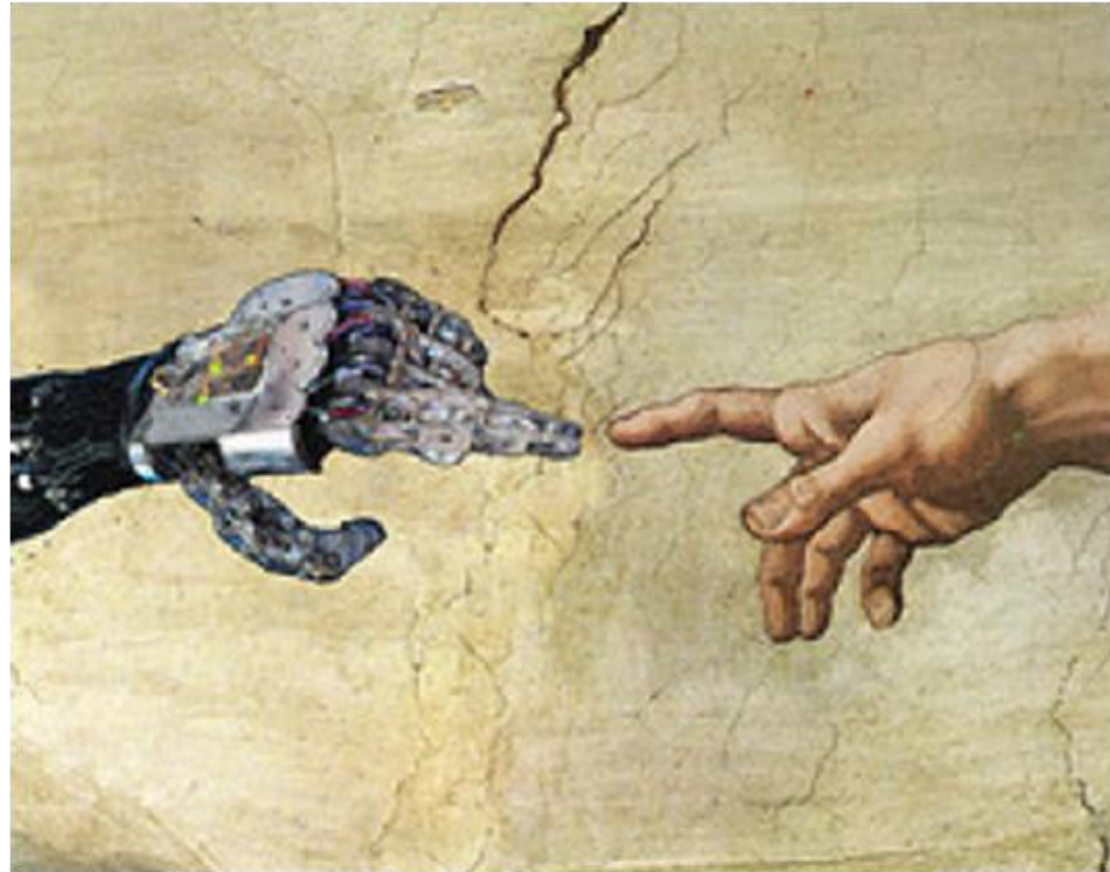




Mankind's Destiny with Machines

Will Humans Become Supermen? Gods?



Andrew Linnell

jandrewlinnell@yahoo.com

www.thechristianmysteries.org



Outline

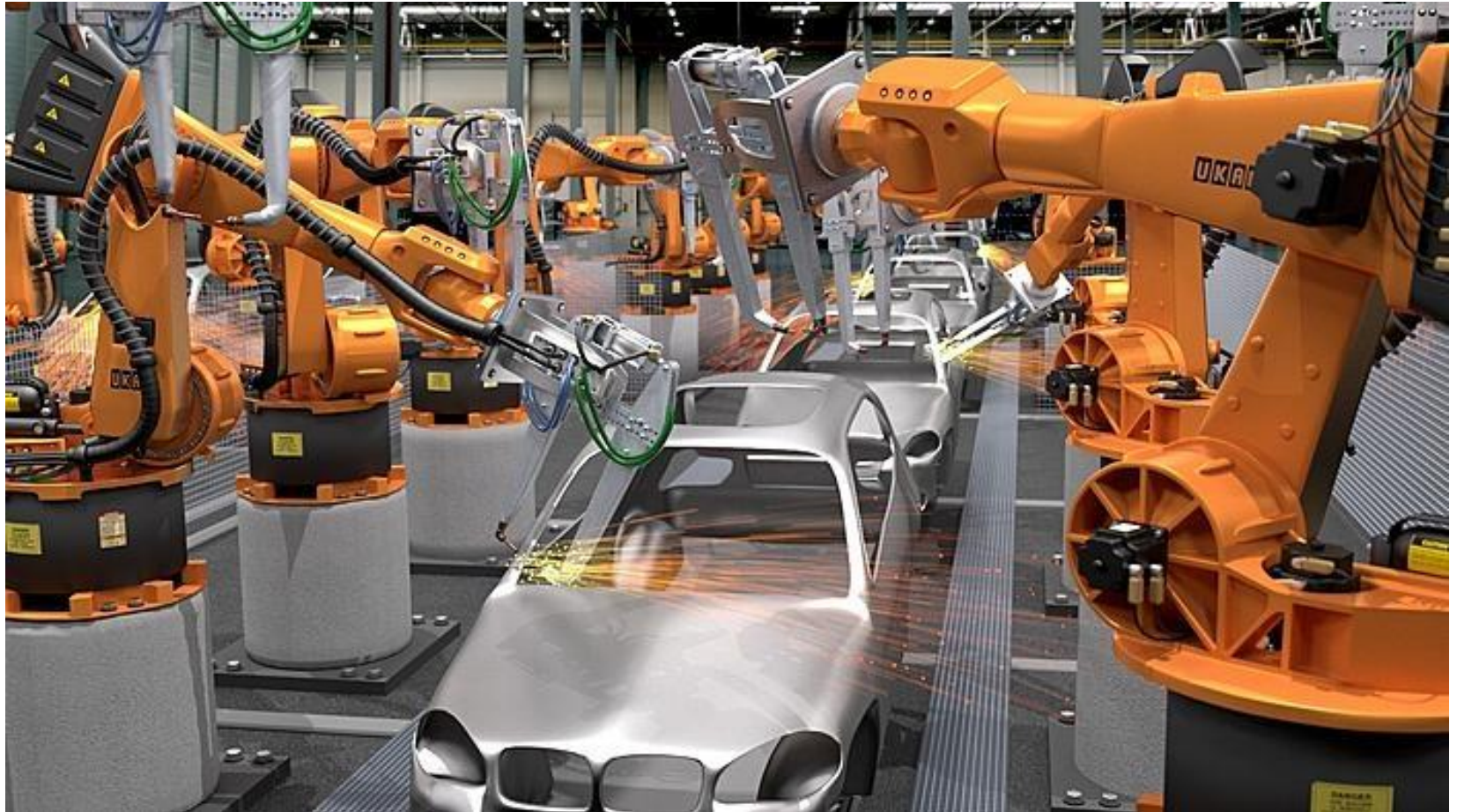
- Overview of Machines and Robotics
- Artificial Intelligence → Kurzweil's Singularity
- Attachment of machines to the human body
- Where will this lead?
- Spiritual Science and the Path to Jupiter

Evolution of Machines

- Cain tilled the soil
- Tubal-Cain, a smith
- Transport e.g. chariot
- Warfare e.g. catapults
- Manufacturing e.g. spinning wheel
- From plant to animal
 - to fossil fuel to electricity to ?



Robots in Manufacturing



Robots in Home Care

From cleaning



To shopping and protecting

Need for artificial intelligence

Robotic Intelligence Controlling Machines





What is Intelligence?

Human intelligence – brain, mind, soul?

What is Artificial Intelligence?

From FLI's 2015 The Future of AI Conference

- “Intelligence (human, not AI) is the ability to **model** the world and to **act** on it”
- Possible to reverse engineer the brain
- Turing Test success already at hand

So, what is consciousness?

Which came first: matter or consciousness?



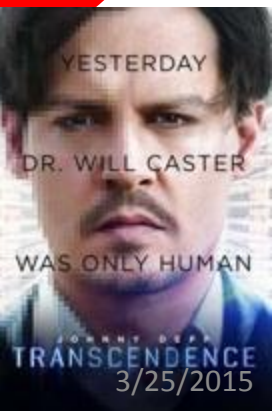
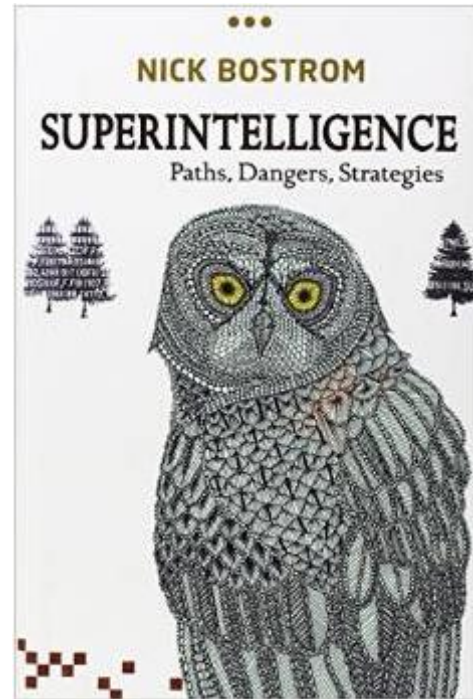
Is Human-Level AI Even Possible?

The reasoning goes like this:

- If people are biological machines, then eventually we will reverse engineer them, and understand their workings
- Then, surely we can **make improvements**
 - With materials and technology not available to evolution
 - How could there not be something we can improve?
 - Design can overcome local minima, make great strides, try things much faster than biology
- OK, when might this happen? AI Industry claims:
 - 25% chance by 2030
 - 50% chance by 2040
 - 10% chance never

Artificial Intelligence

- “If some day we build machine brains that surpass human brains in general intelligence, then this new superintelligence could become very powerful. And, as the fate of the gorillas now depends more on us humans than on the gorillas themselves, so the fate of our species would depend on the actions of the machine superintelligence.”
- “We do have one advantage: we get to build the stuff. ... It also looks like we will only get one chance. Once unfriendly superintelligence exists, it would prevent us from replacing it or changing its preferences.” – Nick Bostrom
- Will Superintelligence rival Godintelligence?
 - God the all-wise, God is love, and super-AI?
 - For Good or Evil?





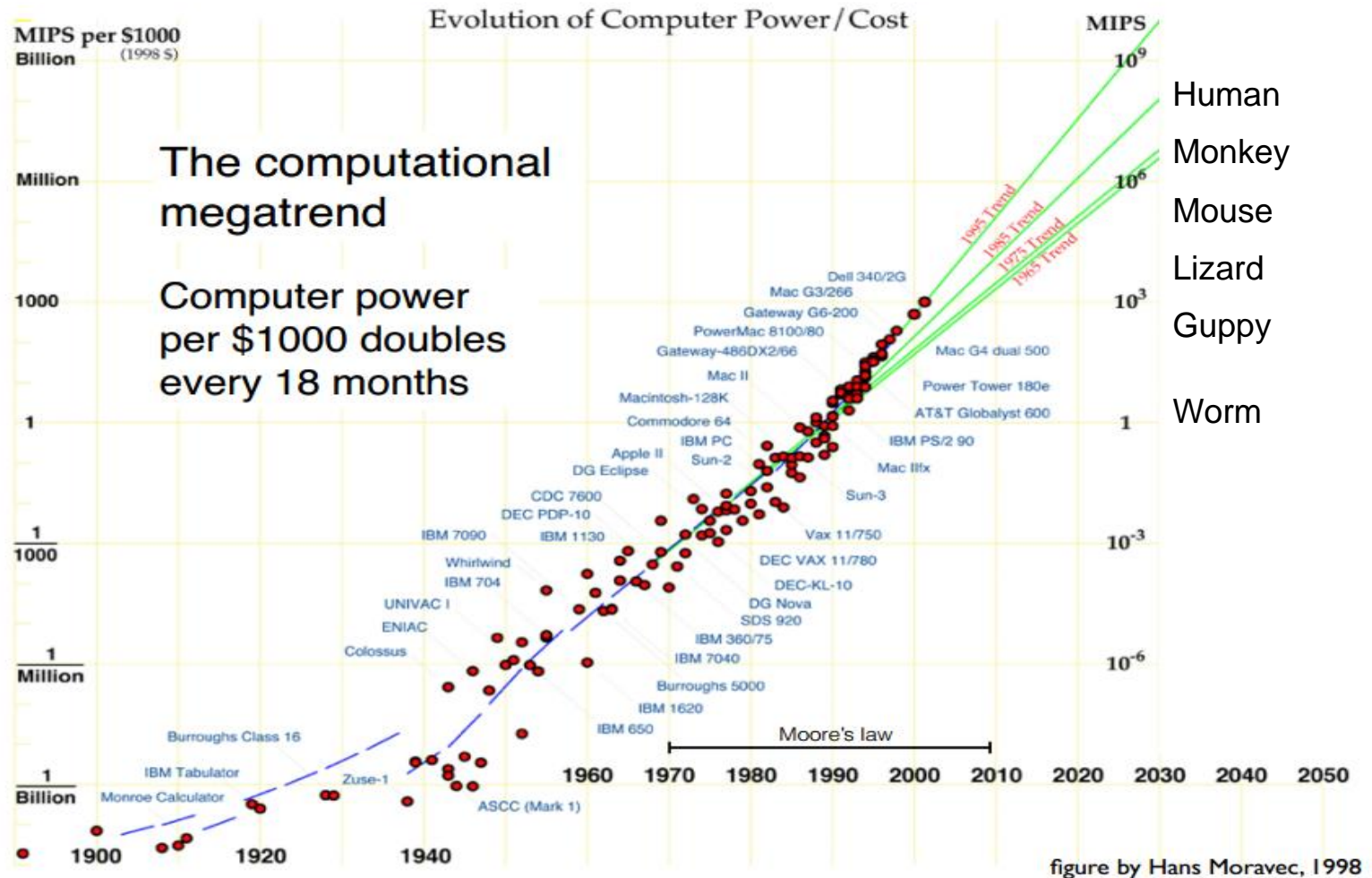
FLI's The Future of AI, Jan. 2, 2015

When people finally come to understand the principles of intelligence—what it is and how it works—well enough to design and create beings as intelligent as ourselves:

1. It would change the way we work and play, our sense of self, life, and death, the goals we set for ourselves and for our societies
2. It would also be of significance beyond our species, beyond history
3. It would lead to new beings and new ways of being, beings inevitably much more powerful than our current selves
 - A fundamental goal for science, engineering, the humanities, ... for all mankind -- http://futureoflife.org/misc/ai_conference

When Will AI Become Human-Level?

“By 2025 these machines will have an IQ greater than 90% of the U.S. population. That ... would put another 50 million jobs within reach of smart machines.” Harvard Business Review, 2014



When Silicon Beings Surpass Carbon

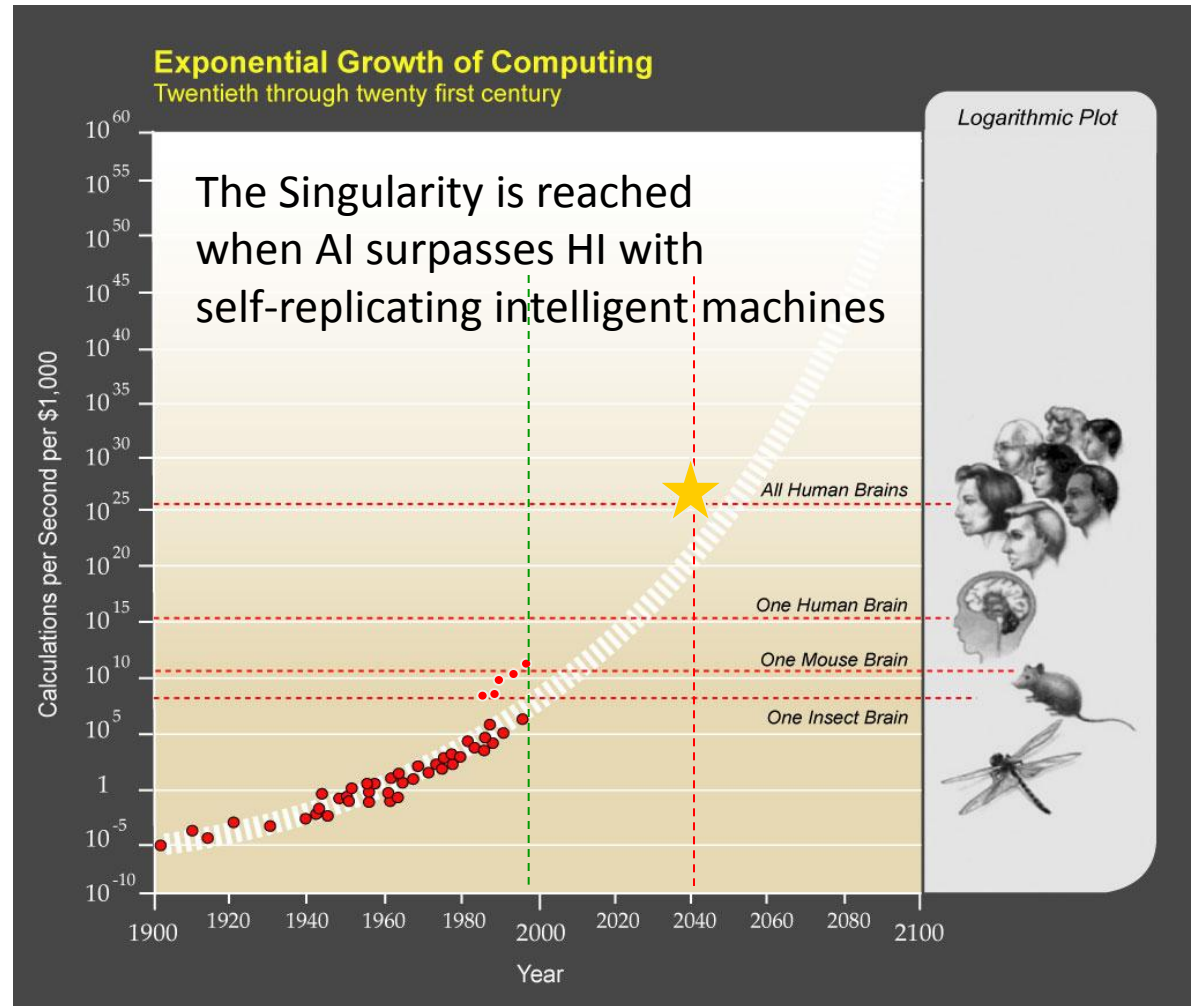
\$2000 computer, 2020 = human brain, 2045 = Σ all human

Law of
Accelerating
Returns:
technological
change is
exponential as is
the change in
the *rate* of
change

Blue Brain Project

Mimic the Brain

www.eetimes.com, May 28, 2008





The Voice of Technology

Also: [Will Robots Inherit the Earth?](#) (Scientific American, October 1994)

- “The **body**, this mass of biomolecules, is a **machine** that acts according to a set of specifiable rules... We are machines, as are our spouses, our children, and our dogs... I believe myself and my children all to be mere machines.” [Rod Brooks, Director of CS-AIL, MIT.]
- “The neural code is the **software** whereby the brain transforms raw sensory data into perceptions, memories, decisions, and meanings.” [John Horgan Science Writer and Author of *Rational Mysticism*]
- “The more we learn about our brains, the more ways we will find to **improve** them. ...With further advances, **no part of the brain will be out of bounds for attaching new accessories**. In the end, we will find ways to **replace every part of the body and brain – and thus repair all the defects and flaws that make our lives so brief. Needless to say, in doing so, we'll be making ourselves into machines.**” [Marvin Minsky, Director of MIT Media Lab]

The Voice of Religion

- “your whole **spirit and soul and body** be preserved blameless” unto the future – *Thessalonians 5:23*



Minsky: on Soul and Spirit

- “Many thinkers firmly maintain that machines will never have thoughts like ours, because no matter how we build them, they'll always lack some vital ingredient
- They call this essence by various names--like sentience, consciousness, spirit, or soul. Philosophers write entire books to prove that, because of this deficiency, machines can never feel or understand the sorts of things that people do
- However, every proof in each of those books is flawed by assuming, in one way or another, the thing that it purports to prove--**the existence of some magical [divine] spark that has no detectable properties**
- I have no patience with such arguments
- We should not be searching for any single missing [or invisible] part”

[The Emotion Machine](#), Simon and Schuster, 2006



Is the Spirit Just Maya (illusion)?

Trans-Spirit is a natural science branch where “researchers seek to achieve a complete scientific understanding of spiritual phenomena and, based on that understanding, to develop techniques and technologies for **inducing** ‘spiritual experiences’ at will

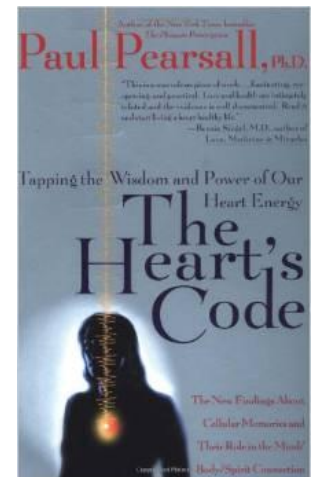
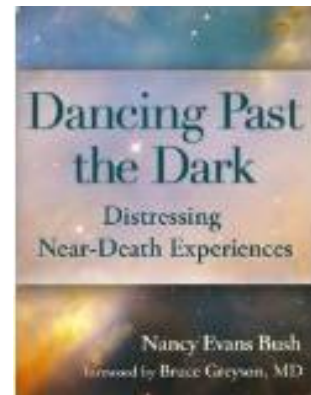
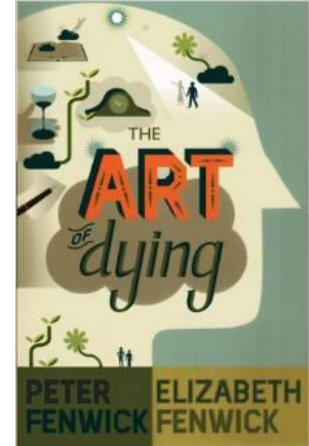
Trans-Spirit aims to focus almost exclusively “on the ***physical mechanisms*** that predispose human beings to believe and behave according to religious and spiritual norms.”

Trans-Spirit: Religion, Spirituality and Transhumanism, Journal of Evolution and Technology, 2005 Vol. 14 pgs 39-53, Michael LaTorra, New Mexico State University

Human Consciousness & The Brain

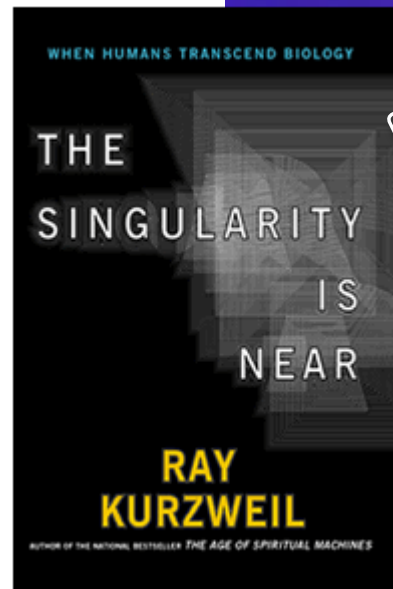
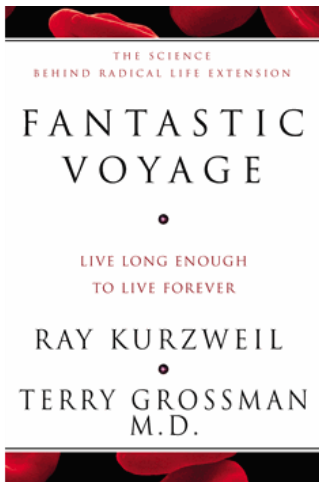
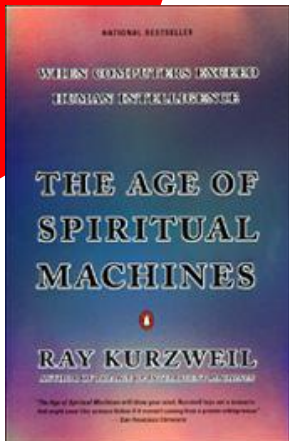
Will we “be there” once we reverse engineer the brain?

- Peter Fenwick
 - Eminent neuropsychiatrist
 - Academic expert on disorders of the brain
 - Research: end of life phenomena
 - Consciousness may be independent of the brain and so able to survive the death of the brain
 - Change attitudes so that we in the West can face up to death, to embrace it as a significant and sacred part of life
- Richard Greyson
 - Professor Psychiatry and Neurobehavioral Sciences, UVA.
 - Researcher in the field of near-death studies
 - <https://www.youtube.com/watch?v=Rtk644N2DDs>
 - <https://www.youtube.com/watch?v=en-3Bz1RMig>
- Paul Pearsall
 - The heart is more than just a pump; it conducts the cellular symphony that is the very essence of our being.
 - Research on cellular memory of the heart
 - Do memories move with transplanted heart? Other organs?



Ray Kurzweil's Vision of the Future

- Immortality is within our grasp
- When Humans transcend biology



Key: GNR

Kurzweil's Singularity (A Movie)



- GNR to make a “better” life and world
- “Humanity is fast approaching an era in which our intelligence will become increasingly *merged with computers* and trillions of times more powerful.
 - “Live long enough to live forever”
- This will be the dawning of a new civilization, enabling us to *transcend our biological limitations*.
- Boundaries blur between *human and machine, real and virtual*. Human aging and illness are reversed, world hunger and poverty are solved, and we cure death.”



Life After the Singularity

- “The bulk of our *experiences will shift* from real reality to virtual reality”
 - What becomes of our biological body?
- Most of the intelligence of our civilization will ultimately be *nonbiological*, which by the end of this century will be trillions of trillions of times more powerful than human intelligence
- However, this does not imply the end of biological beings, even if thrown from its perch of evolutionary superiority [Kurzweil expects the rise of hybrid humans]
- Moreover, it is important to note that the nonbiological forms will be derivative of our biological design
 - **“In other words, our civilization will remain human, indeed in many ways more exemplary of what we regard as human than it is today, although our understanding of the term will move beyond its strictly biological origins.”**
 - *Ray Kurzweil*

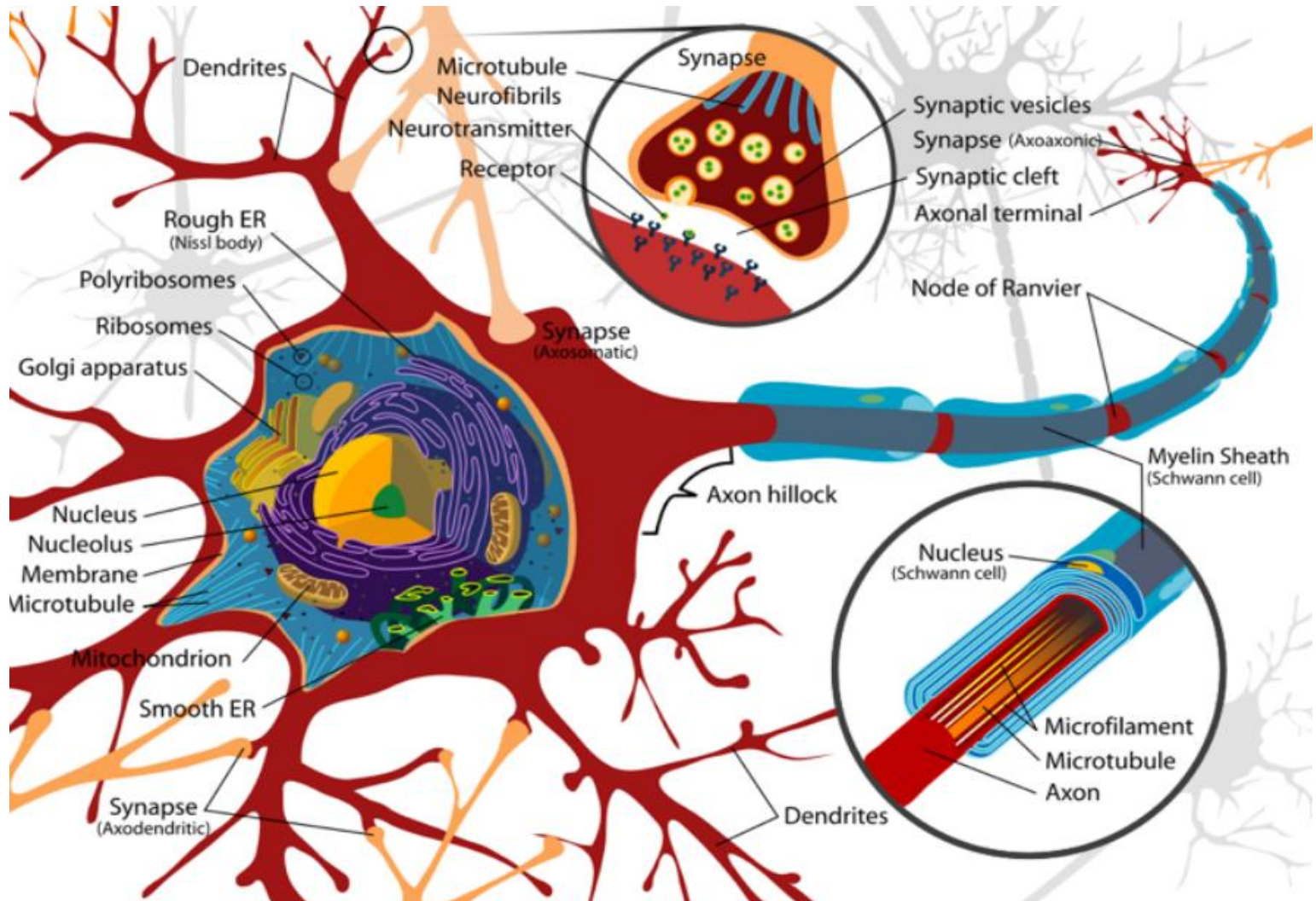
Brain Augmentation

Embed

- GPS & RFID
- Wireless internet
- iPad functionality
 - Voice recognition
 - Connect vis-cortex
- Health sensors
- Psychological guides
- Might these be embedded at birth?



Do Synapses Correspond to Transitors?



Neuroplasticity of the Brain

- Refers to changes in neural pathways and synapses due to changes in behavior, environment, neural processes, thinking, emotions, as well as changes resulting from bodily injury
- Known in vision improvements
- Leads to human trials on a broad scale for motor cortical implants to help quadriplegic or locked-in patients perform tasks and communicate with the outside world



Is it Wrong to Couple Man to Machine?

Improving Prosthesis

- From Captain Hook to ...
- Built in robotics
- Helping the maimed to live
 - Is this not the Christian thing?
 - Or is it one's karma (so better to do nothing)?
- Is this a slippery slope?
 - Temptation to change natural (weaker) for artificial?
 - Example: plastic surgery
 - How does the human soul & spirit deal with mechanical limbs?
 - What does it mean for future generations?



Bionic Eye

- Allen Zderad was blind
- Given a bionic eye implant
- Works by bypassing the damaged retina and sending signals directly to the optic nerve
- A small chip was attached to the back of the eye with multiple electrodes offering 60 points of stimulation
- Future version could have 1000 points of stimulation
- Source: <http://www.medicalnewstoday.com/articles/289863.php>



Bionic Limbs

- Three Austrians have replaced injured hands with bionic ones that they can control using nerves and muscles transplanted into their arms from their legs
- Transplant would have meant taking anti-rejection drugs for the rest of their lives
- His son, then 4, said proudly "my father is a robot"



Bionics Becoming Affordable

- Made with \$2000 3D Printer and inexpensive materials
- More: <https://www.youtube.com/watch?v=A6isKsPWubA>



Linking the Brain to Mechanical Arms



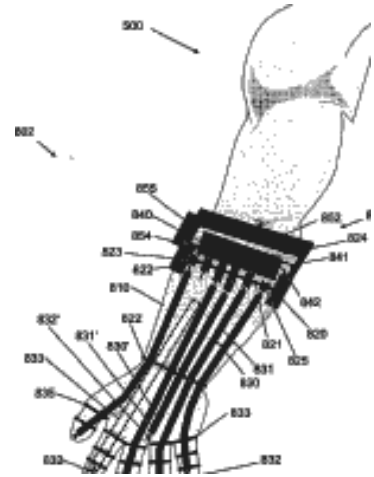
Link to [video](#)

Robotic Arms for Humans

<http://www.youtube.com/watch?v=ppILwXwsMng>

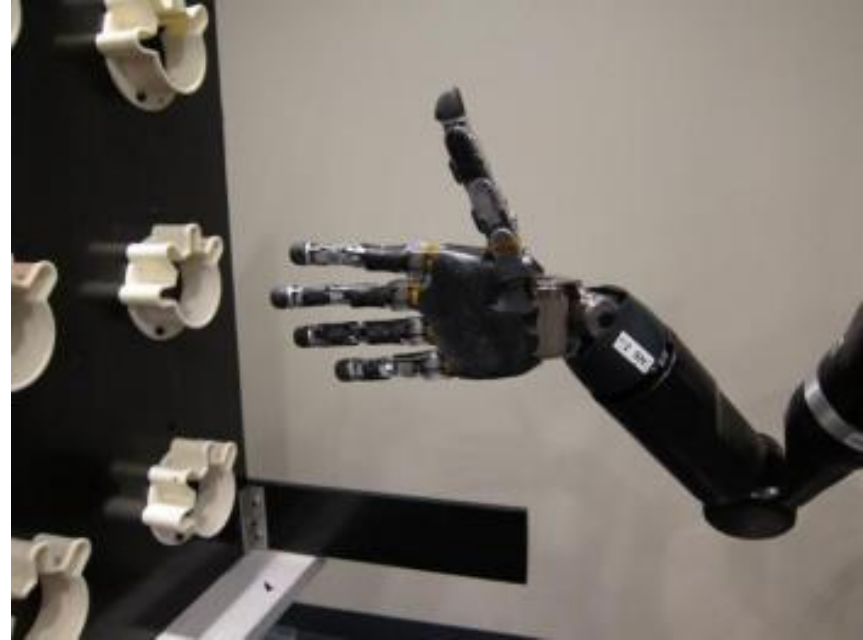
December 2, 2009

- European scientists say they successfully connected a robotic hand to a man who had lost an arm allowing him to feel sensations in the artificial hand and control it with his mind
- The experiment lasted a month
- Amputee was *able to make complex movements using his mind* to control a biomechanic hand connected to his nervous system
- Wiggle the robotic fingers and make movements



How it Works

1. Record brain activity
 2. Set brain probes
 3. Train brain to use
 - Jan Scheurmann watched animations of movements and imagined them
 - The signals her brain sends to calibrate the system are recorded
 - Then "reading her thoughts" allows proper placement of probes she uses to move the hand
- Source: <http://www.medicalnewstoday.com/articles/287120.php>
 - Does neuro-plasticity play a role?
 - Can the human change to accommodate machines?





Moral Questions

- If someone is suffering, what do we do?
 - Christian impulse
- Free someone in a biological prison?
 - Let them live a near-normal life
- Is there a role for illness? Suffering?
 - Who can judge if someone suffering should suffer?
 - If we can help overcome, shouldn't we? Karma?
- Do we know what we are doing?
 - Risk/Benefit “equation” enough?



Trailer 3
Play 2:32



Trailer 2
Play 2:29



Trailer
Play 2:03

Ex Machina [®]

In Theaters April 10th, 2015 | © 2015 A24

Details

A young programmer is selected to participate in a breakthrough experiment in artificial intelligence by evaluating the human qualities of a breathtaking female A.I.

Official Website ▶

Director Alex Garland
Writers Alex Garland
Actors Oscar Isaac, Domhnall Gleeson, Alicia Vikander
Genre Thriller, Science Fiction

Seduction of AI Fear of Machines “taking over”



“I Love My Apple”

- “I’ve said this before, but thought it was worth repeating: It’s in Apple’s DNA that technology alone is not enough.
- That it’s technology married with liberal arts, married with the humanities, that yields us the result that makes our hearts sing.” – Steve Jobs when announcing iPad2, March/2011
- Can we really love our machines?

Machine Aided Sex



- Toys (more than vibrators)
 - “Reach out and touch someone”
- Connect digitally for your sweetheart to stimulate you
 - [Ohmibod](#): Blue-motion, wearable technology
 - “To connect with your partner, you must both be connected via Google+. Once connected, simply search for your partner and send them an invite to "play." Once the invitation is accepted, you can then "make a connection" and control your partner's vibrator from anywhere — at any time. Look for the iconic blue heart, indicating that your partner's vibrator is connected to your device.”
 - TrueCompanion: male and female, \$3000 or \$6000 (responsive to verbal commands), multiple personalities
 - Will it become mainstream?
 - http://www.huffingtonpost.com/2015/01/29/future-of-sex-podcast_n_6569838.html?utm_hp_ref=technology



RoXXy the 'Healthcare' Robot



- Has conversations with you but never says “not tonight dear”
- Multiple personalities (you set from a big menu)
- Its e-skin is responsive to touch
- Will have simulated orgasm (dial for speed, simultaneous)
- “Ain’t nothing like the real thing, baby” – or will this too change?

With What Can We Fall in Love?

- Pygmalion
 - His wife
 - Pygmalion
 - He
 - like
 - W
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love
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Pygmalion by Jean-Baptiste Regnault, 1786, Musée National du Château et des Trianons



Hephaestus, God of Technology

- Hephaestus, Greek god; Vulcan Roman equivalent
 - Center of his cult was in Lemnos
 - Last Planetary condition (Earth – Jupiter – Venus – Vulcan)
- God of technology, blacksmiths, craftsmen, artisans, sculptors, metals, metallurgy, fire, and volcanoes.
 - Served as the blacksmith of the gods
 - Hephaestus's symbols are a smith's hammer, an anvil and a pair of tongs, and sometimes an axe
- Son of Zeus and Hera (who throws him off Olympus after birth)
 - Hephaestus was lame giving him a grotesque appearance
 - Builds thrones for the gods, Hera's binds her
- Hephaestus, being the most unfaltering of the gods, was given Aphrodite's hand in marriage by Zeus in order to prevent conflict over her between the other gods (nerds get the girl, sort-of)
- Story of Prometheus, Epimetheus, and Pandora

Machines: Becoming Invisible



- Cloud computing
- Wearable computing
- In-the-body computing - nanobots

Virtual Reality

Imitation of the Etheric Realm



- Coming when oil runs out
 - Work from home
- Wireless sensory augmentation
 - Implantation at or even before birth
 - It will become the norm
 - Visual & audio easy – how about touch?
- A New Maya – a second “reality”
 - Mental context switch
 - Need for a threshold? Nanny or Guardian?
 - Much easier entry than to spiritual world

Cyber-Life as an Avatar

- Most business conducted online in cyber space
- Much of social life will too
- Body health? Avatar health?
- Which reality preferred?
 - Parents restricting kids
- Multiple different avatars
 - Personalities, temperament
 - Sex (transgender)
 - Age
 - Skills, knowledge
 - Sold on a virtual market?
 - Useful for soul development?





Rudolf Steiner

SPIRITUAL SCIENCE PERSPECTIVE

Mankind's Destiny with Machines



Thinking and Consciousness

- Does consciousness require a brain?
 - Near-death experiences
 - Minimal brain yet high IQ
- Thinking after death – thinking before birth?
 - Was there thinking before birth? Yes, and it was more alive!
 - Body as the tomb of our living thinking
 - AI as a further death of thinking
 - AI using electricity (sub-nature) : what is xl in super-nature?
 - Future (healthy) human is to expand with balance into both (see *Michael Mystery*, Chpt 29, From Nature to Sub-Nature, March, 1925)
- What is the Human Being?
 - St. Paul (and mystics) claim: soma, psyche, and pneuma



Three-foldness of Our Soul

- If we look into what is rightly called man's inner being, we come first to the 'darkest depths' of the soul, where the soul is still subject to emotions of fear, terror, anxiety and hope, and to the whole gamut of pleasure and pain, joy and sorrow. We called this part of the soul the **sentient soul**.
- We went on to distinguish in these dark foundations of soul experience what we call the intellectual soul, which is achieved when the ego assimilates external impressions and quietly allows that which emerges in the sentient soul to live itself out and find equilibrium. Inner truth, as we may call it, arises in the **intellectual soul**.
- When the ego then works further on what it has gained on its way to the intellectual soul, it raises itself to the **consciousness soul**, where for the first time a clear knowledge of the ego is possible, and where man is led out from inner life to a real knowledge of the world.
- *Source:*
<http://wn.rsarchive.org/Lectures/GA059/English/RSP1983/19100210p01.html#sthas.h.iOopzXhF.dpuf>



Evolving Human Consciousness

- “Moreover, through your having changed the atom, through the fact that you have united the spirit in you with the mineral world, a permanent stamp has been made **upon the general consciousness of mankind**
- “Everything that is performed **without regard to self**, that is connected with the **interests of another**, helps to intensify and to **strengthen our consciousness in the future struggles for existence**
 - For example, you build a church for others, not for yourself
- “Whatever is achieved in the way of development of consciousness in the world does something to further the **evolution of the consciousness** of every single being, even if such a being has not actually worked at the development of his own consciousness”
 - *The Atom as Coagulated Electricity, GA93*



Steiner on Facing Human-Mechanical

- “The will is there to harness human energy to mechanical energy
- These things should not be treated by fighting against them – that is a completely false view
- These will not fail to appear; they will come
 - What we are concerned with is whether, in the course of world history, they are entrusted to people who are familiar in a selfless way with the great aims of earthly evolution and who structure these things for the health of human being or whether they are enacted by groups of human beings who exploit these things in an egotistical or in a group-egotistical sense
- It is not a question of **what**; the what is sure to come; it is a question of the **how**, how one tackles these situations”
 - Rudolf Steiner, *The Reappearance of Christ in the Etheric*, lecture 12



Attachment of a Second Being

“During the course of the Fifth Post-Atlantean epoch, so many problems have lost all inner, vital warmth. The countless questions which confront us when we study Spiritual Science with any depth, simply do not exist for the modern man with his materialistic outlook. **A different form of experience will come to the man of modern times.** In his own opinion he knows ever so well; he observes the material world, **uses his intellect to establish the interconnections between its phenomena** and believes that all its riddles are solved in this way, never realizing that he is simply groping in a phantasmagoria. **But this way of working coarsens and dries up his ether-body,** with the ultimate result that the [Ahrimanic] powers, ***like a second nature, will attach themselves to him.***

The Balance in the World and Man, Lucifer and Ahriman, Rudolf Steiner

Note Similarity to Angel as a Second Being



Confronting Ahriman

- “In an **ether-body** that has been **parched** by materialism, Ahriman will be able to dwell
- “It is our duty to **educate children** in the future in such a way that they will be competent to understand the spiritual world
- “The ether-body must be **quickened** in order that the human being may be able to take his rightful stand, fully cognizant of the nature of the being who stands at his side
- “If he does not understand the **nature of this second being**, he will be spellbound by him, fettered to him”
- “We, in our age, must get the better of Ahriman by **enriching the Ego with the wisdom** that can be born only from knowledge and investigation of the spiritual world, i.e. from Spiritual Science”

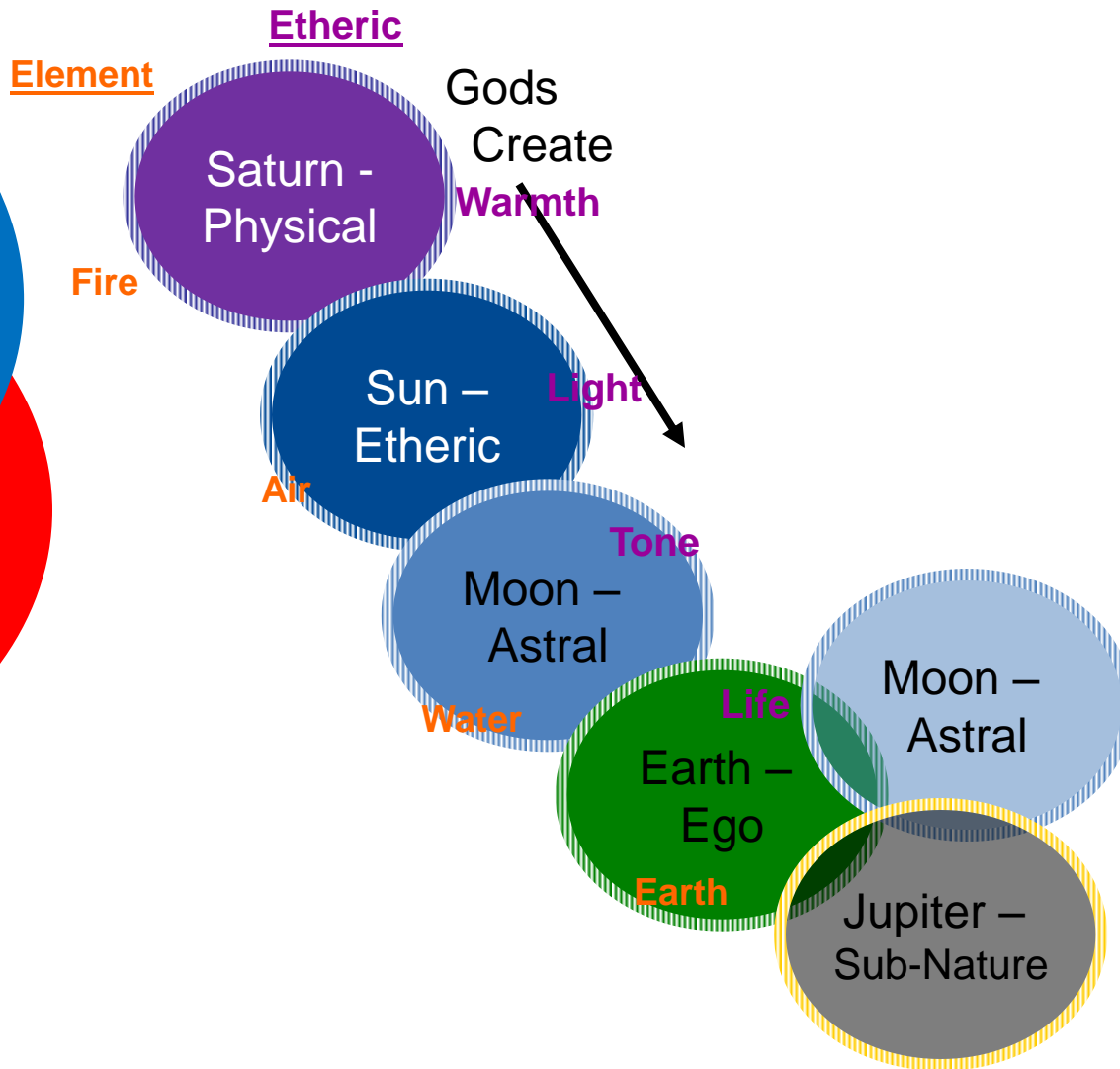
Rudolf Steiner, *The Balance in the World and Man, Lucifer and Ahriman*, Lecture 1



Facing a Future with Machines

- “All that is present in the world today in terms of machines and instruments and is set in motion [to serve the **principle of utility**] will evolve into terrible, horrifying demons”
- “This can be stopped if we transform the utilitarian apparatus into something that also **proclaims beauty or the Divine.**”
- “Our feelings of fear are nourishment for evil beings.” — *Jan.26, 1908, Berlin, GA 245*

Past Stages of Human Condition





The Human Stage in Old Moon

- On Old Moon the Angeloi were at the human state
 - Their appearance was quite different from ours
 - Quite different conditions existed
 - We developed to an advanced pre-state of the Earth evolution
 - We became a troublesome concern for the Angeloi
- On Earth, Angeloi were able to use a body as an avatar

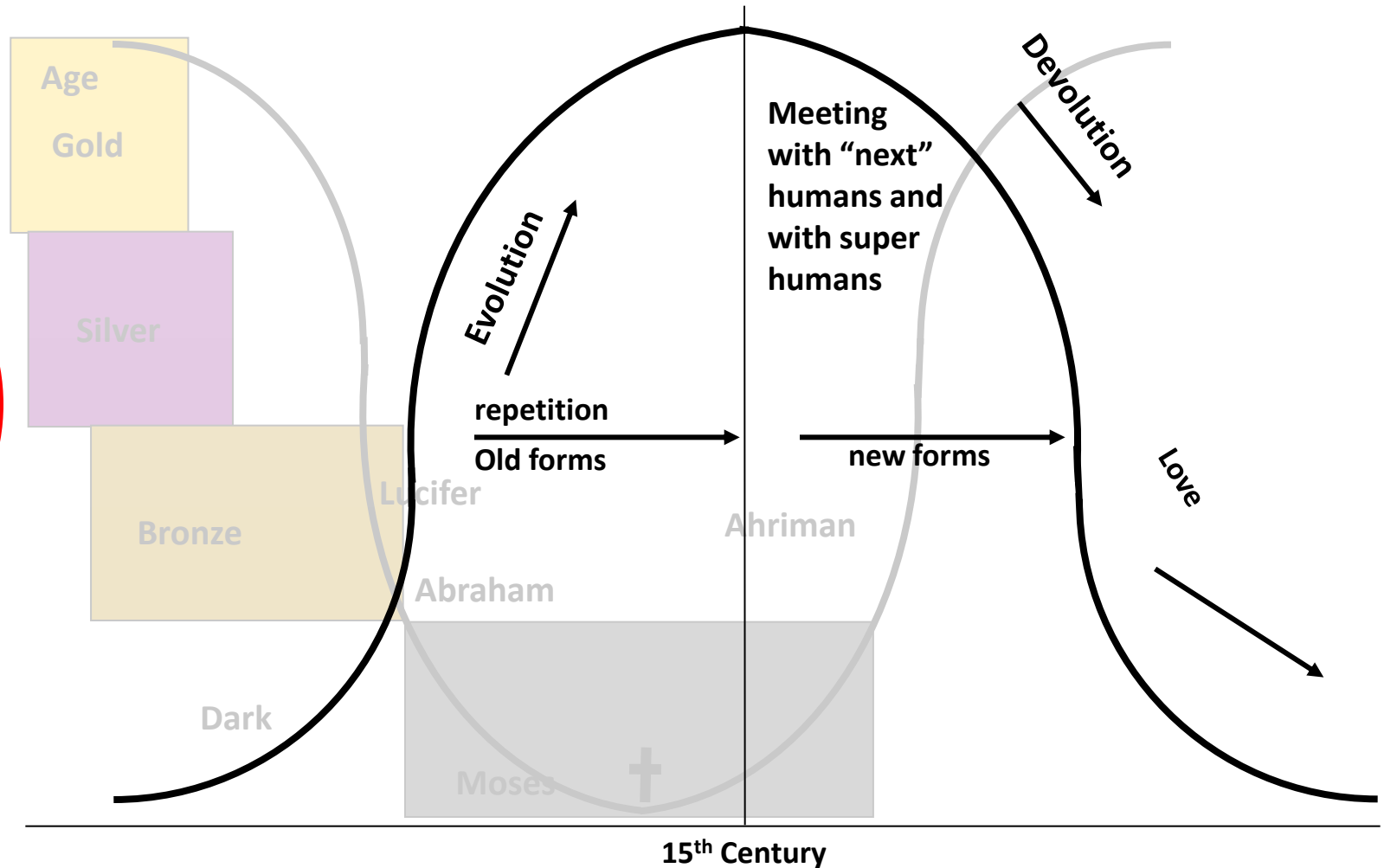
The Mission of the Archangel Michael, V, The Michael Deed and the Michael Influence as Counter-pole of the Ahrimanic Influence, November 29, 1919



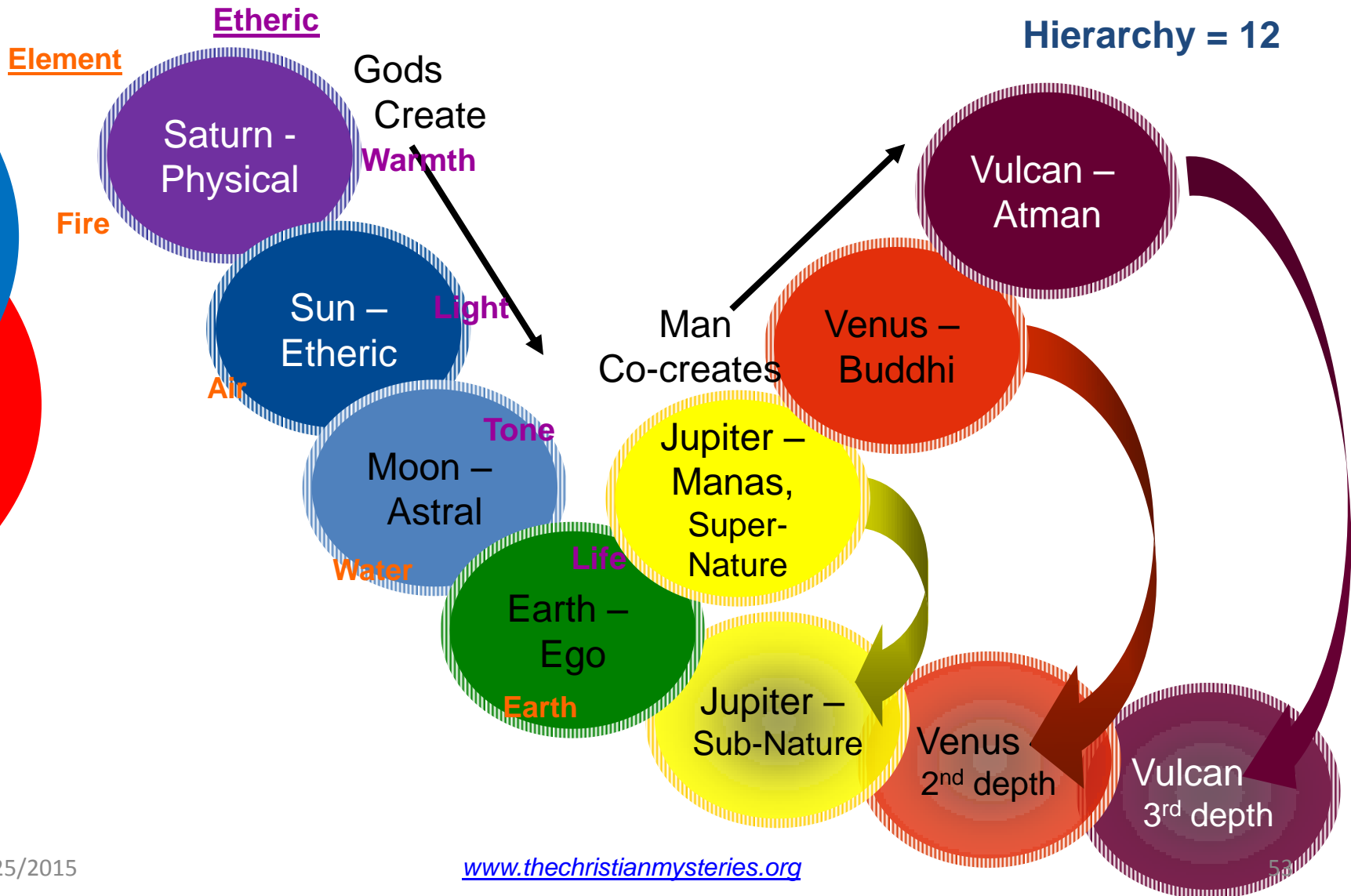
What Will Be Our Future World?

- “What is now around you will become your inner life. You will take into yourselves what is now the mineral kingdom and it will become part of your inner being; similarly the plant kingdom. What surrounds you in nature will become your inner being
- **“What we ourselves prepare and make ready in the world — that is what will constitute our future existence**
- “The measure of what you yourself place into the world is the measure of the consciousness that the world will give back to you
- **“What we do with the mineral world, with the plant world, with the animal world, and with men, that we shall surely become”**
 - If you found a charitable institution or have contributed something to its foundation, what you have contributed will become an integral part of you”
 - *The Atom as Coagulated Electricity, GA93*

Historical Picture



7 Stages of Human Condition





Overlapping Evolutions

- In our descending evolution (now) the Jupiter Humans arise
 - On Jupiter, they will have advanced to a new and different form of human
 - These Jupiter men exist already now just as we existed upon Old Moon
 - They exist not externally visible but as supersensible beings

The Mission of the Archangel Michael, V, The Michael Deed and the Michael Influence as Counter-pole of the Ahrimanic Influence, November 29, 1919



Overlapping Evolutions, cont.

- These sub-human beings' character consists of an impulse which strongly coincides with the **human power of will**
 - They now appear from below as beings produced in Ahriman's realm
 - They play into where we are most asleep – our will
 - Ahrimanic influences act through those with obscured consciousnesses
- “as long as one does not take into consideration these forces as forces **objectively existing in the world** just as one takes into consideration what today is called magnetism, electricity, and so forth, one will not gain an insight into human nature”
 - Today's natural science does not contain man, merely the physical body

The Mission of the Archangel Michael, V, The Michael Deed and the Michael Influence as Counter-pole of the Ahrimanic Influence, November 29, 1919



Mankind's Continued Becoming

- In the beginning, form was given to all by the Gods (Elohim)
 - 5th Epoch: Man given power to give form for **minerals**
 - Just as in the past the Gods created the mineral world from a chaotic mass, so our cathedrals, inventions, and even our institutions are the germs for a future world
 - So We **Must** Transform the Earth
 - Into a **temple of truth, beauty, and goodness**
 - 6th Epoch: Man transforms the **plants**
 - Man will be able to create and give shape to plant-life
 - 7th Epoch: Man transforms the **animal kingdom**
 - Man will give form and have power over animal life
 - And at a still higher stage, he will be able to reproduce his like by an act of **conscious will (love)**
- Gods allow Man to delve into sub-nature as Jupiter preparation
 - But for health, we must be balanced with super-nature

Rudolf Steiner, *An Esoteric Cosmology* XV

Avatarness in the Future

- In Hinduism
 - Deliberate descent of a deity to Earth
 - Typically translated into English as
 - “incarnation” or “manifestation”
- Historically in Spiritual Science
 - Angels (and earlier arch-angels) joined human
- Today, Spiritual Science claims
 - Spiritual being can overshadow
 - Or speak/write through a human
 - Moments of dimmed consciousness
- Future, Spiritual Science asks
 - Will we offer our body to another for karma?
 - Will we, as the next angels, be able to ‘avatar’ a Jupiter-Human?





Love and Jupiter

- "Just as **wisdom was evolved** upon the Moon, in order that it might now be found in all things, so in like manner is **love evolving**
 - Love came into existence first in its lowest, its most sensuous form, during the Lemurian period
 - Love will become ever more and more spiritualized, until at last, when the Earth has reached the end of its evolution, the whole of existence will have become **pervaded with love as today it is pervaded with wisdom**
- The Beings who will wander about **upon Jupiter**, just as human Beings move about upon the Earth, will **find love exhaling** from all creatures, the love which they themselves, as Human Beings, will have placed there during their life upon the Earth
 - They will find love in everything just as we today find wisdom everywhere
 - Then human beings will develop love out of their own inner selves in the same way that they are now little by little evolving wisdom
 - **The great cosmic love that here upon the Earth is beginning its existence will then permeate all things.** *Rudolf Steiner, Gospel of St. John, Hamburg*
- **From Wisdom to Cosmic Love to The Father.** Manas to Buddhi to Atman



Becoming Awake

- In the 9th century, the Ego was placed in the Intellectual Soul
 - “It was in the intellectual soul , the transformed part of the ether-body, that Ahriman established his footing. From there he lures man to false conceptions and judgments of material things, leads him to error, to sin, to lying — to everything that originates in the intellectual soul. Ahriman seeks to make the intellect, given to mankind, similar to his own: a cold, soulless cosmic impulse equating prosperity with goodness. In every illusion that matter is the sole reality, we must perceive the whispered promptings of Ahriman”
 - *The Deed of Christ and the Opposing Spiritual Powers*, Rudolf Steiner
- Between 15th and the 19th centuries, the Intellect was greatly developed
- Full of creative power then but such creative power wanes as decadence sets in
 - “In order to fructify the developed intellect, a stream of spirituality from higher regions of world existence seeks entry into earthly life of mankind. Whether this will happen depends upon man opening his heart and soul to what thus seeks entry into the earthly from the spiritual world.” [Ibid]
 - Elemental beings seeking entry into the earthly today
 - Necessary for man not only to become conscious once more of the spiritual in all nature, but also to be able to perceive it (and Christ in the Etheric)
- Faithfulness to truth as antidote to Ahriman’s attack through materialism
 - Science today
 - Stops short of the truth
 - Satisfied with a predictive model
- Practice living rhythms rather than mechanical



Conclusion: There is a Social Future

But very different from what we know today

1. Western destiny is with technology especially machines
 - It actually is a battle for the etheric realm
 - Dangers prevail crying in the wilderness
 - Nanotechnology, e.g., is a dangerous frontier
 - We must not lose what it is to be a Human
 - Fear or hatred of the future feeds Ahriman
 - Parallel development of spirit and body for Jupiter-Men underway
 - Beginning through the will, Man's contact with and responsibility for Jupiter-humans will increase
2. Man must be a balance of sub & super Nature, dark & light, and other polarities
 - New mysteries arise through this balance
 - Who will build the **new Masonic mysteries**?
3. Man will co-create Jupiter and beyond
 - “Oh Man, Know Thou Thyself” itself evolves

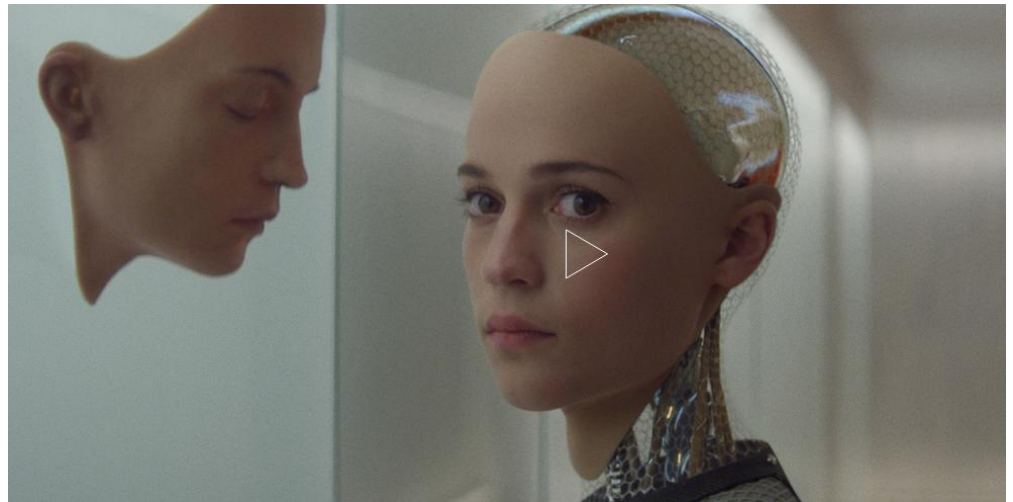
Facing the Future -- *Rudolf Steiner*

“We must eradicate from the soul all fear and terror of what comes towards Man out of the future. We must acquire serenity in all feelings and sensations about the future.

We must look forward with absolute equanimity to everything that may come. And we must think only that whatever comes is given to us by a world-directive full of wisdom.

It is part of what we must learn in this age, namely, to live out of pure trust, without any security in existence - trust in the ever-present help of the spiritual world.

Truly, nothing else will do if our courage is not to fail us.”





Questions?

**As angels permeated Earth with Wisdom from the Kyriotetes,
what beings will we assist to build a Jupiter permeated by Love?**

And, thank you for sharing your insights!



Further Study

By Rudolf Steiner:

- The Temple Legend
- Concerning Electricity
- The Mystery of the Human Double
- The Michael Deed and the Michael Influence as Counter-pole of the Ahrimanic Influence
- The Deed of Christ and the Opposing Spiritual Powers
- The Elemental World and the Future of Mankind
- Building Stones for an Understanding of the Mystery of Golgotha

By Others:

- The Battle for the Etheric, Nick Thomas, Temple Lodge Press, 2006
- I Corinthians 12:12-27, a passage ending with “Now ye are the body of Christ”
- The Futurist, March-April 2006, www.wfs.org
- Blue Brain Project, www.eetimes.com, May 28, 2008
- Alan Turing paper Computing Machinery and Intelligence, Mind, 1950
- Will Robots Inherit the Earth? Marvin Minsky, Scientific American, Oct 1994
- The Futurist, March-April 2006, www.wfs.org, pg. 42
- <http://www.cyberkineticsinc.com/>



Rudolf Steiner Bibliography

- An Outline of Occult Science, 1909
- Egyptian Myths and Mysteries, 9/2-14, 1908
- The Balance in the World and Man, 11/20-22, 1914
- The Realm of Language, The Lost Unison between Speaking and Thinking, 7/17-18, 1915
- Inner Impulses of Evolution, Mexican Mysteries and Knights Templar, 9/16 – 10/1, 1916
- The Karma of Vocation, 11/4-27, 1916
- The Karma of Materialism, 7/31-9/25, 1917
- The Work of the Angels in Man's Astral Body, 10/9/1918
- Rosicrucian Esotericism, 1909
- Theosophy of the Rosicrucian, 1907
- The Challenge of the Times, 11/29 – 12/8, 1918
- The Influences of Lucifer and Ahriman, 11/1-15, 1919
- The Mission of the Archangel Michael, 11/21-30, 1919
- The Reappearance of Christ in the Etheric
- The Boundaries of Natural Science, 9/27 – 10/3, 1920
- Life between Death and a New Birth as Image of the Future Jupiter, 10/21, 1921
- Michealmas and the Soul-Forces of Man, 9/27 – 10/1, 1923
- The Michael Mystery, 3/1925



In Him Was Life

- You cannot understand life if you restrict yourself to centric forces
- For the living, I must go to the 'ends of the world' to all the points at the periphery to see how their interplay unites within the living.
- Like the leap from Kinematics to Mechanics is the leap from lifeless to living – to the incalculatable – cosmic
- ONLY the man-made is only lifeless
- Question: is theory of Gravity correct?



Electricity and Vibratory Physics

- Thinking – Electricity
- Thinking – Light
- Living Thinking
- Sympathetic Vibratory Physics

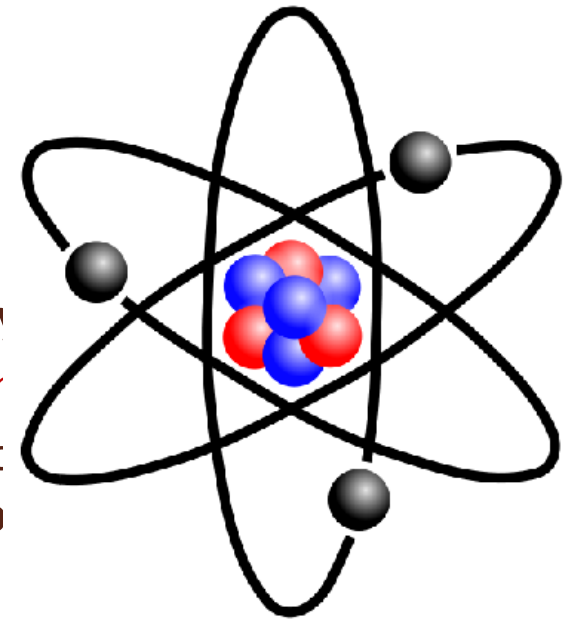


Spiritual Science's Perspective

- Light as consciousness
- Electricity as light in sub-nature
- As we penetrate into sub-nature, so must we in proportion rise into super-nature
- We must cultivate a science of the levels above and below the mere physical

What is the Atom?

- The atom is nothing but coagulated electricity
 - Thought itself is composed of the same substance
- **Before** the end of the fifth epoch of culture, science reached the stage where man will be able to produce an atom itself
- When the similarity of substance between the thought and the atom is once comprehended, the way to get hold of the forces contained in the atom will soon be discovered and then nothing will be inaccessible to certain methods of working
- It is impossible to conceive what might happen in such circumstances if mankind has not, by then, reached selflessness
- The attainment of selflessness alone will enable humanity to be kept from the brink of destruction





The Machine-Planet: Our future?

by Ingo Hoppe

- *Star Wars* director, George Lucas, is well versed in Rudolf Steiner

The 'Death-Star'

- Whether in medicine or in robot-guided automobile production, whether in the entertainment industry or in daily life, everywhere the machine grows increasingly more dominant. Connect up with cables and networks as many areas of life as possible, with the greatest possible speed and thoroughness, and computerise them totally. The Earth, encircled by satellites in ever greater numbers, becomes ever more tightly enwoven into the world-wide telecom and computer networks. Huge cities are constantly expanding, entire countries are transformed into deserts by industry, and cultural landscapes that have evolved over many centuries are criss-crossed by eight-lane highways, cell phone and television towers. And now, with gene-technology, living nature is also to be forced into the straight-jacket of mechanistic manipulation. If this development is thought through to the end, and if one assumes that it is the only developmental tendency of mankind, then it is plain to see what its final consequence would be: the environmental destruction of living nature in favor of the total mechanization of all aspects of life.

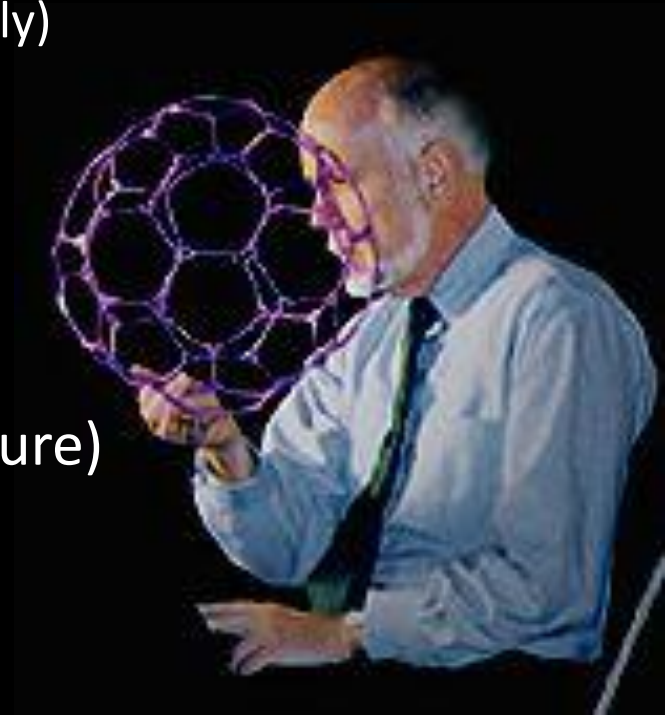
Becoming New Masons of Sub-Nature

“Nanotechnology is the builder’s final frontier.”

Richard Smalley

1996 Nobel Laureate in Chemistry, Rice University

- Temple Legend: Hiram and Solomon
 - One (Solomon) can envision (heavenly)
 - One (Hiram) can build (earthly)
- Masonic orders
 - Mystery knowledge, character
- From masons of stone
- To masons of technology (sub-nature)
 - New mysteries





Striving for Truth

Evolving From Science to Engineering

- “It no longer matters if we understand it; what matters is if the model can accurately predict all outcomes.”
- Richard Feynman: It works “for all practical purposes”
- “It's okay to have theories that assign tiny probabilities to outcomes, so long as no other theory does better”
 - Eliezer Yudkowsky, [Machine Intelligence Research Institute](http://www.alignmentresearch.org/)
- Rudolf Steiner: “we are striving for a connection of the ‘I’ with the truth”
- John 8:32 “ye shall know the truth, and the truth shall set you free”