PLACEDO:
THE MYSTERIOUS LEGACY
OF MAGIC IN MEDICINE

Prof. Dr. Dr. Heinz Schott, University of Bonn
Leading Questions

• Placebo: How far is it generally important for medical practice?

• Magic in Medicine: Is it a general trait of medical practice?

• „Mysterious legacy“: What may medical history reveal?

• Global Health: What may traditional (oriental and occidental) medicine teach us regarding modern Western biomedicine?
Some concepts explaining the mental healing factor in the history of medicine

• 1950es: „Placebo“ (Evidence-based Medicine)
• 19th/20th c.: „Healing power of nature“ (Naturopathy, Naturheilkunde)
• 1880es: „Suggestion“ (psychotherapy)
• 1840es: „Hypnotism“ (medical hypnosis)
• 1770es: Mesmerism (animal magnetism, magnetopathy)
• 16th/17th c.: „Natural magic“ (Magia naturalis; magic of nature)
• Middle Ages: Religious medicine (spiritual healing/belief healing)
1.

Placebo and nocebo:
The contemporary concept (20th century)
First drawing of the *Placebo* on a panel depicting a series of Flemish proverbs

by Pieter Brueghel the Elder about 1560

The Text means: „I am a placebo and tend to hang my coat everywhere according to the wind [i. e. to float with the tide].“
Definitions

• **Placebo** (Lat.)
  • = *I shall please*
  
  • *placebo effect*
  • = *healing factor independent from the effective substance (drug) or the medical treatment as such*
  
  • (Michael Balint: *The Drug ‘Doctor’; Die Droge Arzt*)

• **Nocebo** (Lat.)
  • = *I shall harm*
  
  • *nocebo effect*
  • = *harming factor of a medical treatment despite of its healing intention (‘iatrogenic disease’)*
  
  • In contrast to the placebo research the nocebo effect is widely ignored by scientific medicine!!
The placebo formula of the pharmaceutical research

- Effect of the verum preparation [with a specific drug] \( V \)
  - minus (-)
- effect of the placebo preparation [without the specific drug] \( P \)
  - = true efficacy of the specific drug \( TE \)

- \( V - P = TE \)
Evidence-based Medicine (EbM)

• Target:
  • To detect the real efficacy of a medical drug by excluding the placebo effect

• Methodology:
  • Double-blind randomized controlled trial (RCT)
  • „gold standard“ of scientific biomedicine

• Problem:
  • Exclusion of the personal individuality (esp. Doctor-patient-relationship), cultural codes, and healing concepts which do not fit into the frame of the EbM (e.g. homeopathy, psychotherapy, naturopathy, „alternative“ healing methods)
The „placebo effect“ was introduced into medical terminology in the 1950es

• BUT: The phenomenon was well-known since antiquity

• BUT: The placebo effect was always more or less deliberately used to support the medical treatment

• I suppose: In all medical cultures worldwide

• The idea to exclude it systematically as far as possible from medical practice is quite new and due to the natural scientific foundation of medicine and its biostatistical (IT based) methodes of EbM
Don’t forget the impact of the nocebo effect!

• At least as important as the placebo effect in medical practice

• But much less investigated than the placebo effect
Worst Case of a Nocebo:
A harmful thing that causes harm and you know it's harmful.
2.

Hypnotism and suggestion:
The historical basis of the “placebo”
(19th century)
“Hypnotism” and “suggestion”

• Neurophysiological approach (1840ies):
  • James Braid: *Neurypnology or [...] nervous sleep* (1843)

• Psychodynamic (psychosomatic) approach (1880ies)
  • Hippolyte Bernheim: *De la suggestion [...]* (1884)

• → The concepts of “hypnotism” and “suggestion” were compatible with academic (natural scientific) medicine
  • they became the basis for modern psychotherapy and Freud’s psychoanalysis (Freud adopted mainly Bernheim’s theory)
„Eye fixation method“ inducing hypnosis by James Braid (ca. 1845)
H. Bernheim (1840-1919)
The founder of modern psychotherapy and psychosomatic medicine
A milestone of medical history and fundamental for all placebo studies

H. Bernheim:

*The Suggestion and its Healing Effect*

Authorized German edition by Sigmund Freud (1888)
Hypnosis/Suggestion (H. Bernheim, ca. 1885)

Hypnotizing/Suggesting person = triggers an auto-suggestion

Critical consciousness is interrupted

Doctor

Patient

“nervous sleep”
“auto-suggestion”
“belief”
“automatism”

Hypnosis/Suggestion (H. Bernheim, ca. 1885)
„Hypnotism“ at the end of the 19th century
„Hypnotic“ fascination by beams from the eyes (a mesmeric idea)

Drawing by Sascha Schneider from „Gerlings hypnotische Unterrichtsbriefe“ (1921)
3.

Mesmerism:  
Healing by sympathetic interaction  
according to the *fludium* theory  
(18th century)
„Medicina electrica“ (about 1760)  
Steel magnets (about 1780)
Franz Anton Mesmer (1734-1815)

Bust by F. X. Messerschmidt; 1770

Lead, height altogether 48 cm
Vienna

„to mesmerize, mesmerizing“
classical mesmerism

Magnetizer = transmitter
and/or
Baquet = accumulator
mesmerized patient = recipient

Fluidum Transfer
Fluidum = cosmic energy

in between: intensifying factors („Verstärkungsmittel“):
= mirrors, music, healing rituals

classical mesmerism
Magnetizing a young lady

„The Magnetizer“ by Daniel Chodowitzky (1794)
LE MAGNÉTISME ANIMAL

Importante Découverte par M. Mesmer, Docteur en Médecine, de la Faculté de Vienne en Autriche.

Il est prodigieux la quantité des Maladies guéris par cette méthode qui consiste dans l'application d'un fluide santé que ce médecin dirige tantôt avec un de ses doigts, tantôt avec une Baguette de Fer qu'un autre dirige à son gré sur ceux qui recouvrent à lui. Il se suffit d'un Bacquet auquel sont attachés des Cordes qui les malades montent autour deux, et des fers recrochés qu'ils approchent du creux de l'Estomach ou de la Rate, et en général de la...
Medical Magic:  
Alchemy and natural philosophy  
(16th and 17th centuries)
Magia naturalis (i.e. natural magic) – The basic concept
Including moments of the placebo resp. nocebo effect

• Microcosm-Makrocosm-Analogy
  • The small world (microcosm man) corresponding the large world (macrosm)

• Signatures: External markers ➡ hidden powers
  • Example: Orchids effective against sterility and impotence

• Simile-principle: natural things similar to a disease can be therapeutically used
  • Example: The red hematite („blood stone“) stops bleeding

• Sympathy: Far distance effect (quasi telepathy)
  • Example: „Fascinatio“ (Ficino) / „weapon salve“ (J. B. van Helmont)

• Imaginatio: Incorporation of an external thing
  • Example: Muttermal („Hasenscharte“) / Coloured child from white parents
Signatures / Simile principle

Orchid roots (Greek *orchis* = Hoden) traditionally used as an Aphrodisiacum
Signatures / Simile Principle

„Blood Stone“

Hematite ring

Offer in the internet : 3,50 Euro

It would stop bleeding and stimulate blood production; would also support stability and a good mood.
Sympathy: Magical Interaction

Sender/transmitter (eye beams)                               Recipient

Example: Love spell

(M. Ficino: *De amore*, 1484)
The effect of the imagination (incorporation of an image) in a pregnant woman

Ambroise Paré (1635)
Paracelsus =
Theophrastus Bombast von Hohenheim (1493/94-1541)
A forerunner of medical chemistry („natural magic“)

- He stressed the relevance of „imaginatio“ and belief (Glauben) for health and disease
- He was very aware of the placebo/nocebo problem (power of the mind) and the personality of the doctor as a healing factor
5. Demonology: The religious background (Antiquity; Middle Ages – until today)
Demonology: Possession by spirits
Crucial ambivalence: „good“ versus „evil spirits“

- **Good spirits**
  - Divine powers
  - Eudemonia (εὐδαιμονία)
  - Enthusiasm (ἐνθεως) (possessed by God)
  - Holy Spirit (Pentacost)

- **Evil spirits**
  - Harming powers
  - „Kakodemonia“ (J. Kerner)
  - Devil’s possession
  - Witch „sabbat“ (devil’s cult)

- Historical paradigm: Jeanne d’Arc (1412-1431)
  - First adored like a Saint, then killed like a satanic witch
Harming demons

Assyrian fever demon *Pazuzu*,
bronze figure (2nd millennium B.C.)
The „shot of a witch“ (German: *Hexenschuss*) = lumbago
Wood cuts (U. Molitor, about 1500)
Jesus Christ exorcizes a possessed
Conclusion
Magic [overlapping with religion] is a global phenomenon of everyday life and essential for the healing arts -- often being expressed unconsciously through popular traditions and rituals e. g. amulets, jewelry, veneration of Saints etc.
The „Eye of God“ in the internet (also symbol of Masonry)

Tin amulet against the evil eye with an agate stone; 19 €
In historical and cross cultural perspective:
Placebo is a sort of „magic“ factor in medical (healing) practice
-- not only in (Eastern or Western) traditional medicine but also in academic biomedicine (clinical medicine)
Traditional Western Medicine (TWM) excluded as unscientific "occultism"

Natural science paradigm of medicine since 19th c.

Alternative Medicine, naturopathy etc. = the relics of TWM

Medical pluralism more accepted in Asia (?) Inofficial medical pluralism

Globalized scientific ("Western") biomedicine

Traditional Asian Medicine(s) (TAM) not radically broken by natural scientific medicine

Europe

Asia

Antiquity
Indeed, such an investment would be very useful ...
Thank you very much!