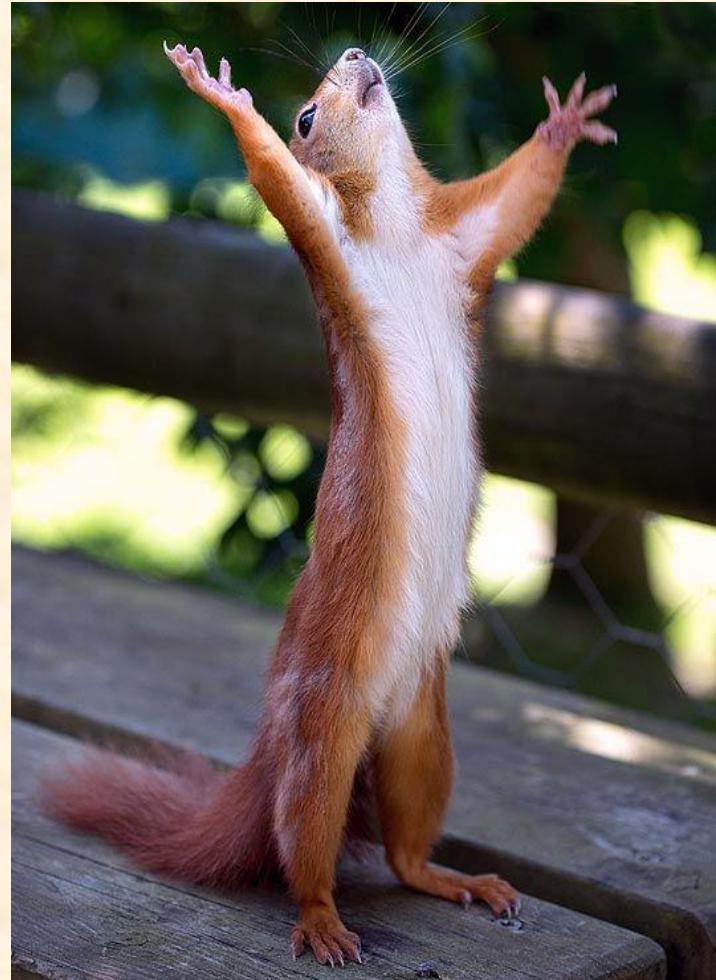


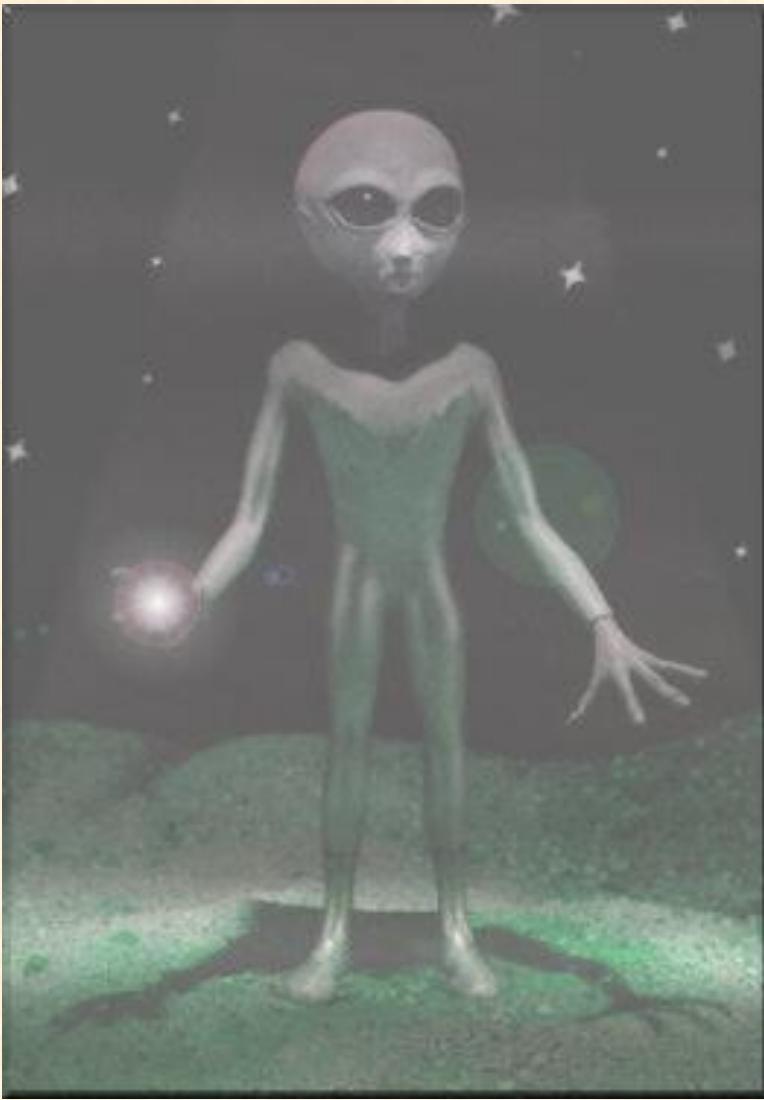
Het ontstaan van religie ontsluierd?

**Wat we kunnen leren
van de cognitieve
wetenschap van
religie.**

Antwerpen, 5 december 2023

Johan Braeckman





Mochten buitenaardse wezens het leven op aarde onderzoeken, wat zou hen dan opvallen?



Hadj, Mekka



Vaticaan, Sint-Pietersplein



**Kumbh Mela pelgrimstocht, Hindu, elke twaalf jaar
ca. 30 tot 70 miljoen mensen baden in Ganges
(Foto: satelliet Ikonos, 680 km. afstand)**

religie: een van de oudste typisch menselijke fenomenen?



Grot in Shanidar, Irak. Neanderthaler, zestigduizend jaar geleden: negental skeletten & aanwijzingen van ‘begrafenisrituelen’. Eén graf lijkt duidelijk ‘gedecoreerd’, met zevental soorten bloemen (met medische en misschien andere waarde – graf van Sjamaan?). Er is evenwel geen wetenschappelijke consensus over interpretatie, evenmin over de vraag of graven aanwijzing zijn voor geloof in hiernamaals.

The Gods of Prehistoric Man

Johannes Maringer



HISTORY OF RELIGION

Prehistoric Religion

A Study in Pre-Christian Antiquity : an Examination of the Religious Beliefs of the Oceanic, Central African, and Amazonian Primitives, the Development Among the Later Indo-Asiatic and Totemic Peoples, Their Interpretation by the We



FREDERICK WEBB HODGE, PHILO LOAS MILLS,
PHILO LOAS, SGN MILLS







Cave art may show finger sacrifice

Michael Marshall

STONE Age Europeans may have deliberately amputated their fingers during religious ceremonies. The idea could explain why so many of the prehistoric images of hands on cave walls are missing fingers – but not everyone agrees.

Images of hands, whether handprints or stencils, are some of the most common forms of cave art. Two French caves, called Gargas and Cosquer, are known for their unusual hand images. Of the 231 hand images in Gargas, 114 have at least one finger segment missing, while Cosquer has 49 hand images, 28 of which are missing finger segments.

Nobody knows why. One suggestion is that the people's hands were intact and they folded fingers when making the pictures, perhaps as a simple counting system. Or maybe people lost fingers to frostbite.

Mark Collard at Simon Fraser University in British Columbia, Canada, and his colleagues

wondered if instead people might have removed the fingers on purpose.

To find out if this was plausible, they examined ethnographic studies conducted since the 17th century to see how many human societies practised finger amputation. They found 121 societies that did it. "I was pretty shocked," says Collard. "It seems like such a debilitating

"It seems like such a debilitating practice that I couldn't imagine signing up to do it myself"

practice that I couldn't imagine signing up to do myself."

The team found 10 reasons people amputated their fingers, including as a marker of group identity and as a punishment. In some societies, voluntary finger removal represented a religious sacrifice done to appeal to a supernatural being. For instance, some women removed and ate a finger to encourage pregnancy. Collard suspects Stone Age

Hand stencils with shortened or missing fingers from Cosquer cave

humans also removed their fingers as a sacrifice. Such unpleasant experiences can enhance cooperation within a group and encourage distrust of outsiders (*Journal of Paleolithic Archaeology*, doi.org/cxkb).

Collard emphasises that this is a hypothesis. It is one that other archaeologists reject. Ian Gilligan at the University of Sydney, Australia, thinks frostbite is more likely. "None of the ethnographic cases they cite match the distinctive pattern seen in the ice age hand stencils – namely, a sequential shortening of fifth, fourth and third fingers, with the thumb spared," he says. But that pattern corresponds to frostbite damage, he adds.

There is no reason to think people's fingers were removed at all, says Paul Pettitt at Durham University in the UK, because they could simply have folded their fingers in. "Most of the ethnographic examples involve the removal of a little finger," he says. The hand stencils in Gargas cave have up to four fingers missing. "Nobody would be idiotic enough to remove every finger bar the thumb. That simply makes no sense," says Pettitt. ■

Does sex with a robot count as cheating?

A STUDY exploring the reactions of robots has found that people are OK with the idea of a partner paying to use a sex robot if someone is in a relationship.

That is according to Michael Koverola at the University of Helsinki, who asked more than 300 people to judge the moral character of people in a futuristic scenario.

The story was set in the year 2035, in which a person, male or female, single or married, goes to visit a brothel. Depending on the scenario a sign read either "All our robots are humans" or "All our workers are humans". Participants were asked to judge the actions of the person on a scale of 1 to 7. They were more likely to condemn a person than a single person who visited the brothel.

The researchers also asked participants about their sexual history, and found self-reported having more partners were more positive towards the idea of visiting regardless of the nature of the worker. Women more than men condemned the character of men (*PsyArXiv*, doi.org/cxkb).

"Relationships seem to be what people morally judge the most," says Thomas Koverola at the University in Medford. "The more you start thinking about it as something that could go against or interfere with relationships, that seems to be what people morally judge the most."

Sex robots aren't yet as advanced as human ones, but plans for robot brothels are in the works. In Texas, a robot brothel was due to open by the end of the year, but the facility is planned to open in 2019.

Attitudes toward robots vary between countries. In the US, plans to look at the issue were dropped, says Koverola. ■

- Onderzoekers telden 121 culturen die vingers afsnijden, vaak als religieus “offer”.
- Bv. de Dani (Baliemvallei in Papoea)



This ritual is specific to the woman population of the Dani tribe. A woman will cut off the top of her finger if she loses a family member or child. The practice was done to both gratify and drive away the spirits, while also providing a way to use physical pain as an expression of sorrow and suffering.

+ Hard to fake signal?



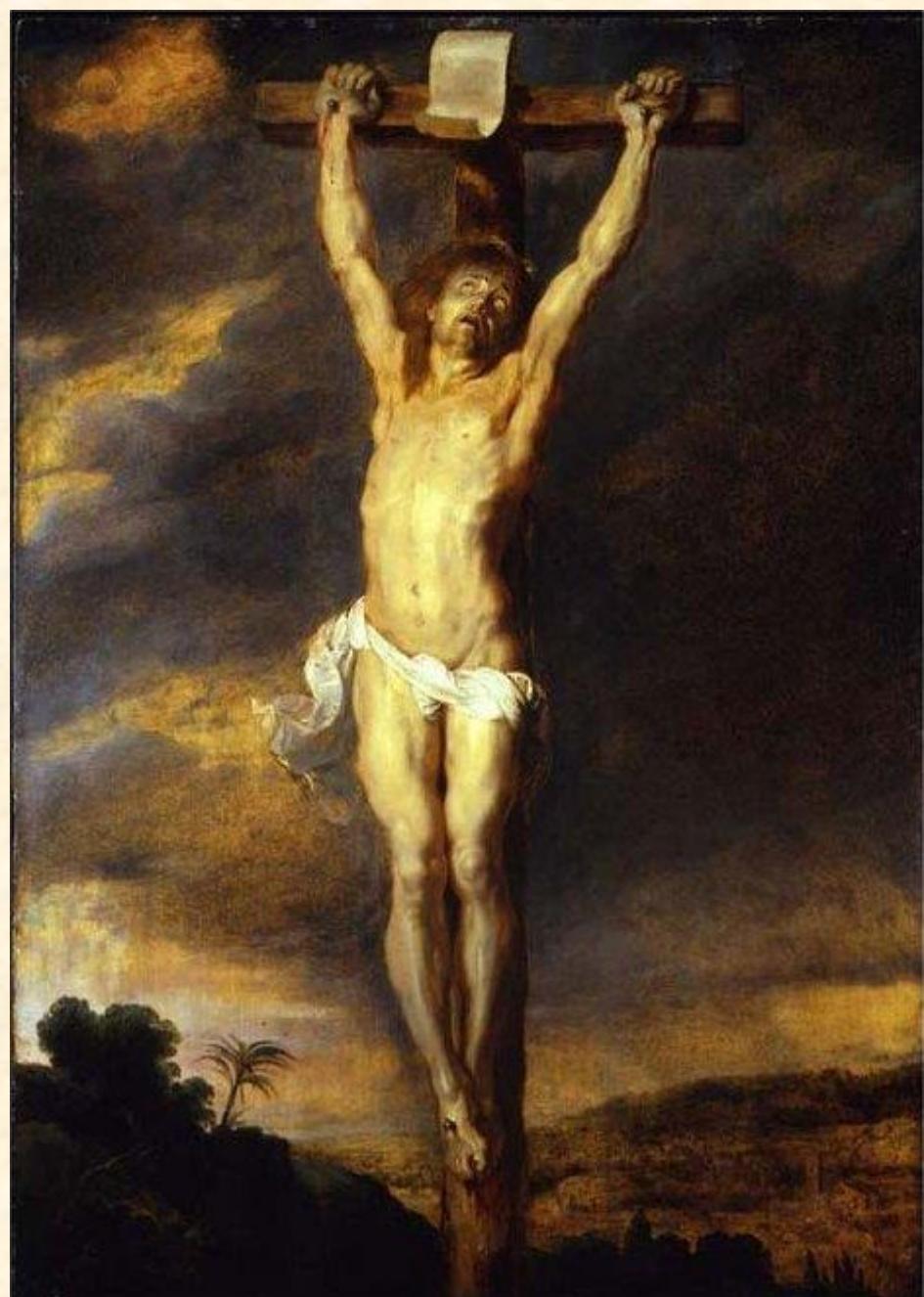
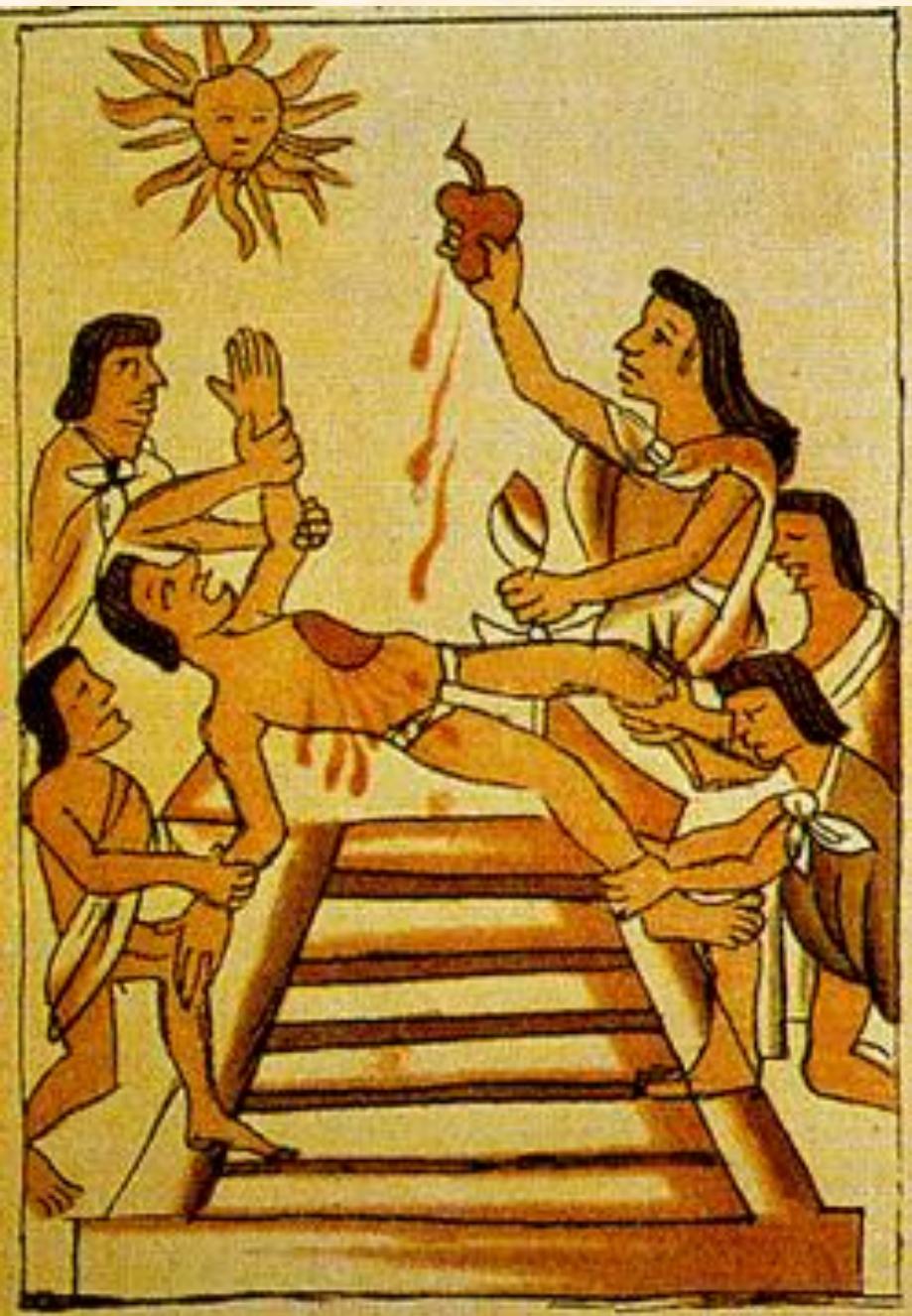
“offeren” en zelfpijniging:
veel voorkomend, aan religie gerelateerd
fenomeen.

Een van de functies: “hard to fake signal”

Vraag: aan wie of wat?





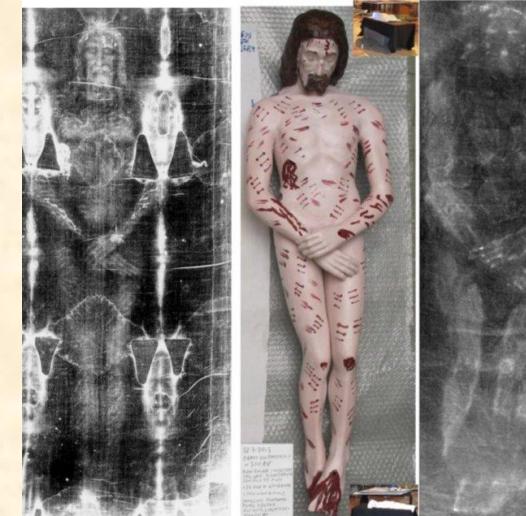
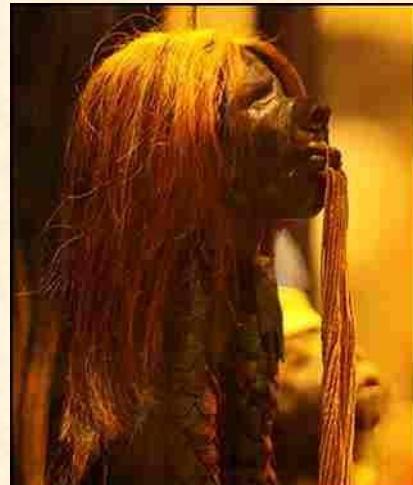
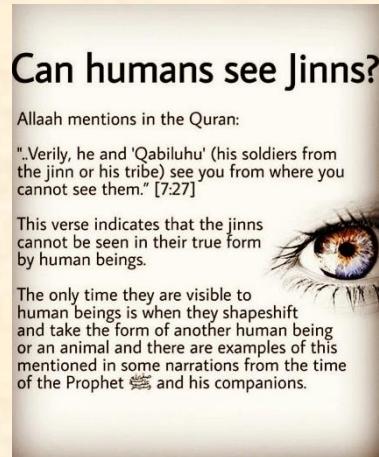


Sjiieten: Asjoera (herdenking martelaarsdood Hussein, kleinzoon profeet Mohammed)





Vaststelling: religie leidt tot merkwaardige opvattingen & bizar gedrag.



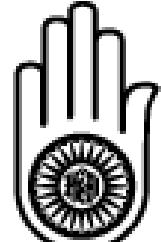
Is religie universeel?

Elke cultuur kent religie, maar niet iedereen is (in dezelfde mate) religieus.

(Mogelijk deels genetisch bepaald, zie tweelingstudies)



Presbyterian



Jainism



Jainism (Swastika)



Hinduism
(Swastika)



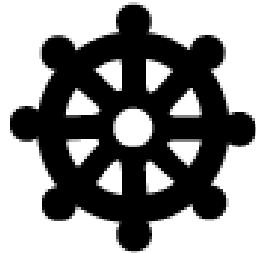
Hinduism
Pranava



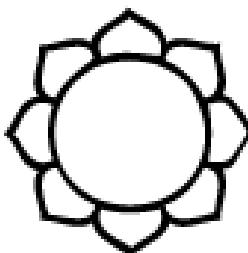
Ayyavazhi
Lotus Carrying Namam



Islam (Muslim)



Buddhism
Wheel of Dharma



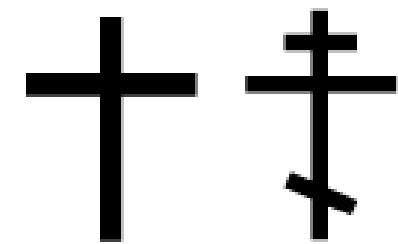
Buddhism
Lotus Flower



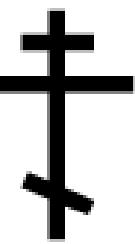
Judaism
Menorah



Trident of Shiva



Christianity
Latin cross



Christianity
Orthodox cross



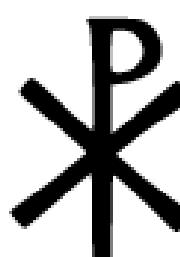
Shinto (Japan)
Torii Gate



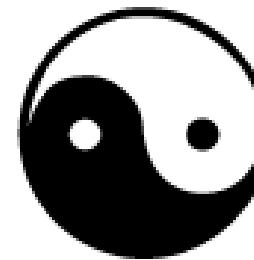
Judaism
Star of David



Bahai Faith
Nine Pointed Star



Christianity
Chi Rho



Taoism (Daoism)
Yin and yang



Sikhism



Buddha Eye



Religion symbols

Name	Known As
Uranus	Sky God and Father of the Titans
Gaea	Mother Earth
Phoebe	Ruled the Moon with Atlas
Coeus	Titan of Intelligence
Oceanus	Father of Oceanid
Tethys	Mother of all Rivers and Seas
Hestia	Goddess of Hearth and Fire
Demeter	Goddess of Harvest
Poseidon	God of the Sea
Hera	Goddess of Marriage and the Queen of all God and Goddess
Zeus	Supreme God, of Sky and Thunder
Ares	God of War
Hades	God of the Underworld
Hephaetus	God of Fire and Forge
Hebe	Served wine and nectar to the Gods
Apollo	God of Sun, Shepherd, Music, Poetry, Archery, Healing etc
Hermes	God of Flock, Roads, Trading etc
Aphrodite	Goddess of Love
Atlas	God who supported Heaven
Epimetheus	After-thought
Prometheus	Fore-thought
Maia	Mountain Goddess

Norse Deities and Other Supernatural Beings

Deity	Role
Balder	Odin's son, gentle and handsome god
Bragi	god of poetry and music
Fenrir	monstrous wolf, child of Loki
Freyja	goddess of love and fertility, twin of Freyr
Freyr	god of fertility and prosperity, twin of Freyja
Frigg	wife of Odin, goddess of the sky, marriage, and childbirth
Heimdall	god who guards Asgard, the home of the gods
Hel	goddess of the dead, child of Loki
Idun	goddess of fertility, spring, and rebirth
Jormungand	giant serpent
Loki	trickster figure, companion to the gods
Mimir	giant who guards the well of knowledge
Njord	sea god, father of Freyr and Freyja
Odin	god of wisdom, battle, and poetry, and ruler of the gods
Thor	god of the sky and thunder, associated with the weather, crops, and warriors
Tyr	god of war, justice, and order
Valkyries	female spirits, servants of Odin
Ymir	frost giant whose body was used to form the world

Size and Projected Growth of Major Religious Groups

	2010 POPULATION	% OF WORLD POPULATION IN 2010	PROJECTED 2050 POPULATION	% OF WORLD POPULATION IN 2050	POPULATION GROWTH 2010-2050
Christians	2,168,330,000	31.4%	2,918,070,000	31.4%	749,740,000
Muslims	1,599,700,000	23.2	2,761,480,000	29.7	1,161,780,000
Unaffiliated	1,131,150,000	16.4	1,230,340,000	13.2	99,190,000
Hindus	1,032,210,000	15.0	1,384,360,000	14.9	352,140,000
Buddhists	487,760,000	7.1	486,270,000	5.2	-1,490,000
Folk Religions	404,690,000	5.9	449,140,000	4.8	44,450,000
Other Religions	58,150,000	0.8	61,450,000	0.7	3,300,000
Jews	13,860,000	0.2	16,090,000	0.2	2,230,000
World total	6,895,850,000	100.0	9,307,190,000	100.0	2,411,340,000

Source: The Future of World Religions: Population Growth Projections, 2010-2050

PEW RESEARCH CENTER

definitieproblematiek - elementen van religie (vgl. met geloof, bijgeloof, godsdienst...)

- **Geloof in god, goden** (schepping, oorsprong, oordeel, macht, kennis, leven & dood, interventie...)
- **Geloof in andere bovennatuurlijke wezens** (engelen, demonen, djinns...)
- **Geloof in ‘tussenpersonen’** (heiligen, sjamanen...)
- **Geloof in ‘paranormale’ krachten; geloof in mirakels**
- **Geloof in vorm van leven na de dood** (vooroudercultus, hemel, hel, reïncarnatie...)
- **geloof in interactie tussen mens & bovennatuurlijke**
- **Geloof in ‘*mind over matter*’** (dualisme: lichaam & geest)
- **Geloof in vorm van bovennatuurlijk “intelligent design”**
- **>>> animisme, sjamanisme**

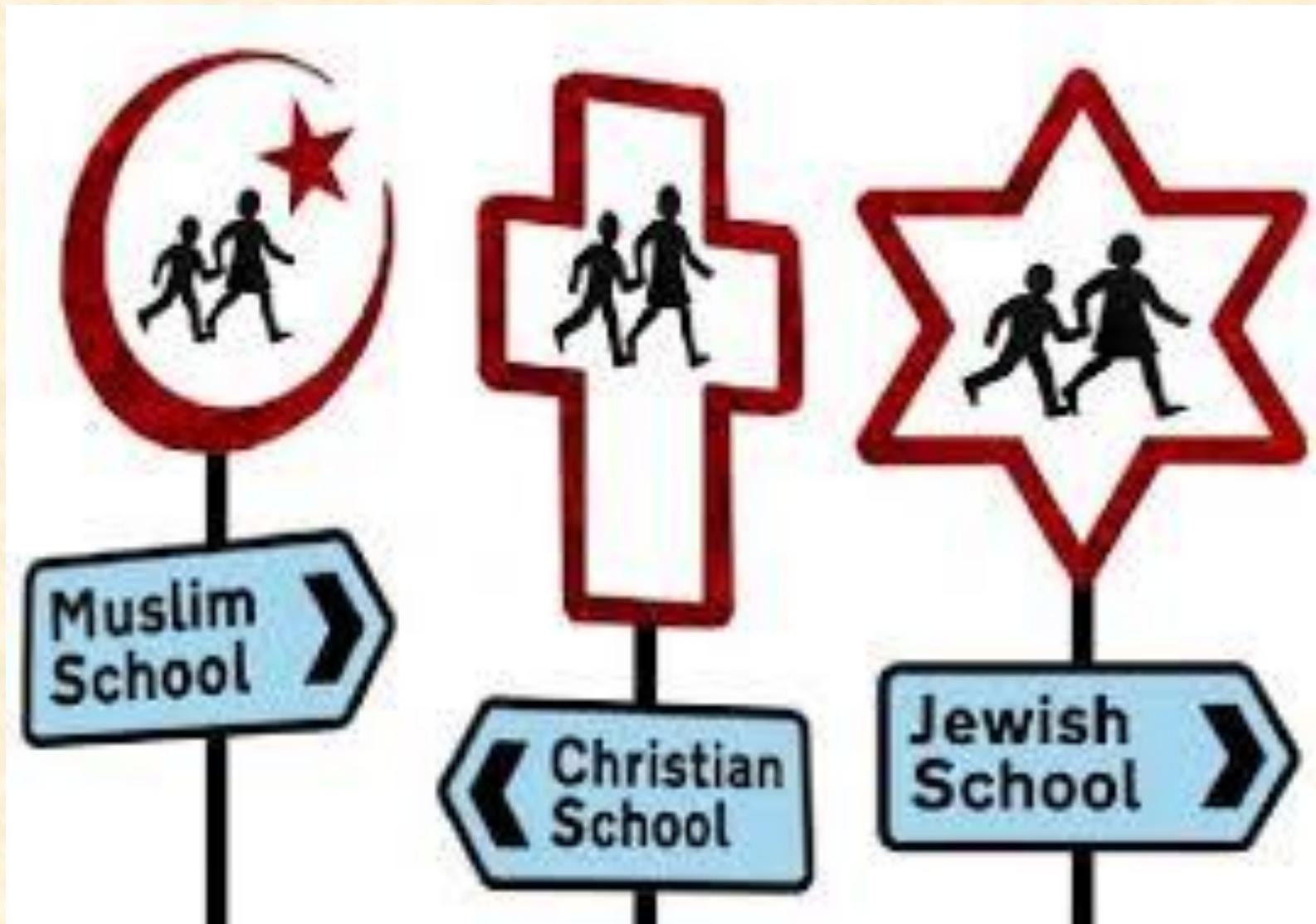
Primaire invalshoek: waarom geloven mensen in dit alles?

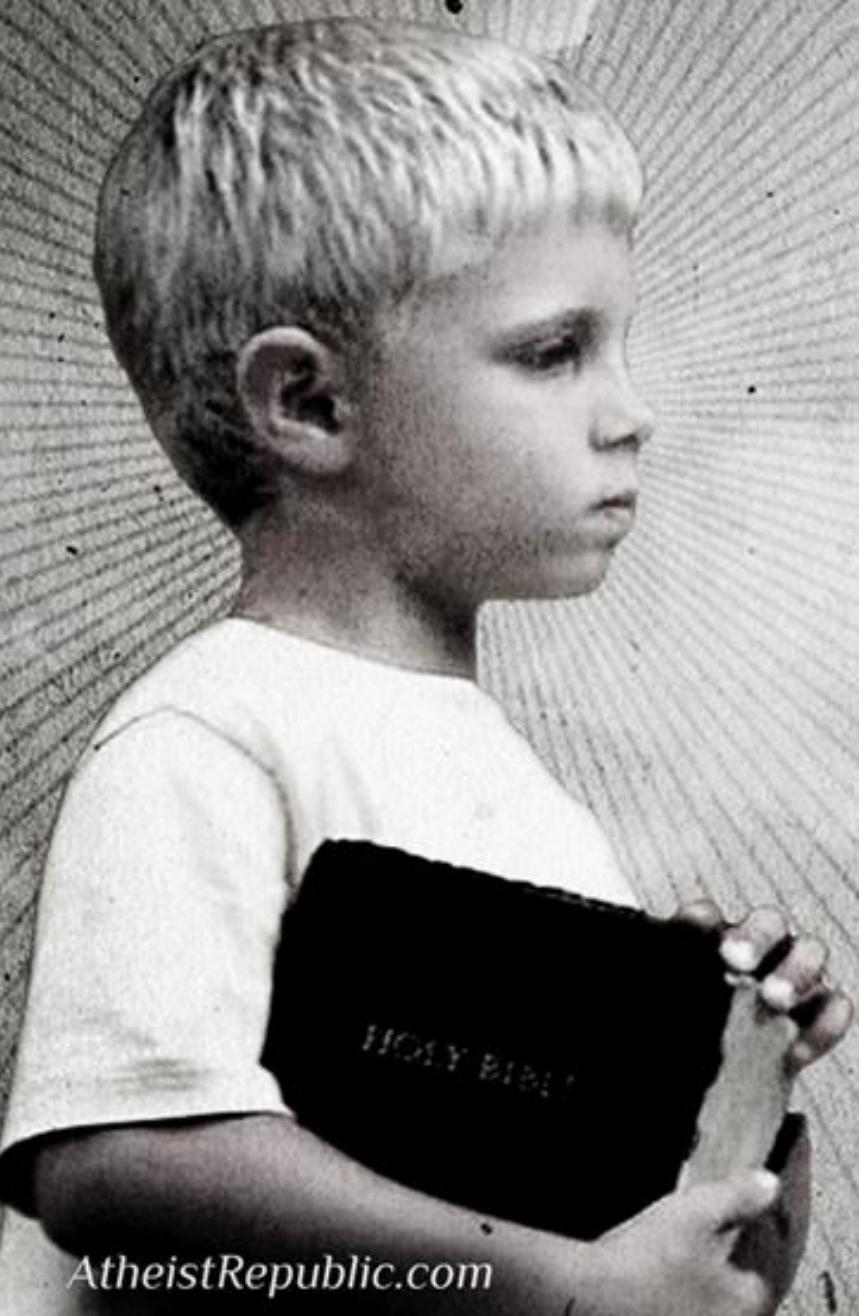
Why Would Anyone Believe in God?



Justin L. Barrett

“Indoctrinatie”?





If religious instruction were not allowed until the child had attained the age of reason, we would be living in a quite different world.

- Christopher Hitchens

Scientific studies on the cognitive science of religion

Kelemen & Rottman (Boston University)

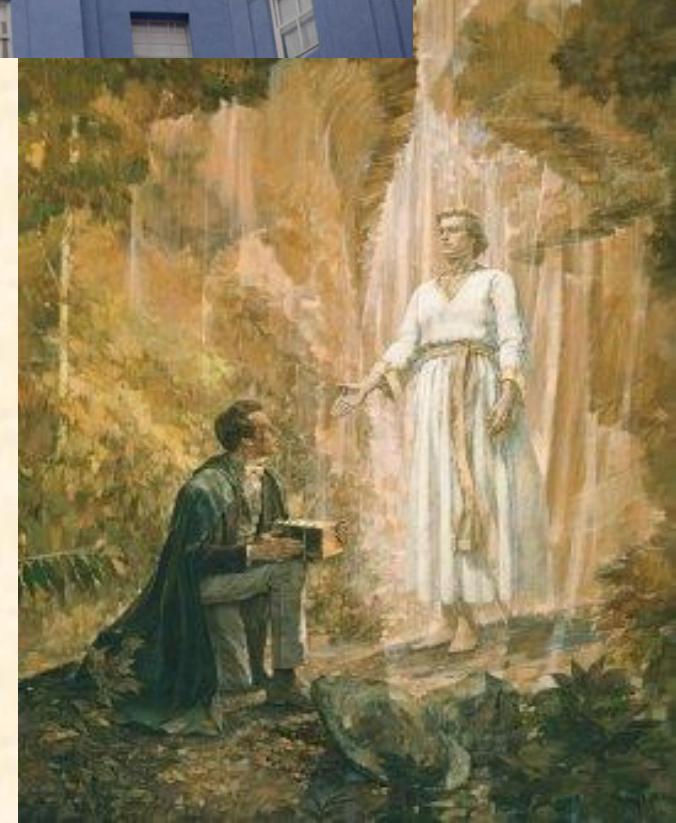
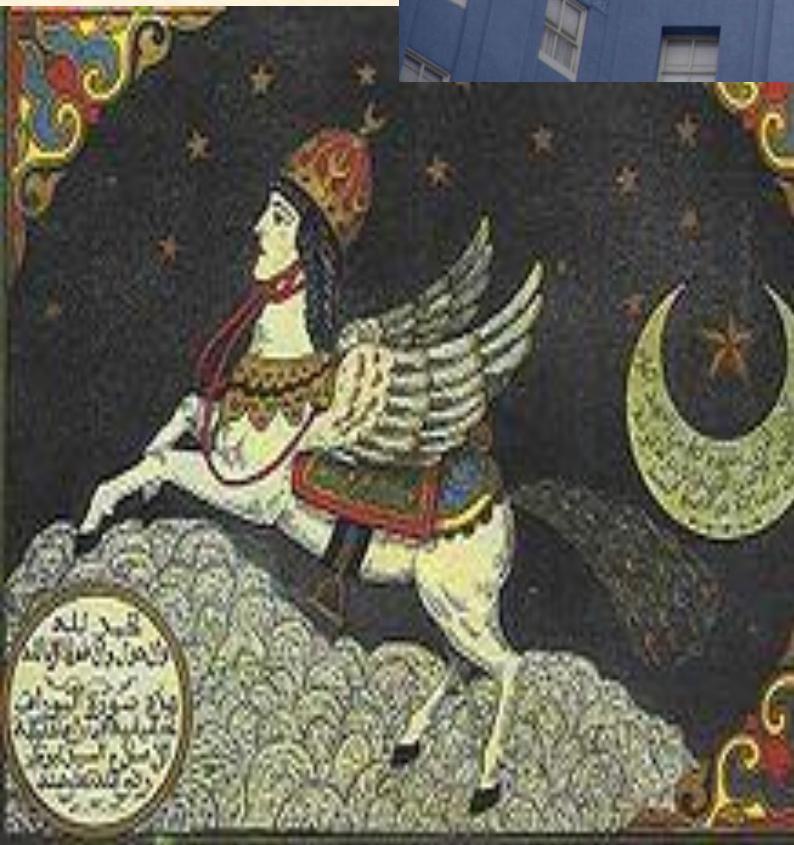
Deborah Kelemen studies cognitive development in children and Josh Rottman is a PhD student working with her. In a chapter in [Science and the World's Religions](#) they write (p206, 7):

“.... religion primarily stems from within the person rather than from external, socially organised sources evolved components of the human mind tend to lead people towards religiosity early in life.

They discuss theories on the development of religious concepts in young children. They conclude that religion “cannot be understood as resulting primarily from education or passive acquisition from parents or society”. For them the question is whether children come into the world as “born believers” (a view held by others in the field but not by them) or that children develop religious views as they try to understand the world around them (the view they accept).

Waarom is religie zo ‘natuurlijk’ en ‘besmettelijk’?

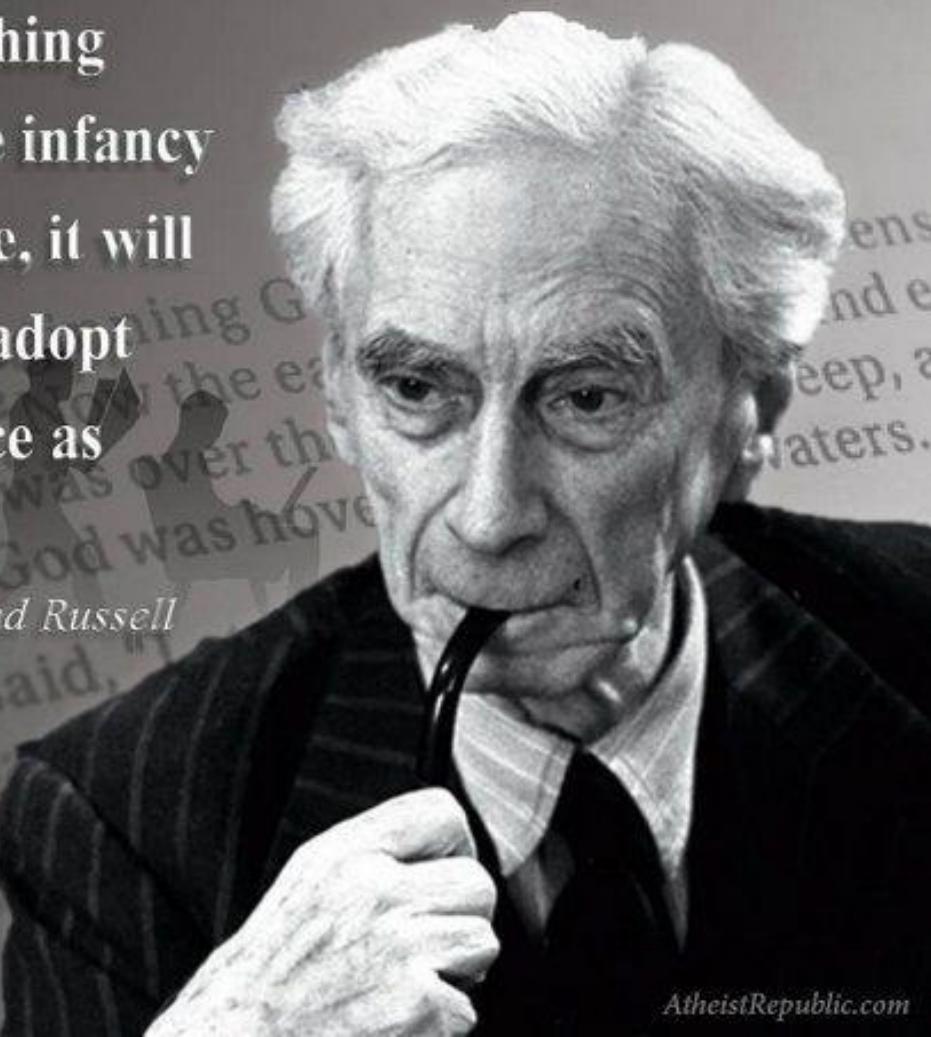
Waarom is het blijkbaar makkelijker om religieus te zijn dan niet-religieus? – ondanks ‘fantastische’ karakter. Waarom nemen mensen zo gemakkelijk religieuze opvattingen aan die vaak zeer problematisch zijn vanuit rationeel en wetenschappelijk perspectief (ook intelligente, hoogopgeleide mensen)?

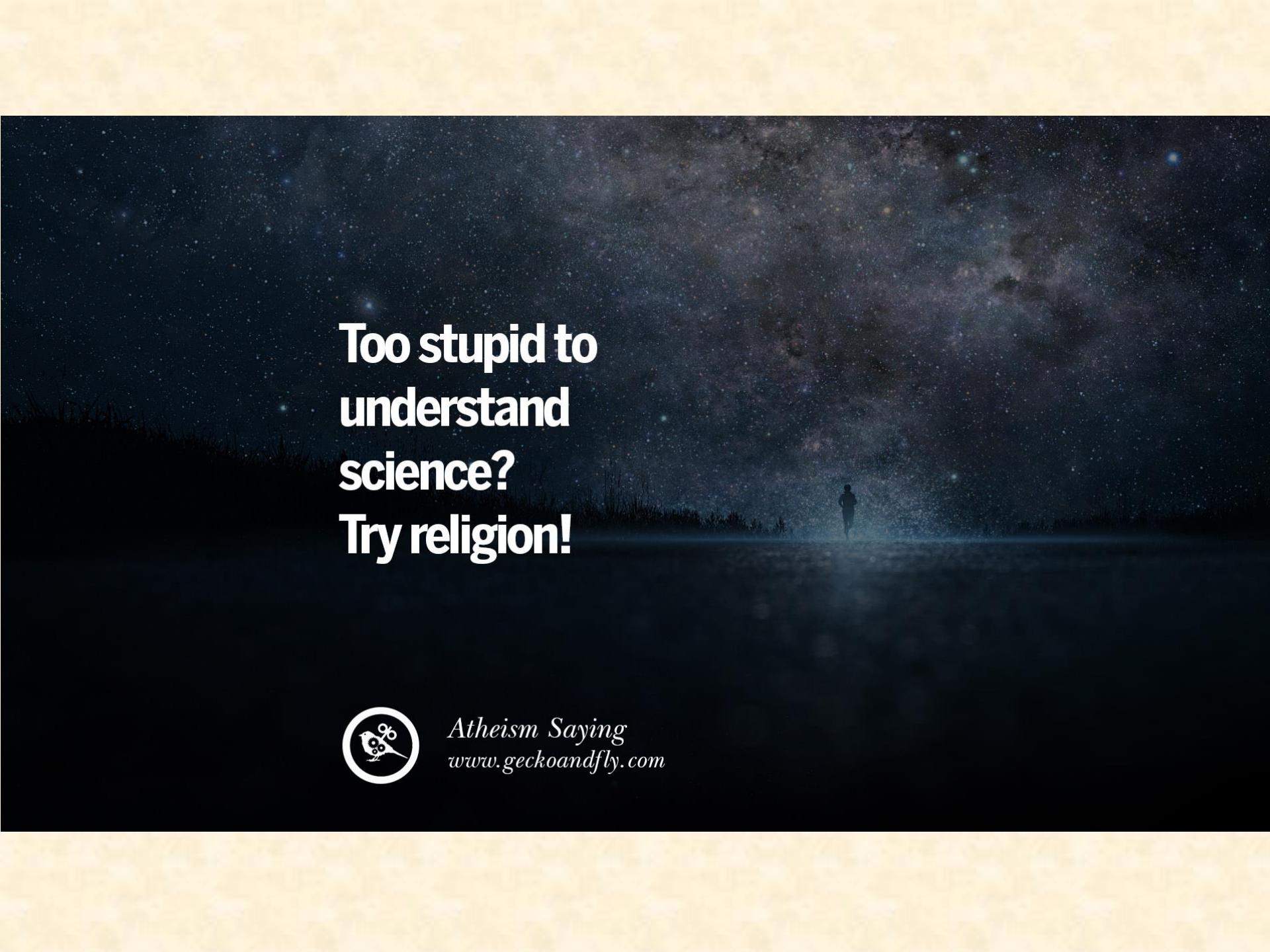


Vroegere verklaringen

Religion is something
left over from the infancy
of our intelligence, it will
fade away as we adopt
reason and science as
our guidelines.

– Bertrand Russell





**Too stupid to
understand
science?
Try religion!**



Atheism Saying
www.geckoandfly.com

**“If you could reason with religious people,
there would be no religious people.”**

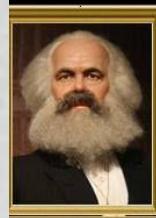


Ludwig Feuerbach Das Wesen des Christentums



HOFENBERG

Religion is the sigh of the oppressed creature, the heart of a heartless world, and the soul of soulless conditions. It is the opium of the people.



Quot

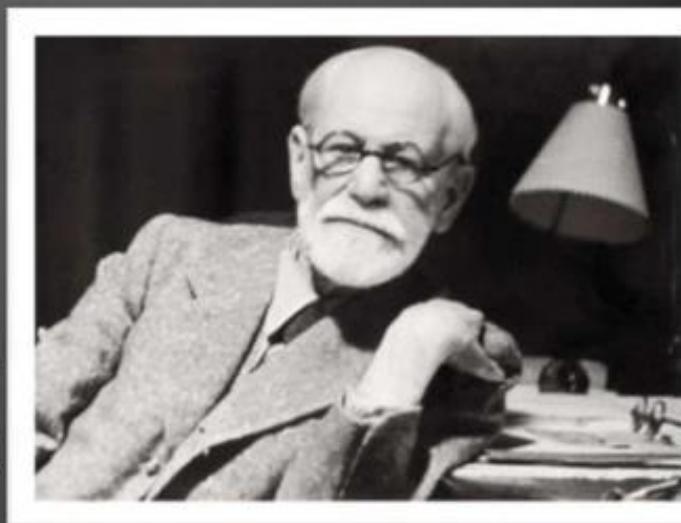
Religion is the impotence of the human mind to deal with occurrences it cannot understand.



Karl Marx
Prussian-German philosopher
(1818-1883)
QuoteHD.com

Freud and Religion

- ✿ Religion, Freud believed, was an expression of underlying psychological neuroses and distress.
- ✿ Freud believed that religion is a means of giving structure to social groups, wish fulfillment, an infantile delusion, and an attempt to control the outside world.
- ✿ "Religion is an illusion and it derives its strength from the fact that it falls in with our instinctual desires." --Sigmund Freud, *New Introductory Lectures on Psychoanalysis*, 1933.



SIGMUND
FREUD

The
**FUTURE
OF AN
ILLUSION**

Author of
**A GENERAL INTRODUCTION
TO PSYCHOANALYSIS**

AGAIN the master psychologist shall bring a cool world . . . This time no courageous and tough-minded thinking as before did re-courageous and tough-minded living.

Here is presented the philosophical standpoint of psychoanalysis "We'll never be willing to let science alone explain the universe and reconcile him to its completeness."

Andere: Edward Tyler, James Frazer (religie vloeit voort uit animisme, bijgeloof en magisch denken); Emile Durkheim (religie staat voor het sacrale in de samenleving); Mircea Eliade (religie is het sacrale deel van de menselijke psyche); Clifford Geertz (religie is een cultureel geheel van symbolen om betekenis en motivatie mogelijk te maken, enz.



FEAR OF DEATH

The Terror Management Theory of Everything

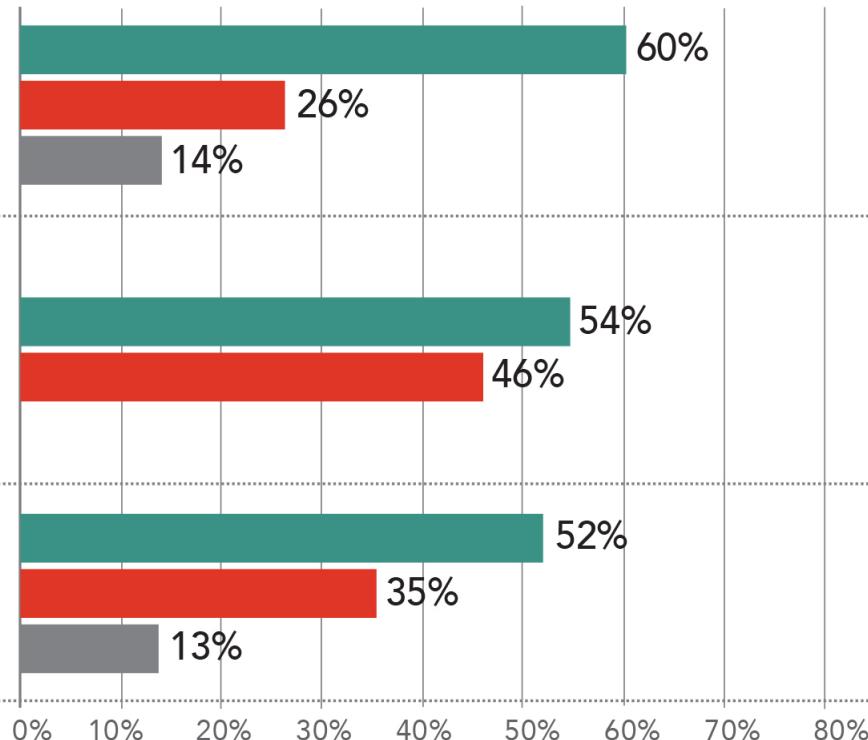
American Theological Views: THE AFTERLIFE

AGREE DISAGREE NOT SURE

Heaven is a place where all people will ultimately be reunited with their loved ones.

Only those who trust in Jesus Christ alone as their Savior receive God's free gift of eternal salvation.

By the good deeds I do, I partly contribute to earning my place in heaven.

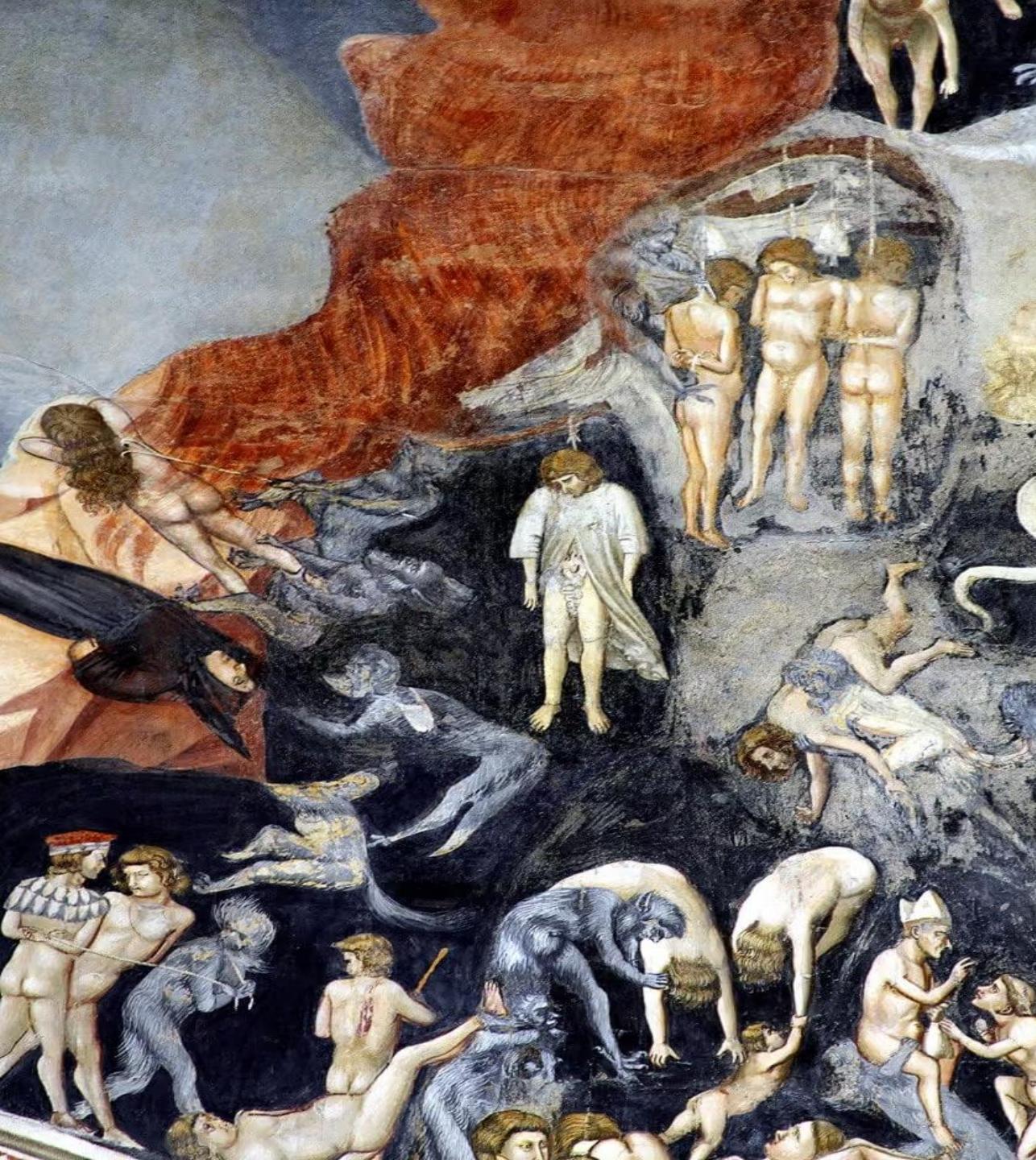


HELL:

Hell is an eternal place of judgment where God sends all people who do not personally trust in Jesus Christ.

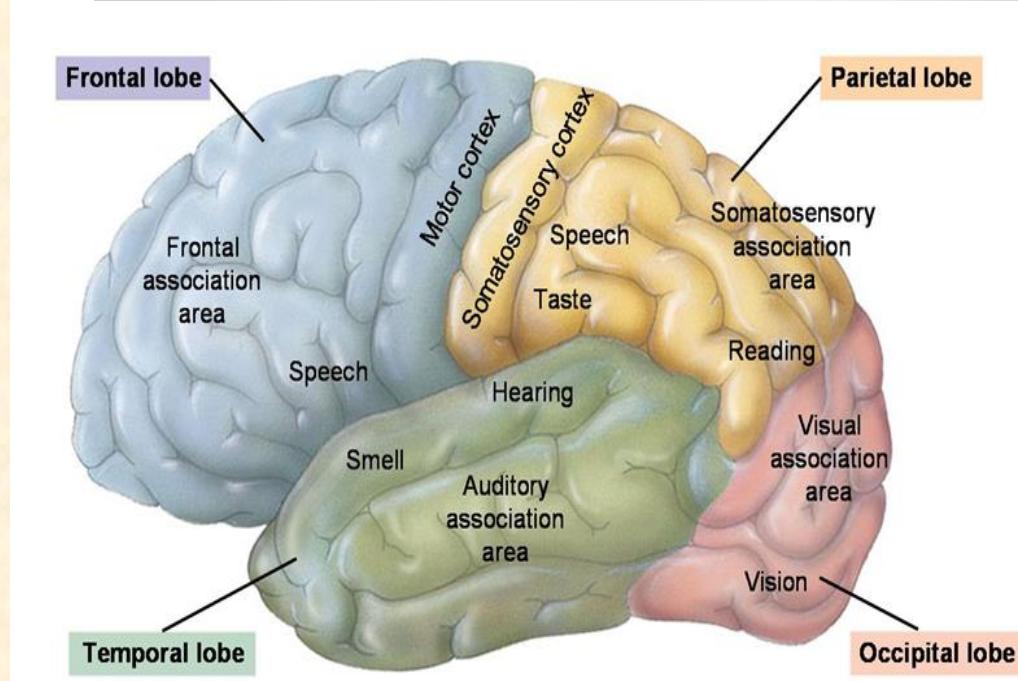
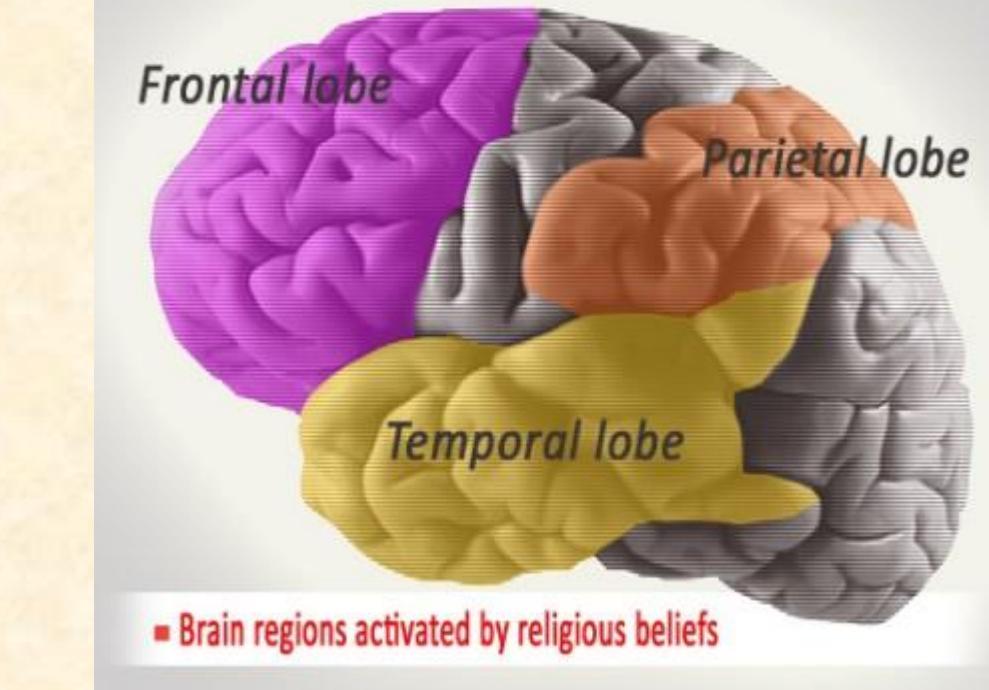
40% agree

Opvattingen over ‘hiernamaals’ & ‘leven na de dood’ – voor zover aanwezig! - zijn niet altijd troostend & nemen de angst niet weg (Griekse Hades, christelijke hel etc.)



Het laatste oordeel
(1306), Giotto

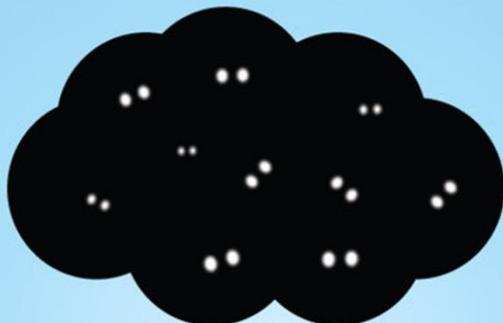
Omdat religie zo alomtegenwoordig is denken sommige neurowetenschappers dat zich een ‘God spot’ in het brein bevindt.
(vgl. patiënten met epilepsie of andere aandoeningen.)



GOD HELMET

Developed by

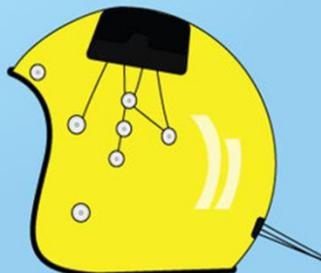
Stanley Koren and neuroscientist Michael Persinger



...participants report of a
"sensed presence"...

...80% of participants experience a
presence beside them in the room...

...1% report an experience of God...



Todd
Murphy

The God Helmet Experiments

The Science That Found God
In the Human Brain.

Simplified versions of the God Helmet papers.
Originally written by Dr. Michael Persinger
and his many colleagues.
Edited into easier reading by Todd Murphy

De “God spot” benadering kent meerdere zwakke plekken. Hoe is die “spot” daar gekomen? En waarom? Wat is de precieze functie ervan?

De “God spot” hypothese kan misschien antwoorden bieden op *proximate* vragen, maar wat is de *ultimate* verklaring?

Cf. N. Tinbergens “vier vragen”

Mechanism (Causation)

How does this behavior occur in an individual?

Ontogeny (Development)

How does this behavior arise in an individual?

Adaptive Value (Function)

Why is this behavior adaptive for the species?

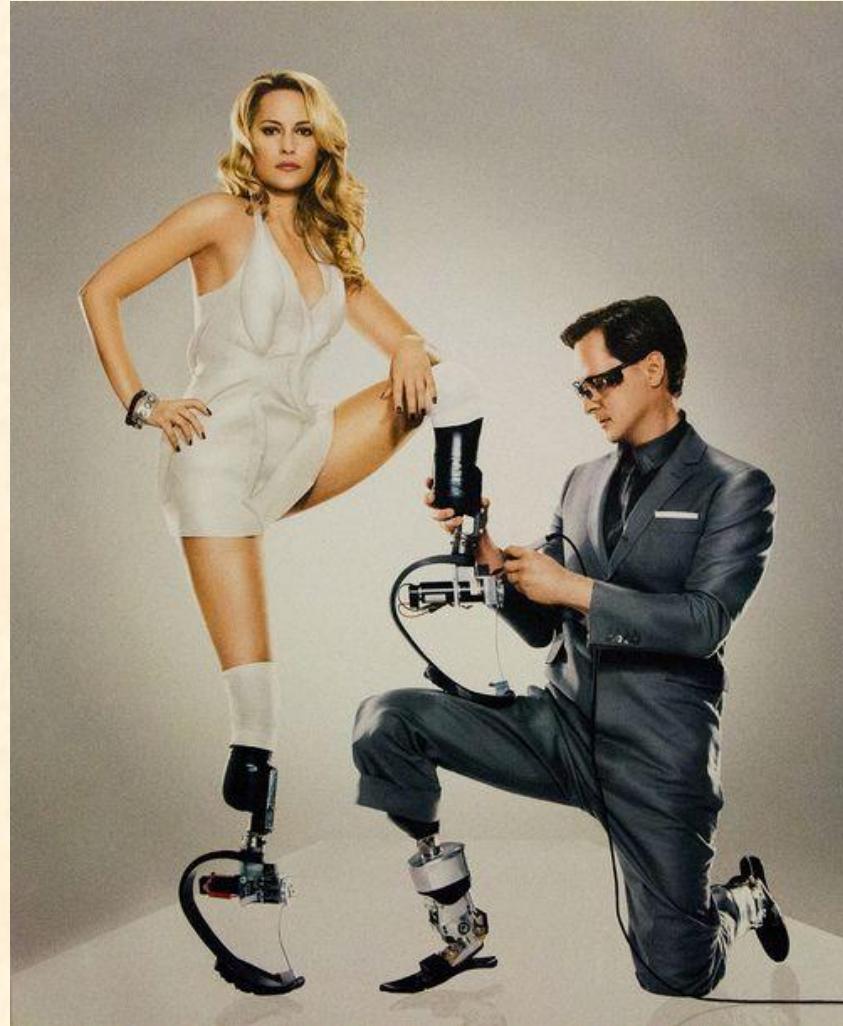
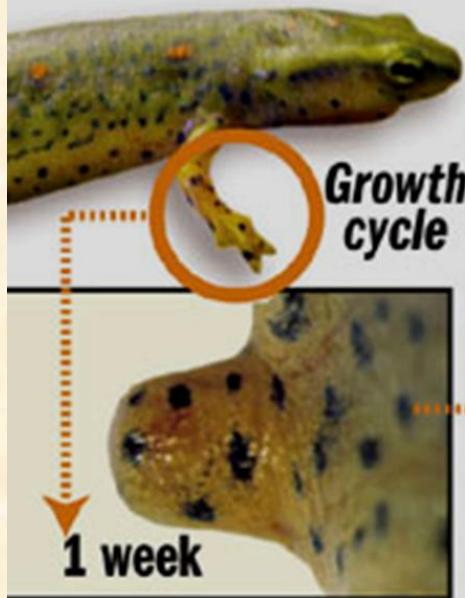
Phylogeny (Evolution)

How does this behavior arise in the species?



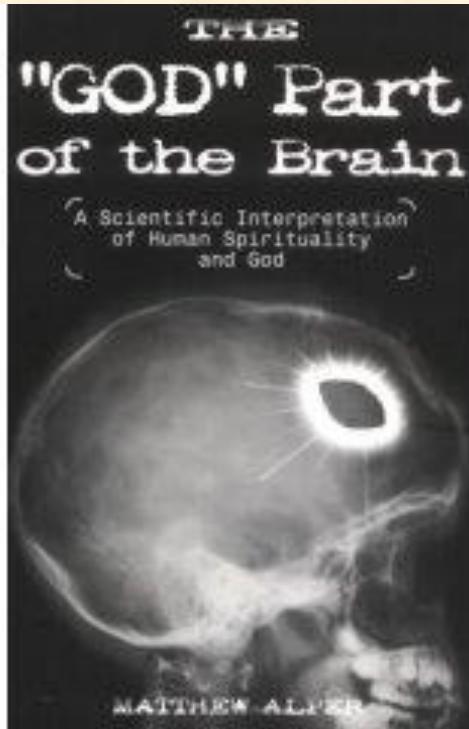
Regenerating a limb

A newt can regenerate an entire limb within 7-10 weeks.





Proximate & Ultimate verklaringen voor religie



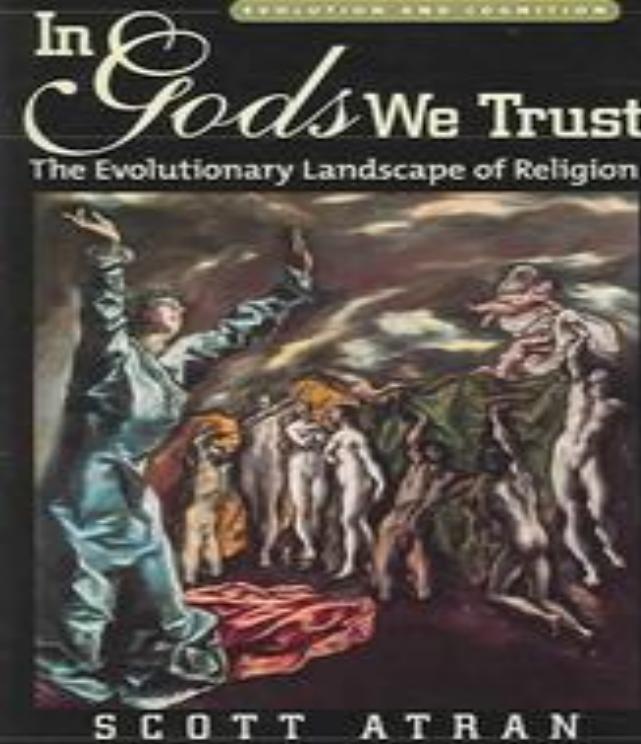
BRAIN SCIENCE & THE BIOLOGY OF BELIEF

WHY
GOD
WONT
GO
AWAY

ANDREW NEWBERG, M.D.
EUGENE DAQUILLI, M.D., PH.D., AND VANCE RAINE



Michael Persinger, neurologist at Laurentian University in Sudbury, Ontario.



SCOTT ATRAN



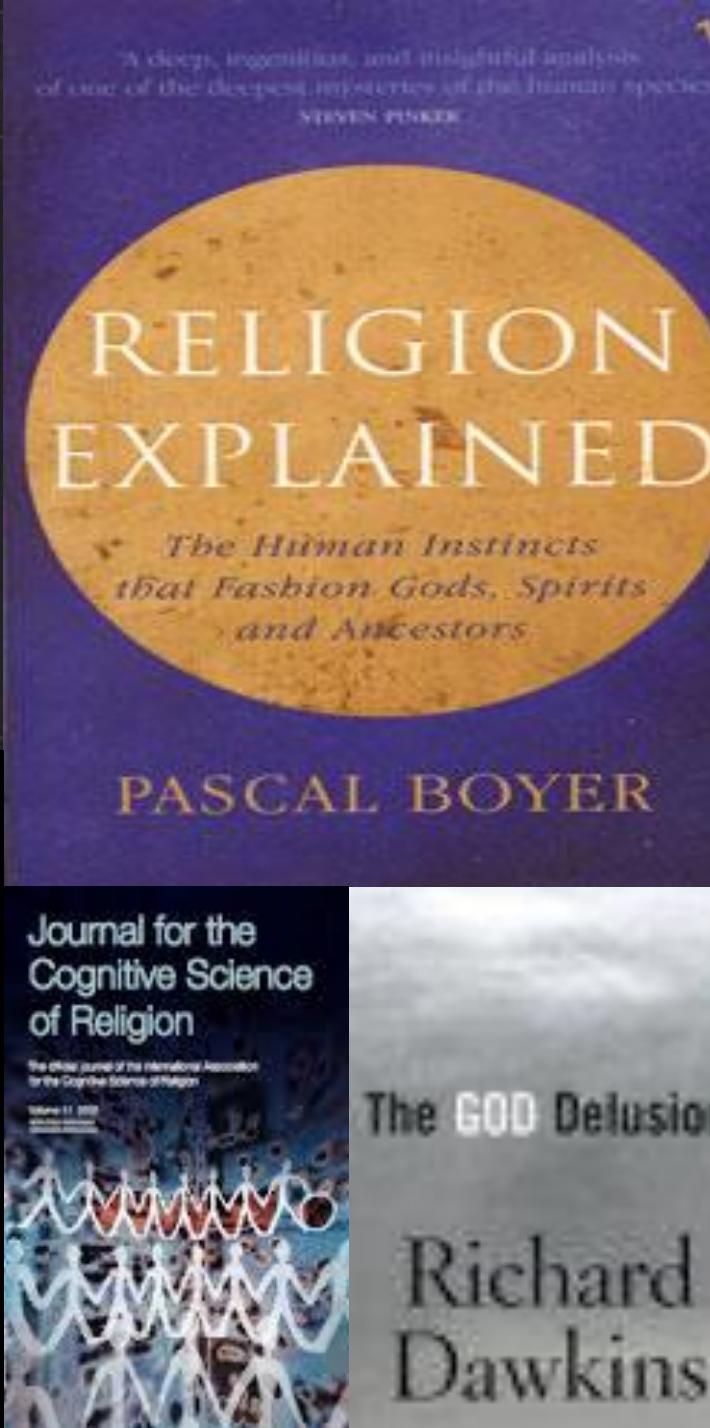
THE ROOTS OF RELIGION

EXPLORING THE COGNITIVE SCIENCE OF RELIGION

Edited by
ROGER TRIGG and JUSTIN L. BARRETT



BRIGHAM SCIENCE AND RELIGION SERIES



BREAKING THE SPELL

RELIGION AS A NATURAL PHENOMENON



DANIEL C. DENNETT



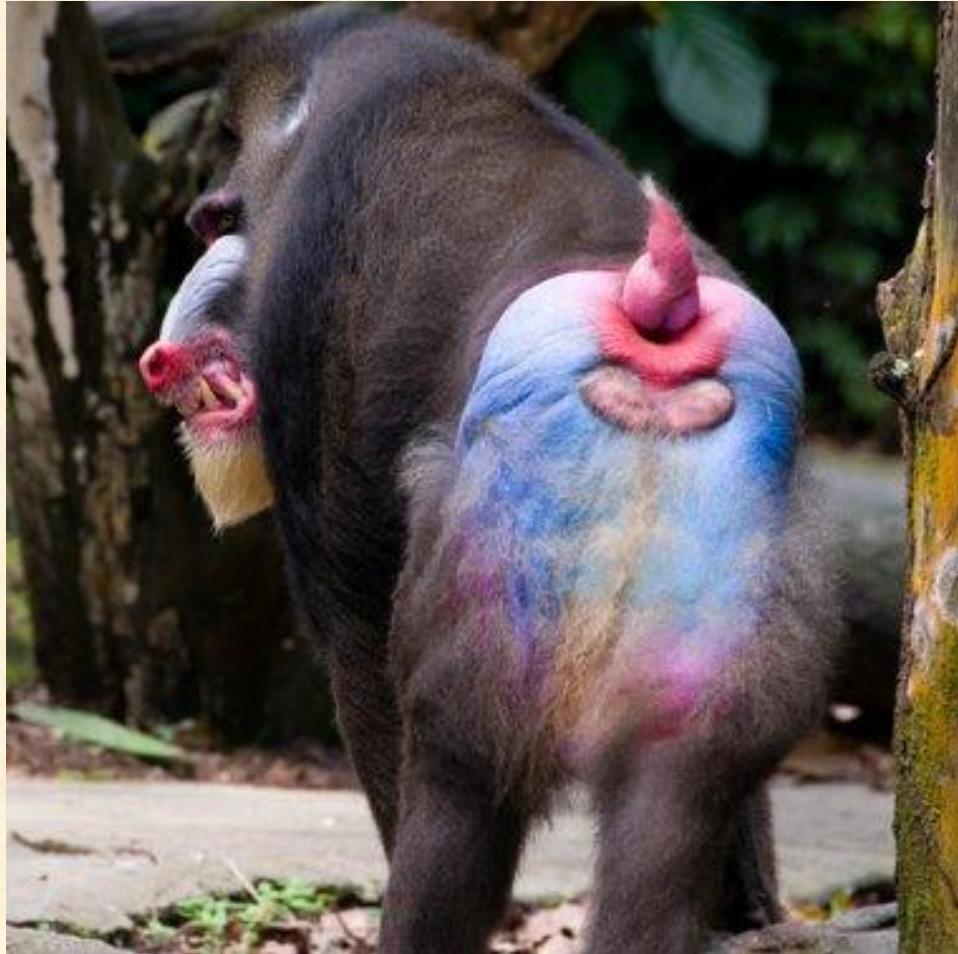
BORN BELIEVERS

Richard
Dawkins

The Science of Children's Religious Belief

JUSTIN L. BARRETT, PH.D.

To an evolutionary psychologist, the universal extravagance of religious rituals, with their cost in time, resources, pain and privation, should suggest as vividly as a mandrill's bottom that religion may be adaptive. (Marek Kohn)



R. Dawkins, *The God Delusion*:

No known culture lacks some version of the time-consuming, wealth-consuming, hostility-provoking rituals, the anti-factual, counter-productive fantasies of religion.

Universal features of a species demand a Darwinian explanation.

adaptationistisch denken

Wat is de functie van...? Of ander uitgedrukt:

Welk adaptief probleem wordt opgelost door...?

Of nog anders uitgedrukt:

Hoe heeft natuurlijke (en seksuele) selectie gezorgd voor:

tanden? de huid? het hart? de longen? de ogen? de wimpers?
de lever? angst? jaloezie? schuldgevoel? schaamte? agressie?
visuele perceptie? vluchtgedrag? hongergevoel? altruïsme?

.....

Religie?

Reverse engineering



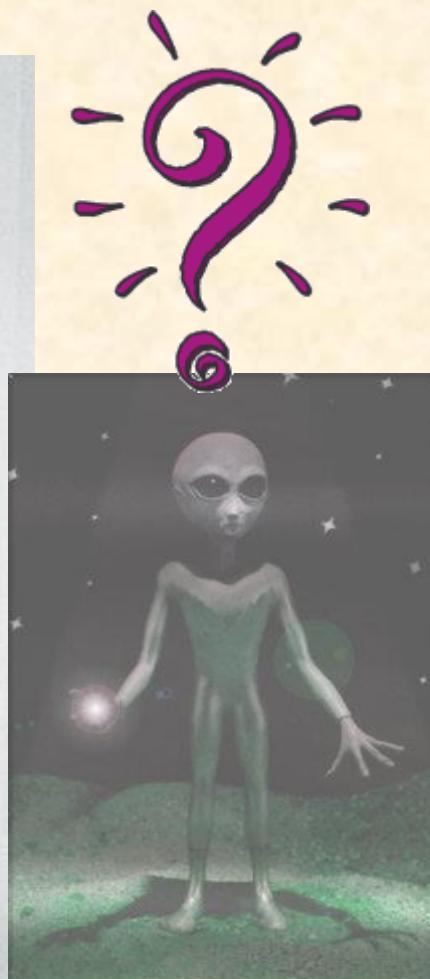
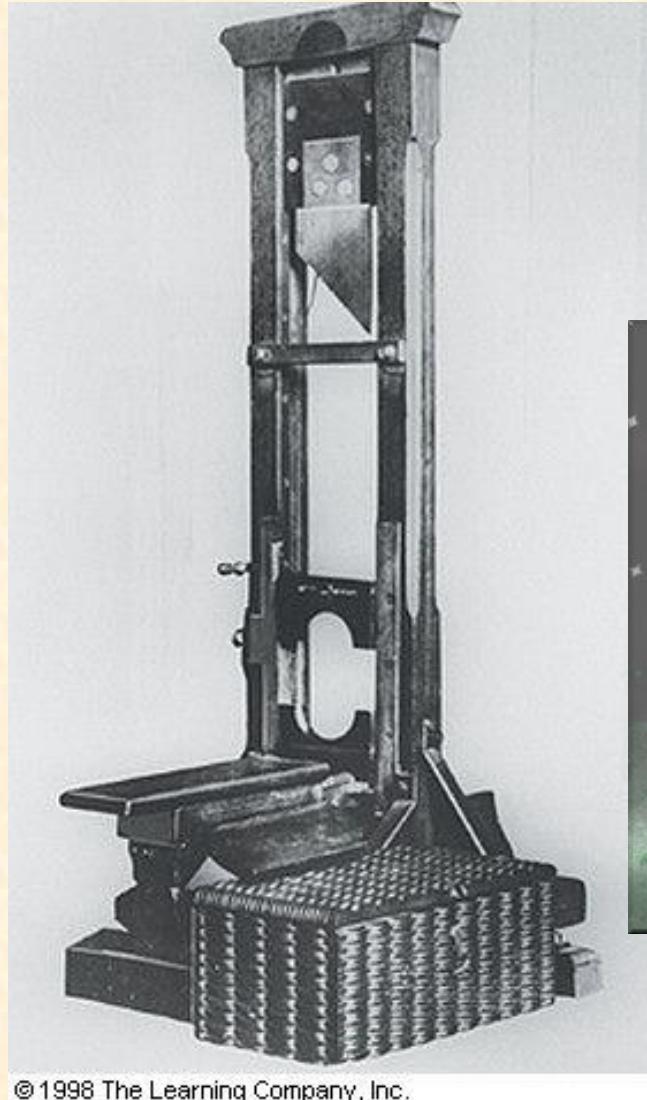




future generations
will never know
about this unique relationship



Hoe zou een *alien* aan *reverse engineering* doen?



Kunnen we religie
reverse engineeren?

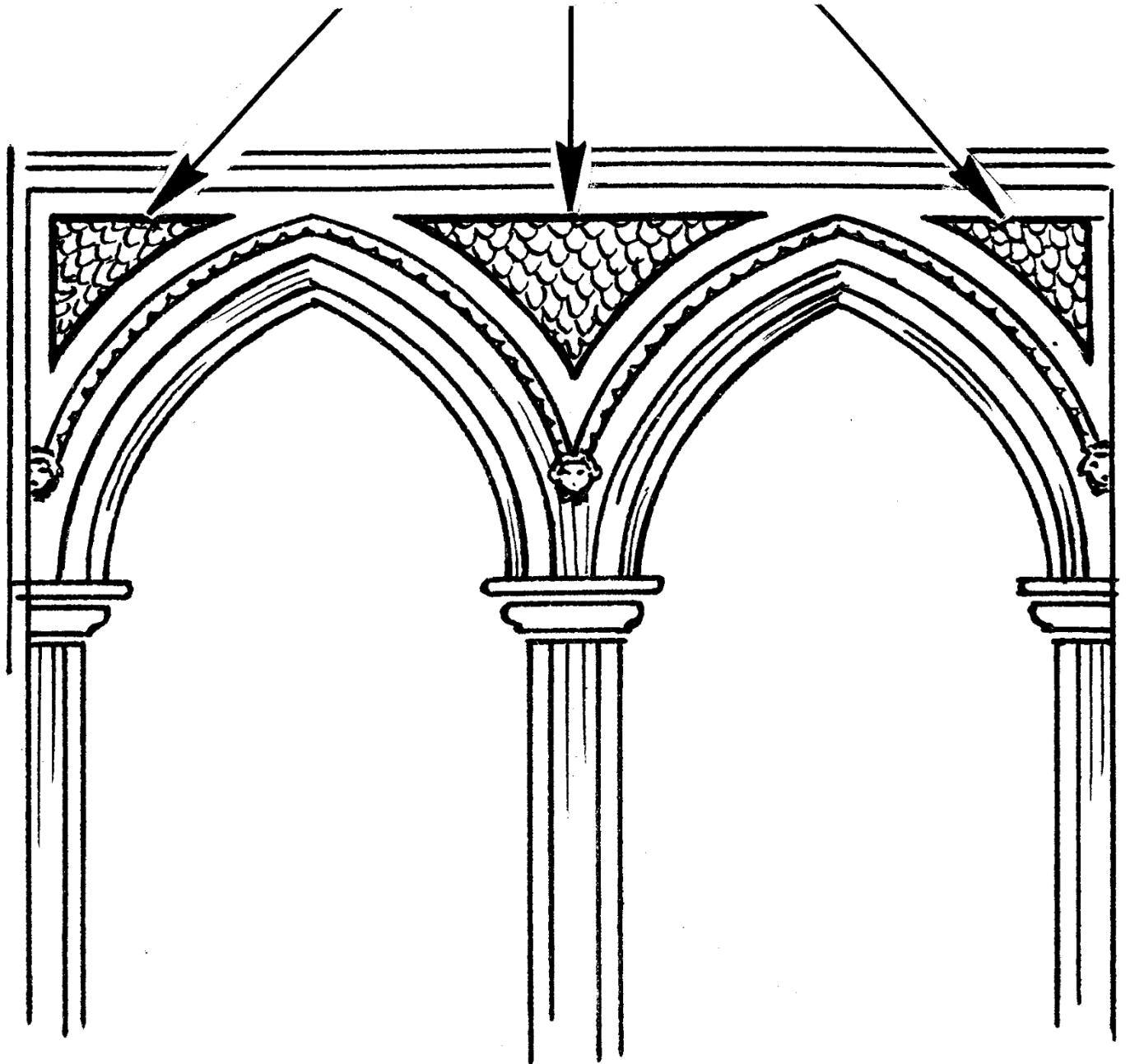
Wat zou de adaptieve functie van religie kunnen zijn?

- Verklaringen bieden voor mysterieuze, angstaanjagende fenomenen?
- Hiaten in onze kennis opvullen?
- Angst en onzekerheid reduceren?
- Mentale energie-besparing?
- Angst aanjagen?
- Moreel gedrag afdwingen en aanmoedigen?
- Voor groepsdifferentiatie zorgen? (ziekte vermijden; loyaliteit & groepscohesie bevorderen etc.)

Of: Religie als “bijproduct” of “neveneffect”?



SPANDREL

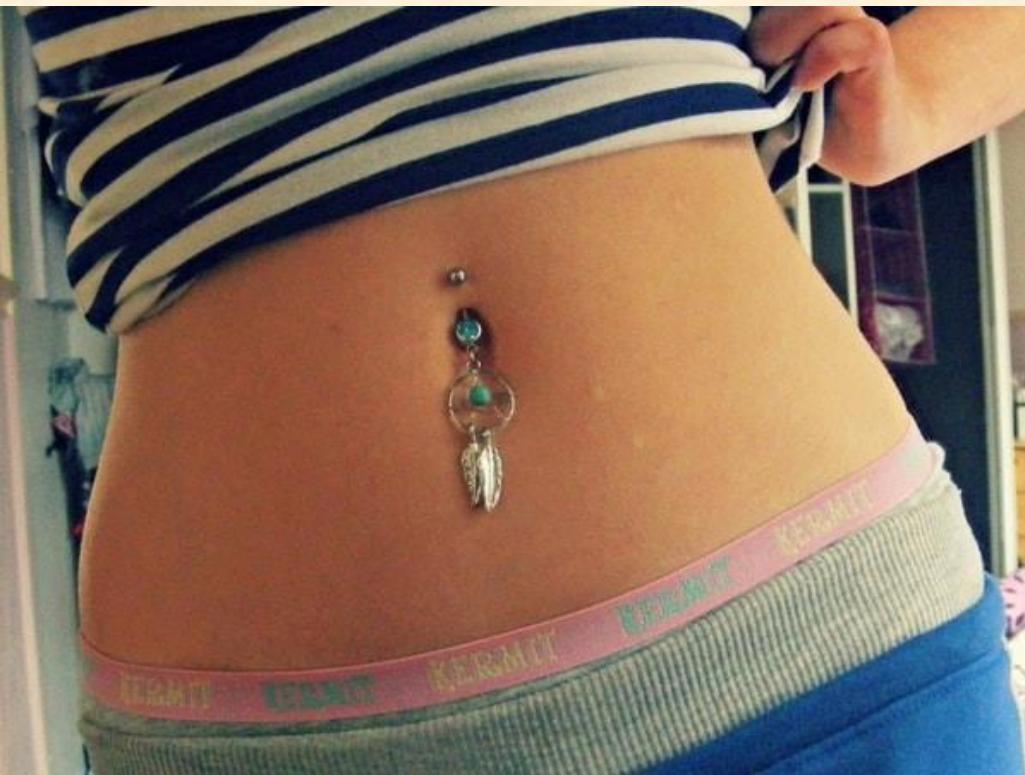


Maar is religie “zomaar”
een neveneffect?

Beter geformuleerd: religie “rijdt mee met”, “ent zich op”, “is een spontaan neveneffect van” “gewone” psychologische, geëvolueerde vermogens.

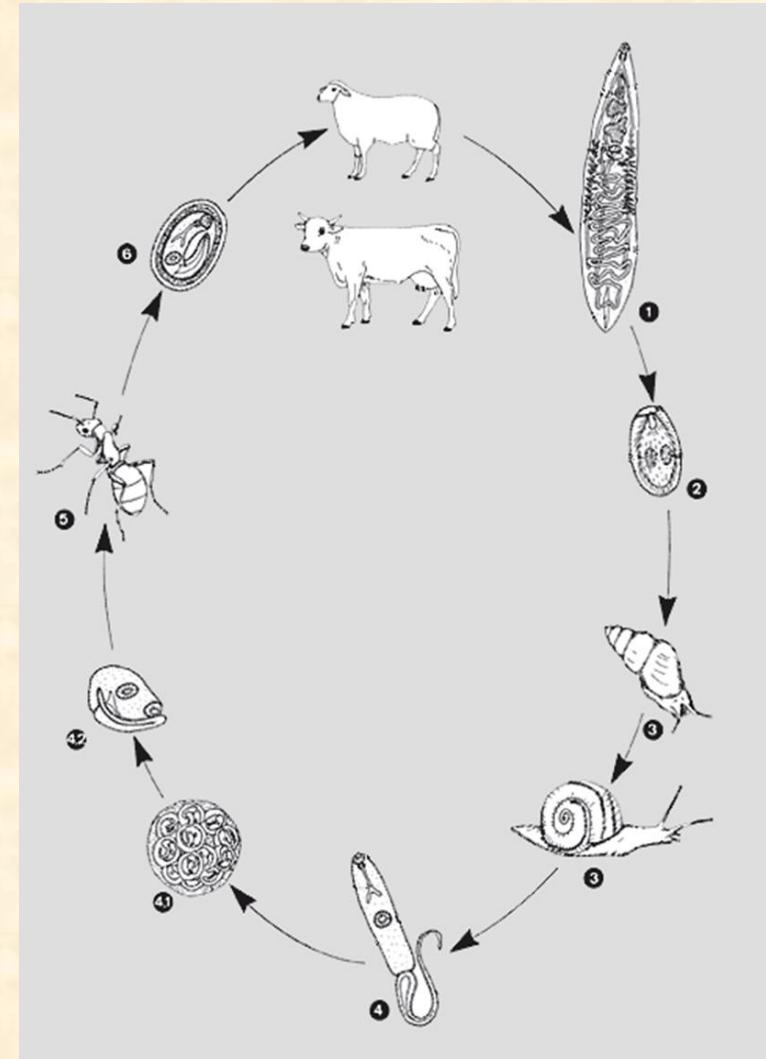
= *mainstream* standpunt “cognitive science of religion”

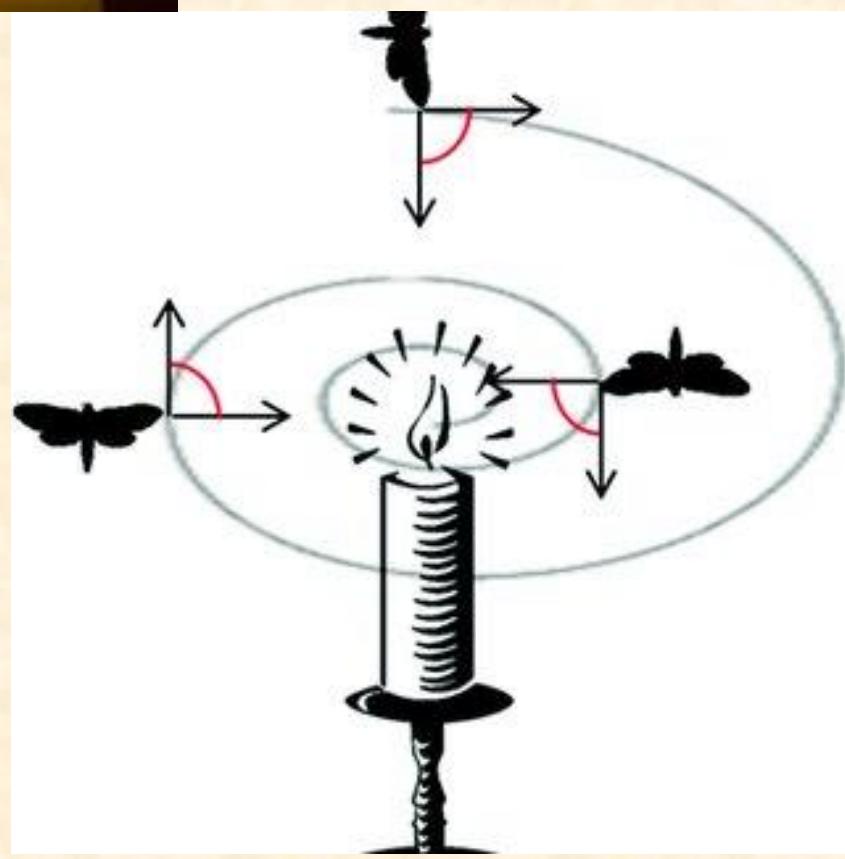
Maar ook niet “zomaar”: neveneffecten kunnen zelf functioneel worden.



Wat is de juiste vraag?

Gedrag
'zelfdodingsmier',
aangetast door de
lancetworm
*(Dicrocoelium
dendriticum)*





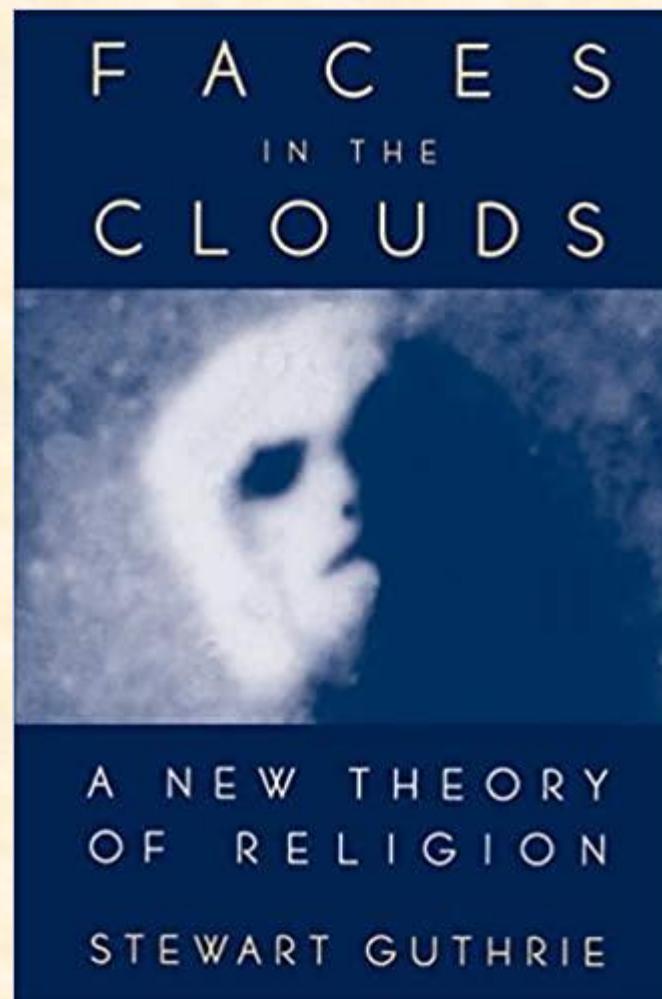
- De lancetworm “kaapt” het brein van de mier.
- Artificieel licht “kaapt” de psychologie – de oriëntatievermogens – van motten.

Wie of wat kaapt welke
psychologische vermogens zodat
religie ontstaat?

Adaptieve functies kunnen ‘gekidnapt’ en gemanipuleerd worden



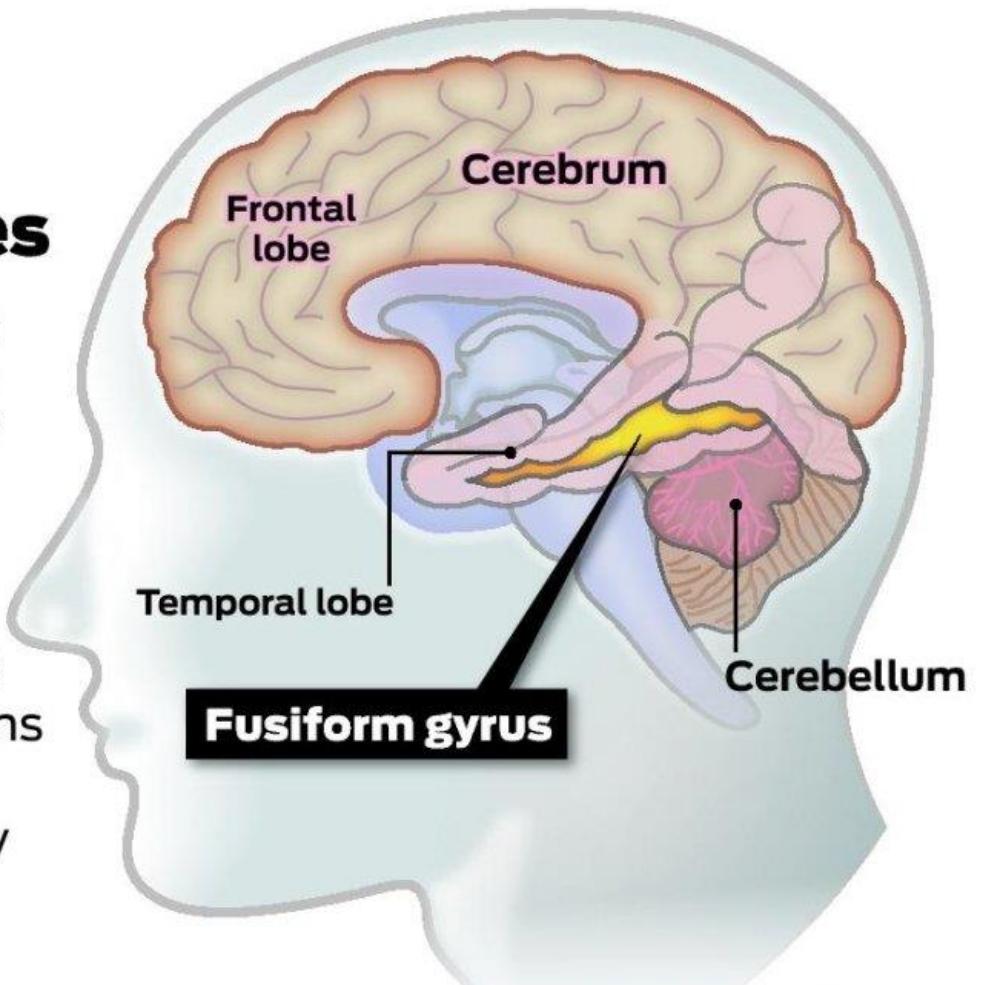
Stewart Guthrie: *Faces in the clouds* (1993)



We zijn goed in het spotten van echte gezichten, om evidente evolutionaire redenen.

Region of the brain used in identifying faces

Experiments have shown that when people look at faces, areas in a region of the brain called the fusiform gyrus are activated. A new study by a Stanford neurologist investigated what happens when that section of the brain is overstimulated by an electrical charge.



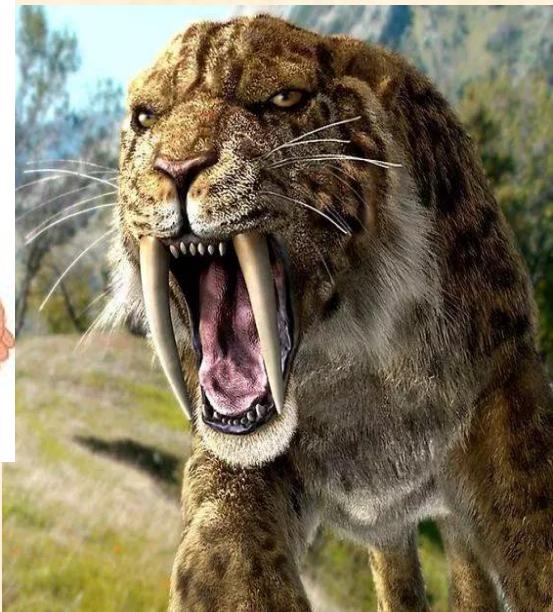
Source: National Institutes of Health

Todd Trumbull / The Chronicle

rookmelder-principe



type 1 & type 2 fouten (vals positief, vals negatief)



Antropomorfisme:
projectie van
intenties, plannen,
emoties, doelen....





ISTI MIRANT STEUAM



denken in termen van “agents”

- “agency” = denken dat er een subject, een BWZ met intenties, doelen & plannen, achter gebeurtenissen schuilt.
- Zie bv. verschil tussen creationisme & evolutionaire verklaring voor de natuur
- Vgl. complottheorieën (sterke overlapping religieuze opvattingen)

Justin Barret: *Hyperactive agency detection device*





“the intentional stance” (Dennett)

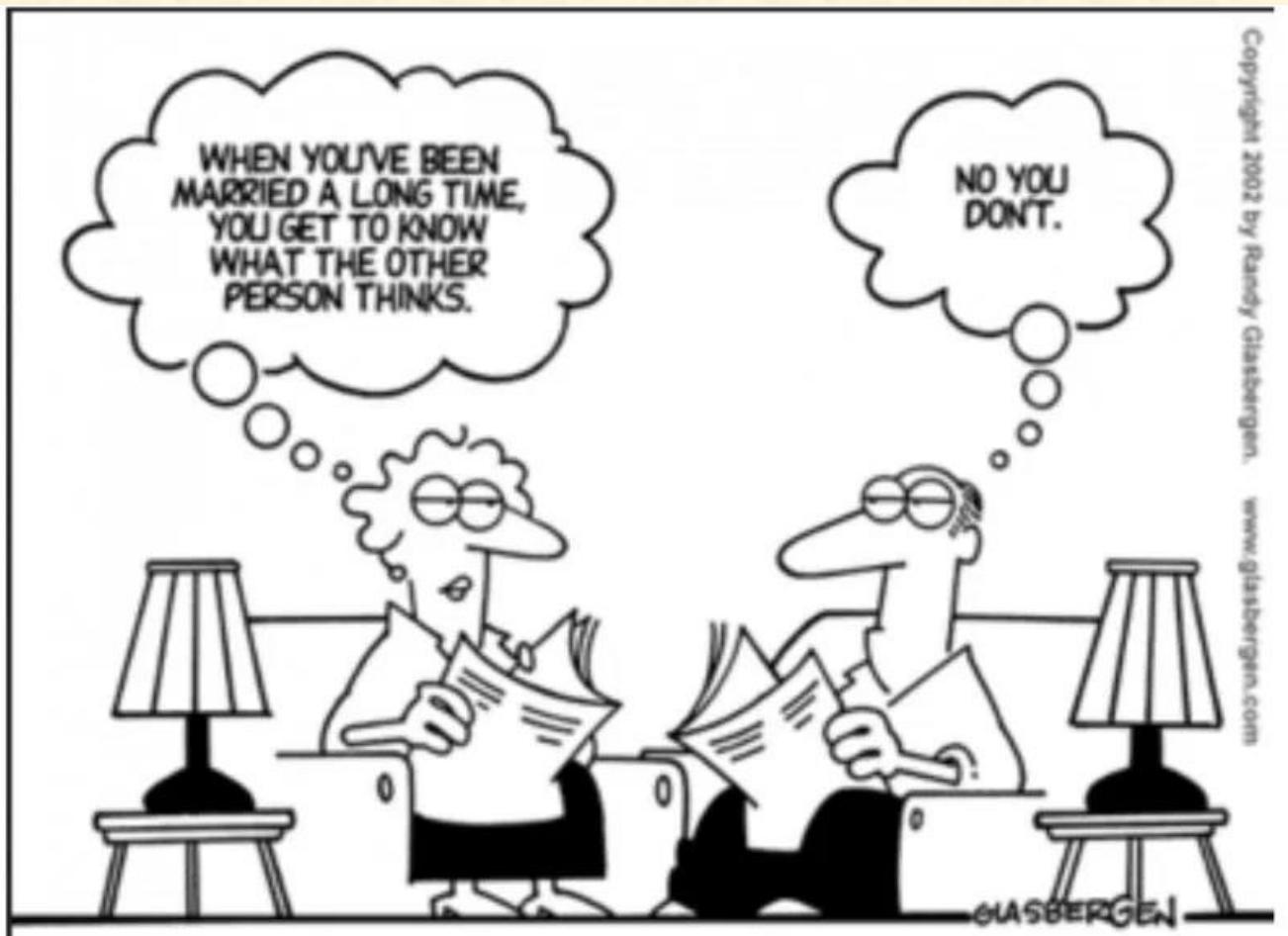
Here is how it works: first you decide to treat the object whose behavior is to be predicted as a rational agent; then you figure out what beliefs that agent ought to have, given its place in the world and its purpose. Then you figure out what desires it ought to have, on the same considerations, and finally you predict that this rational agent will act to further its goals in the light of its beliefs. A little practical reasoning from the chosen set of beliefs and desires will in most instances yield a decision about what the agent ought to do; that is what you predict the agent will do.

THE INTENTIONAL STANCE

Daniel C. Dennett



gekoppeld aan *Theory of Mind*
= “mindreading”; maakt ook “manipulatie” mogelijk (cf.
offeren, bidden...)





BCCL





© RPA



Mentalizing Deficits Constrain Belief in a Personal God

Ara Norenzayan Will M. Gervais, Kali H. Trzesniewski

Published: May 30, 2012 • <https://doi.org/10.1371/journal.pone.0036880>

Article	Authors	Metrics	Comments	Media Coverage
▼				

Abstract

Introduction

Results and Discussion

Materials and Methods

Acknowledgments

Author Contributions

References

Reader Comments (2)

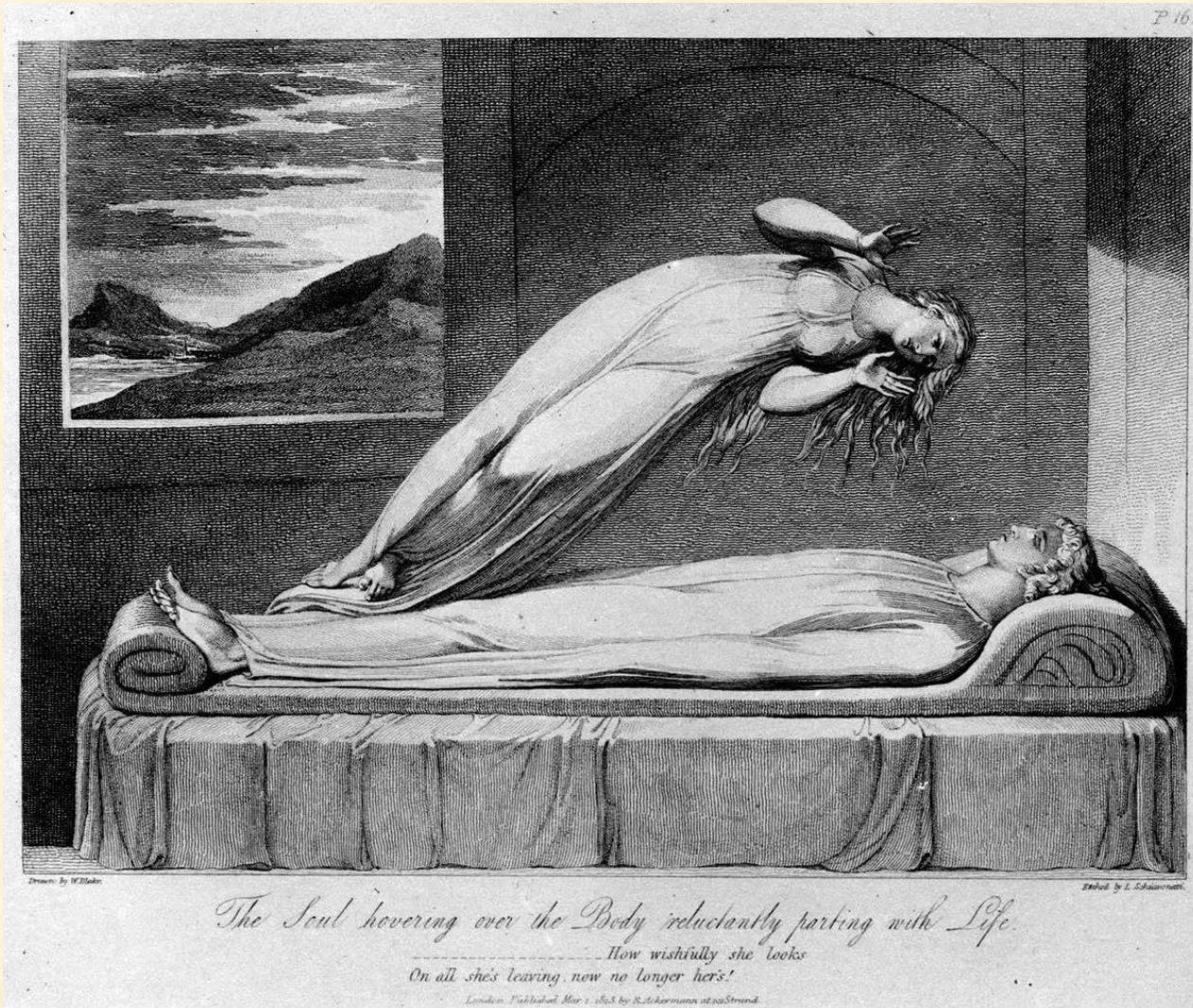
Media Coverage (0)

Figures

Abstract

Religious believers intuitively conceptualize deities as intentional agents with mental states who anticipate and respond to human beliefs, desires and concerns. It follows that mentalizing deficits, associated with the autistic spectrum and also commonly found in men more than in women, may undermine this intuitive support and reduce belief in a personal God. Autistic adolescents expressed less belief in God than did matched neuro-typical controls (Study 1). In a Canadian student sample (Study 2), and two American national samples that controlled for demographic characteristics and other correlates of autism and religiosity (Study 3 and 4), the autism spectrum predicted reduced belief in God, and mentalizing mediated this relationship. Systemizing (Studies 2 and 3) and two personality dimensions related to religious belief, Conscientiousness and Agreeableness (Study 3), failed as mediators. Mentalizing also explained the robust and well-known, but theoretically debated, gender gap in religious belief wherein men show reduced religious belief (Studies 2–4).

dualistisch denken



Paul Bloom (Yale University)

Paul Bloom runs the Mind and Development Lab at Yale University. He says that humans have a tendency to believe in God:

“ the universal themes of religion are not learned. They emerge as accidental by-products of our mental systems. They are part of human nature.” **”**

Like Kelemen & Rottman, Bloom sees several evolutionary causes that lead to religious belief in young children: distinguishing bodies and souls (“we are natural-born dualists”) and “we’ve evolved to be creationists”. He nominates Scott Atran, Pascal Boyer, Justin Barrett, and Deborah Kelemen as other cognitive scientists who share these conclusions.

Bloom is convinced that all humans, even his own children, will inevitably see design and divinity in the world: “Creationism—and belief in God is bred in the bone.”

Bloom says of course much of the content of religious belief is learned but “the universal themes of religion are not learned. They emerge as accidental by-products of our mental systems. They are part of human nature.”

“promiscuous teleology”

Kelemen – Children’s teleological reasoning

Function, goals and intention: children’s teleological reasoning about objects

Deborah Kelemen

A fundamental aspect of adult thought is the ‘teleological’ tendency to assume that objects exist for a purpose. When seeing an unfamiliar artifact or strange anatomical part on an animal, the first question an adult will usually ask is ‘what’s that for?’ – a query that assumes that the object can be teleologically explained in terms of its function. Current debate focuses on the origin and scope of teleological thought, and its role in children’s emerging theories of the biological world. The bias to view objects as ‘designed for a purpose’ probably derives from children’s privileged understanding of intentional behavior and artifacts. This makes children prone to a ‘promiscuous teleology’ in which artifacts and natural objects of all types are viewed as existing for a function. Because of this, I argue that we should be cautious about taking the existence of an early teleological bias as evidence that there is biological understanding that exists independently of a psychological construal of living things.

T

Why are rocks pointy? Children's preference for teleological explanations of the natural world

November 1999 · Developmental Psychology 35(6):1440-1452 ·  Follow journal

DOI: [10.1037/0012-1649.35.6.1440](https://doi.org/10.1037/0012-1649.35.6.1440)

 Deborah Kelemen

Overview

Stats

Comments

Citations (194)

References (51)

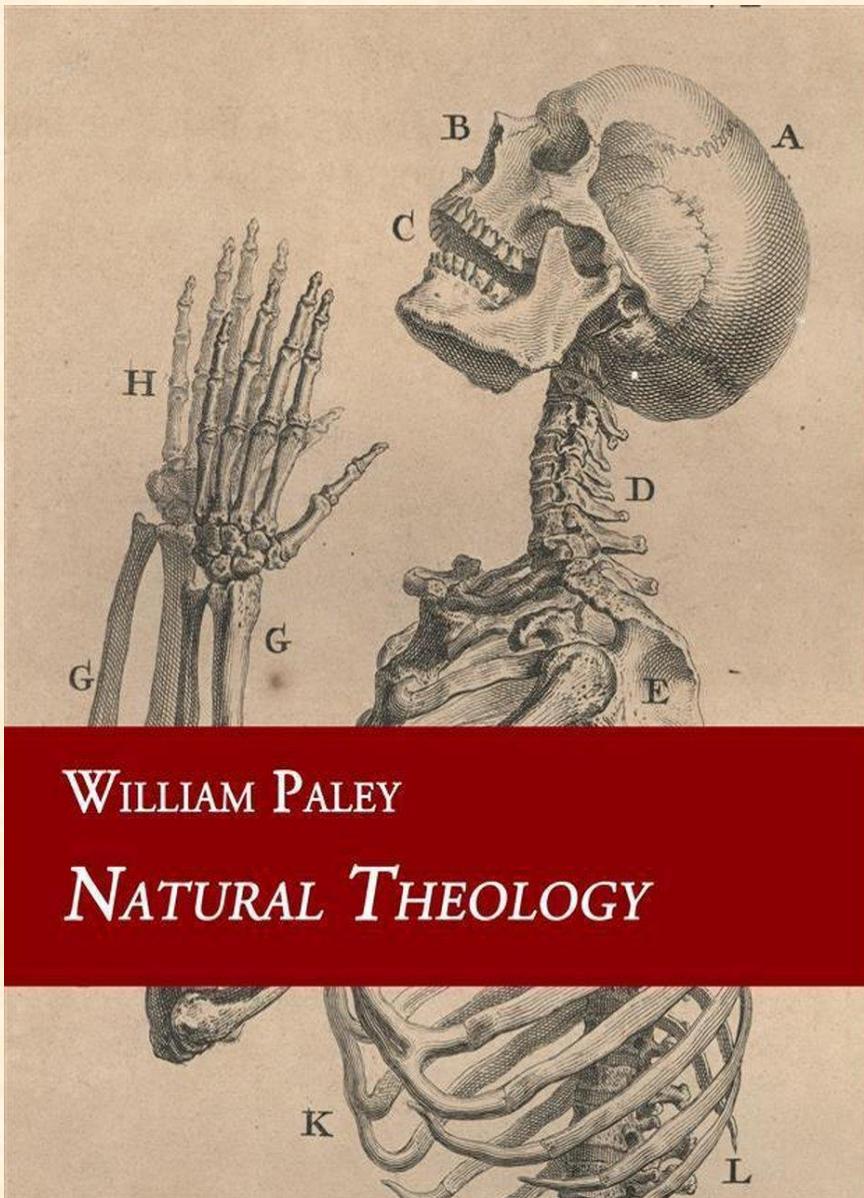
Related rese

Abstract

Teleological explanations are based on the assumption that an object or behavior exists for a purpose. Two studies explored the tendency of adults and first-, second-, and fourth-grade elementary-school children to explain the properties of living and nonliving natural kinds in teleological terms. Consistent with the hypothesis that young children possess a promiscuous teleological tendency, Study 1 found that children were more likely than adults to broadly explain the properties of both living and nonliving natural kinds in teleological terms, although the kinds of functions that they endorsed varied with age. Study 2 was an attempt to reduce children's broad teleological bias by introducing a pretrial that described, in nonteleological terms, the physical process by which nonliving natural kinds form. In spite of this attempt, Study 2 replicated the effects of Study 1, with only fourth graders showing any shift in preference for teleological explanation.

OKAY, WISE GUY... IF THERE'S
NO GOD, WHO DESIGNED THESE CHAIRS?

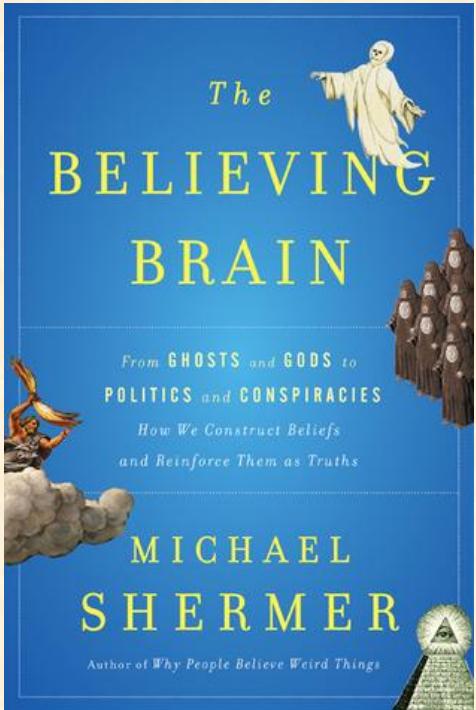




WILLIAM PALEY

NATURAL THEOLOGY





MIND

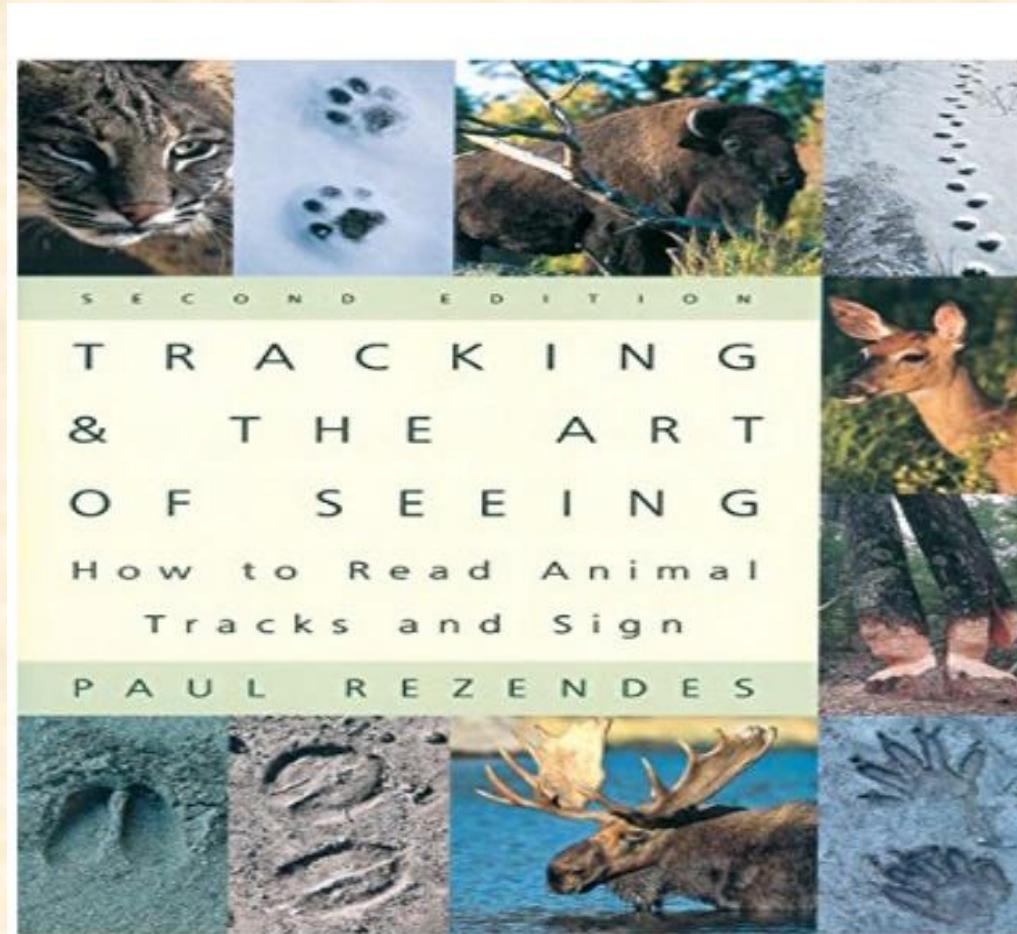
Patternicity: Finding Meaningful Patterns in Meaningless Noise

Why the brain believes something is real when it is not

Het vermogen om patronen te herkennen, zowel correct als vals (“pseudopatronen”)

Probleem: geef mensen een hoeveelheid willekeurige data en ze herkennen er een patroon in. Toeval lijkt vaak niet toevallig. Bv.:
iPodshuffle van Apple moet
geherprogrammeerd worden (zodat hij *minder*
random koos.)

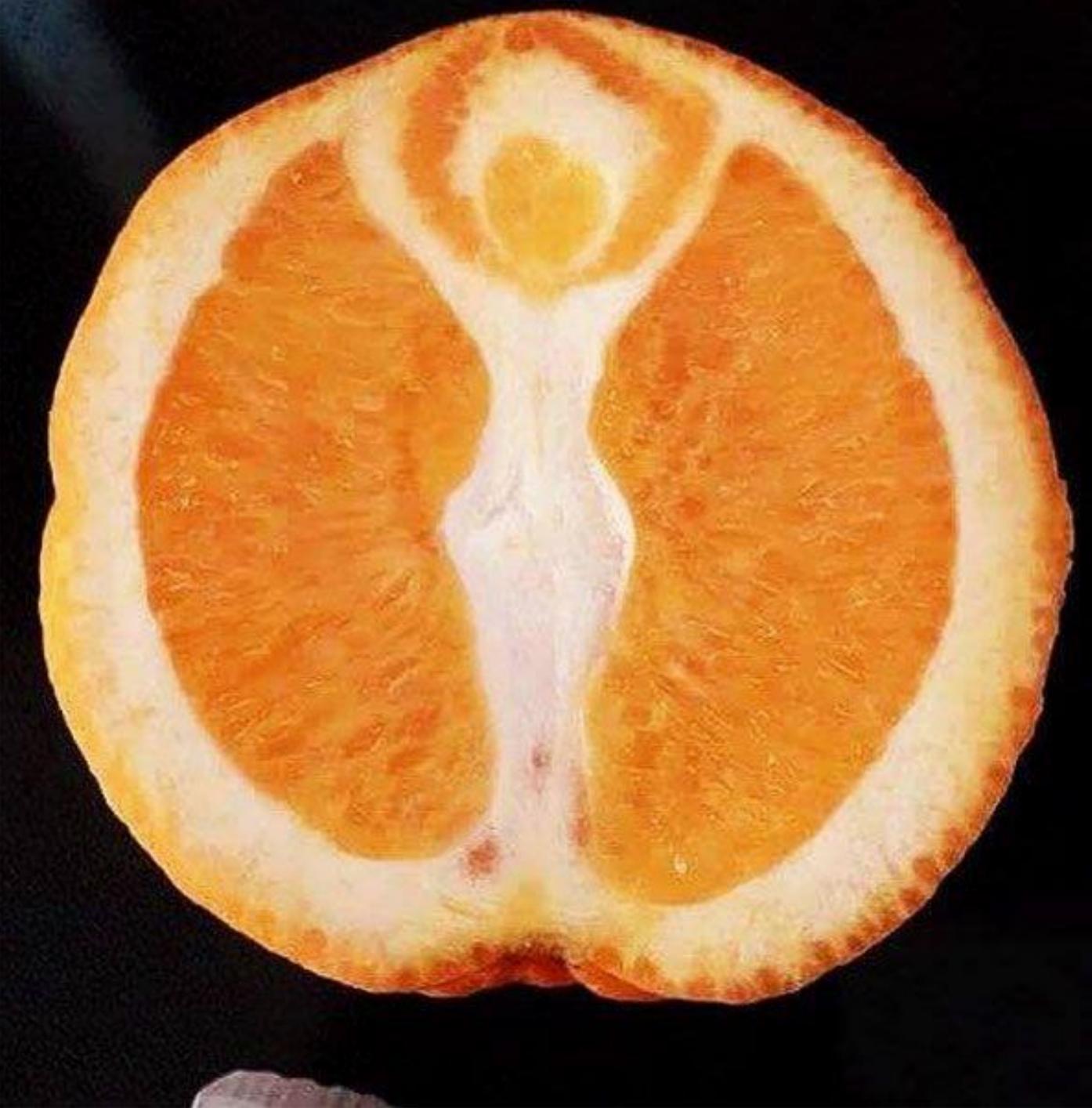
We geloven in foute patronen omdat ons geëvolueerd vermogen om correcte patronen te detecteren.

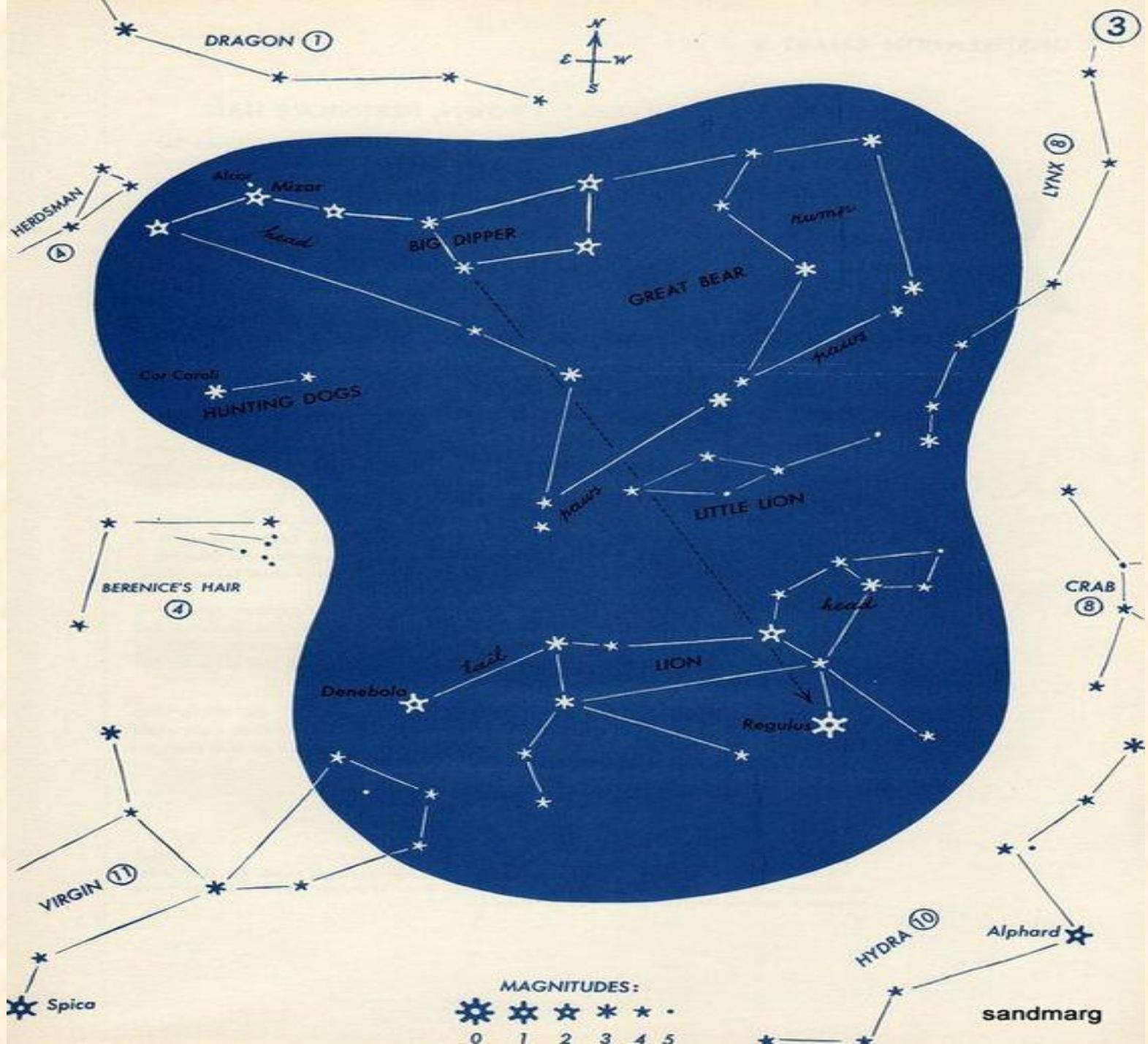


We hebben slechts weinig input nodig om patronen te zien (of te horen etc.). Vaak maakt ons brein een correcte inschatting, ook op basis van geringe informatie:



Maar als we “pseudo-input” krijgen, creëert ons brein evengoed betekenis....





Marcel Mariën:
La danseuse étoile.



1011001010100111011011001101110101011101111101101011001110
0100101010101011101001001000111011101010010010101110110010
1101101101111000111011000011111000111010110110101110011
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<https://www.youtube.com/watch?v=zGsUcPdPWBg>

Nor his woes..
So here's to my Sweet Satan.
The other's little path
Would make me sad,
Whose power is faith.
He'll give those with him 666.
And all the evil fools,
they know he made
us suffer sadly.

Météorite : Elle s'écrase sur la maison de Mme Comette à Paris



Ecrit par Chloé M.



Mise à jour le 10 oct. 2011 16:16:34