



Epilepsy: Science and superstition

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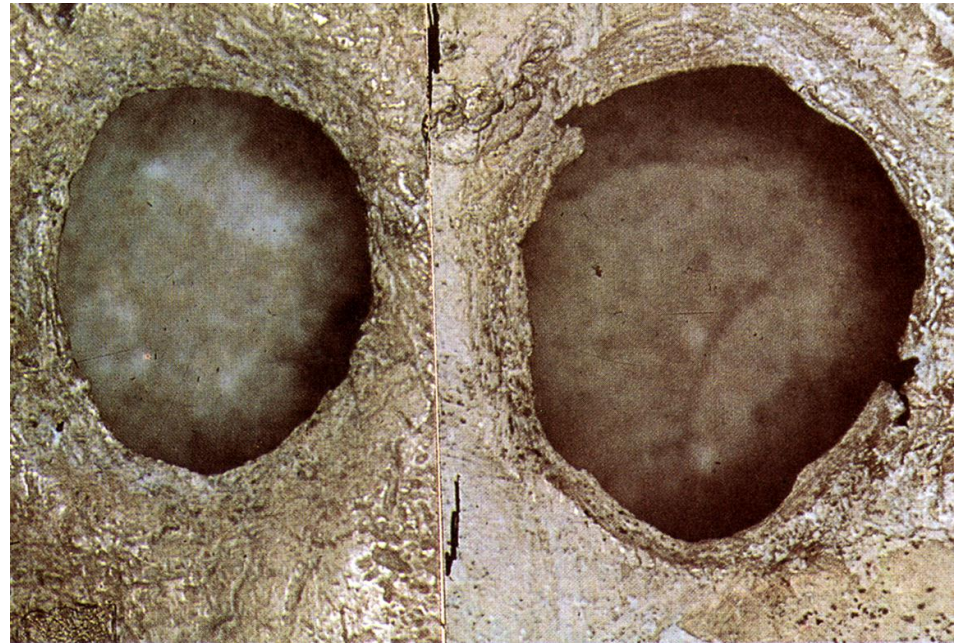




Is the history of epilepsy really, as often believed, a history of progressive growth of knowledge and insight, starting from sheer superstition and ending up with scientific enlightenment?

The history of epilepsy seen as a perpetual antagonism between rational (scientific, natural) and irrational (superstitious) explanations

The earliest indication of a rational approach to epilepsy



Neolithical findings of (partially survived) trepanations
left: about 10.000 B.C., necropolis of Taforalt

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What has trepanation to do with epilepsy? Why indication of rational approach?

- Part of the trephined artifacts show skull fractures
- 30 – 50% of such traumas result in acute symptomatic seizures; these will have stopped if the trepanation was successful
- The Hippocratic writers knew that brain trauma can cause contralateral convulsions and that trepanation is the correct procedure
- Trepanation may then, in a logical conclusion, also have been used to treat non-traumatic cases of epilepsy.
- This is in fact known from societies that in historical times used trepanation as a treatment for migraine, epilepsy etc

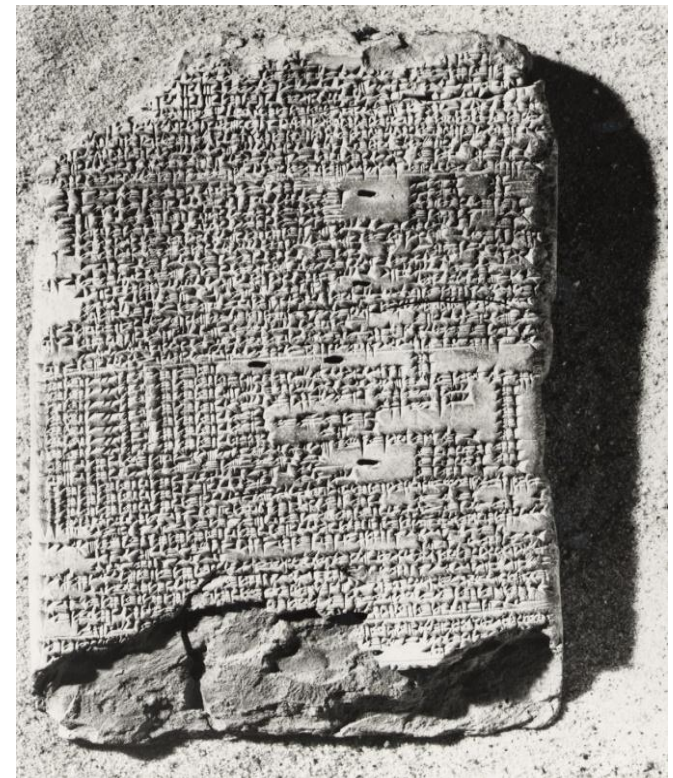


Epilepsy: the written history.

Oldest texts: Mesopotamia, irrational approach

Babylonian cuneiform text of 15th - 14th century BC

- Seizures of many different symptomatologies are distinguished and explained by the "hand" of different deities
- Notion of status epilepticus



Hippocrates



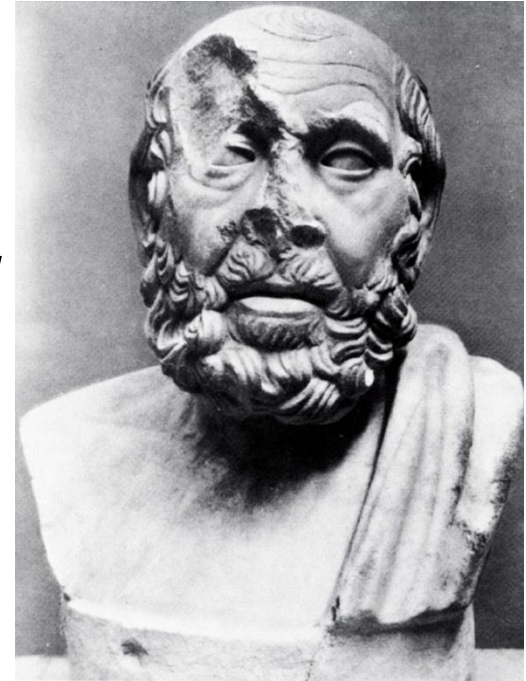
“On the Sacred Disease” (ca 400 BC)

Epilepsy is not sent by gods, it has no supernatural but natural causes like all other diseases. Its origin is in the brain [*may be based on the observations of traumatic epilepsy*].

The different seizure types are explained by differences in the natural causes: climate, the body fluids, the celestial bodies etc.

Did this refute superstitious beliefs once for all?

Treatment: to abstain from whatever facilitates seizures, and to do what opposes them: understanding of seizures as resulting from opposed factors



Historical patients: The epileptic boy in the synoptic gospels

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Matthew 17, 14-21: the boy **σεληνιαζεται** (= has the moon sickness, still today popular term in rural Greece); exorcism of a demon by Jesus.

Marc 9, 14-29, Luke 9, 37-43 : the boy is seized by a „spirit“ which is exorcized by the Christ.

Exorcism: the church's approach to epilepsy



Master of St. Severin (ca. 1300)

St. Severin of Noricum performing an exorcism
(Horne Museum Foundation, Florence)



Peter Paul Rubens (1577 - 1640): Saint Ignatius of Loyola preaches (1619)

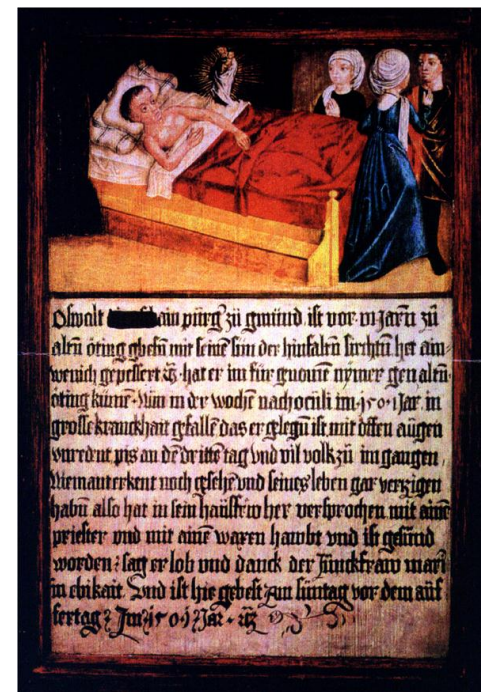
(Wien, Kunsthistorisches Museum)

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Historical patients: An Austrian ex-voto

“Oswalt ..., a citizen of Gmünd, went 6 years ago to the old Ötting with his son who has the falling sickness, was only little improved and they resolved never again to take to Altötting. Now, in the week after Oculi in the year 1501, fell into great illness that he lay with open eyes speechless until the third day and many people came to him, did not recognize or see anybody, and they lost all hope for his life. So his wife engaged him with a priest and a waxen head, and he recovered.

Say honour, praise and thanks to the Virgin Mary in eternity. And this happened here on the Sunday before Ascension day in the year 1501.”





Aspects of a historical document

- The patients don't have names
- First documented case of status epilepticus: absence status or convulsive status followed by stupor?
- Painted by witness?
- Syndrome diagnosis: the family history
- Piety or superstition? The waxen head!
(*Wolf, Bauer, Trinkla. Epilepsia 2008*)



Pilgrimage: Altötting and epilepsy

“Engagement to Altötting”

Ex-voto about 1520

Engagement = vow

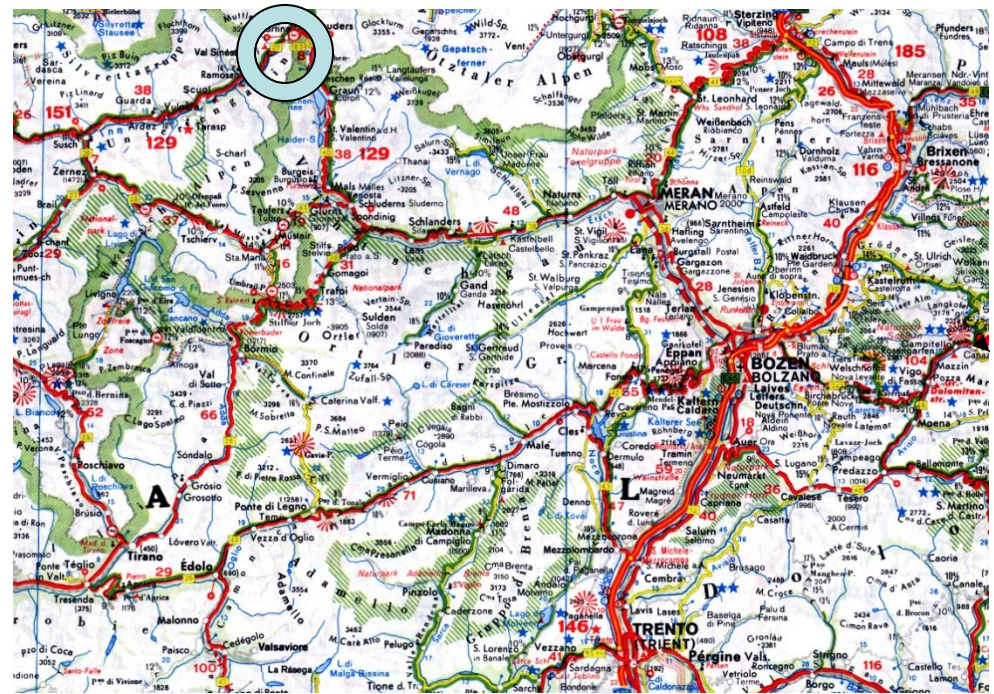


Historical patients: Katharina Willi



Müstair monastery, June 4, 1838

23 year old nun Katharina Willi fell ill with epileptic seizures and rheumatic pains. Doctors found no help. In November her death was expected from one hour to the next.



Katharina Willi: miracle and pilgrimage

On November 16, 1838 she together with other nuns held a novene in the praise of the Holy Virgin.

Next day from a window in the sick chamber she watched mass being held before the altar with the image of the ascension of the Virgin.

She exclaimed "*O chara mamma da Dieu*" and recovered.

Lived another 50 years in the monastery.

Event created local pilgrimage.

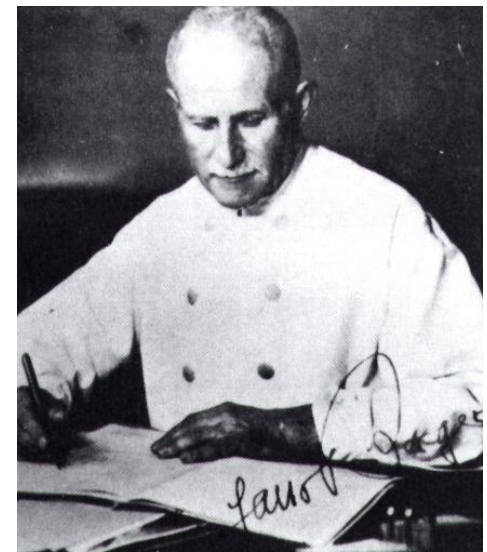
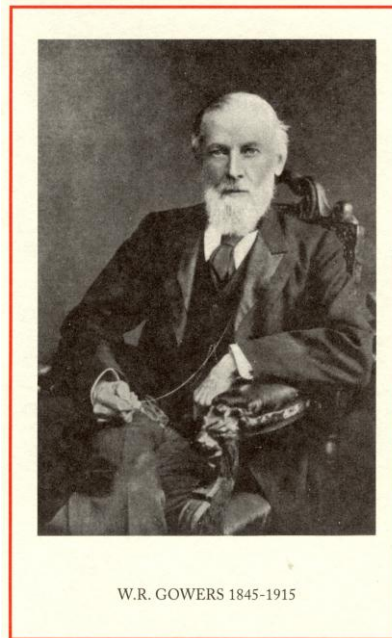
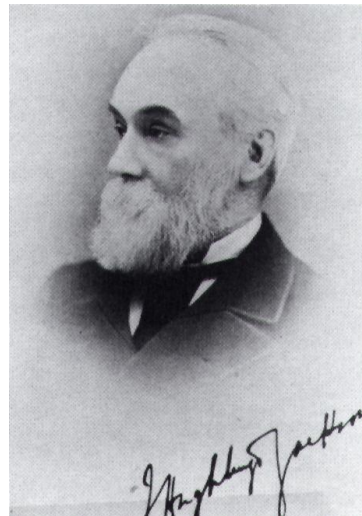


The miraculous altarpiece

The modern era: victory of science



Samuel Auguste Tissot





The modern era: some landmarks

- 1886: Cooperation of Jackson and Horsley in London: first surgery based on anatomical analysis
- 1909: Foundation of the International League Against Epilepsy in Budapest
- 1924: Hans Berger starts to record human EEGs
- 1938: Phenytoin first medicine deliberately developed as an antiepileptic drug by Merrit and Putnam
- since ~ 1984: MRI

A contemporary pilgrimage: São José de Ribamar, Brasil



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Anneliese Michel, Exorcism in Germany 1976

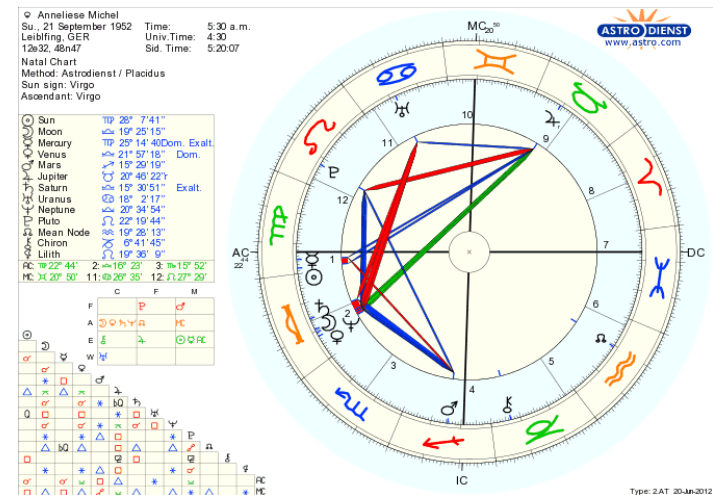
- Girl with TL epilepsy and psychosis close to Würzburg stopped medical treatment and underwent repeated exorcisms by priests Ernst Alt and Arnold Renz
- Stopped to eat and died from exhaustion and starvation
- Famous trial: priests believed they had not done wrong; believed in demons who “possessed” the girl and quoted their names as Osman, Tarik, Judas, Laima, Patait and Hitler.
- Ongoing controversial internet discussion of the correct view of the case; priest Alt still states she was possessed





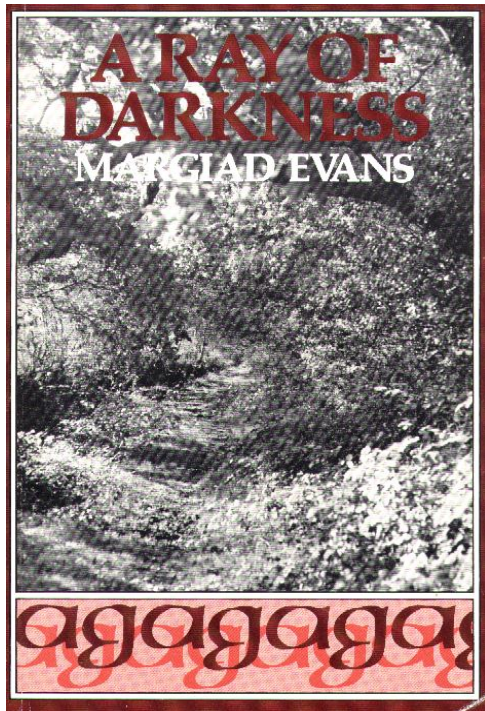
Anneliese Michel: an astrological website 2012, rejecting the idea of possession

- "The girl's assumed epilepsy is also confirmed by astrology. Epilepsy is related to the astral body being too big or incarnated in the body the wrong way, especially in the kidneys. And epilepsy very often occurs partly as a connection between Neptun and Venus, in this case as a conjunction, partly in connection with Uranus (convulsions)."
- Thousands of people believe this



Anneliese Michel's horoscope

Historical patients:
Margiad Evans (1908-
1958, 1.GTCS 11.5.1950)



“A Ray of Darkness” (1952),
autobiographical account of her
epilepsy



A thought-provoking testimony

“The old idea of demoniac possession, I am sure, arose not from the onlookers of sufferers in fits but from the sufferers themselves. Because in the violent attacks one feels as though the body has been entered by a terrific alien power; and that that power is trying, after entrance, to push its way out again.”

(A Ray of Darkness, p. 154)



Conclusions

- Epilepsy is not only the most frequent serious chronic disorder of the brain, it has also been present in the entire history of mankind
- Throughout history, starting in prehistorical times and continuing until present days, there are documents of both rational and superstitious explanations of epilepsy
- The fundamentals of a scientific understanding of epilepsy were expressedly formulated 2500 years ago
- Superstitions are great survivors
- For the rational mind they are difficult to understand but some may be based upon unusual subjective seizure experiences which may give us something to think about