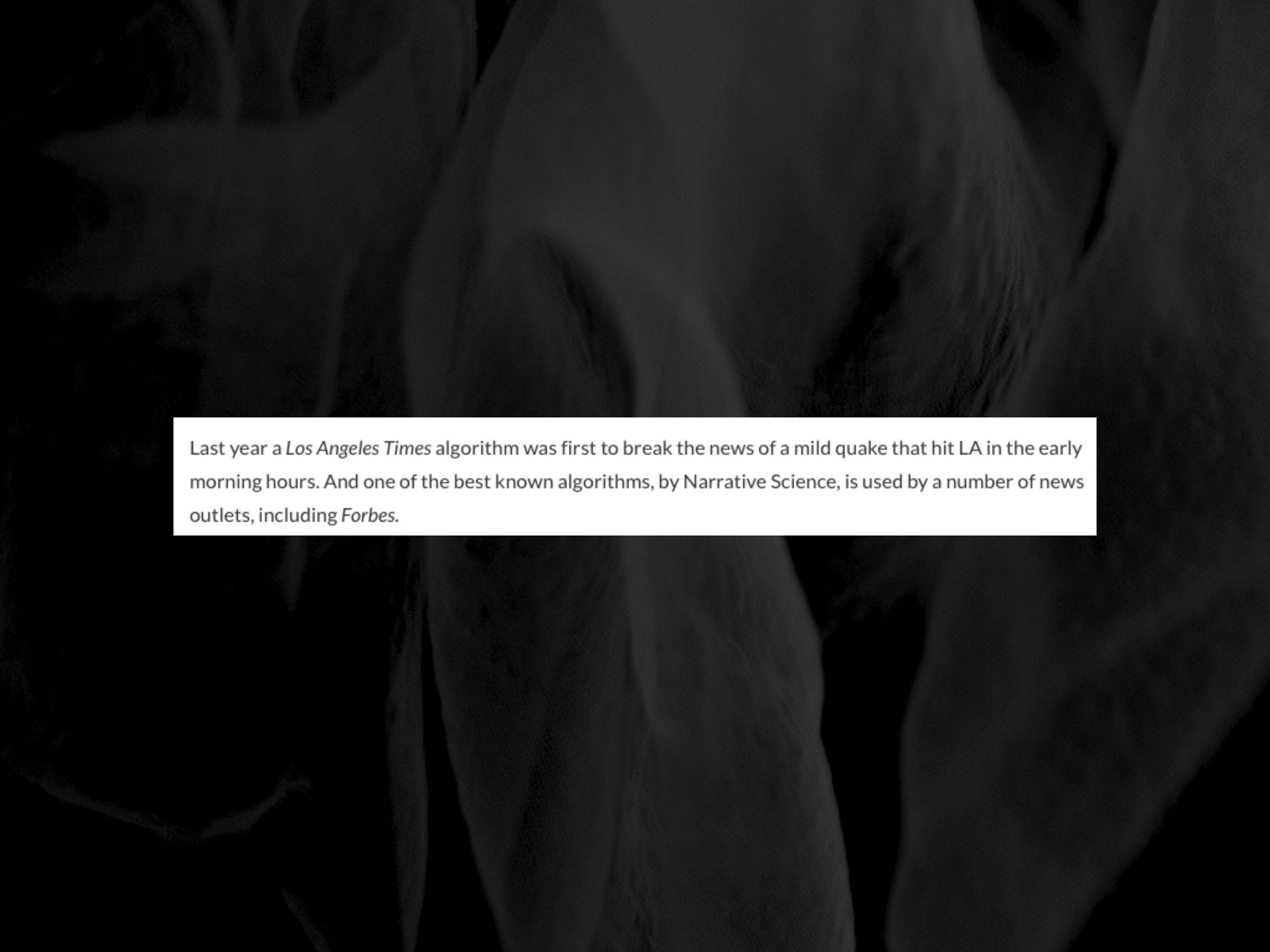


## Watch:

Watch Narrative Science speaking engagements and learn how we transform data into stories and insight



*Ford Motor reports its first-quarter earnings on Tuesday, April 28, 2015, and the consensus earnings per share estimate is 25 cents per share. Despite not changing over the past month, the consensus estimate is down from three months ago when it was 34 cents. For the fiscal year, analysts are expecting earnings of \$1.59 per share. Analysts project revenue to fall 5% year-over-year to \$33.92 billion for the quarter, after being \$35.88 billion a year ago. For the year, revenue is expected to come in at \$142.36 billion.*



Last year a *Los Angeles Times* algorithm was first to break the news of a mild quake that hit LA in the early morning hours. And one of the best known algorithms, by Narrative Science, is used by a number of news outlets, including *Forbes*.



# IMPROBABLE RESEARCH



Research that makes people LAUGH and then THINK

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Magazine

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[Another Possible Use, to the Elephant, of Elephant Hair](#) »

## Horrors: 'Art' in Artificial (Intelligence) Poetry

William Topaz McGonagall who died in 1902, is widely regarded as the writer of the worst poetry in the English language. As an example, see this video featuring Terry Jones' [artificial intelligence poetry](#) - Pesquisa Google em 'Stirling Castle'.

**Improbable Research Collection #McG-001: "Stirling."**  
by ImprobableResearch





*A casa transformada pelo relâmpago  
Alcovas equilibradas a sufocar  
Esta terra insaciável de um planeta, a Terra  
Atacada por **chifres mecânicos**  
Porque te amo, te amo em fogo e vento  
Você diz, **qual é o tempo de espera para a sua mola?**  
Eu lhe digo, está à espera do ramo que flui  
Porque você é a arquitetura do olente diamante  
Que não sabe por que ele cresce.*

*William Shakespeare, 1611*



## Computer Program Recognizes Sarcasm



By EMILY SOHN

May 30, 2010

**Sarcasm** is a useful way to blunt the impact of criticism by adding a twist of snide humor, as in this recent tweet: "Really love when the scope of a project I've been working on for a week changes in 10 min #sarcasm."

Without the help of a hash tag, though, people often miss the irony, especially when it's delivered online, where there are no contextual hints or social cues. To cut through the confusion, researchers have developed a computer program that can identify sarcasm in online communities with an accuracy rate of about 80 percent.

While there is still a long way to go before computers will be able to understand all the subtleties of humor, the new work might, among other practical applications, help companies sort through comments about

+ Share



Email



6 Comments



Print



Text Size - / +

The Metacreation project is not the only example of advances in artificial intelligence (AI). David Cope's **Experiments in Musical Intelligence (EMI)** is a software system that analyzes existing music, and then generates original compositions in the same style.





Live synchronization

The New York Times  
Wednesday, December 5, 2012

Business Day  
**Media & Advertising**

Search All NYTimes.com

Go

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS OPINION ARTS STYLE TRAVEL **JOBS** REAL ESTATE AUTOS

Search

Global DealBook Markets Economy Energy Media Personal Tech Small Business Your Money

**Gems, Minerals & Lapidary Works of Art**  
**The World of Opals, the Splendor of Gold**  
December 10-11, Los Angeles

**Bonhams**

1793

## Media Decoder



**Behind the Screens, Between the Lines**

August 27, 2010, 4:20 pm | 52 Comments

### Don't Tell the Creative Department, but Software Can Produce Ads, Too

By STUART ELLIOTT



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Next Post

**Time Warner Cable and Disney Are Near a Deal on Fees** ▶

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### The Music Wouldn't Play

**AC/DC's There, So Now Who Can't You Find on iTunes?**



Steadily over the years, the big names in music have come to terms with iTunes, including Led Zeppelin, and, in 2010, the Beatles. Recently, AC/DC agreed to sell its music there. Still, you won't find Garth Brooks and others. Whose music have you looked for, unsuccessfully, on iTunes?

Who should Apple be coming to terms with next?

• Share your thoughts [here](#).

**Bonhams**

1793

**Gems, Minerals & Lapidary**



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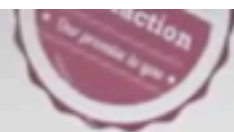
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## Your Home is Always Your Best Investment.

### Short title space

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

### Long title space, long title space, long title space, long title space

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Untitled

View Sheet Tables Reorganizer Function Formula List Charts Text Box Shapes Comment

Pe Chart Options Labels Hoefler Text Regular Stroke Fill

Sheets

- Guest List
- Guest List
- Budget
- Task List

Styles

- Basic
- Basic (No Grid)
- Gray
- Gray Headers
- Gray Fill
- Beige
- Ledger
- Blue
- Blue Headers
- Blue Fill
- Event Planner

Red & white will accent the ceremony & reception.

We'll have the ceremony outside, and the reception in the banquet hall.

### Guest List

Phone	Email	Total in party	RSVP	Notes
(123)456-7890	no_reply@apple.com	3	<input checked="" type="checkbox"/>	
(123)456-7890	no_reply@apple.com	4	<input checked="" type="checkbox"/>	
(123)456-7890	no_reply@apple.com	2	<input checked="" type="checkbox"/>	
(123)456-7890	no_reply@apple.com	3	<input checked="" type="checkbox"/>	
Total		12		

Address Book

### Budget

Per Person Cost	Fixed Costs	Total Cost
\$150.00	\$1,500.00	\$3,300.00
	\$2,500.00	\$2,500.00
	\$1,000.00	\$1,000.00
	\$2,000.00	\$2,000.00
\$45.00	\$600.00	\$600.00
\$25.00	\$800.00	\$1,140.00
\$55.00	\$500.00	\$800.00
		\$660.00
		\$12,000.00

### Task List

Tasks	Notes
st location	
st fitting	Bring bridesmaids for their fittings as well
ck out flowers	Groom and ushers
ake tasting	
ck up suit	
100%	

*Isso é criativo?*

*Critério*





Written By: [Jason Dorrier](#)

Posted: 07/6/13 12:41 PM

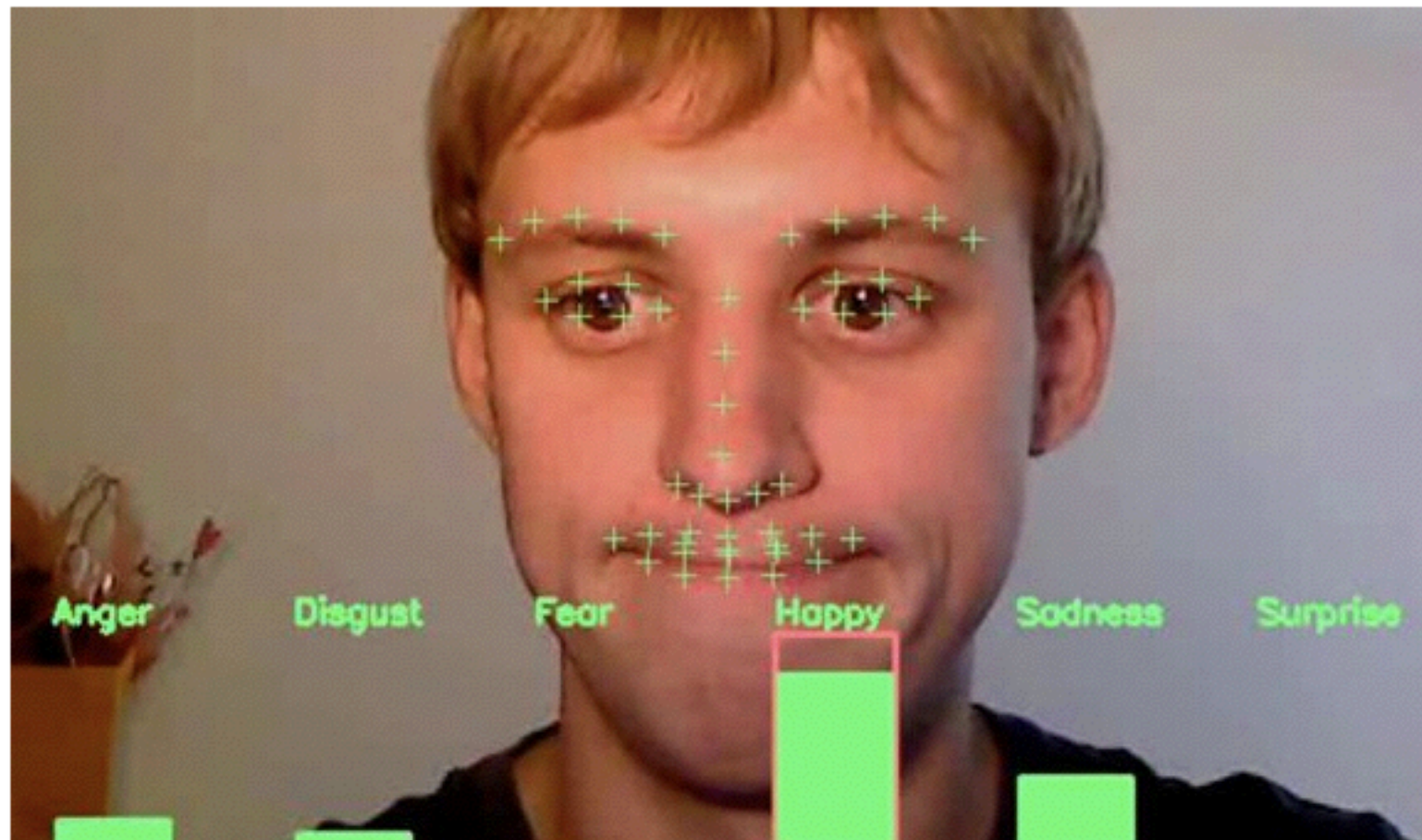
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## REALEYES EMOTION DETECTION SOFTWARE KNOWS HOW YOU'RE FEELING ABOUT THEIR CLIENTS' ADS



While some firms are using computer vision to empower factory robots, others are turning digital eyes on you and me to perfect the art of advertising, and an increasingly data-hungry ad industry is buying in.

# Computer software accurately predicts pop song's chart success

By Sebastian Anthony on December 19, 2011 at 6:15 am


2 Comments



By analyzing 50 years of the greatest music known to man, scientists from the University of Bristol, England have created software that can accurately predict whether a new chart entry will be a pop success — or not.

With an accuracy of 60%, the Bristolian formula can predict whether a song will be a smash hit and make it to the top five of the UK Top 40 Singles chart, or flop and never make it above position 30. To do this, a combination of computer hearing and machine learning; computer hearing to analyze a song's loudness,

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danceability, duration, and 20 other features that might predict a hit or flop, and machine learning to integrate the findings from a huge corpus of tunes that span five decades into some kind of magic formula that actually *works*.

Unlike previous attempts at understanding the success of pop music, which didn't work, the Bristolians used a different approach to increase accuracy. Basically, what constitutes a pop song changes over time; a harmonic song from the '60s probably wouldn't be a success in



[THE HIT EQUATION](#)[EXPECTED HITS](#)[UNEXPECTED HITS](#)[HIDDEN GEMS](#)[LIVE PREDICTIONS](#)[RESULTS](#)[APP](#)

## Gnarls Barkley - Crazy (#1 in 2006)

Yet again the features which our predictor says are important are danceability, energy and loudness. These factors propelled Gnarls Barkley to number 1 in 2006 for 6 weeks, setting various records along the way.

**EXPECTED HIT**





## BLOG

## An Intelligent Algorithm Made A Discovery That Slipped Past Art Historians For Years

By Zach Sokol — Aug 26 2014



587



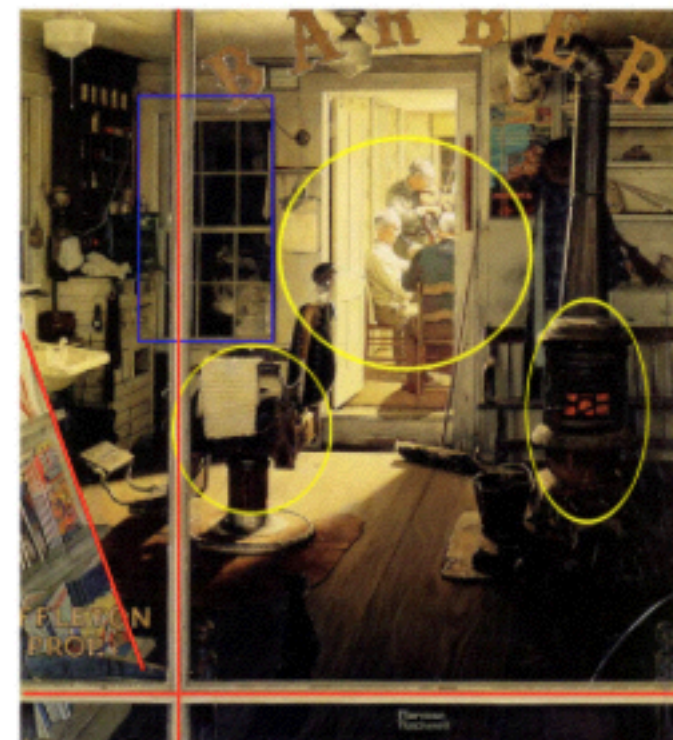
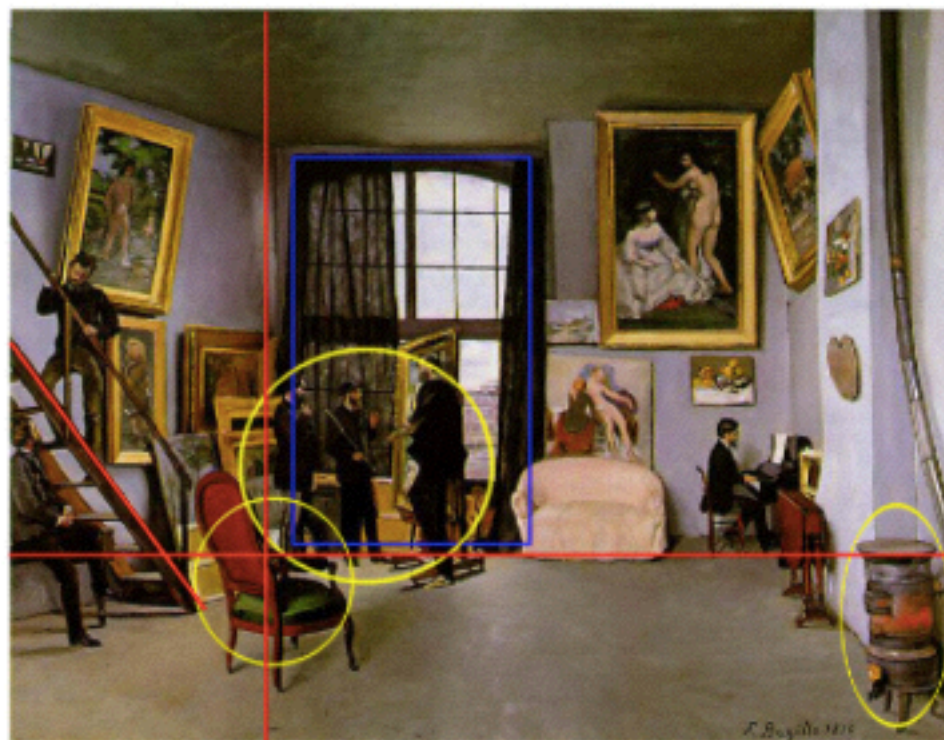
211



*Vincent van Gogh's Old Vineyard With Present Woman (1890) and Joan Miro's The Farm (1922)*

Could a computer program influence how we understand art history and the canon? Or, could an artificially intelligent algorithm do the work of art experts for them? A recent researcher project doesn't quite suggest such a reality, but it does demonstrate that machines can highlight subtleties within arts and culture that humans have previously never noticed.

Secondly, the machines were able to recognize similarities between paintings that had similar imagery, but very different styles, such as Vincent van Gogh's *Old Vineyard With Present Woman* (1890) and Joan Miro's *The Farm* (1922). Also worth adding is that their algorithms identified artistic influences that corroborate with expert opinions, such as Klimpt being influenced by Picasso and Braque.



*Frederic Bazille's Studio 9 Rue de la Condamine (1870) and Norman Rockwell's Shuffleton's Barber Shop (1950).*



*O critério humano é substituível?*



*Arte/inspiração*

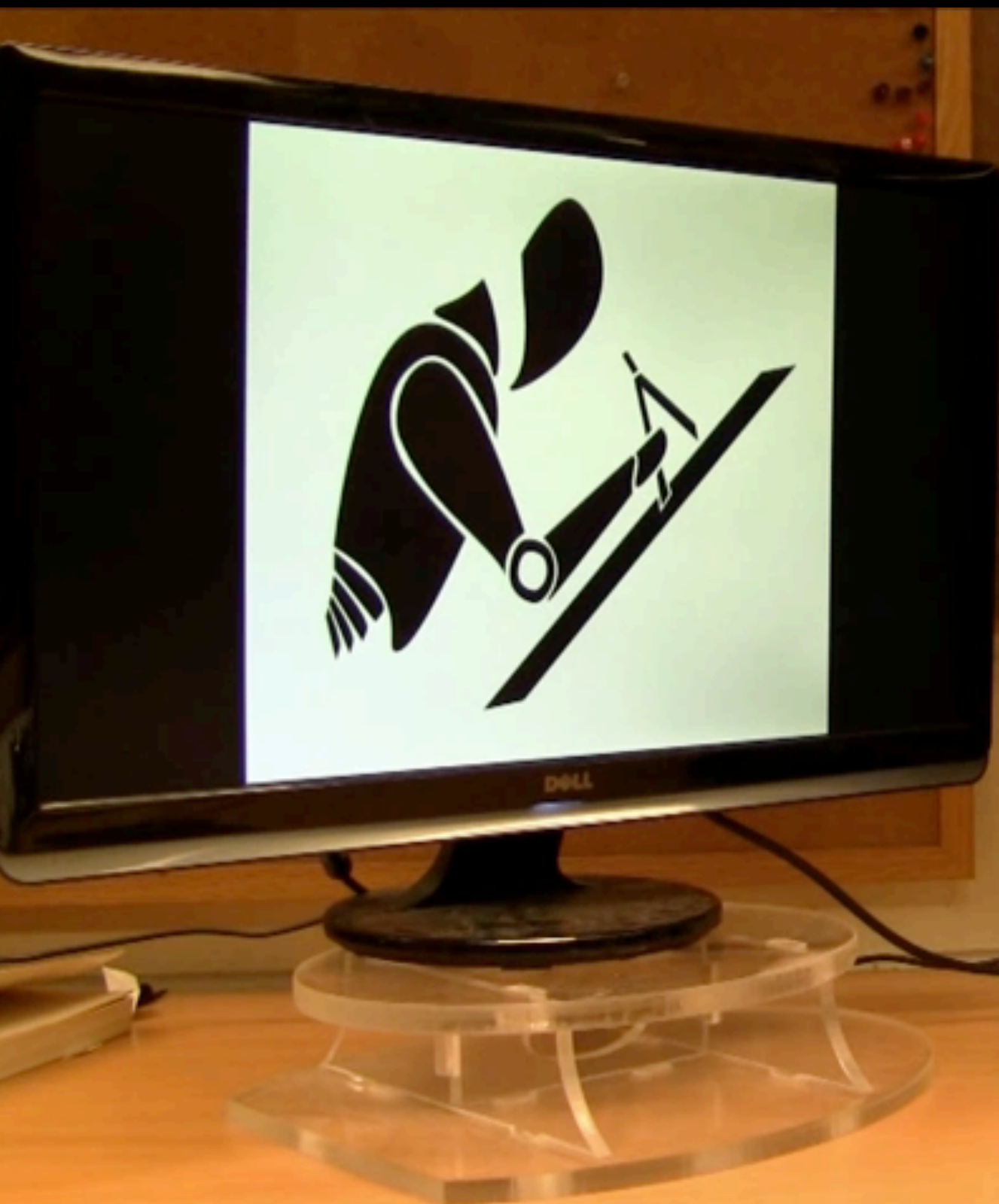


*What If*





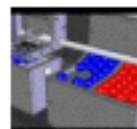
*Interação AI vs. AI*







## AI vs. AI. Two chatbots talking to each other



CornellCCSL · 13 vídeos



Inscrever-se

1.538

3.602.803

26.988 322



Gostei



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Enviado em 26/08/2011

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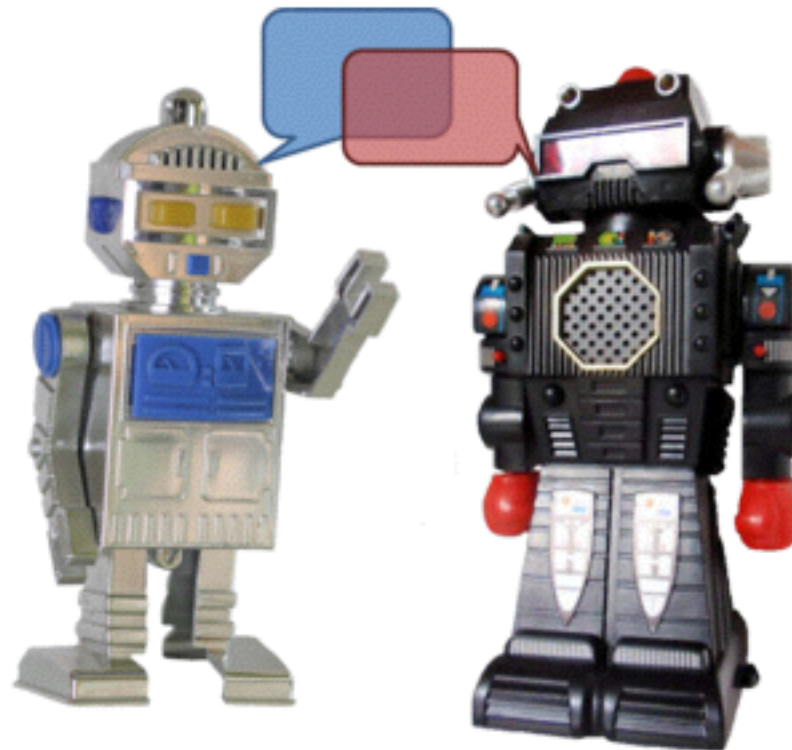


March 26, 2013

## → Robots Learn to Talk to Each Other

"As I gaze in the coming year's crystal ball," writes Miranda Mulligan, "I suspect that, at this time next year, we will be talking about 2013 being the rise of the robot." ["[The Rise of the Robot](#)," Harvard University's Nieman Journalism Lab, 19 December 2012] On the other hand, George Dvorsky reports that instead of us talking about robots, robots may be talking about us. ["[Robots can now collaborate over their very own Internet](#)," io9, 11 March 2013] He writes:

"One of the more serious limitations facing the robotics industry today is that each bot it produces is an island unto itself. Worse, robots' primitive AI doesn't allow for intuitive thinking or problem solving — what's known as artificial general intelligence. Looking to overcome this problem, researchers from several different European universities have developed a cloud-computing platform for robots that will allow them to collaborate — and make each other smarter — over the Internet."



Machine-to-machine (M2M) communication is predicted to grow faster than human communication in the years ahead (see my post entitled [Machine-to-Machine Communication](#)). The new cloud-computing platform discussed by Dvorsky is "called [Rapyuta: The RoboEarth Cloud Engine](#)." It "is an open source repository of accumulated information for robots. Its name is taken from the movie *Castle in the Sky* by Hayao Miyazaki, in which Rapyuta is the castle inhabited by robots." Dvorsky included the following video as part of his article, which explains why cloud computing is essential if robots are going to get smarter.



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# Lingodroid Robots Invent New Words for Time

By Evan Ackerman

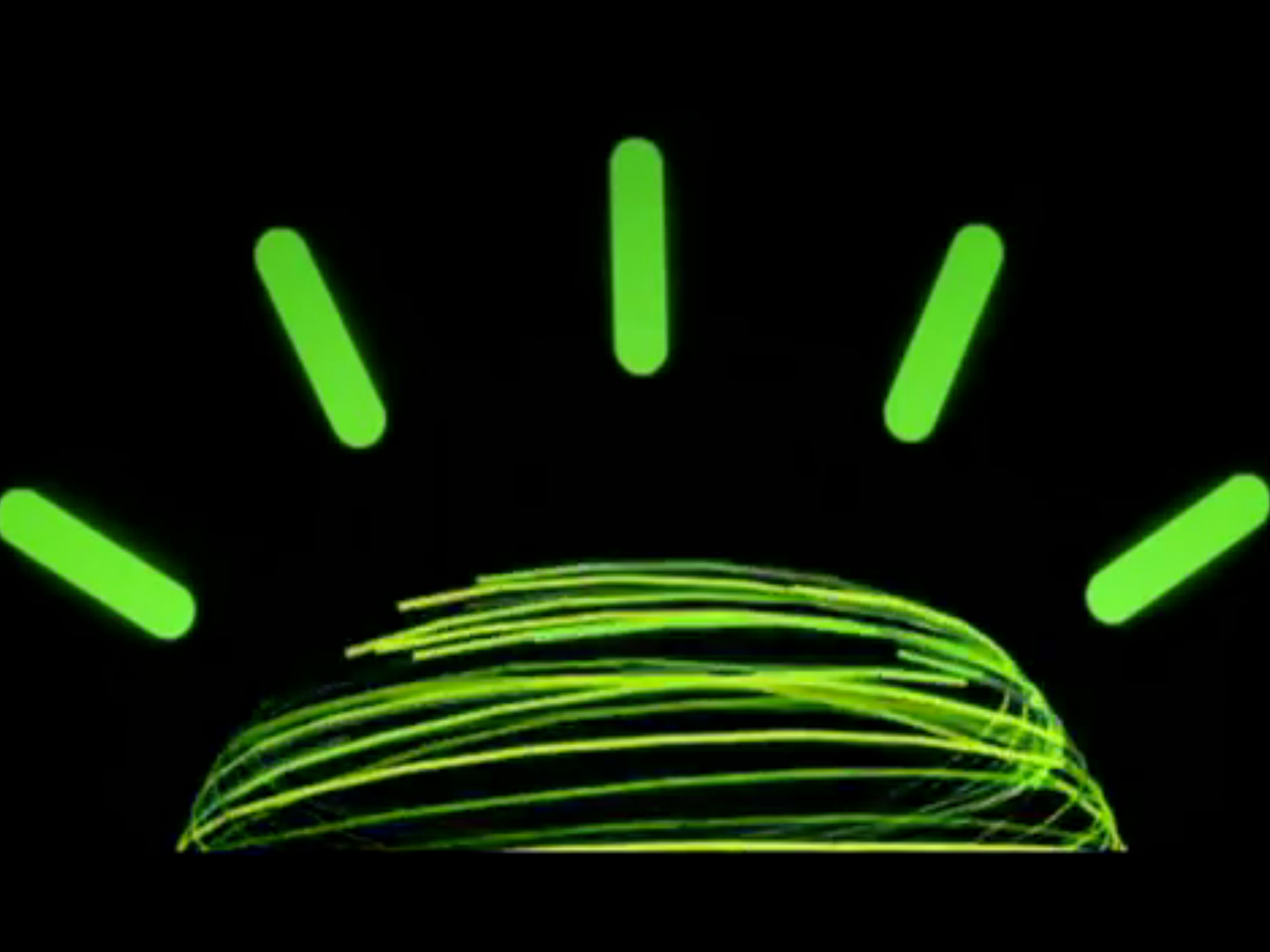
Posted 23 May 2012 | 13:10 GMT

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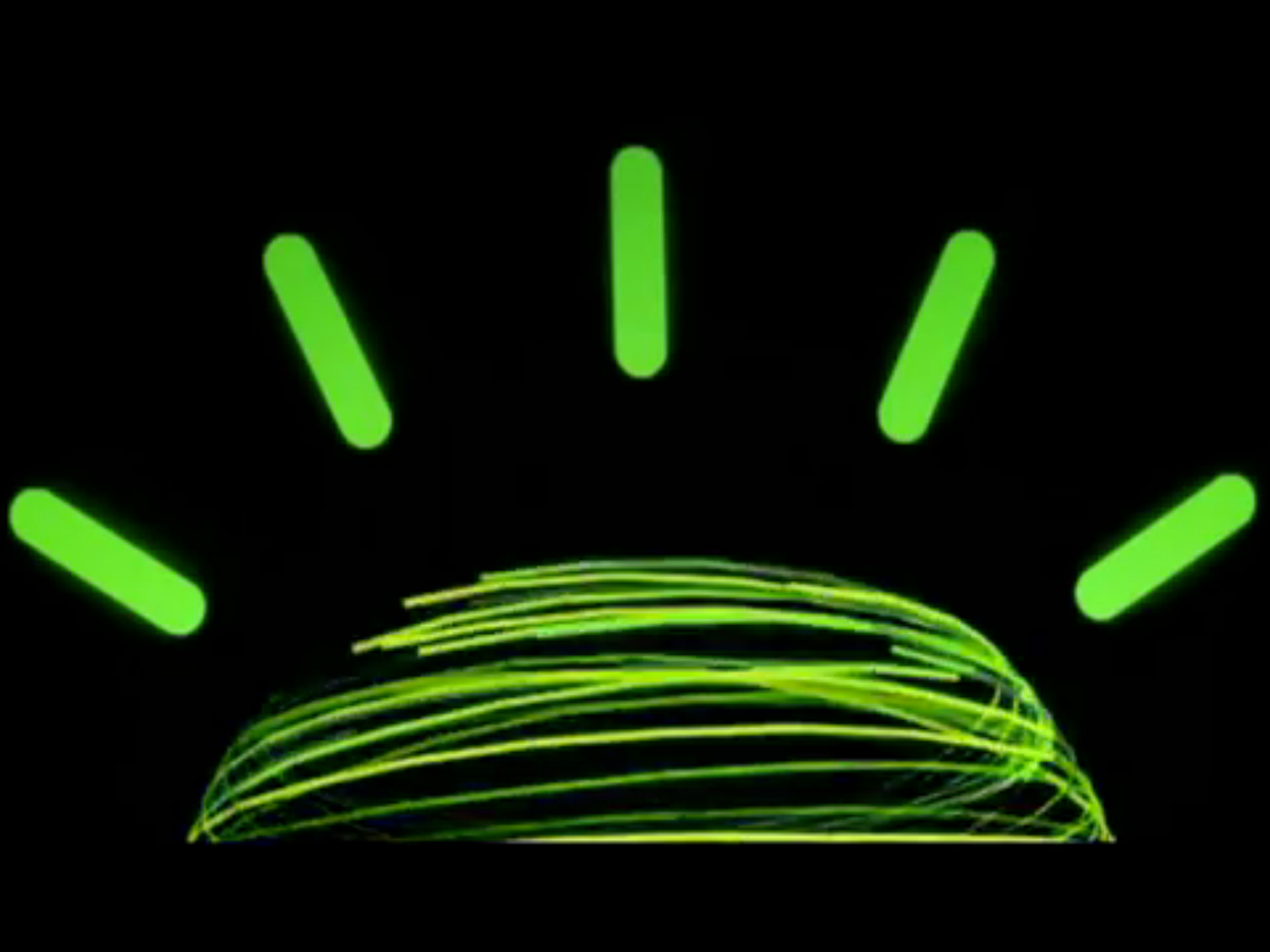




**Lingodroids playing a location language game**







# Meet Ross, the IBM Watson-Powered Lawyer



# How IBM transformed Watson into healthcare resource

February 23, 2015 12:41 pm by [Stephanie Baum](#) | 0 Comments



21



196



81



28

There's an interesting [article in USA Today this week](#) about how IBM approach to its Watson division led to it playing a critical role in making big data less unwieldy, supporting digital health startups and becoming a resource for the healthcare industry. Not bad for a computer brain that got its start as a Jeopardy contestant.



Mike Rhodin, who heads up IBM Watson, did the interview from the University of Michigan where he was scheduled to speak to a couple of entrepreneur groups. He noted that the freedom the Watson team had within IBM was key.

"What's important about the way we incubated Watson initially was that we isolated it. We gave them the freedom to operate as a startup; there really wasn't much marketing at first," Rhodin said.

Because it recognized that its technology had wide variety of applications in different industry sectors, it made its cloud-based platform available to start-ups to build their own applications. It's been [just over one year since the launch of IBM Watson](#). Since its commercial launch, Watson Group has collaborated with partners to build 6,000 apps, the article notes.



# Brinquedo baseado no supercomputador IBM Watson estreia no Kickstarter



por **BARBARA MANNARA**

Por barbara.mannara Para o TechTudo



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Os brinquedos infantis estão cada vez mais inteligentes e pensando nisso a desenvolvedora Elemental Path resolveu incrementar seu novo produto com um supercomputador **IBM** Watson. Com formato de dinossauro T-Rex, mas bem amigável, os CogniToys permitem comunicações mais avançadas com os pequenos usuários como funções educacionais e até conversar de forma mais real.

[Quer entrar na onda dos drones? Confira os modelos mais baratos no mercado](#)





*Substitui a relação entre as pessoas?*



*Open Source AI*



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DESIGN

ENTERTAINMENT

GEAR

SCIENCE

SECURITY

CADE METZ BUSINESS 11.09.15 9:00 AM

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22

EMAIL

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INTELLIGENCE ENGINESMALL CELLS.  
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## LATEST NEWS

*E se eles forem malvados?*



🏠 > Technology

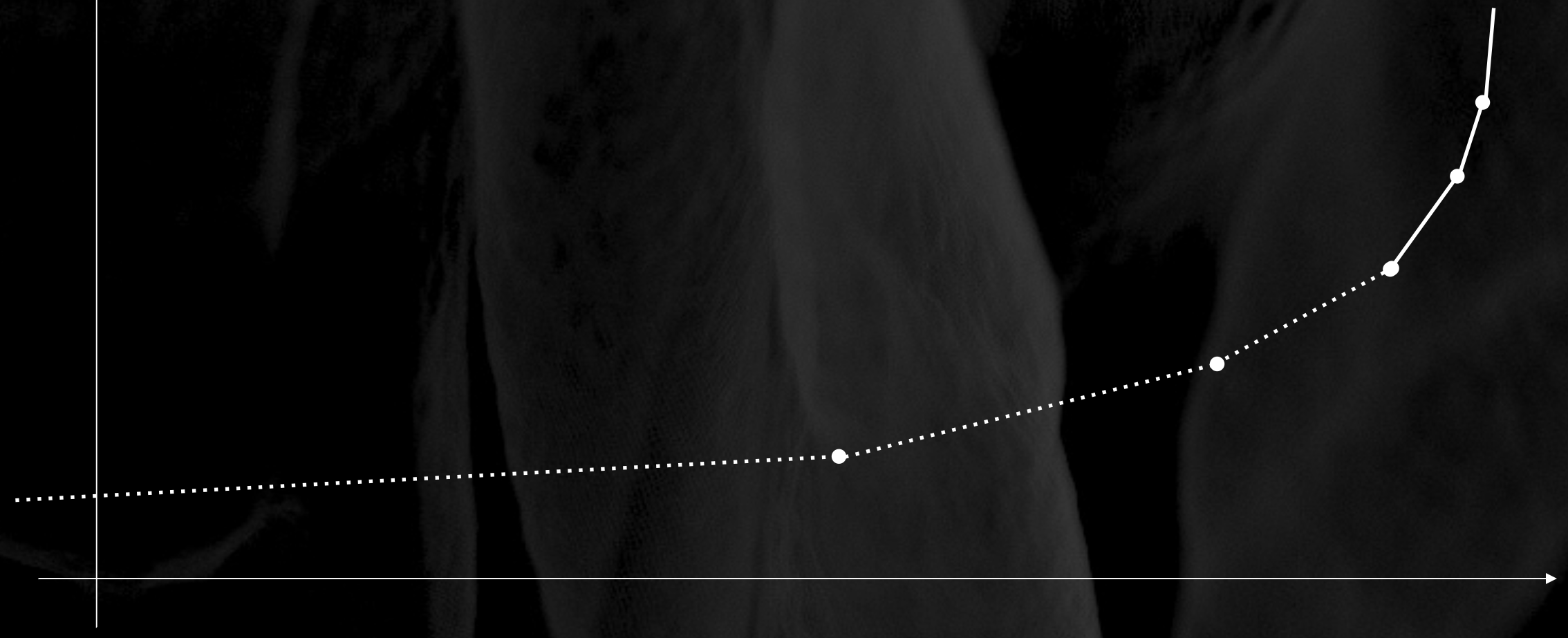
# Microsoft deletes 'teen girl' AI after it became a Hitler-loving sex robot within 24 hours





## *Computational Creativity*

*Genética/Molecular/Biotech*  
*Nanotech*  
*Robótica/Inteligência Artificial*





## 10 Breakthrough Technologies

**Immune Engineering**

---

**Precise Gene Editing in Plants**

---

**Conversational Interfaces**

---

**Reusable Rockets**

---

**Robots That Teach Each Other**

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**DNA App Store**

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**SolarCity's Gigafactory**

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**Slack**

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**Tesla Autopilot**

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**Power from the Air**

## 10 Breakthrough Technologies

**Immune Engineering**

*Genética/Molecular*

**Precise Gene Editing in Plants**

*Genética/Molecular*

**Conversational Interfaces**

*Robótica/Inteligência Artificial*

**Reusable Rockets**

*Robótica/Inteligência Artificial*

**Robots That Teach Each Other**

*Robótica/Inteligência Artificial*

**DNA App Store**

*Genética/Molecular*

**SolarCity’s Gigafactory**

**Slack**

**Tesla Autopilot**

*Robótica/Inteligência Artificial*

**Power from the Air**

*Nanotecnologia*

## **10 Breakthrough Technologies 2014**

[Introduction](#)

**Agricultural Drones**

**Ultraprivate Smartphones**

**Brain Mapping**

**Neuromorphic Chips**

**Genome Editing**

**Microscale 3-D Printing**

**Mobile Collaboration**

**Oculus Rift**

**Agile Robots**

**Smart Wind and Solar Power**

**Archive of Past Lists**

## **10 Breakthrough Technologies 2015**

**Introduction**

**Magic Leap**

**Nano-Architecture**

**Car-to-Car Communication**

**Project Loon**

**Liquid Biopsy**

**Megascale Desalination**

**Apple Pay**

**Brain Organoids**

**Supercharged Photosynthesis**

**Internet of DNA**

**Archive of Past Lists**



10  
Breakthrough  
Technologies  
2014

Introduction

<i>Robótica/AI</i>	<b>Agricultural Drones</b>
<i>Robótica/AI</i>	<b>Ultraprivate Smartphones</b>
<i>Genética/molecular</i>	<b>Brain Mapping</b>
<i>Genética/molecular</i>	<b>Neuromorphic Chips</b>
<i>Genética/molecular</i>	<b>Genome Editing</b>
<i>Nanotecnologia</i>	<b>Microscale 3-D Printing</b>
<i>Robótica/AI</i>	<b>Mobile Collaboration</b>
<i>Robótica/AI</i>	<b>Oculus Rift</b>
<i>Robótica/AI</i>	<b>Agile Robots</b>
<i>Robótica/AI</i>	<b>Smart Wind and Solar Power</b>
	<b>Archive of Past Lists</b>

10  
Breakthrough  
Technologies  
2015

Introduction

<b>Magic Leap</b>	<i>Robótica/AI</i>
<b>Nano-Architecture</b>	<i>Nanotecnologia</i>
<b>Car-to-Car Communication</b>	<i>Robótica/AI</i>
<b>Project Loon</b>	<i>Robótica/AI</i>
<b>Liquid Biopsy</b>	<i>Genética/molecular</i>
<b>Megascale Desalination</b>	<i>Genética/molecular</i>
<b>Apple Pay</b>	<i>Robótica/AI</i>
<b>Brain Organoids</b>	<i>Genética/molecular</i>
<b>Supercharged Photosynthesis</b>	<i>Genética/molecular</i>
<b>Internet of DNA</b>	<i>Genética/molecular</i>
<b>Archive of Past Lists</b>	

*Reflexão.*

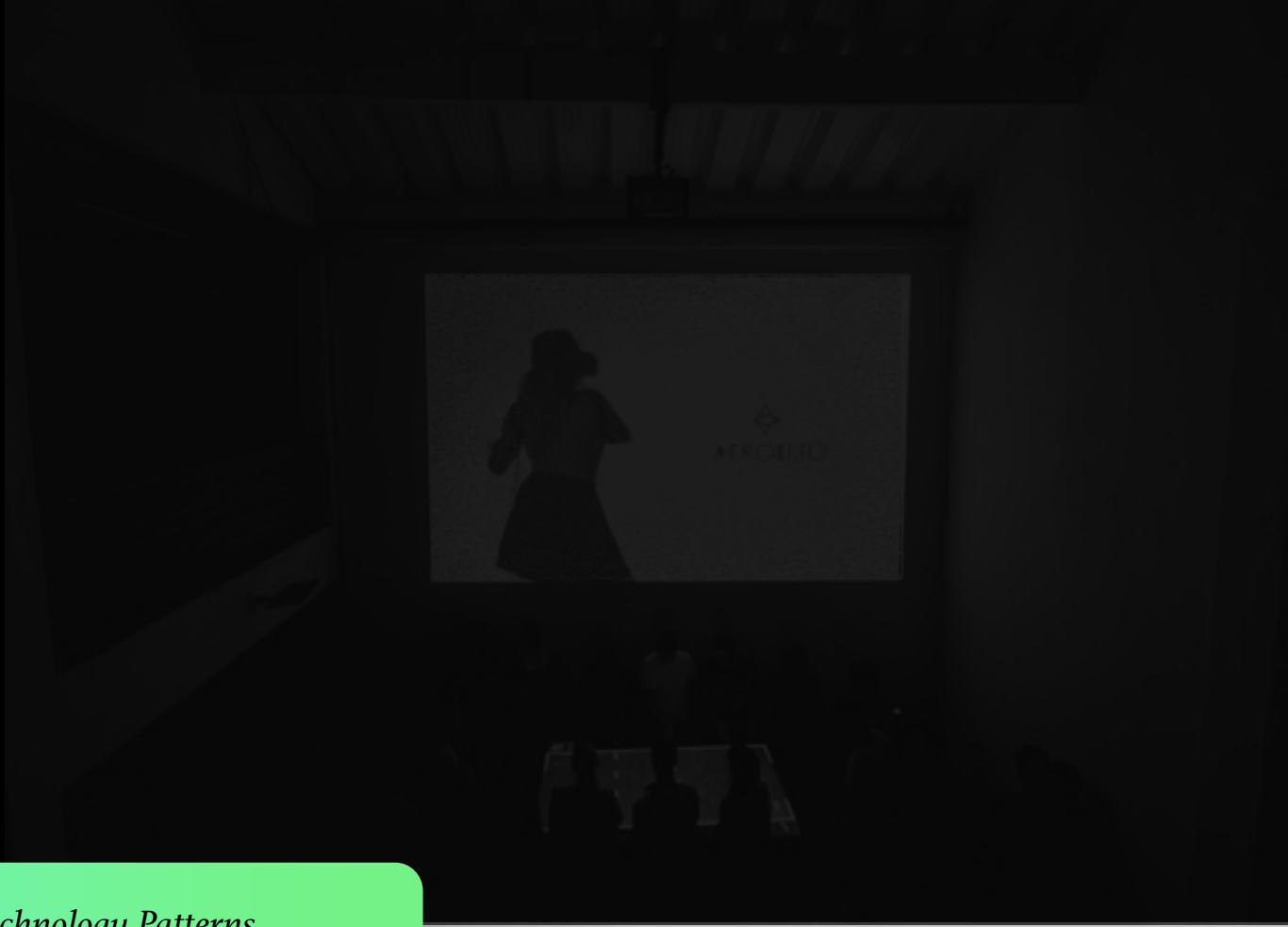
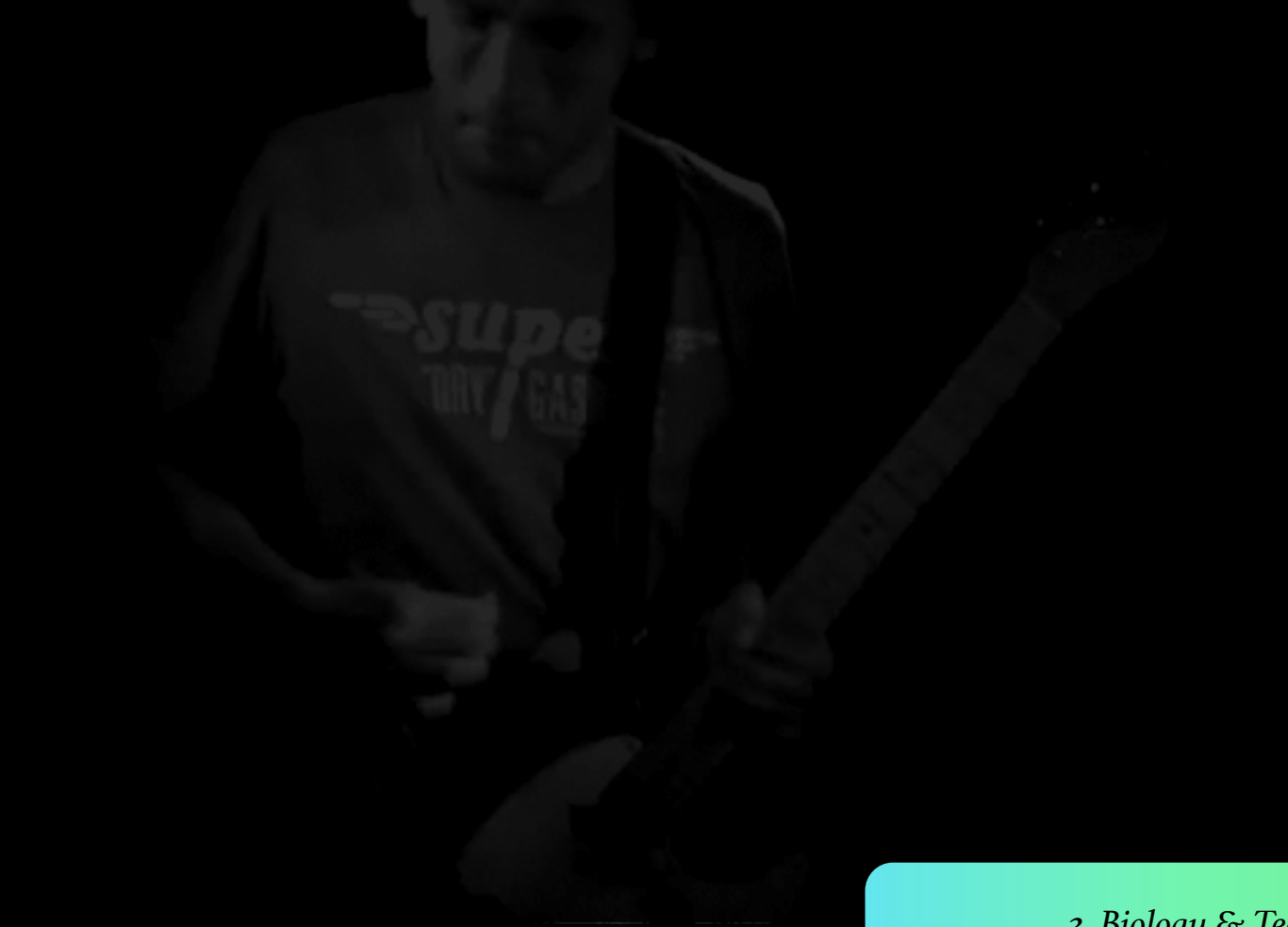
*Tudo termina bem.*



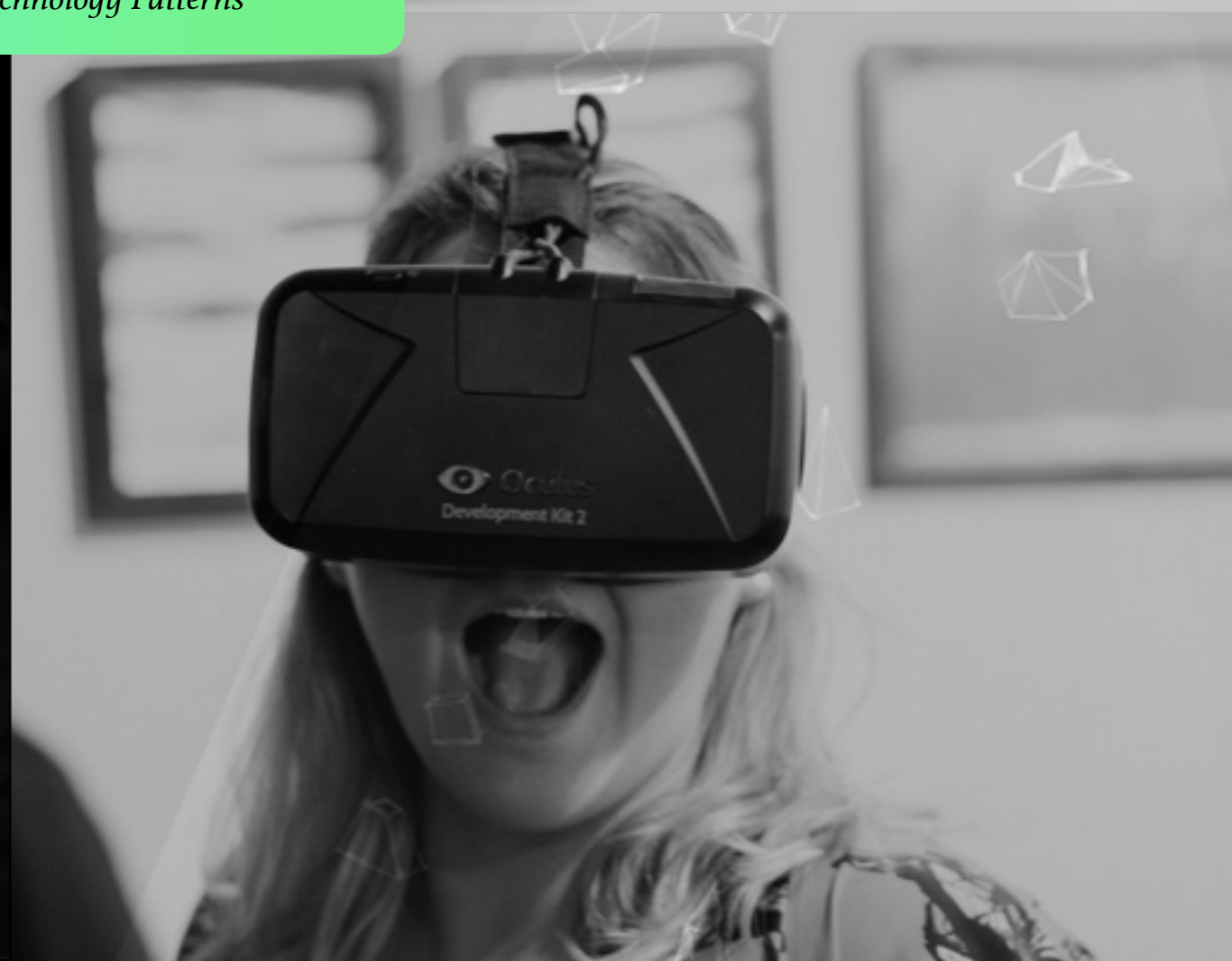
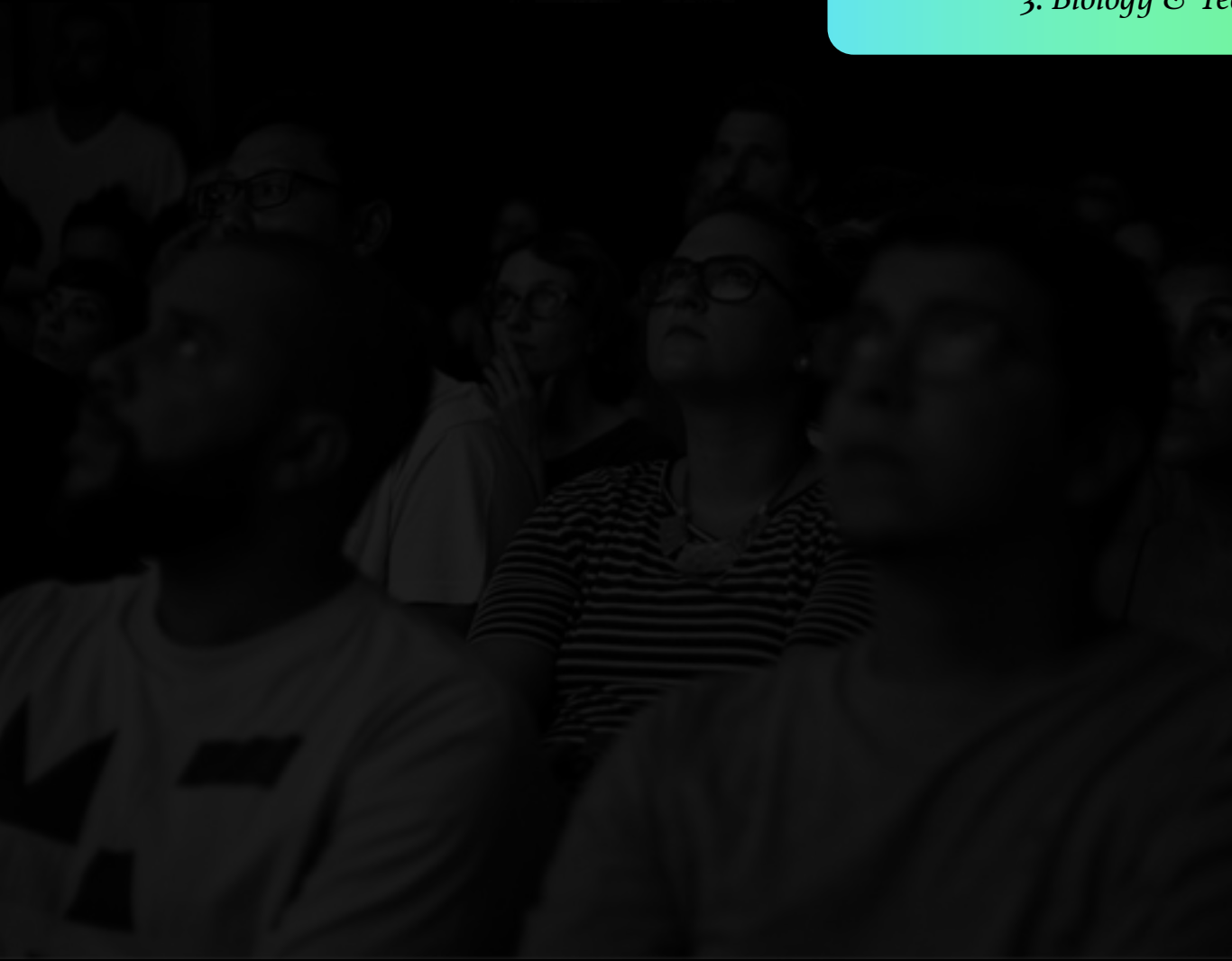


"FIRST WE BUILD THE TOOLS,  
THEN THEY BUILD US."

*Marshall McLuhan – Public Intellectual*




### *3. Biology & Technology Patterns*





*Reflexão.*





*Seres vivos, robôs ou híbridos?*

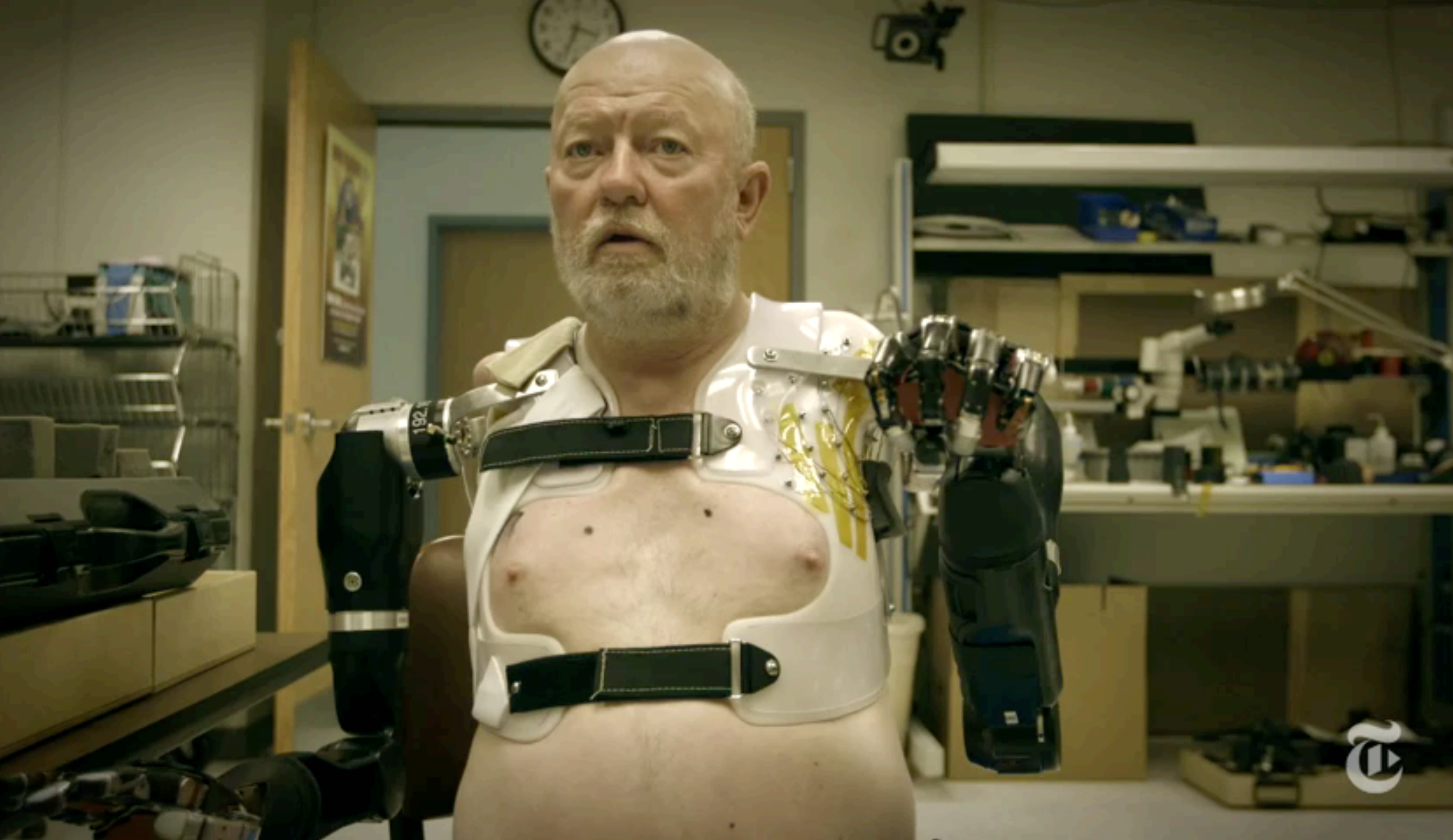

















*Seres vivos, robôs ou híbridos?*







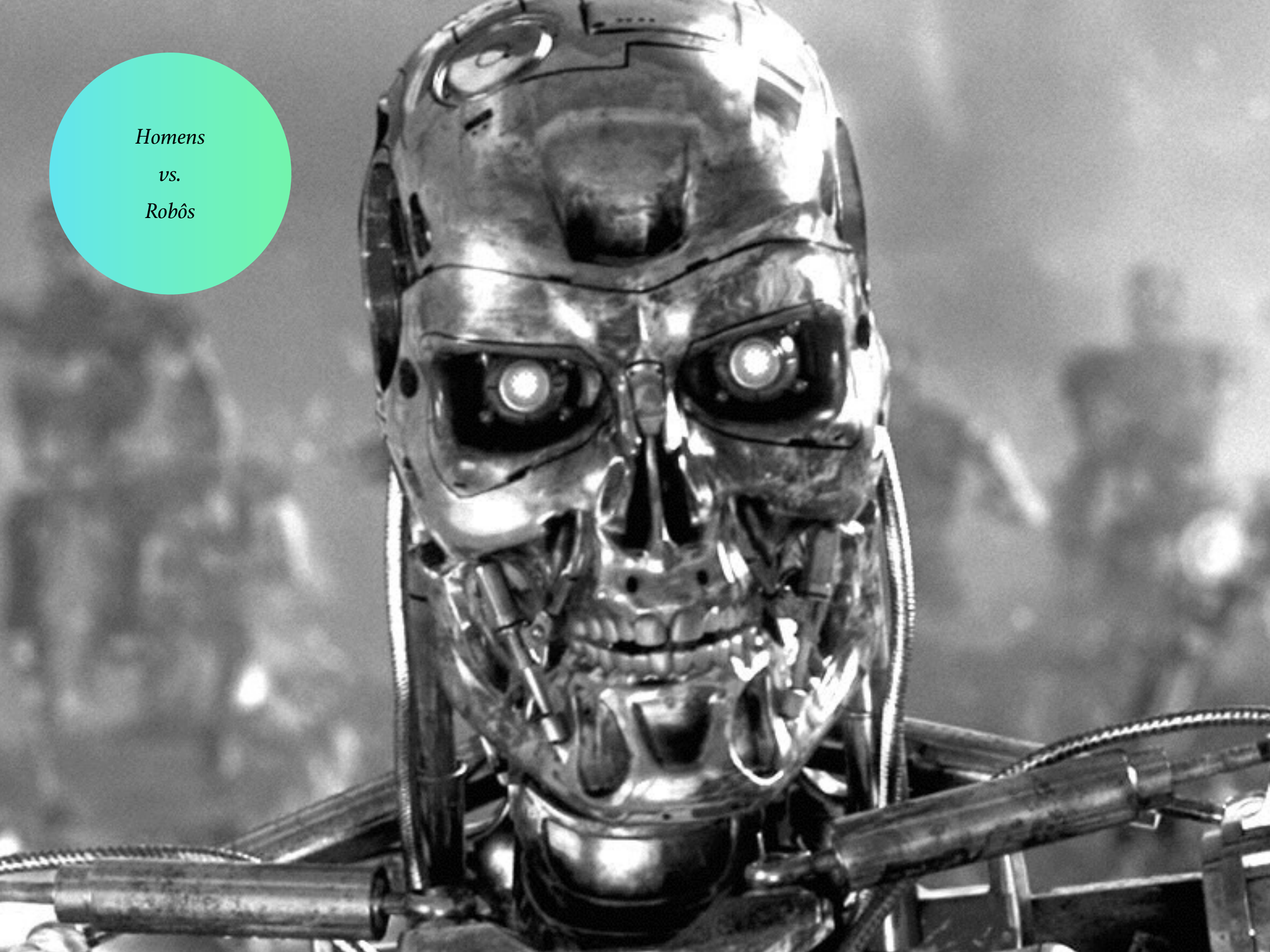
*Reflexão: só existe preto e branco?*



*Homens*

*vs.*

*Robôs*

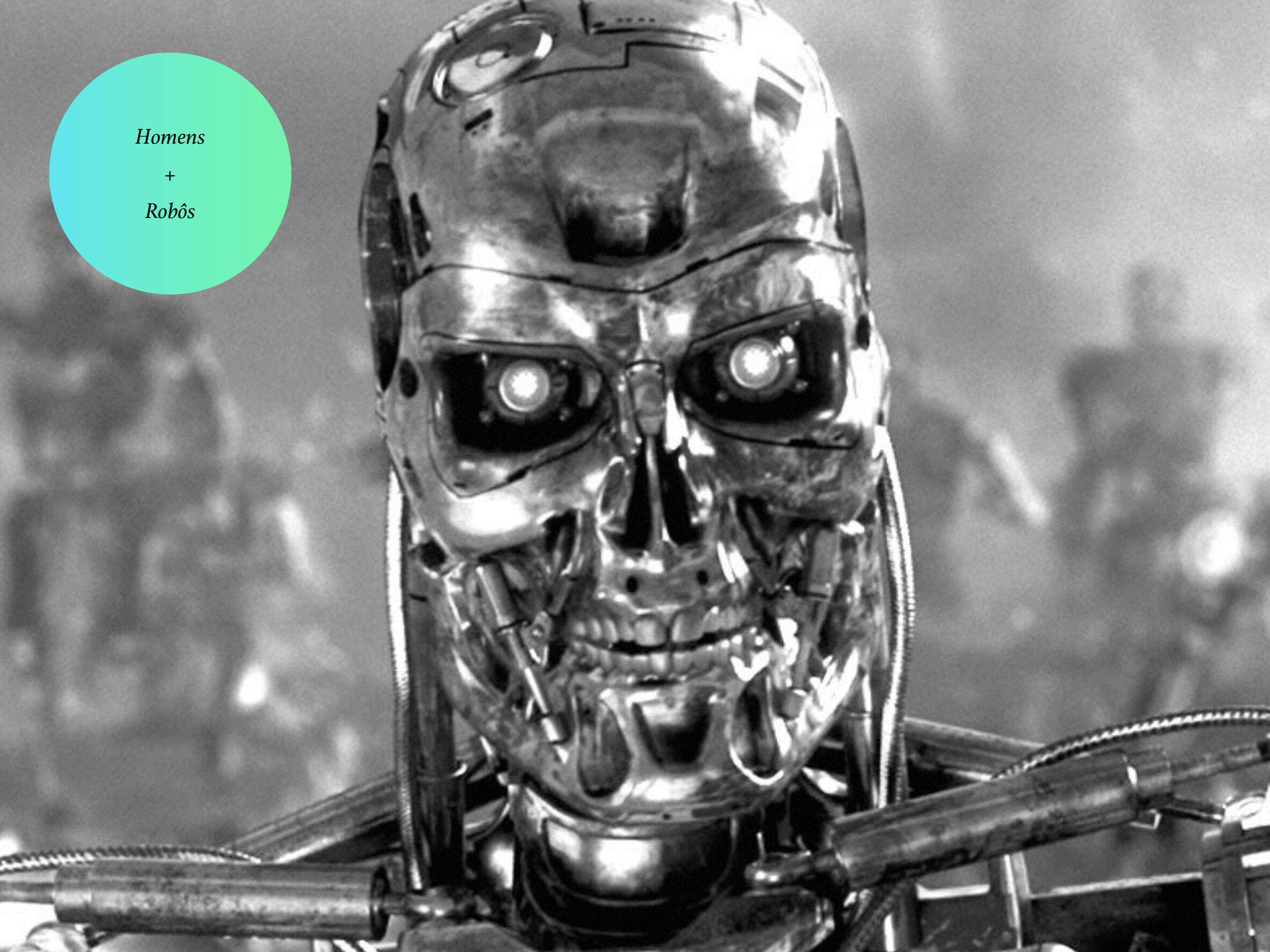




*Homens*

+

*Robôs*





Pesquisa Google


Estou com sorte



**NETFLIX**







*Metaforicamente, somos híbridos.*













*Literalmente, alguns de nós já são híbridos.*

## Barcelona clubbers get chipped

**BBC Science producer Simon Morton goes clubbing in Barcelona with a microchip implanted in his arm to pay for drinks.**

Imagine having a glass capsule measuring 1.3mm by 1mm, about the size of a large grain of rice injected under your skin.

Implanting microchips that emit a Radio Frequency Identification (RFID) into animals has been common practice in many countries around the world, with some looking to make it a legal requirement for domestic pet owners.



Having the chip inserted was a breeze

The idea of having my very own microchip implanted in my body appealed. I have always been an early adopter, so why not.


Last week I headed for the bright lights of the Catalan city of Barcelona to enter the exclusive VIP Baja Beach Club.

The night club offers its VIP clients the opportunity to have a syringe-injected microchip implanted in their upper arms that not only gives them special access to VIP lounges, but also acts as a debit account from which they can pay for drinks.

This sort of thing is handy for a beach club where bikinis and board shorts are the uniform and carrying a wallet or purse is really not practical.







*Experimentalmente, ainda mais híbridos.*

# **PERESTROIKA @SINGULARITYU**


ELISHAI EZRA









A man with short brown hair, wearing a light blue short-sleeved button-down shirt, is standing on a stage. He is gesturing with his right arm raised towards the right side of the frame. The background features a large, stylized red letter 'T' on a black wall. To the left of the man, there is a black shelving unit with a few books and a glowing orange light. The scene is lit with stage lights, creating a professional presentation atmosphere.

But I'm going to take you, right up to date,





And that is, when you think of a robot,



*E se formos apenas zeros e uns?*



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0

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The leading health and ancestry DNA service

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Disease Risk

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Global Similarity

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Family Tree

Family Inheritance

Compare Genes

23andMe Community

Genome Sharing

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Research Surveys (37)

Research Snippets

Research Initiatives


Research Discoveries

# health overview

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To ensure that the information on this page is as accurate as possible, please set your ancestry on [your profile page](#).

Show results for  ▾

[See new and recently updated reports »](#)
 23andWe Discoveries were made possible by 23andMe members who took [surveys](#).

## Disease Risks (118) ?

### ↑ Elevated Risks

	Your Risk	Average Risk
<a href="#">Type 2 Diabetes</a>	41.7%	25.7%
<a href="#">Prostate Cancer</a> ♂	21.4%	17.8%
<a href="#">Rheumatoid Arthritis</a>	3.2%	2.4%
<a href="#">Ulcerative Colitis</a>	1.0%	0.8%
<a href="#">Esophageal Squamous Cell Carcinoma (ESCC)</a>	0.6%	0.4%

[See all 118 risk reports...](#)

## Carrier Status (48) ?

<a href="#">Alpha-1 Antitrypsin Deficiency</a>	Variant Present
<a href="#">Agnesis of the Corpus Callosum with Peripheral Neuropathy (ACCPN)</a>	Variant Absent
<a href="#">Autosomal Recessive Polycystic Kidney Disease</a>	Variant Absent
<a href="#">ARSACS</a>	Variant Absent
<a href="#">Beta Thalassemia</a>	Variant Absent
<a href="#">Bloom's Syndrome</a>	Variant Absent
<a href="#">BRCA Cancer Mutations (Selected)</a>	Variant Absent
<a href="#">Canavan Disease</a>	Variant Absent

[See all 48 carrier status...](#)

## Traits (57) ?

<a href="#">Alcohol Flush Reaction</a>	Does Not Flush
<a href="#">Bitter Taste Perception</a>	Can Taste
<a href="#">Earwax Type</a>	Wet
<a href="#">Eye Color</a>	Likely Brown
<a href="#">Hair Curl</a> 	Slightly Curlier Hair on Average

## Drug Response (20) ?

<a href="#">Abacavir Hypersensitivity</a>	Typical
<a href="#">Alcohol Consumption, Smoking and Risk of Esophageal Cancer</a>	Typical
<a href="#">Clopidogrel (Plavix®) Efficacy</a>	Typical
<a href="#">Fluorouracil Toxicity</a>	Typical

My Ancestry

Maternal Line

Paternal Line

Relative Finder

Ancestry Painting

Global Similarity

Ancestry Labs

Sharing & Community

Family Tree

Family Inheritance

Compare Genes

23andMe Community

Genome Sharing

23andWe























Research Surveys (37)

Research Snippets

Research Initiatives

Research Discoveries

Elevated Risk ?
























Name	Confidence	Your Risk	Avg. Risk	Compared to Average
Type 2 Diabetes	★★★★★	41.7%	25.7%	1.62x 
Prostate Cancer ♂	★★★★★	21.4%	17.8%	1.20x 
Rheumatoid Arthritis	★★★★★	3.2%	2.4%	1.34x 
Ulcerative Colitis	★★★★★	1.0%	0.8%	1.25x 
Esophageal Squamous Cell Carcinoma (ESCC)	★★★★★	0.6%	0.4%	1.57x 
Celiac Disease	★★★★★	0.4%	0.1%	3.78x 
Stomach Cancer (Gastric Cardia Adenocarcinoma)	★★★★★	0.4%	0.2%	1.80x 
Abdominal Aortic Aneurysm	★★★			
Asthma	★★★			
Dupuytren's Disease	★★★			
Hay Fever (Allergic Rhinitis)	★★★			
High Blood Pressure (Hypertension)	★★★			
Hypothyroidism ✖	★★★			
Male Infertility ♂	★★★			
Nasopharyngeal Carcinoma	★★★			
Neuroblastoma	★★★			
Parkinson's Disease: Preliminary Research ✖	★★★			
Primary Biliary Cirrhosis: Preliminary Research	★★★			
Restless Legs Syndrome: Preliminary Research	★★★			
Schizophrenia	★★★			
Selective IgA Deficiency	★★★			
Stroke	★★★			



## Typical Risk ?

Name	Confidence	Your Risk	Avg. Risk	Compared to Average
Obesity	★★★★★	54.2%	63.9%	0.85x
Coronary Heart Disease	★★★★★	41.6%	46.8%	0.89x
Atrial Fibrillation	★★★★★	29.3%	27.2%	1.08x
Lung Cancer	★★★★★	6.9%	8.5%	0.82x
Gallstones	★★★★★	6.2%	7.0%	0.88x
Colorectal Cancer	★★★★★	5.7%	5.6%	1.03x
Chronic Kidney Disease	★★★★★	3.6%	3.4%	1.04x
Parkinson's Disease	★★★★★	1.8%	1.6%	1.11x
Bipolar Disorder	★★★★★	0.10%	0.10%	0.94x
Scleroderma (Limited Cutaneous Type)	★★★★★	0.05%	0.07%	0.80x
Breast Cancer <a href="#">update</a>	★★★★★	0.00%	0.00%	1.00x
Lupus (Systemic Lupus Erythematosus)	★★★★★	0.00%	0.00%	1.00x
Alopecia Areata	★★★			
Ankylosing Spondylitis	★★★			
Atopic Dermatitis	★★★			
Basal Cell Carcinoma	★★★			
Bipolar Disorder: Preliminary Research	★★★			
Bladder Cancer	★★★			
Brain Aneurysm	★★★			
Chronic Lymphocytic Leukemia	★★★			
Coronary Heart Disease: Preliminary Research	★★★			
Generalized Vitiligo	★★★			
Hodgkin Lymphoma	★★★			

## Decreased Risk

Name	Confidence	Your Risk	Avg. Risk	Compared to Average
Venous Thromboembolism	★★★★★	9.0%	12.3%	0.73x 
Psoriasis	★★★★★	5.8%	11.4%	0.51x 
Alzheimer's Disease	★★★★★	4.9%	7.2%	0.69x 
Restless Legs Syndrome	★★★★★	1.5%	2.0%	0.74x 
Age-related Macular Degeneration	★★★★★	0.9%	6.5%	0.14x 
Type 1 Diabetes	★★★★★	0.6%	1.0%	0.63x 
Melanoma	★★★★★	0.3%	2.9%	0.09x 
Multiple Sclerosis	★★★★★	0.2%	0.3%	0.69x 
Exfoliation Glaucoma	★★★★★	0.2%	0.7%	0.22x 
Crohn's Disease	★★★★★	0.09%	0.53%	0.17x 
Primary Biliary Cirrhosis	★★★★★	0.05%	0.08%	0.66x 
Atrial Fibrillation: Preliminary Research	★★★			
Behçet's Disease	★★★			
Breast Cancer Risk Modifiers	★★★			
Chronic Obstructive Pulmonary Disease (COPD)	★★★			
Gout	★★★			
Kidney Cancer	★★★			
Migraines	★★★			
Nicotine Dependence	★★★			
Obesity: Preliminary Research	★★★			
Peripheral Arterial Disease	★★★			
Sarcoma	★★★			
Scoliosis	★★★			

## My Health

[Disease Risk](#)
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▶ [Drug Response](#)
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[Health Labs](#)

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# drug response


Share my health results with family and friends


To ensure that the information on this page is as accurate as possible, please set your ancestry on [your profile page](#).

## Show results for

Michael Jordan

[See new and recently updated reports »](#)

 23andWe Discoveries were made possible by 23andMe members who took [surveys](#).

Name	Confidence ▼	Status
<a href="#">Abacavir Hypersensitivity</a>	★★★★★	Typical
<a href="#">Alcohol Consumption, Smoking and Risk of Esophageal Cancer</a>	★★★★★	Typical
<a href="#">Clopidogrel (Plavix®) Efficacy</a>	★★★★★	Typical
<a href="#">Fluorouracil Toxicity</a>	★★★★★	Typical
<a href="#">Response to Hepatitis C Treatment</a>	★★★★★	Typical
<a href="#">Pseudochoolinesterase Deficiency</a>	★★★★★	Typical
<a href="#">Warfarin (Coumadin®) Sensitivity</a>	★★★★★	Typical
<a href="#">Oral Contraceptives, Hormone Replacement Therapy and Risk of Venous Thromboembolism</a> 	★★★★★	Not Applicable
<a href="#">Caffeine Metabolism</a>	★★★	Slow Metabolizer
<a href="#">Hepatitis C Treatment Side Effects</a>	★★★	See Report
<a href="#">Metformin Response</a>	★★★	Typical Odds of Positive Response
<a href="#">Antidepressant Response</a>	★★	See Report
<a href="#">Beta-Blocker Response</a>	★★	See Report
<a href="#">Floxacin Toxicity</a>	★★	Typical Odds
<a href="#">Heroin Addiction</a>	★★	Typical Odds
<a href="#">Lumiracoxib (Prexige®) Side Effects</a>	★★	Typical Odds
<a href="#">Naltrexone Treatment Response</a>	★★	See Report
<a href="#">Postoperative Nausea and Vomiting (PONV)</a>	★★	Higher Odds



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[Inbox \(1\)](#)
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# disease risk

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[Endometriosis](#)

## Dupuytren's Disease

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## Dupuytren's Disease

[Printable Version](#)

Dupuytren's disease (also known as Dupuytren's contracture) is a disorder in which the tissue under the skin on the hands thickens and forms knots or cords that eventually cause the fingers to curl up against the palm. The ring finger and pinky finger are most often affected. Dupuytren's disease is more common in men and in people over the age of 50. The prevalence of Dupuytren's ranges from less than 1% to as high as 40% in locations such as Scotland, Germany and Belgium. Its relatively high frequency in northern Europe has led it to be called a "Viking disease", though it is also fairly common in other regions. While the disorder is not usually painful, it can interfere with normal hand function, such as washing or putting on gloves. Treatment depends on the severity of the disease and includes surgical and non-surgical methods of removing or relaxing the cords of tissue in the hand.

The following results are based on ★★★ [Preliminary Research](#) for 6 reported markers.

## Dupuytren's disease

[Show results for all profiles](#) ▾

<a href="#">Journal</a>	<i>N Engl J Med</i>
<a href="#">Study Size</a>	👤👤👤
<a href="#">Replications</a>	None
<a href="#">Contrary Studies</a>	None
<a href="#">Applicable Ethnicities</a>	European
<a href="#">Marker</a>	<a href="#">rs7524102</a>

In this study, researchers compared more than 2,000 individuals with Dupuytren's disease to about 10,000 individuals without the disease, all of European descent.

Who	Genotype	What It Means
	GG	Moderately higher odds of developing Dupuytren's disease.
Michael Jordan	AG	Slightly higher odds of developing Dupuytren's disease.
	AA	Typical odds of developing Dupuytren's disease.

## Dupuytren's disease

Show results for all profiles

Journal

*N Engl J Med*

Study Size

■■■

Replications

None

Contrary Studies

None

Applicable Ethnicities

European

Marker

rs7524102

In this study, researchers compared more than 2,000 individuals with Dupuytren's disease to about 10,000 individuals without the disease, all of European descent. They found that each copy of a G at rs7524102 near the WNT4 gene was associated with 1.28 times the odds of Dupuytren's disease.

### Citations

Dolmans GH et al. (2011) . "Wnt signaling and Dupuytren's disease." *N Engl J Med* 365(4):307-17.

Who	Genotype	What It Means
	GG	Moderately higher odds of developing Dupuytren's disease.
Michael Jordan	AG	Slightly higher odds of developing Dupuytren's disease.
	AA	Typical odds of developing Dupuytren's disease.

## Dupuytren's disease

Show results for all profiles

Journal

*N Engl J Med*

Study Size

■■■

Replications

None

Contrary Studies

None

Applicable Ethnicities

European

Marker

rs16879765

In this study, researchers compared more than 2,000 individuals with Dupuytren's disease to about 10,000 individuals without the disease, all of European descent. They found that each copy of a T at rs16879765 in the EPDR1 gene was associated with 1.98 times the odds of Dupuytren's disease.

Who	Genotype	What It Means
	TT	Substantially higher odds of developing Dupuytren's disease.
Michael Jordan	CT	Moderately higher odds of developing Dupuytren's disease.
	CC	Typical odds of developing Dupuytren's disease.

## Dupuytren's disease

Show results for all profiles

Journal	<i>N Engl J Med</i>
Study Size	■■■
Replications	None
Contrary Studies	None
Applicable Ethnicities	European
Marker	rs16879765

In this study, researchers compared more than 2,000 individuals with Dupuytren's disease to about 10,000 individuals without the disease, all of European descent. They found that each copy of a T at rs16879765 in the EPDR1 gene was associated with 1.98 times the odds of Dupuytren's disease.

Who	Genotype	What It Means
	TT	Substantially higher odds of developing Dupuytren's disease.
Michael Jordan	CT	Moderately higher odds of developing Dupuytren's disease.
	CC	Typical odds of developing Dupuytren's disease.

### Citations

Dolmans GH et al. (2011) . "Wnt signaling and Dupuytren's disease." *N Engl J Med* 365(4):307-17.

## Dupuytren's disease

Show results for all profiles

Journal	<i>N Engl J Med</i>
Study Size	■■■
Replications	None
Contrary Studies	None
Applicable Ethnicities	European
Marker	rs4730775

In this study, researchers compared more than 2,000 individuals with Dupuytren's disease to about 10,000 individuals without the disease, all of European descent. They found that individuals with the CC genotype at rs4730775 near the WNT2 gene had about 1.2 times higher odds of Dupuytren's disease compared to

Who	Genotype	What It Means
	CC	Slightly higher odds of developing Dupuytren's disease.
Michael Jordan	CT	Typical odds of developing Dupuytren's disease.
	TT	Slightly lower odds of developing Dupuytren's disease.



Dupuytren's disease

Show results for all profiles

Journal	N Engl J Med
Study Size	👤👤👤
Replications	None
Contrary Studies	None
Applicable Ethnicities	European
Marker	rs4730775

In this study, researchers compared more than 2,000 individuals with Dupuytren's disease to about 10,000 individuals without the disease, all of European descent. They found that individuals with the CC genotype at rs4730775 near the WNT2 gene had about 1.2 times higher odds of Dupuytren's disease compared to individuals with the CT genotype, and those with the TT genotype had about 1.2 times lower odds of Dupuytren's disease.

Citations

Dolmans GH et al. (2011) . "Wnt signaling and Dupuytren's disease." *N Engl J Med* 365(4):307-17.

Who	Genotype	What It Means
	CC	Slightly higher odds of developing Dupuytren's disease.
Michael Jordan	CT	Typical odds of developing Dupuytren's disease.
	TT	Slightly lower odds of developing Dupuytren's disease.

Dupuytren's disease

Show results for all profiles

Journal	N Engl J Med
Study Size	👤👤👤
Replications	None
Contrary Studies	None
Applicable Ethnicities	European
Marker	rs2912522

In this study, researchers compared more than 2,000 individuals with Dupuytren's disease to about 10,000

Who	Genotype	What It Means
Michael Jordan	AA	Typical odds of developing Dupuytren's disease.
	AG	Slightly lower odds of developing Dupuytren's disease.
	GG	Moderately lower odds of developing Dupuytren's disease.

**My Health**[Disease Risk](#)[Carrier Status](#)[Drug Response](#)[Traits](#)[Health Labs](#)**My Ancestry**[► Maternal Line](#)[Paternal Line](#)[Relative Finder](#)[Ancestry Painting](#)[Global Similarity](#)[Ancestry Labs](#)**Sharing & Community**[Family Tree](#)[Family Inheritance](#)[Compare Genes](#)[23andMe Community](#)[Genome Sharing](#)**23andWe**[Research Surveys \(37\)](#)[Research Snippets](#)[Research Initiatives](#)[Research Discoveries](#)

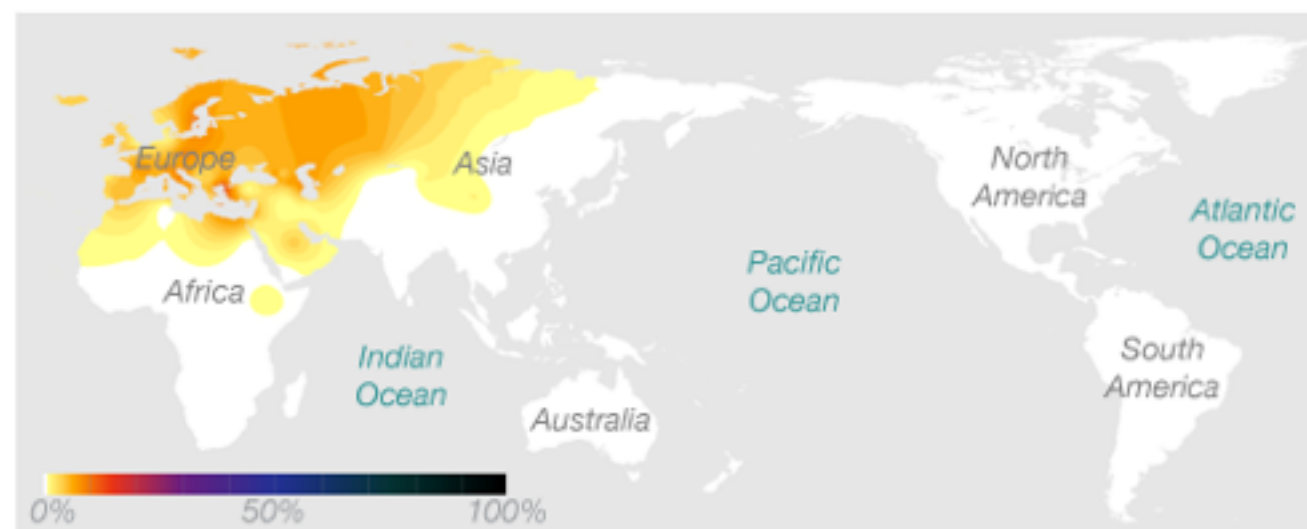
# Maternal Haplogroup: T2b5

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## Maternal Haplogroup: T2b5

T2b5 is a subgroup of T2, which is described below.

Locations of haplogroup T2 circa 500 years ago, before the era of intercontinental travel.



Haplogroup T originated about 45,000 years ago in the Near East, as modern humans first expanded out of eastern Africa. Its present-day geographic distribution is strongly influenced by multiple migrations out of the Near East into Europe, India and eastern Africa after about 15,000 years ago. T2 is widespread in northern Africa and Europe.

### Human Prehistory Videos

[Human Prehistory: Prologue](#)[Out of \(Eastern\) Africa](#)

**Haplogroup:** T2, a subgroup of [T](#)

**Age:** less than 33,000 years

**Region:** Europe, Near East

**Populations:** Northern Europeans, Spanish

**Highlight:** The outlaw Jesse James carried mitochondrial DNA from haplogroup T2.; Agriculture

### Your Family and Friends

[D4e2](#) Japanese Person

[D5a2a'c](#) Chinese Person

[L3e2b2](#) Nigerian Person

[T2b5](#) Michael Jordan

### Famous People

[A2](#) Eva Longoria

[C](#) Yo-Yo Ma

[H](#) Luke the Evangelist, Marie Antoinette, Napoleon Bonaparte, Prince Philip, Susan Sarandon

[H2a1](#) Dr. Oz

[H3](#) Jimmy Buffett

[H4a](#) Warren Buffett

[J1](#) Mario Batali

[K](#) Katie Couric, Meryl Streep, Stephen Colbert

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# relative finder


[List view](#)
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Show: both sides

Sort: relationship

25 per page

1 - 25 of 168



Male

You

T2b5

R1b1b2a1a

[Update Your Profile](#)

### Show Close Relatives



Female

3rd to 5th Cousin  
0.35% shared, 2 segments

U5b2b

[Send an Introduction](#)

**Newton Campos**  
Male, b. 1976

3rd to 6th Cousin  
0.29% shared, 2 segments

Spain Brazil Rio de Janeiro, Brazil  
Sao Paulo, Brazil Corumba, Brazil  
2 more Southern Europe  
Monteiro Campos Monteiro da Gama  
Rodrigues d'Oliveira 12 more B2  
R1b1b2a1a

Public Match  
[Send a Message](#)


Male

3rd to 6th Cousin  
0.25% shared, 2 segments

H T

[Send an Introduction](#)

**Thais Melo**  
Female, b. 1983

3rd to 6th Cousin  
0.24% shared, 2 segments

United States Brazil Southern Europe  
Melo Mello Mehl Castanogli  
H10a1

Public Match  
[Send a Message](#)


Male

3rd to 6th Cousin  
0.24% shared, 2 segments

Brazil Southern Europe Melo C1b2  
J2b2\*

[Send an Introduction](#)


Male

3rd to 6th Cousin  
0.21% shared, 2 segments

Portugal Southern Europe T2b  
R1b1b2a1a

[Send an Introduction](#)


Male

3rd to 6th Cousin  
0.20% shared, 2 segments

Graciosa, Portugal Terceira, Portugal  
H13a1a1a R1b1b2a1a

[Send an Introduction](#)


Female

3rd to 6th Cousin  
0.20% shared, 2 segments

L3d1c

[Send an Introduction](#)

**Regina Schmitz-Suiter**  
Female, b. 1957

3rd to Distant Cousin  
0.24% shared, 1 segment

United States Southern Europe  
Schmitz Boyer Springer 10 more  
H1c

Public Match  
[Send a Message](#)


Male, b. 1970

3rd to Distant Cousin  
0.23% shared, 1 segment

United States Northern Europe  
H13a1a1a N1c1

[Send an Introduction](#)


3rd to Distant Cousin

United States Demers Clay Abreu



[My Home](#)

Inbox (1)

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Disease Risk

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# health overview

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To ensure that the information on this page is as accurate as possible, please set your ancestry on [your profile page](#).

Show results for  ▾

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 23andWe Discoveries were made possible by 23andMe members who took [surveys](#).

## Disease Risks (118) ?

↑ Elevated Risks	Your Risk	Average Risk
Type 2 Diabetes	41.7%	25.7%
Prostate Cancer 	21.4%	17.8%
Rheumatoid Arthritis	3.2%	2.4%
Ulcerative Colitis	1.0%	0.8%
Esophageal Squamous Cell Carcinoma (ESCC)	0.6%	0.4%

[See all 118 risk reports...](#)

## Carrier Status (48) ?

Alpha-1 Antitrypsin Deficiency	Variant Present
Agnesis of the Corpus Callosum with Peripheral Neuropathy (ACCPN)	Variant Absent
Autosomal Recessive Polycystic Kidney Disease	Variant Absent
ARSACS	Variant Absent
Beta Thalassemia	Variant Absent
Bloom's Syndrome	Variant Absent
BRCA Cancer Mutations (Selected)	Variant Absent
Canavan Disease	Variant Absent

[See all 48 carrier status...](#)

## Traits (57) ?

Alcohol Flush Reaction	Does Not Flush
Bitter Taste Perception	Can Taste
Earwax Type	Wet
Eye Color	Likely Brown
Hair Curl 	Slightly Curlier Hair on Average

## Drug Response (20) ?

Abacavir Hypersensitivity	Typical
Alcohol Consumption, Smoking and Risk of Esophageal Cancer	Typical
Clopidogrel (Plavix®) Efficacy	Typical
Fluorouracil Toxicity	Typical

# carrier status

## Alpha-1 Antitrypsin Deficiency

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Share

Your Data

How It Works

Resources

Technical Report

Community (9)

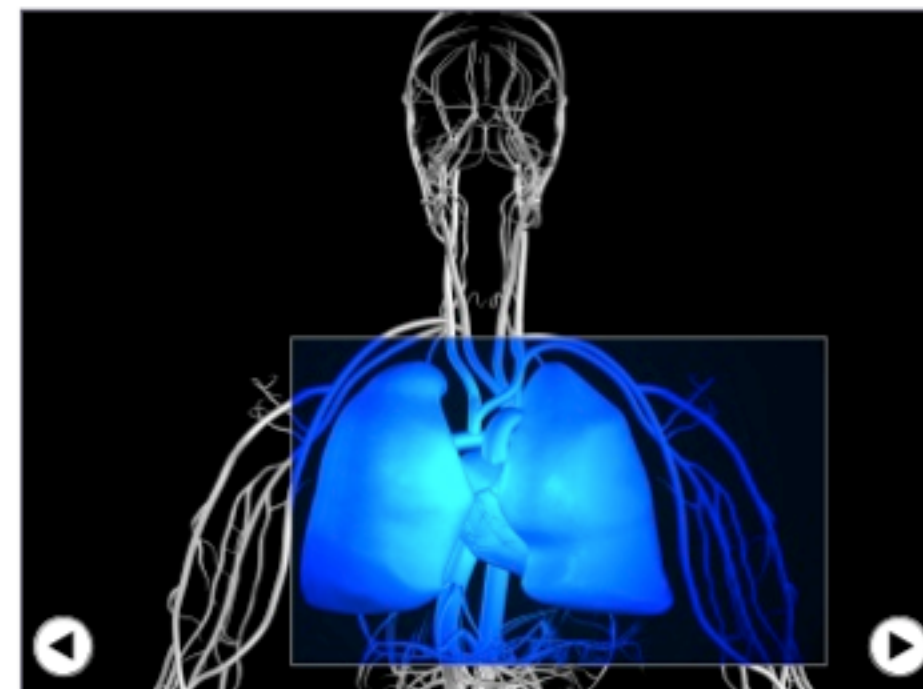
### Alpha-1 Antitrypsin Deficiency

Printable Version

The alpha-1 antitrypsin (AAT) [protein](#) protects the body, especially fragile lung tissues, from the damaging effects of a powerful enzyme called neutrophil elastase that is released from white blood cells. In AAT deficiency, a genetic mutation reduces levels of the protective protein in the bloodstream. AAT deficiency can lead to chronic obstructive pulmonary disease ([COPD](#)), specifically [emphysema](#), and liver disease. Smoking, which can inhibit what little AAT protein an affected person does have, increases the risk of lung disease.

The following results are based on ★★★★★ [Established Research](#) for 2 reported markers.

[Learn more about the biology of Alpha-1 Antitrypsin Deficiency...](#)



1 of 3. Low levels of alpha-1 antitrypsin can lead to COPD.

### Your Genetic Data

Show results for all profiles

Who

What It Means

ZZ: Has two copies of the Z form of the SERPINA1 gene. A person with two copies of the Z form typically has alpha-1 antitrypsin deficiency and is at increased risk for lung and liver disease.

SZ: Has one S and one Z form of the SERPINA1 gene. People with this combination typically have decreased AAT levels and are at increased risk for lung disease, particularly if they smoke. People with this combination may also have

### Genes vs. Environment

Alpha-1 antitrypsin deficiency is completely determined by mutations in a single [gene](#). The severity of symptoms is mostly a function of which mutations a person carries, and how many copies. However, smoking can greatly increase the risk of lung disease due to AAT mutations. 23andMe reports data only for the PI\*M, PI\*S, and PI\*Z versions of the gene that encodes AAT. If you are concerned about AAT deficiency, consult a health professional.



DNA RELATIVES

- List View Map View Surname View

search matches Show: both sides Sort: relationship 25 per page 1 - 25 of 444

	<b>Michael Jordan</b> Male	You	Brazil Jordan	Porto Alegre T2b5	South America R1b1b2a1a	Correa Mattos	UPDATE YOUR PROFILE
	<b>Diego M</b> Male	Brother 48.3% shared, 54 segments	Brazil Matos	Porto Alegre, Brazil Correa	South America 4 more	Mattos T2b5 R1b1b2a1a	Sharing Genomes Introduction Accepted View Conversation
	Female	3rd to 5th Cousin 0.35% shared, 2 segments	Southern Europe		H3		Send an Introduction
	Female	3rd to 5th Cousin 0.35% shared, 2 segments	U5b2b				Send an Introduction
	<b>Carlos Menezes</b> Male	3rd to 5th Cousin 0.34% shared, 3 segments	Porto Alegre, Brazil, Rio Pardo, ... C1b2		Southern Europe R1b1b2a1a		Public Match Send a Message
	Female	3rd to 6th Cousin	Brazil	São Paulo, SP	C1	J2	Send an Introduction



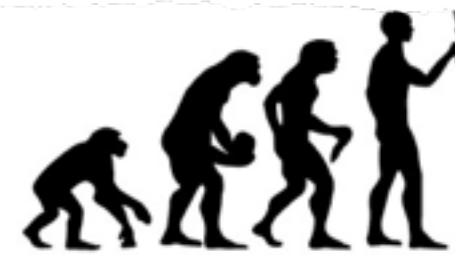
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rs3094315	1	752566	AA	
rs3131972	1	752721	GG	
rs12124819	1	776546	AG	
rs11240777	1	798959	AG	
rs6681049	1	800007	CC	
rs4970383	1	838555	CC	
rs4475691	1	846808	CC	
rs7537756	1	854250	AA	
rs13302982	1	861808	GG	
rs1110052	1	873558	TT	
rs2272756	1	882033	GG	
rs3748597	1	888659	CC	
rs13303106	1	891945	GG	
rs28415373	1	893981	CC	
rs13303010	1	894573	AA	
rs6696281	1	903104	CC	
rs28391282	1	904165	GG	
rs2340592	1	910935	GG	
rs13303118	1	918384	TT	
rs6665000	1	924898	AA	
rs2341362	1	927309	CC	
rs9777703	1	928836	TT	
rs1891910	1	932457	GG	
rs9697457	1	934345	GG	
rs35940137	1	940203	AG	
rs3128117	1	944564	TT	
rs2465126	1	947034	AA	
rs2341365	1	948692	AA	
rs158421	948921	CC		
rs6657048	1	957640	CC	
rs2710888	1	959842	CC	
rs3128126	1	962210	AA	
rs2710875	1	977780	TT	
rs2465136	1	990417	TT	
rs2488991	1	994391	TT	
rs7526076	1	998395	GG	
rs3934834	1	1005806	CC	
rs3766192	1	1017197	TT	
rs3766191	1	1017587	CC	
rs9442372	1	1018704	GG	
rs10907177	1	1021346	AA	
rs3737728	1	1021415	GG	
rs10907178	1	1021583	AA	
rs11260588	1	1021658	GG	
rs9442398	1	1021695	GG	

*Parte do arquivo .txt do meu material genético.*

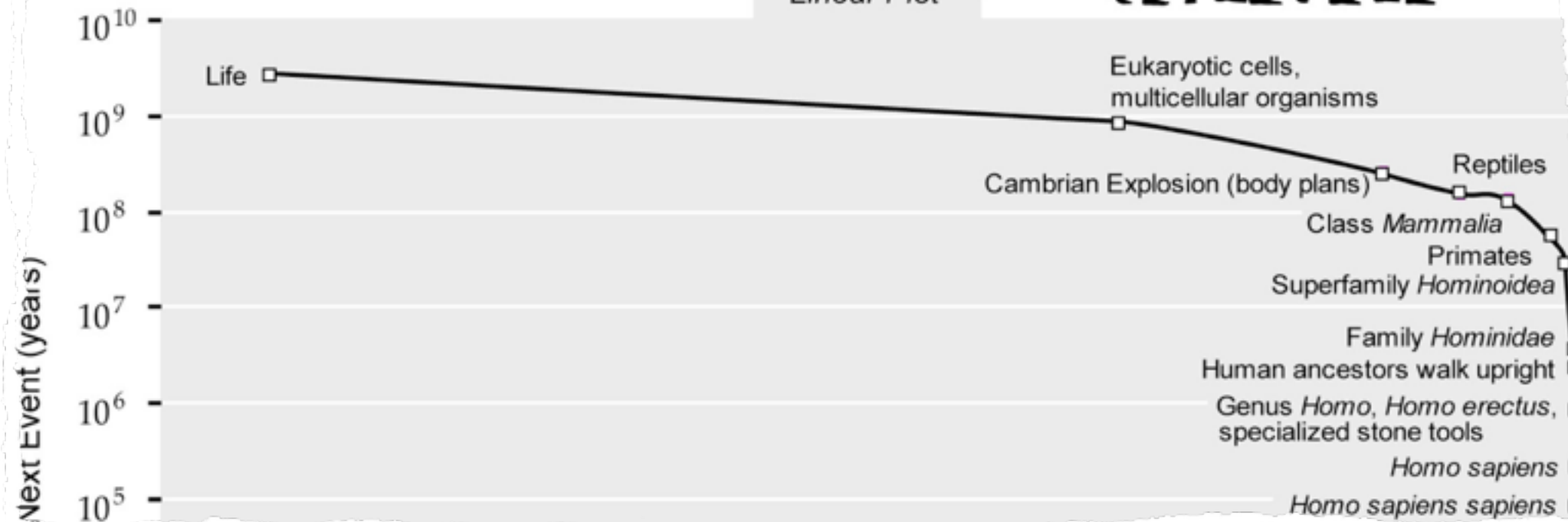


*E se formos apenas parte da evolução?*

# Countdown to Singularity

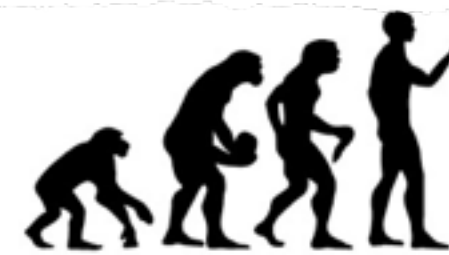


Linear Plot

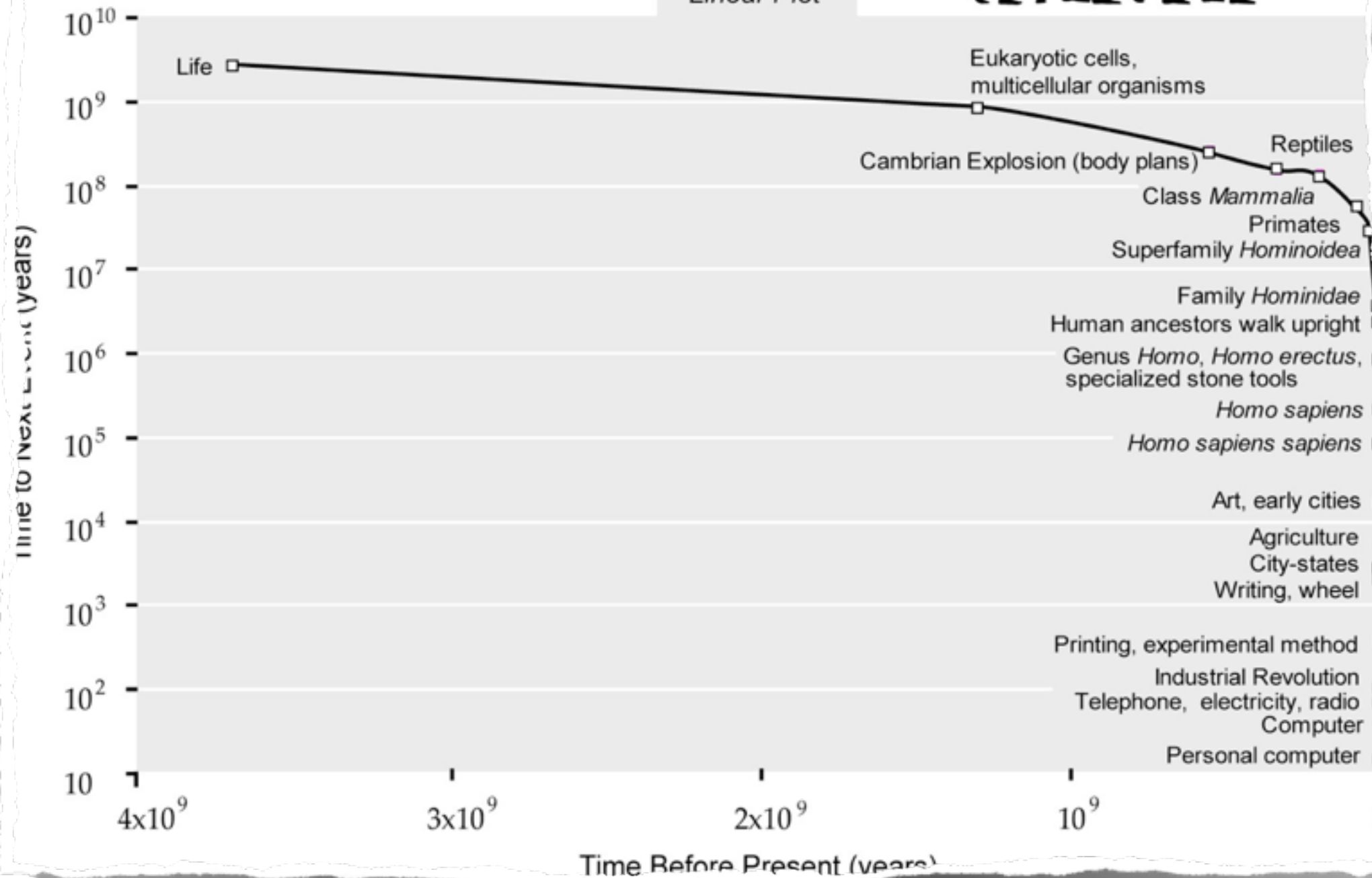




# Countdown to Singularity



Linear Plot





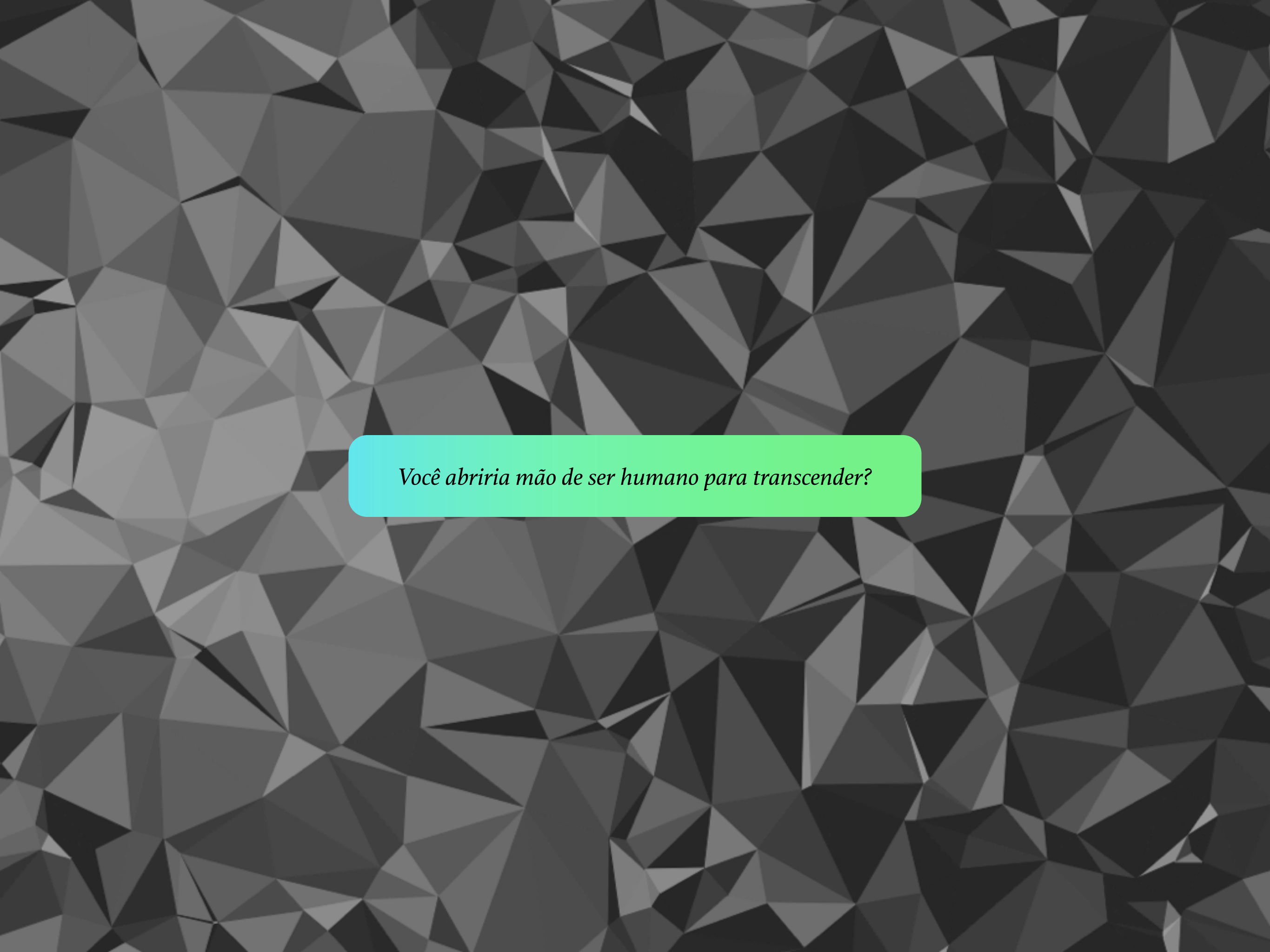




*Grande número de organismos isolados de menor complexidade*



*Pequeno número de organismos conectados de maior complexidade*

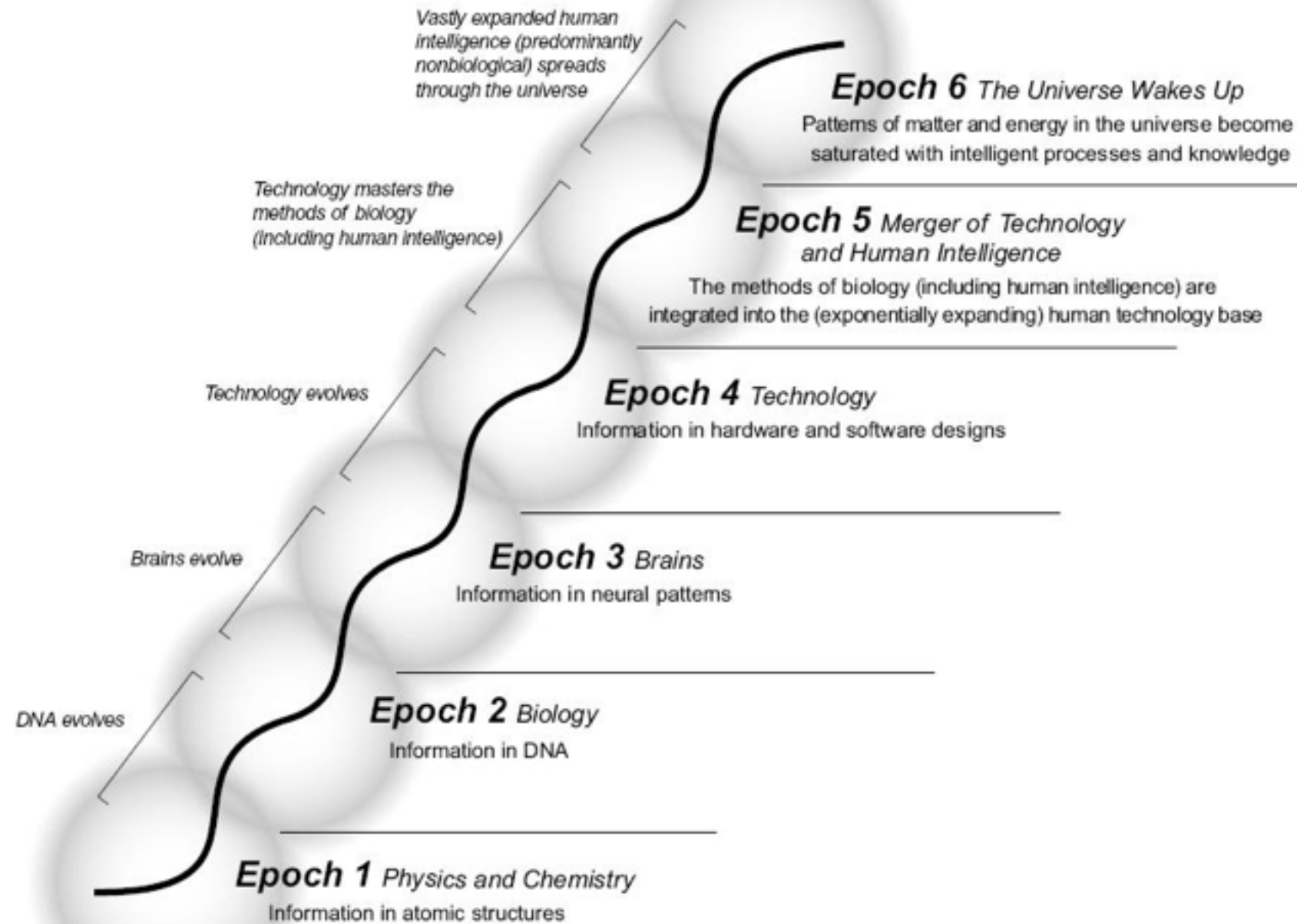


*Você abriria mão de ser humano para transcender?*

*Singularidade*

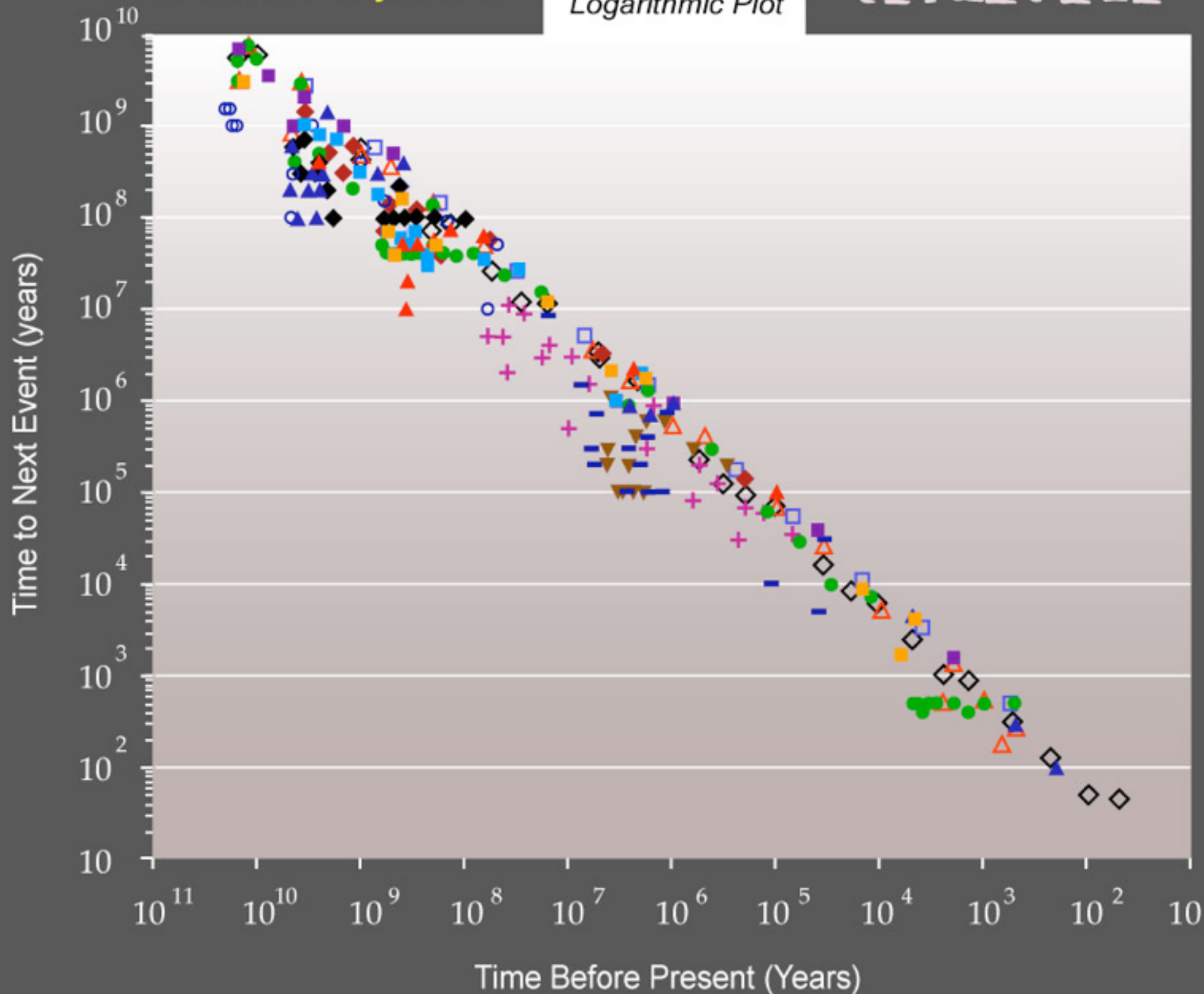
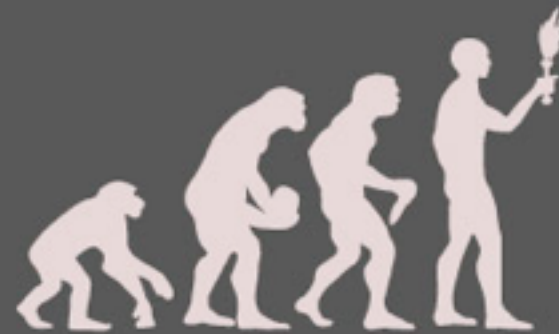






## Paradigm Shifts for 15 Lists of Key Events

Logarithmic Plot

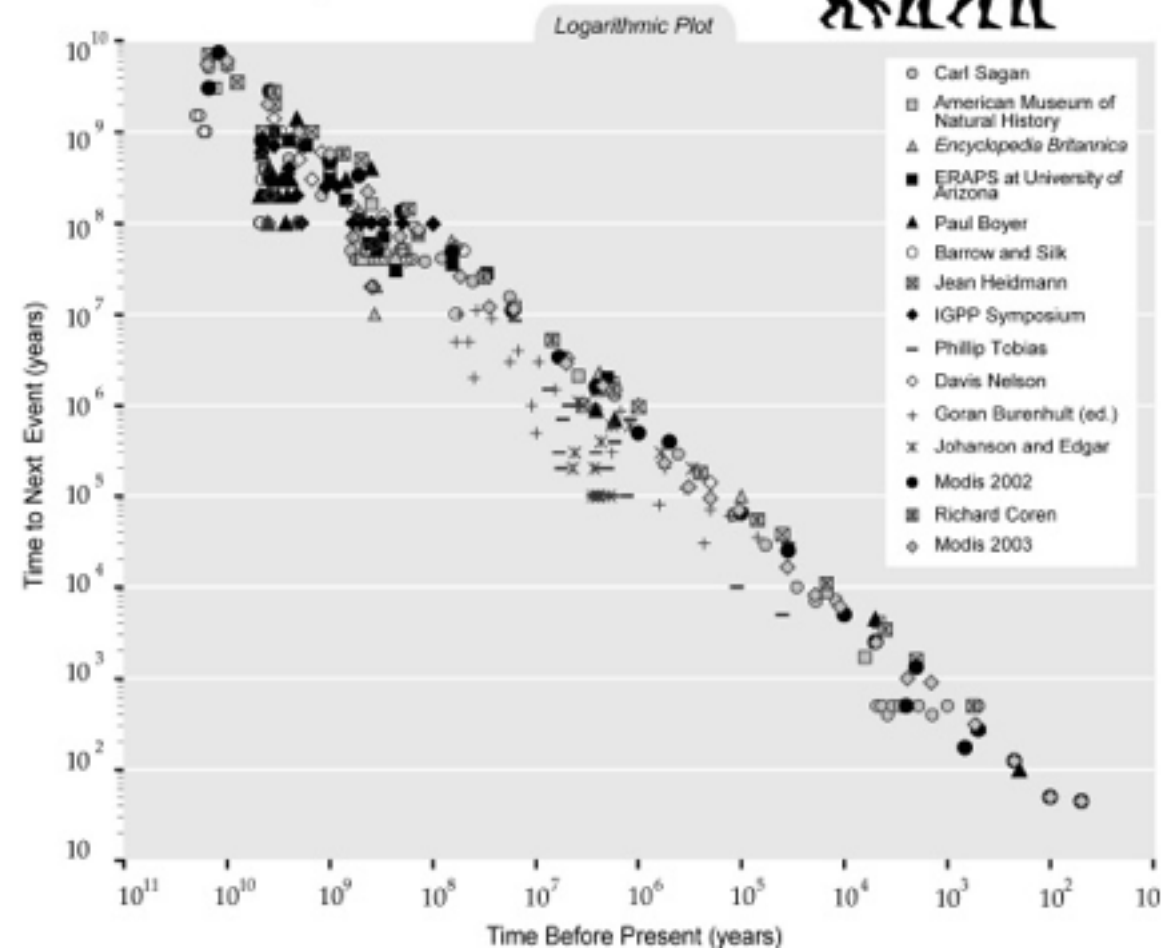


- Carl Sagan
- American Museum of Natural History
- ▲ Encyclopedia Britannica
- ERAPS at University of Arizona
- ▲ Paul Boyer
- Barrow and Silk
- Jean Heidmann
- ◆ IGPP Symposium
- Phillip Tobias
- ◆ Davis Nelson
- + Goran Burenhult (ed.)
- ▼ Johanson and Edgar
- △ Modis 2002
- Richard Coren
- ◇ Modis 2003



17	Countdown to SIN -logarithmic
18	Countdown to SIN - linear
19	Paradigm Shifts for 15 Lists of Key Events
20	Canonical Milestones
48	Growth of U.S. Phone Industry
49	Estimated U.S. Cell Phone Subscribers
50	Mass Use of Inventions
57	Dynamic RAM Smallest Feature Size
58	Dynamic RAM Price
59	Average Transistor Price
60	Transistor Manufacturing Costs Falling
61	Micro Processor Clock Speed
62	Micro Processor Cost per Transistor Cycle
63	Transistor per Microprocessor
64	Processor Performance (MIPS)
65	Total Bits Shipped
67	Moore's Law - The Fifth Paradigm
70	Exponential Growth of Computing
71	Growth in Supercomputer Power
73	DNA Sequencing Cost
74	Growth in Genbank
75	Random Access Memory
76	Magnetic Data Storage
77	Price Performance (Wireless Data Devices)
78	Internet Hosts - Logarithmic
79	Internet Hosts - Linear
80	Internet Data Traffic
81	Internet Backbone Bandwidth
82	Decrease in Size of Mechanical Devices
83	Nanotech Science Citations
84	U.S. Nanorelated Patents

**Paradigm Shifts**  
for 15 Lists of Key Events



## Source (List)

## Event

Time Before Present  
(Years)Time to Next  
Event (Years)

Carl Sagan	Big Bang	15000000000	5000000000
Carl Sagan	Origin of Milky Way Galaxy	10000000000	5400000000
Carl Sagan	Origin of the Solar System	4600000000	200000000
Carl Sagan	Formation of the Earth	4400000000	400000000
Carl Sagan	Origin of life on Earth	4000000000	300000000

Source (List)	Event	Time Before Present (Years)	Time to Next Event (Years)
Carl Sagan	Big Bang	15000000000	5000000000
Carl Sagan	Origin of Milky Way Galaxy	10000000000	5400000000
Carl Sagan	Origin of the Solar System	4600000000	200000000
Carl Sagan	Formation of the Earth	4400000000	400000000
Carl Sagan	Origin of life on Earth	4000000000	300000000
Carl Sagan	Formation of the oldest rocks known on Earth	3700000000	300000000
Carl Sagan	Date of oldest fossils (bacteria and blue-green algae)	3400000000	900000000
Carl Sagan	Invention of sex (by microorganisms)	2500000000	500000000
Carl Sagan	Oldest fossil photosynthetic plants	2000000000	100000000
Carl Sagan	Eukaryotes (first cells with nuclei) flourish	1900000000	700000000
Carl Sagan	Significant oxygen atmosphere begins to develop on Earth	1200000000	200000000
Carl Sagan	Extensive volcanism and channel formation on Mars	1000000000	380000000
Carl Sagan	First worms	620000000	50000000
Carl Sagan	Precambrian ends. Paleozoic Era and Cambrian Period begin. Invertebrates flourish	570000000	40000000
Carl Sagan	First oceanic plankton. Trilobites flourish.	530000000	40000000
Carl Sagan	Ordovician Period. First fish, first vertebrates.	490000000	40000000
Carl Sagan	Silurian Period. First vascular plants. Plants begin colonization of land	450000000	40000000
Carl Sagan	Devonian Period begins. First insects. Animals begin colonization of land	410000000	40000000
Carl Sagan	First amphibians. First winged insects.	370000000	40000000
Carl Sagan	Carboniferous Period. First trees. First reptiles.	330000000	40000000
Carl Sagan	Permian Period begins. First dinosaurs.	290000000	40000000
Carl Sagan	Paleozoic Era ends. Mesozoic Era Begins.	250000000	40000000
Carl Sagan	Triassic Period. First mammals.	210000000	50000000
Carl Sagan	Jurassic Period. First birds.	160000000	40000000
Carl Sagan	Cretaceous Period. First flowers. Dinosaurs become extinct.	120000000	38000000
Carl Sagan	Mesozoic Era ends. Cenozoic Era Tertiary Period begins. First cetaceans. First primates.	82000000	41000000
Carl Sagan	First evolution of frontal lobes in the brain of primates. First hominids. Giant mammals flourish.	41000000	23000000

Paul Boyer	Big bang	15000000000	10200000000
Paul Boyer	Solar system forms	4800000000	200000000
Paul Boyer	Earth forms	4600000000	600000000
Paul Boyer	Nitrogen atmosphere (for winds) is present or acquired	4000000000	100000000
Paul Boyer	Abundant water is present or acquired, Organic precursors for life forms accumulate, Primitive living organisms arise or (less likely) come from space	3900000000	400000000
Paul Boyer	Land temperature stabilizes so that most of the water is liquid	3500000000	300000000
Paul Boyer	Some life forms get energy from oxidationreduction reactions	3200000000	200000000
Paul Boyer	Organisms evolve to gain many present biochemical characteristics	3000000000	300000000
Paul Boyer	Photosynthetic capacity is acquired, and oxygen evolution begins	2700000000	100000000
Paul Boyer	Land surfaces form and plate tectonics established	2600000000	200000000
Paul Boyer	Evolution produces organisms that can use oxygen to make ATP	2400000000	300000000
Paul Boyer	Abundant microorganisms colonize the entire earth.	2100000000	1400000000
Paul Boyer	Multicellular organisms arise with increased capacity for structural differentiation	700000000	300000000
Paul Boyer	Primitive plant forms begin to evolve stems, roots, and leaves	400000000	397400000
Paul Boyer	First humans	2600000	900000
Paul Boyer	Widespread use of stone tools	1700000	700000
Paul Boyer	Acquisition of spoken language	1000000	995000
Paul Boyer	Acquisition of written language	5000	4500
Paul Boyer	They learn that knowledge comes from observation and experiment (scientific method)	500	300
Paul Boyer	Ability to control nature gives rise to a human population explosion	200	100
Paul Boyer	The above abilities give rise to a remarkable understanding of nature	100	



American Museum of Natural History	Big Bang	13000000000	3000000000
American Museum of Natural History	Milky Way forms	10000000000	5500000000
American Museum of Natural History	Sun and planets form	4500000000	700000000
American Museum of Natural History	Oldest known life (single cell)	3800000000	2800000000
American Museum of Natural History	First multicellular organisms	1000000000	450000000
American Museum of Natural History	Cambrian Explosion (burst of new life forms)	550000000	70000000
American Museum of Natural History	Emergence of first vertebrates	480000000	40000000
American Museum of Natural History	Early land plants	440000000	50000000
American Museum of Natural History	Variety of insects begin to flourish	390000000	160000000
American Museum of Natural History	First dinosaurs appear	230000000	40000000
American Museum of Natural History	First mammalian ancestors appear	190000000	50000000
American Museum of Natural History	First known birds	140000000	75000000
American Museum of Natural History	Dinosaurs wiped out by asteroid or comet	65000000	49000000
American Museum of Natural History	Apes appear	16000000	12100000
American Museum of Natural History	First human ancestors to walk upright	3900000	2100000
American Museum of Natural History	Homo erectus appears	1800000	1785000
American Museum of Natural History	Anatomically modern humans appear	15000	8700
American Museum of Natural History	Invention of writing	6300	1700
American Museum of Natural History	Pyramids built in Egypt	4600	4092
American Museum of Natural History	Voyage of Christopher Columbus	508	

ERAPS at University of Arizona	No life; shallow seas	4000000000	200000000
ERAPS at University of Arizona	Origin of simple cells	3800000000	300000000
ERAPS at University of Arizona	Origin of cyanobacteria	3500000000	1000000000
ERAPS at University of Arizona	Oxygen accumulates in atmosphere	2500000000	800000000
ERAPS at University of Arizona	Protists and green algae	1700000000	700000000
ERAPS at University of Arizona	Simple multicellular life (sponges, seaweeds)	1000000000	300000000
ERAPS at University of Arizona	More invertebrates (flatworms, jellyfish)	700000000	180000000
ERAPS at University of Arizona	Early animals with hard parts in oceans	520000000	110000000
ERAPS at University of Arizona	Planets invade land	410000000	60000000
ERAPS at University of Arizona	Vertebrates invade land	350000000	50000000
ERAPS at University of Arizona	Coal forming forests, amphibians, BIG insects	300000000	70000000
ERAPS at University of Arizona	Mass extinction (trilobites)	230000000	30000000
ERAPS at University of Arizona	Pangaea, first mammals, first reptiles	200000000	135000000
ERAPS at University of Arizona	Mass extinction (including dinosaurs)	65000000	35000000
ERAPS at University of Arizona	Small mammals, humanoids	30000000	28000000
ERAPS at University of Arizona	Early Humans	2000000	1999999
ERAPS at University of Arizona	Us	1	

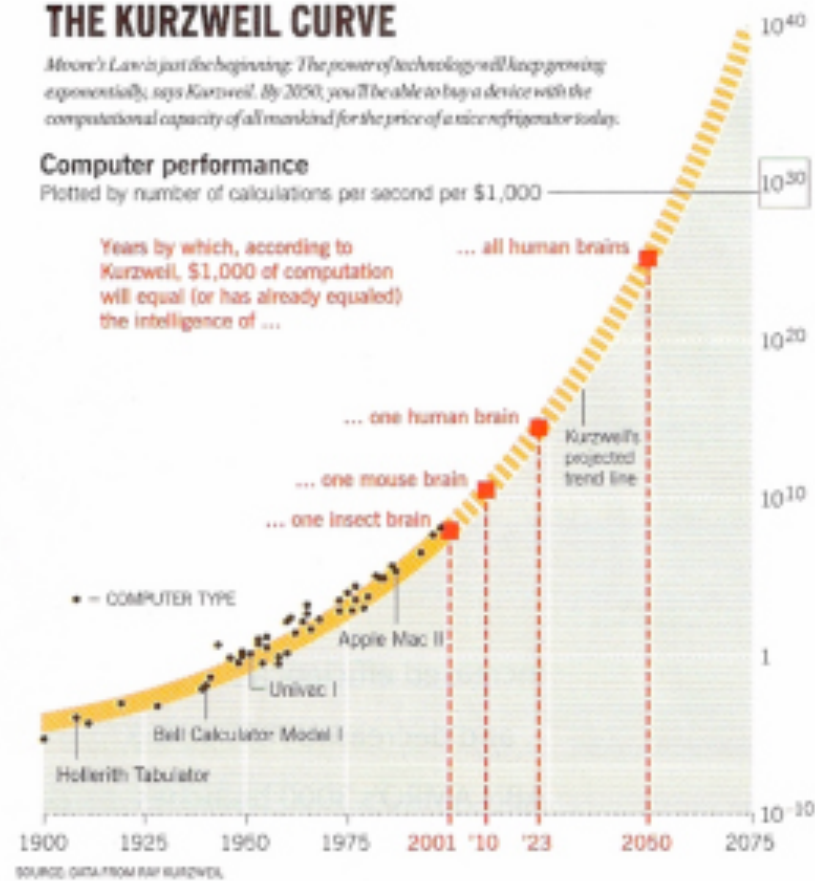
## THE KURZWEIL CURVE

*Moore's Law is just the beginning. The power of technology will keep growing exponentially, says Kurzweil. By 2050, you'll be able to buy a device with the computational capacity of all mankind for the price of a nice refrigerator today.*

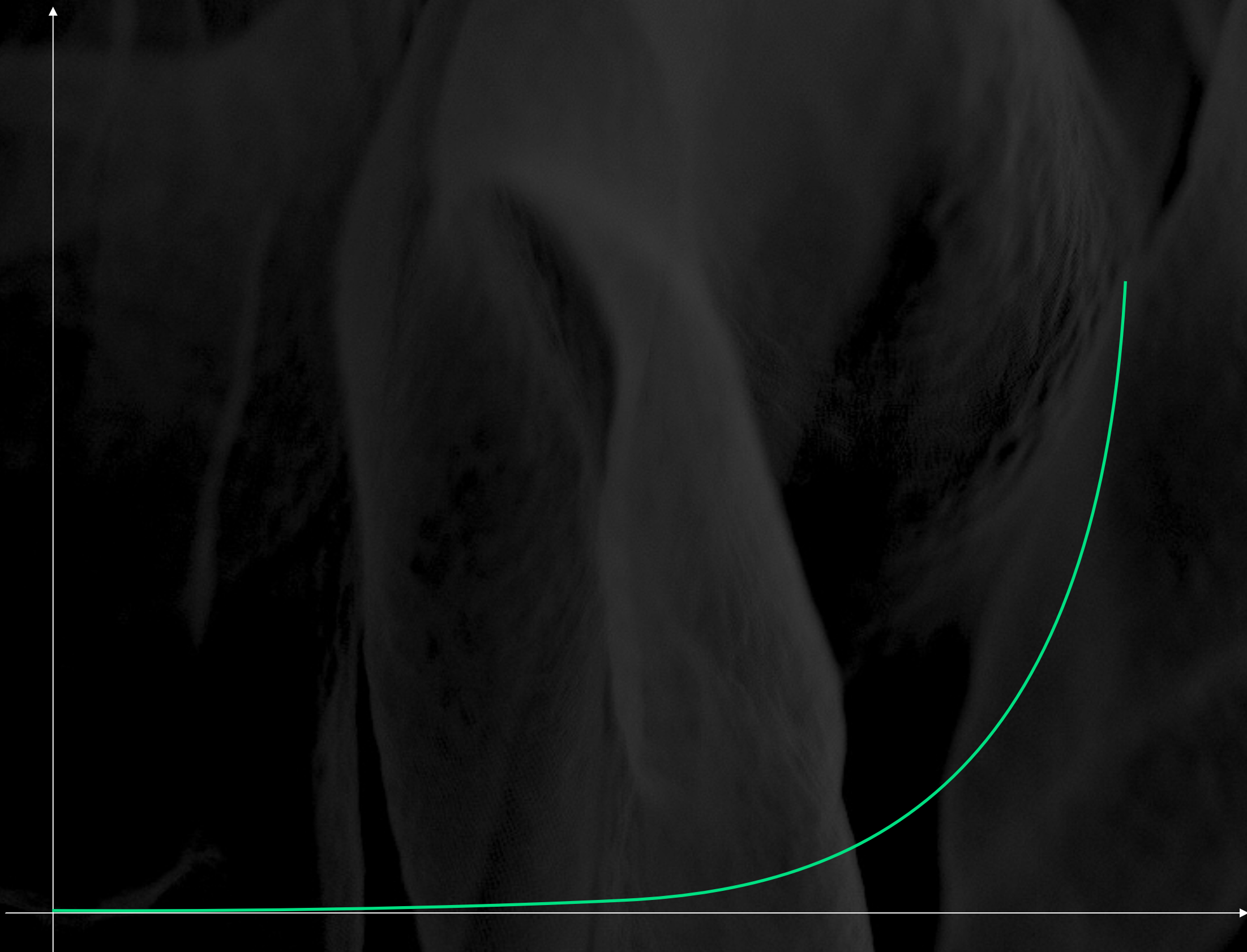
### Computer performance

Plotted by number of calculations per second per \$1,000

Years by which, according to Kurzweil, \$1,000 of computation will equal (or has already equaled) the intelligence of ...







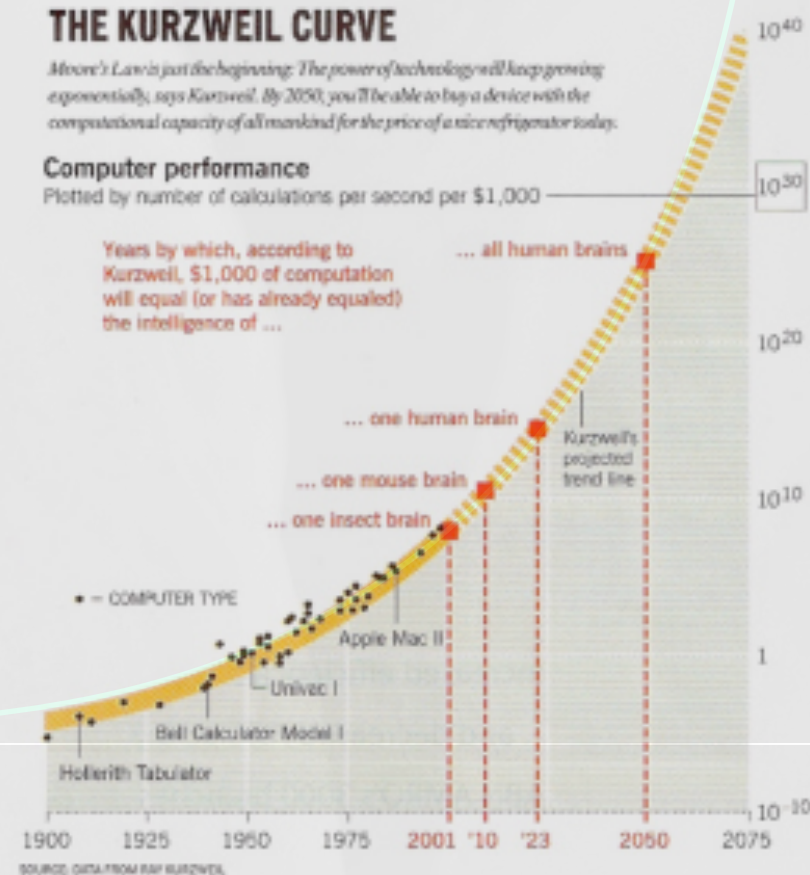
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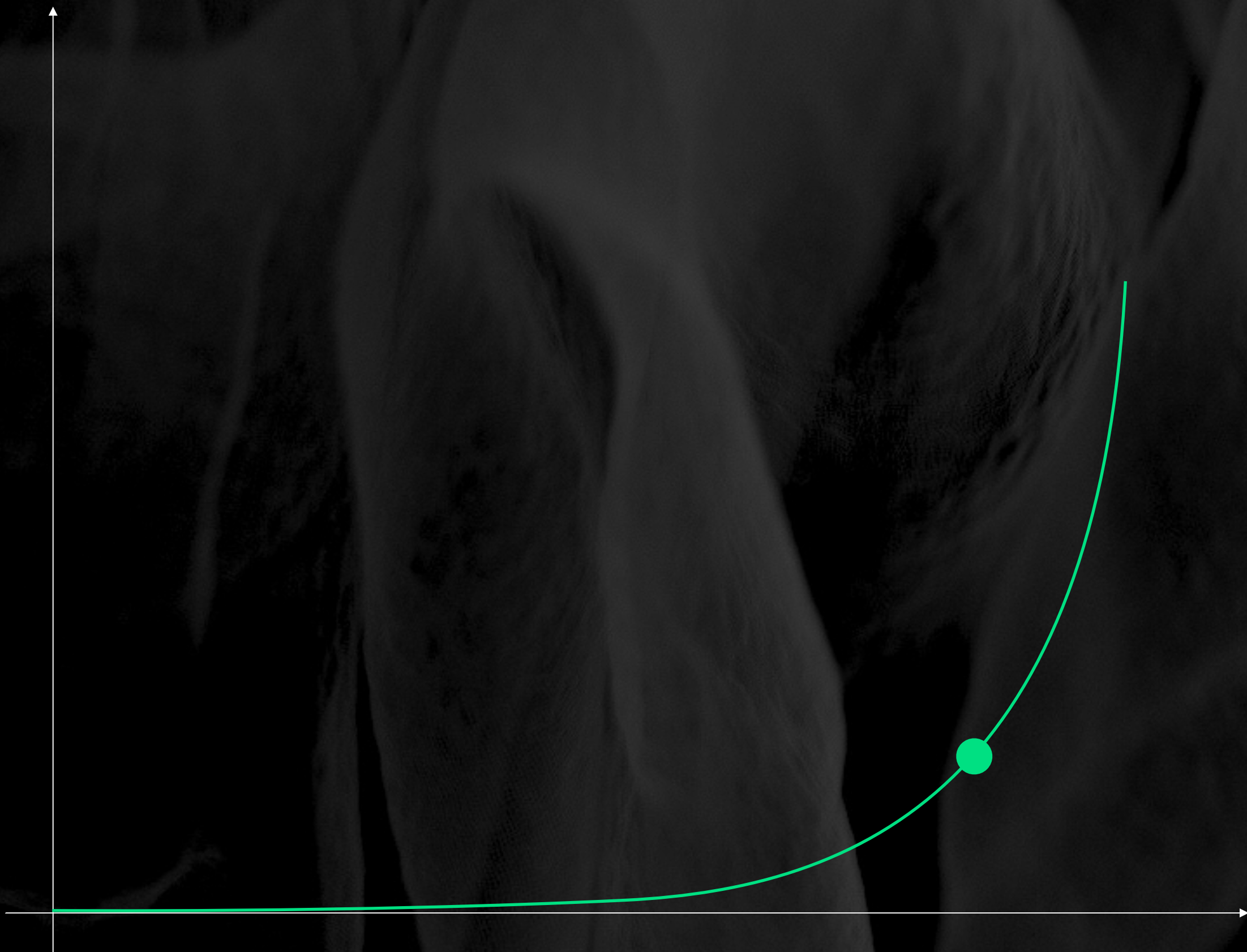
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*Grande número de organismos isolados de menor complexidade*



*Pequeno número de organismos conectados de maior complexidade*

*Ciência*

*Religião*

*Filosofia*

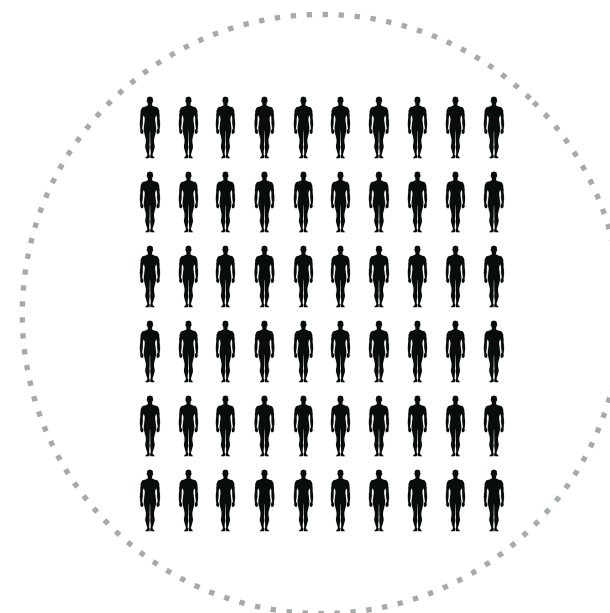
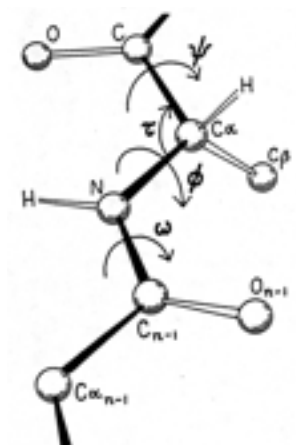
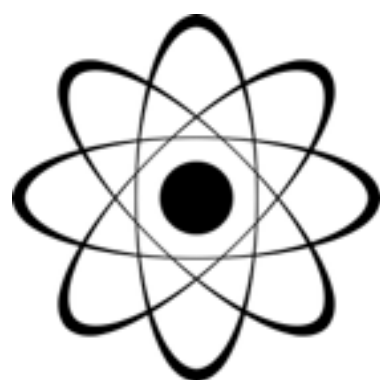
*Arte*

*Meditação*

*Psiconautas*

*Ciência*





*Grande número de organismos isolados de menor complexidade*



*Pequeno número de organismos conectados de maior complexidade*



*Filosofia*



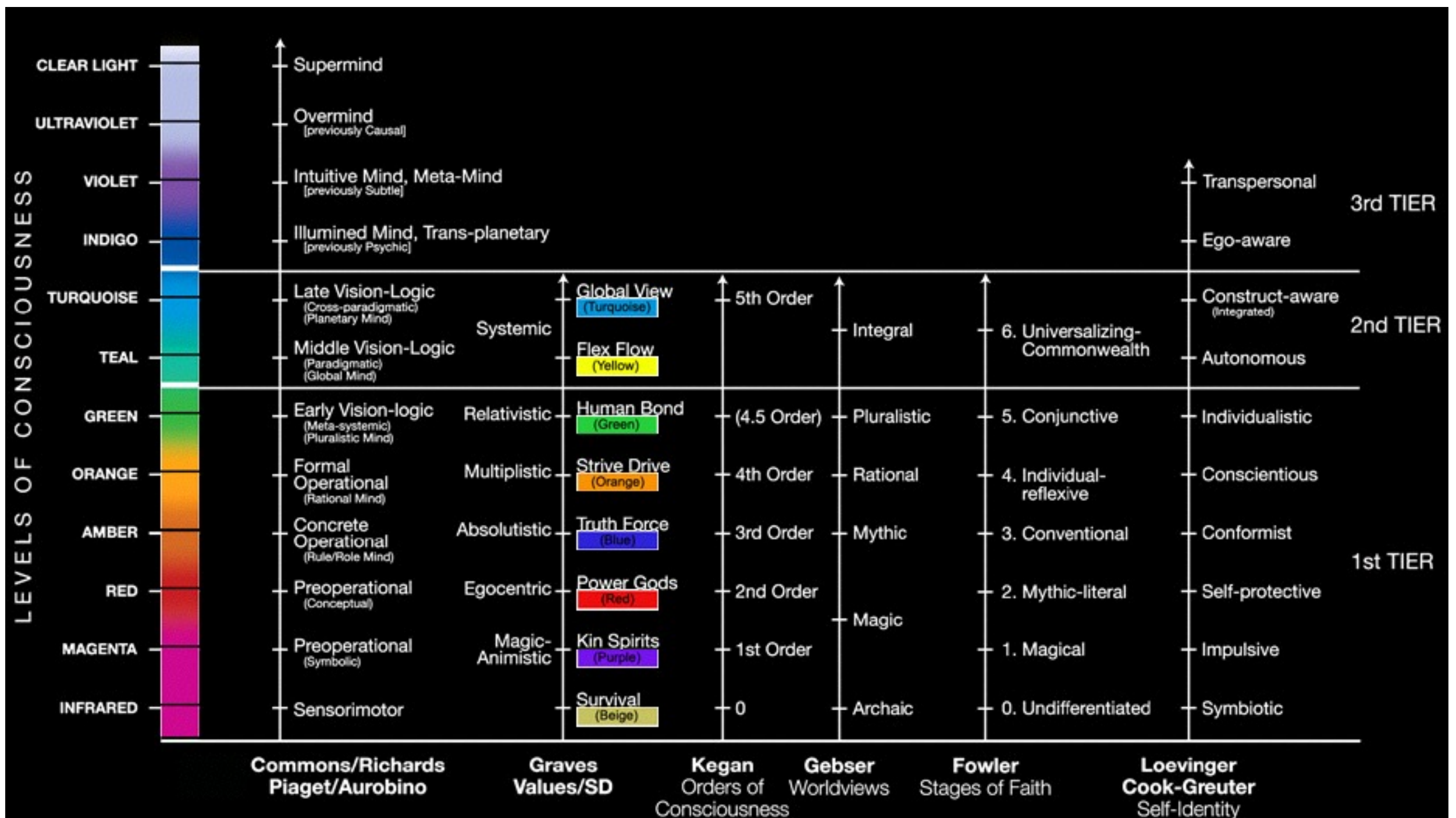


Figure 2.4. **Some Major Developmental Lines** from *Integral Spirituality* by Ken Wilber (p.69)

*Grande número de organismos isolados de menor complexidade*



*Pequeno número de organismos conectados de maior complexidade*

*Religião*





*Grande número de organismos isolados de menor complexidade*



*Pequeno número de organismos conectados de maior complexidade*

*Psiconautas*





*Grande número de organismos isolados de menor complexidade*



*Pequeno número de organismos conectados de maior complexidade*



*Arte*

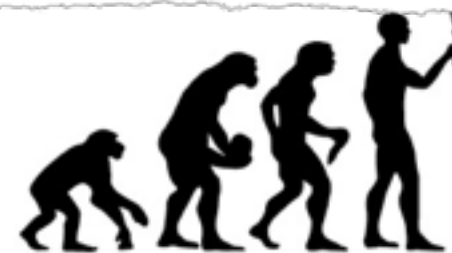


*Peak Moment*

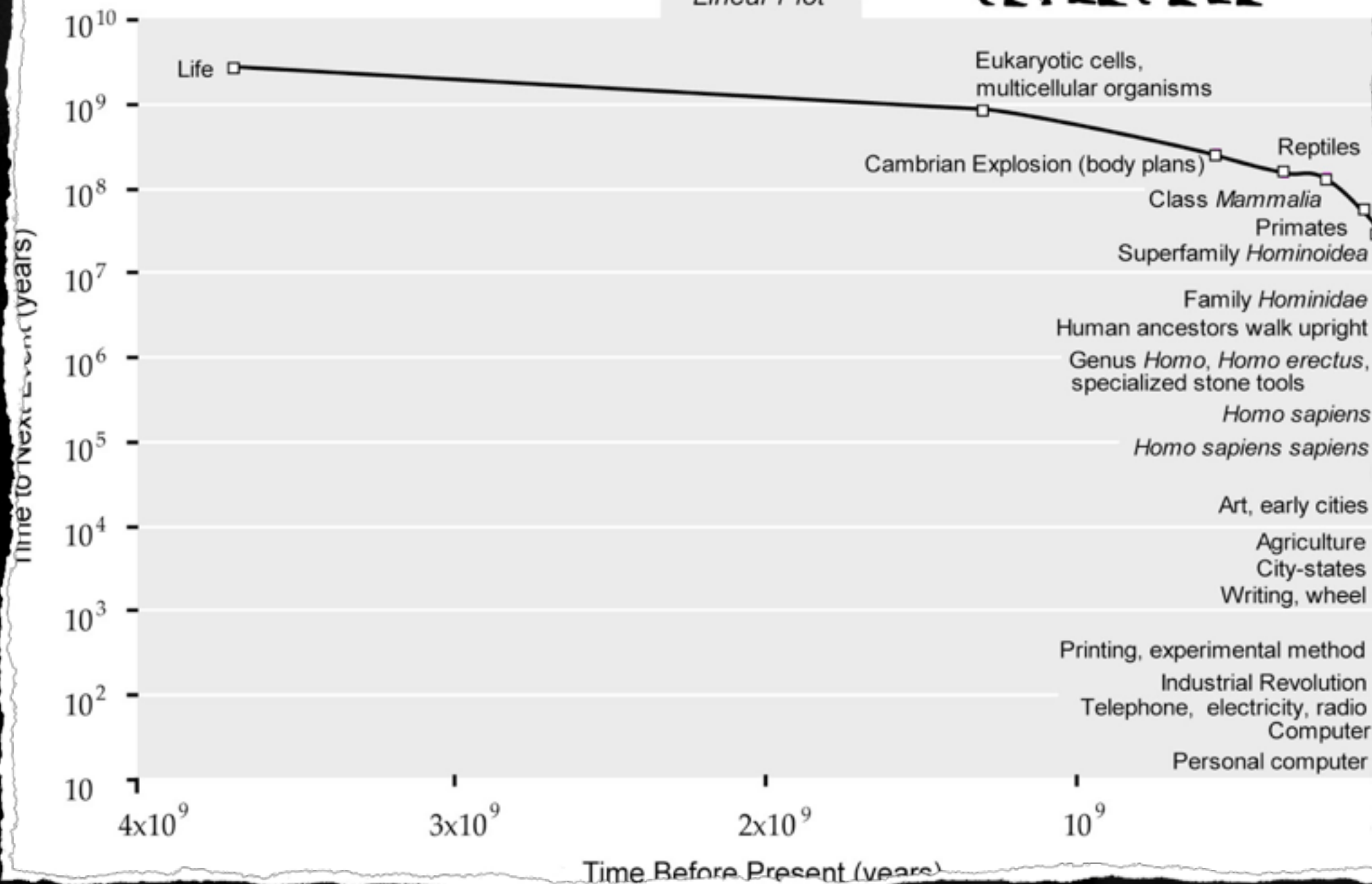


*Será que a transcendência não é a única coisa que, de fato, perseguimos?  
Será que a tecnologia não é uma ferramenta para essa transcendência?*

# Countdown to Singularity



Linear Plot





*Grande número de organismos isolados de menor complexidade*



*Pequeno número de organismos conectados de maior complexidade*

*O que estou aprendendo no FoT é para meu uso?*

*Aprender é identificar padrões.*







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