

Anti-science, pseudo-science,  
konspirationsteorier og alternative  
opfattelser – *hvad stiller vi op?*

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# Anti-science, pseudo-science, konspirationsteorier og alternative opfattelser – *hvad stiller vi op?*

1. Diagnose – indkredsning af problemet og de centrale spørgsmål
2. Anti-science, pseudoscience og konspirationsteorier
3. Prognose – *Hvorfor tror vi mærkelige ting?*
4. Behandling – Hvad virker i mødet med mennesker, der har alternative opfattelser?

# Diagnose: Farvel til Gutenberg

Napoli, 1704:

Domenica Jurlaros mor er meget bekymret. Hendes datter har gennem længere tid haft voldsomme smerter i underlivet. Domenica har været i behandling hos distriktslægen og er blevet åreladet tre gange af en kirurg, men intet synes at hjælpe og morens bekymring vokser dag for dag. Så hun betror sig til en anden kvinde, Onofria Bufalo. Onofria er kendt på egnen som "klog kone", en såkaldt healer. Hun lover at finde en kur og tilbyder sin hjælp – mod en klækkelig betaling. Onofria fremstiller en urtemedicin sødet med honning.

Men Domenicas tilstand forværres yderligere. Den fortvivlede mor og datter begynder nu at mistænke Onofria for at have kastet en forbandelse over den unge kvinde. De henvender sig derfor til den lokale præst og beder ham velsigne Domenica og modvirke Onofrias onde magi og forbandelse.

Oversat og citeret efter Mary Lindemann: *Medicine and Society in Early Modern Europe*, Cambridge University Press 2010, side. 1



# Paternalisme og lægens tab af autoritet

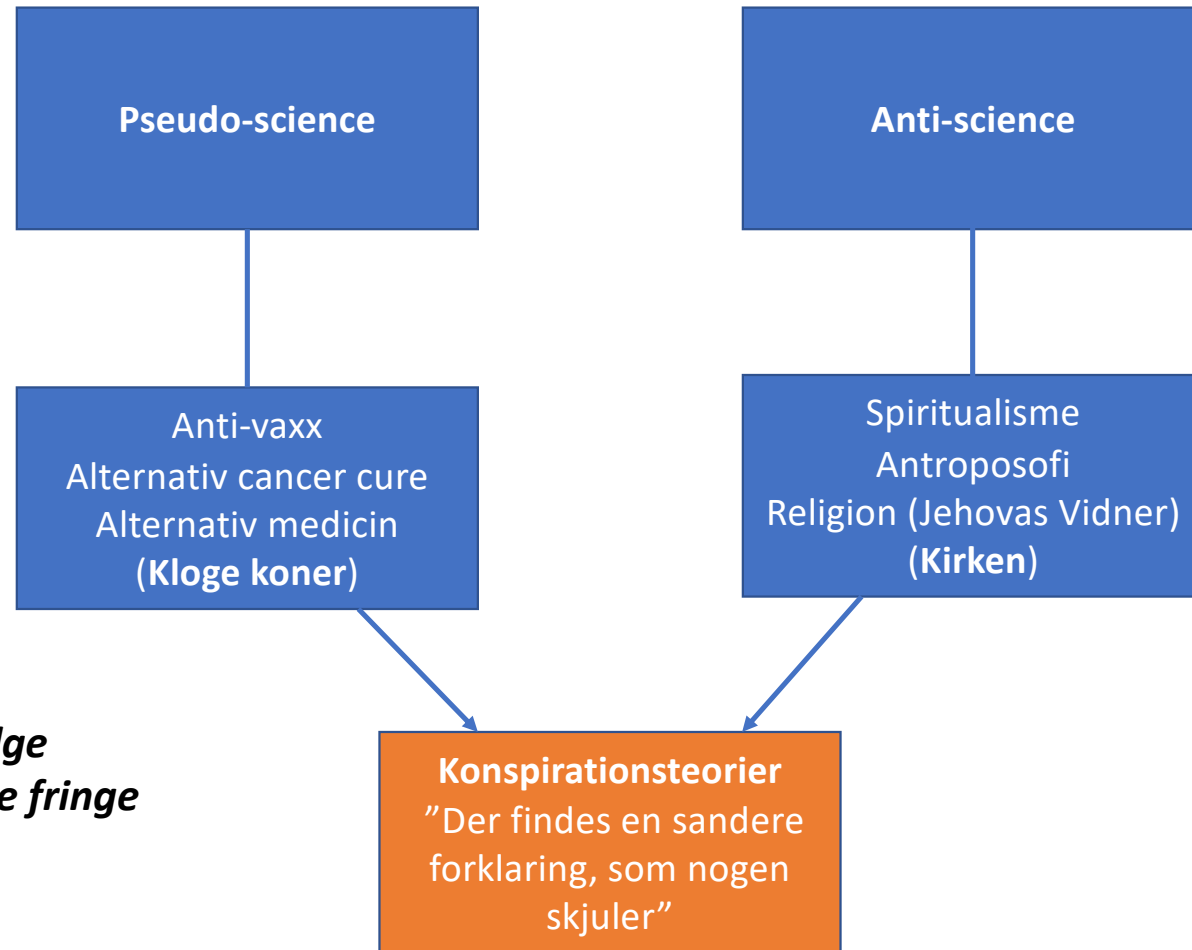
**Paternalisme:** "bedrevidende eller formynderisk holdning eller praksis hvor man på andres vegne dikterer hvad der er bedst for dem" (Den danske Ordbog)

# Står vi ved tærsklen til en ny tilstand i dag?

*”Hvis videnskab bringer oplysning, og oplysning besejrer afsporede teorier, hvorfor er det så så let at finde ”pseudovidenskab” i vores nutidige videnskabelige æra?” (Michael Gordin: *On the Fringe*, s. 89)*

1. Nivellering af vidensautoriteterne
2. Adgang til uanede mængder af information (internettet) og samtaler med ligesindede
3. Ultraliberalistisk, antimyndigheds- og antiregulerings-trend: Individets frihed og ret til selv at bestemme over behandling, liv og død
4. Genkomst af religiøse og spirituelle livspraksisser (ortodoks religion og new age)

# Hvor kommer modstanden fra?



**-Stigmatized knowledge**  
**-Mainstreaming of the fringe**

*(Michael Barkun)*

# Pseudo-science (Denialism)

- vacciners bivirkninger
- 'hidden cancer cures'
- elektromagnetisk stråling, Flad Jord bevægelsen,
- vandmolekylers hukommelse, Aliens/ufologi
- frenologi, kreationisme etc.



# Anti-science (Rejectionism)

## Ginger root and meteorite dust: the Steiner 'Covid cures' offered in Germany

The movement best known for its schools is firmly entrenched within the German health sector



Rudolf Steiner's followers practise a therapeutic exercise called Eurythmy in 1931. Photograph: ullstein bild Dtl./ullstein bild/Getty Images



- Homøopati
- anti-vaxx
- antroposofi, spiritualisme
- alternativ medicin
- ortodoks religion
- krystalhealing etc.



HVEM HAR FORTALT DIG, HVAD  
DU VED?

# Hvem har fortalt dig, hvad du ved?



”Men fortæl mig først, hvorfor du tror på den officielle historie? Jeg mener – beviser? [...] Javist – autoriteter – men hvad mener du selv? Som historiker kan du da ikke være uden interesse i det faktuelle forløb? Der var to flyvemaskiner, men tre skyskrabere, der kollapsede på Manhattan. Vidste du det?”

E-mail fra 11/9-konspirationsteoretiker

### Trust Your Eyes, the Facts, and the Laws of Physics.

#### WTC 7

World Trade Center Building 7, a 47-story skyscraper NOT HIT BY AN AIRPLANE, was the third tower destroyed on 9/11.

The collapse of WTC 7 looks like a classic explosive CONTROLLED DEMOLITION.

- The building fell almost straight down in about 7 seconds – and at free-fall acceleration for 100 feet – per NIST.
- The overall building mass fell uniformly through the path of what was greater resistance. This requires a precisely timed (premed) removal of critical columns.
- The lack in the rubble is characteristic of a demolition timing sequence that causes buildings to implode symmetrically by collapsing inward.
- SMALL POCKETS OF SHORT-LIVED FIRES could not cause floor system failure by “thermal expansion” (NIST in this modern fire proofed steel-framed structure).
- A single, localized failure is grayer cascaded – NIST could not cause the system’s & total FAILURE OF ALL OTHER STRUCTURAL STEEL CONNECTIONS PER SECOND.
- NUMEROUS incidents and recorded statements reveal FOREKNOWLEDGE. These include a caution, warnings, and announcements from both “9/11” and the “9/11” of the collapse... before it happened!

Evidence Excluded from the NIST Report:

- Most of the rubble from the explosion ended up in this near pile – centered within the original footprint.
- The 47-story steel-framed structure was dismantled and reduced to a steel pile only a few stories high. The destruction was total and complete. Also, most of the walls collapsed inward – an unmistakable sign of a controlled demolition explosion.
- Hot spots in the rubble, detected by NASA infrared imaging, persisted for weeks at temperatures far exceeding normal office fires.
- Evidence of melted steel and “bears high temperature corrosion” documented in Appendix C of FEMA report. Problem: Office fires don’t melt steel. Further analysis revealed the signature of thermite – an incendiary that creates molten iron.
- FEMA ordered the destruction of evidence at 4000-odd hours per day prior to completion of their May 2002 report which concluded that the fire had only a “low probability” of destroying the building, and that “further investigation and analysis were required.”

#### WTC Twin Towers

WTC 1 & 2 exhibited many unusual characteristics of controlled demolition – including extreme explosiveness, symmetry, pulverization, and lateral reaction of debris.

- Constant acceleration through path of what was greater resistance – no time for “bouncing”
- Imprecise symmetry of debris distribution
- Extremely rapid onset of destruction
- Over one hundred first responders reported explosions & flashes of light
- Multi-ton steel sections ejected laterally 600 ft at 50 mph
- Mid-air pulverization of 50,000 tons of concrete, metal decking, and floor trusses
- Massive volume of expanding pyroclastic-like clouds
- 1300 ton dia. debris field on “pyroclastic” flows found
- Isolated explosive ejections seen 20-40 stories below cascading demolition canopy
- Total building destruction dismemberment of steel frame
- Several tons of molten iron found under all 2 high-rises
- Evidence of thermite incendiaries found in steel and dust samples
- FEMA steel analysis, oxidation and irregular melting
- No precedent for steel-framed high-rise collapse due to fire

The molten iron canopy exhibited spread and ejection patterns in the first few seconds – a geometry of explosion, not gravitational collapse

#### The Truth is in the Evidence:

- A 30-ton steel column/beam section was severed at their connections and hoisted at 50 mph into the side of neighboring buildings
- FEMA’s office fires cannot produce 2000-PS molten metal – without thermite incendiaries.
- Microspheres formed from molten iron with traces of aluminum and manganese (the byproduct of thermite) were found in the WTC dust by OSHA, an environmental firm and independent physicists.

# Videnskabs-konspirationsteorier

1. Intet sker tilfældigt. Intet er som det på overfladen ser ud
  2. Afviser den officielle forklaring
  3. Leder efter de skyldige
  4. Monologisk trossystem, *bias*
  5. Ophober bekræftelser på teorien
- Trækker tråde mellem skjulte forbindelser
  - alle modbeviser oversættes til yderligere beviser
  - Forceret mønstergenkendelse



# Konspirationsteorier og alternative opfattelser

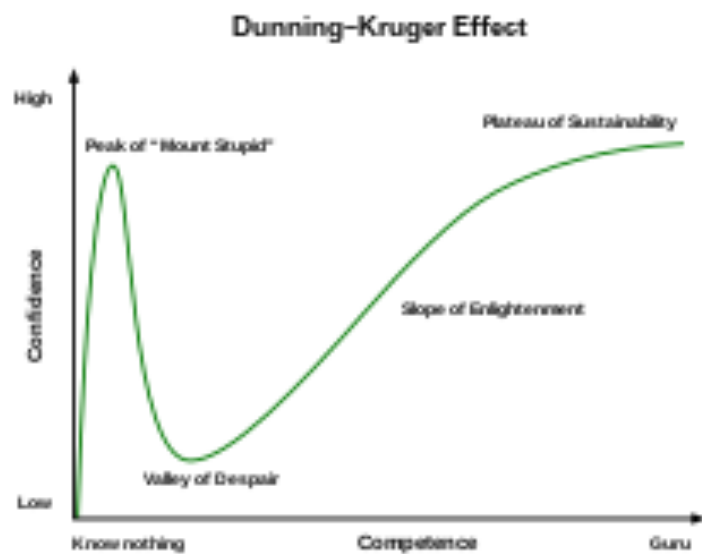
– *Who's the enemy?*

# Hvorfor tror vi mærkelige ting?

## – om kognitive forvrængninger

1. Bekræftelsesbias / in-group bias: Vi søger bevidst eller ubevidst evidens, der bekræfter vores eller gruppens hypotese/verdensbillede
2. Politisk motiveret tænkning: Vi holder fast i de opfattelser, der stemmer overens med vores egne politiske, religiøse og filosofiske overbevisninger
3. Dunning-Kruger effekten: Vi har som lægfolk en tendens til at overvurdere vores egen viden og evner inden for et givent område

# Knowing less, but presuming more...



I et studie fra 2017 sammenlignede forskerne forsøgspersonernes viden om årsagerne til autisme med lægers og forskeres viden og fandt en stærk evidens for Dunning-Kruger effekt: 34 procent af forsøgsp deltagerne mente, at de vidste mere end forskerne om årsagerne til autisme, og 62 procent af de forsøgsp deltagere, der klarede sig dårligst i autisme-videntesten, mente selv, at de ved lige så meget eller mere end forskere om årsager til autisme, sammenlignet med blot 15 procent, der klarede autisme-videntesten bedst.

Studiet fandt også, at de, der tror, at de ved mere om autisme, end de lægefaglige eksperter, er mere tilbøjelige til at stole på misinformationer og ikke-eksperter's 'viden' om feltet.

(Motta et al., 2019)

Sundhedspersoners generobring af autoritet  
gennem opbygning af tillid

# Kommunikationsteknikker til at opretholde en effektiv kontakt og tillid

1. Forstå mekanismerne bag opfattelsen (søg viden!)
2. Stil åbne spørgsmål og forstå opfattelsernes/konspirationsteoriernes funktion
3. Mød den anden med respekt, venlighed, åbenhed og ærlighed
4. Søg en fælles forståelse/oplevelse
5. Anerkend vedkommendes oplevelse af bekymring/uretfærdighed
6. Undgå at eskalere en potentiel uenighed/konflikt
7. Giv information – del hvad du ved (men ikke på en paternalistisk måde – del evt. egne positive historier)
8. "Plant et frø": Hav tålmodighed og forvent ingen hurtige resultater



# Læs mere

Marques et al. (2022): Practical recommendations to communicate with patients about health-related conspiracy theories, *The Medical Journal of Australia* 216(8), 381-384.

Suggested conversation prompts when a patient discusses coronavirus disease 2019 (COVID-19) conspiracy beliefs while attending a vaccination appointment		
Strategy	Aim	Examples
Open-minded approach. Ask questions and listen <sup>25</sup>	Build understanding with the patient, listen carefully, and avoid defending your own beliefs at all costs.	"When did you first start believing in [briefly include the conspiracy; for example, the COVID-19 vaccine has been developed for financial gain by health professionals] and how has this impacted you psychologically?"; "What do these beliefs offer you?"
Work on conversational receptiveness <sup>26</sup>	Foster empathy and increase understanding to bridge the gap between the beliefs of the patient and health care worker.	"I understand that ..."; "So what you're saying is ..."; "How does this make you feel?"; "Tell me more"; "I'm listening. Thank you for sharing."
Affirm values of critical thinking <sup>27</sup>	For patients who perceive themselves as critical thinkers (epistemic need), affirm these values and redirect this towards a deeper examination of the conspiracy theory.	"We likely both agree that asking questions is important, but it is key we evaluate all pieces of evidence. That is, integrate information that makes sense to us but also evidence that makes us feel uncomfortable."
Work at restoring personal control <sup>28</sup>	Attenuate the need to believe in conspiracy theories to reduce existential concerns. This may be especially pertinent during the pandemic, when many people feel they have lost control of their lives.	"It is a difficult and anxiety-provoking time, and we need to work together to get through this crisis"; "We must listen to each other — your voice matters, and I'm here to answer all questions you have about the vaccine today."
Highlight how conspiracy theories are not as commonplace as people might think <sup>19</sup>	This can help address protecting one's in-group (social need).	"Our community is overwhelmingly getting vaccinated; it is far more commonplace for your neighbours to get vaccinated and protect themselves against COVID-19"; "It is key that we work together to protect our community."

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