

A Brief Historical Survey of Prevention and Therapy (From Hippocrates (469-399 B.C.) to the 17th Century)

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A Necessary Premise

We must start by saying that A) Greek philosophy already distinguished “epistémē”, that is to say “Science” from “tékhne”, a term that means the “handycraft’s activity”, i.e. “practical activity”; B) that according to the anonymous author of the pseudo-hippocratic treatise “Peri Tékhne” (On the Art) the “Art” par excellence was just Medicine. C) That according to Aristotle (384-322 B.C.) [1] “the object of the epistémē is the being” whilst “tékhne deals with the existent”, that is to say “the particular”.

1) Hippocrates (c.469-c. 399 A.C.) states [1] that: “Those diseases that medicines do not cure are cured by knife. Those that knife does not cure are cured by fire [2]. Those that fire does not cure must be considered incurable”. The term “disease” is clearly alluding to the “patients” and the author is dealing just with the “particular”, as all the subsequent physicians did and are still doing nowadays: the object of the “tékhne” of the physician is not the “disease”, but the “patient” himself! The books of the treatise “Epidemies” of the Corpus Hippocraticum are the clearest proof.

2) Aulus Cornelius Celsus (1st century B.C.-1st century A.D.) writes [3]: “In those times [4] Medicine was distinguished into three branches: Dietetics, Pharmacology and Surgery”.

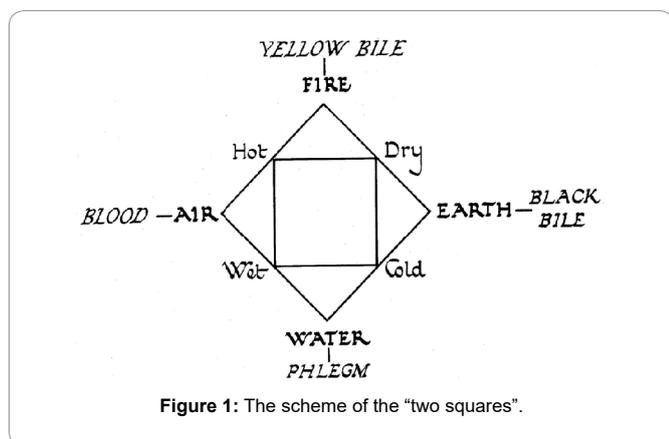
3) Galen (129-c.199 D.C.) in his turn maintains that “The target of medicine is health, and its purpose is the achievement of it. But it is essential for the physicians the knowledge of the means either to restore health whenever it is absent, or to save it whenever it is present. The means that let restore health in case of illness are called “Therapies” and “drugs” whilst those, which let save it are called “healthy diets” with a clear echo of Aristotle, who had already stated five centuries before that “The physicians have recourse to drugs and healthy diets”. However Galen emphasizes [5] that “Medicine is one of the practical Arts. However it is not “practical” in the sense of the arts either of the masons or of the blacksmiths, or of the tailors, but in the sense that it either restores a damaged building, or mends a tear in a dress” and adds that “its two legs are observation and rational evaluation”, i.e. the hippocratic “observatio et ratio”.

4) The result of these Hippocratic, Aristotelian, Celsian and Galenic distinctions and of the corresponding theories (or better “rational elaborations of the sensible data”) - obviously unacceptable nowadays - of the “four qualities” (hot, cold, moist and dry), each couple of which characterized the “four humours” (blood, phlegm, yellow and black bile), in the correct balance of which the “healthy temperament” of each living body consisted, whilst disease was caused by their imbalance, and, moreover, in connection with the supposed “four elements” (air, water, earth and fire) is the following scheme:

- 1) Blood: air, hot and moist;
- 2) Phlegm: water, moist and cold
- 3) Yellow bile: fire, hot and dry;
- 4) Black bile: earth, cold and dry clearly represented by the so-called “figure of the two squares” (Figure 1).

5) The distinctions and the really absurd theories we mentioned above were inherited by the Arabs, who reworked them with the additions a) of the distinction of each quality into 4 degrees; b) of the distinction of the so-called “six unnatural things”

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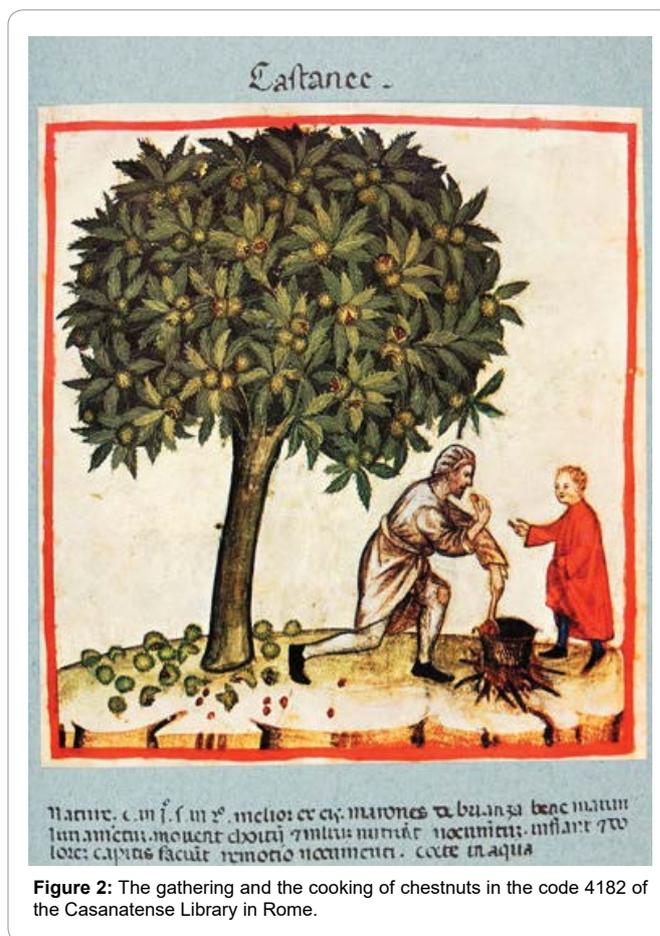
(1 - air; 2 - food and drink; 3 - movement and rest; 4 - sleep and vigil; 5 - inanition and repletion; 6 - accidents of the soul); b) of the "natural things", that is to say the constituent and functional elements of a living body; c) of the "things against nature", i.e. the elements of the diseases. In modern terms: anatomophysiology, hygiene and pathology.

6) The Arab physician Abū al-Hasan al Mukhtār ibn 'Abdūn better known as Ibn Butlan (1001-c.1066) organized and summarized this whole matter in "tables" called "Taqwin al sihha" (literally = "Tabulae sanitatis", transliterated into Latin as "Tacuina sanitatis"), accompanied with marvellous illustrations concerning the "six unnatural things", the captions of which are divided into 5 sections concerning 1) nature and quality with the corresponding degree; 2) choice; 3) benefit; 4) damage; 5) removal of the damage. The tables concerning the "castanee"^[6] (chestnuts) one may read in the plate n. XXIV of the code n. 4182 preserved in both the Casanatense Library in Rome and the Bibliothèqure Nationale in Paris are clearest examples (Figure 2,3).

The pertinent captions read as follows: "1) "nature calide in 1°, sicce in 2°; 2) meliores ex eis marones de Brianza bene maturi; 3) juvamentum movent choitum et multum nutriunt; 4) nocumentum inflant et dolorem capitis faciunt; 5) remotio nocumenti cocte in aqua." (their nature is hot in 1° and dry in 2°; the best variety is that of the marrons of Brianza [7], when perfectly ripe; benefit: they promote sexual intercourses and are exceptionally nutrient; damage: they swell and cause headache; removal of the damage: cooked in water).

7) From the sum and often the contamination of these matters derived and spread throughout all Europe the nearly numberless "Regimina sanitatis" (Regimens of health), real "technical manuals" that filled the medical literature between the 12th and the 17th century.

8) We must distinguish three kinds of "Regimina sanitatis": 1) those dedicated to single and generally noble and renowned personalities; 2) those dedicated either to the students of different sciences, like the Regimina studiosorum (Regimens for students) or to different ages, like the Regimina senum (Regimens for the ageing males); 3) the general ones, the most undeservedly famous among which is the "Regimen sanitatis Salernitanum" (Regimen of health of the Salernitan School), which started from a first nucleus consisting of 1100 verses written by Johannes of Milan (1st half of the 12th century) and - through subsequent



nearly numberless additions that lasted till the 17th century - reached the exceptional number 3520 verses in the 5th volume of De Renzi's "Collectio Salernitana" [8] and contains not only dietetics and hygiene as fundamental means either to preserve, or to recover health, but also Anatomy, Physiology, Pathology, Pharmacology and Therapy gathered - so to say - in a nearly obscene mixture. We cannot exclude that the collection took its cue from the medical knowledge and the medical treatises of the archbishop of Salerno Alphanus (1915-1985), who - during his stay in Byzantium - became surely acquainted with Michael Psellus (1018-1096) counsellor of the Emperor of the East Roman Empire Michael VII Ducas (1050-1090) and author of a "Medical poem" [9], the content of which corresponds - often word for word - to the verses of the "Regimen sanitatis Salernitanum", whose first 6 verses are a shortest summary of "healthy diet" concerning 5 of the "six unnatural things" [10]. The text reads as follows: Anglorum Regi scribit Schola tota Salerni.

Si vis incolumem si vis te vivere sanum:

6) Curas linque graves, irasci crede profanum.

2) Parce mero, coenato parum; 3) non sit tibi vanum

surgere post epulas, 4) somnum fuge meridianum.

5) Ne mictum retine, ne comprime fortiter anum:

Hec si bene serves, tu longo tempore vives [11].

(The whole Salernitan School writes to the King of England.

If you want to enjoy a safe and healthy life, leave the heavy anxieties; consider anger to be a profanation; refrain from wine; have a light dinner; do not avoid standing after a banquet; beware of afternoon lie-down; do not restrain urine and your bowels. If you will observe these rules as carefully as possible, you will enjoy a long life.)

9) The so-called "Aqua vitae" [12], i.e. our "grappa" [13] deserves a particular treatment. The renowned physician Michael Savonarola (1385-1464) - grandfather of the famous Dominican Hieronymus (1492-1498) - dedicates an ample treatise to this topic [14], in which he emphasizes not only the exceptional therapeutic virtues of this "burning water" [16], but also and above all its virtue of preventing illnesses, and considers it nearly a real "elixir of long life". However he points out that the patients liked this miraculous medicine to the point that they went on drinking it in great quantity even after having recovered! Obviously he maintains that in such cases the "miraculous medicine" becomes very dangerous!!

10) Useless to say that not only the theories concerning the "grappa" as an alleged real "elixir of long life", but also - and most of all - the different kinds of "Regimina sanitatis" have not even the faintest scientific foundation, are the simple result of what we call "naive empiricism" and are only characterize here and there by a certain amount of good sense.

11) However we must emphasize that should one read the Consulta (Consultations) of the really giant of the History of Medicine, who was Marcello Malpighi (1628-1694) - the founder

of "microscopical anatomy" - in spite of the climate of the "Galilean scientific revolution", that is to say of the birth of "Science" in the modern sense of the term [17], and of the consequent transfer of its criteria and its method not only into Medicine by the "iatromechanic School" created by the genius of Giovanni

Alfonso Borelli (1608-1679) and the "iatrochemical School" [18] founded by Johan Baptist van Helmont (1577-1644), but also into the Art, the Literature and the Music of the so-called "Baroque" - he can still find - and in this case Malpighi's genius gives a rather bad account of itself! - a clearest inheritance of the Medieval and Renaissance "Regimina" their ungrounded absurdities included [19]. So strong is a century-old although naively empiric literary tradition!

References

1. I dedicate also this work to the memory of my adored son Giulio, who was killed on May, 14, 2012 by a criminal driver, who did not observe a STOP sign. Cf. *Analytica posteriora*. 19:100a8.
2. Cf. Aphorisms. VII:LXXXVII.
3. i.e., by cauterization.
4. Cf. *De Medicina*, Proemium, 9.
5. I.e., during the 3rd and the 2nd century B.C.
6. Cf. *Physiognomoniká* (On physiognomy). 4:898b23ff.
7. Cf. the treatise *De constitutione artis medicae ad Patrophilum* (To Patrôphilus on the constitution of the medical Art), 19, 7, K. I, 103. K. means Claudii Galeni Opera Omnia, edited by Carl Gottlob Kühn, Lipsiae, 1921 ff. The Roman numbers correspond to the volume; the Arab ones to the chapter or the page.
8. Instead of "castaneae": the loss of a final diphthong is usual in the Medieval Latin.
9. A region of Northern Lombardy.
10. *Filiatre Sabezio*, Naples. 1859.
11. In iambic verses. Cf. I.L. Ideler, *Physici et Medici Graeci minores*, anastatic reprint Adolph M. Hakkert - Publisher, Amsterdam 1953; p. 203 ff.
12. Only "air" is missing and the "accidents of the soul" are placed just at the beginning instead at the end.
13. We have added the numbers of the original series of the "six unnatural things" quoted above.
14. There are two etymologies of this term: 1) "aqua vitis" (water obtained by distillation through the "vitis", i.e. the "serpentine" of the "alembic"); 2) "aqua vitae" (water donor of life). Cf. L. Belloni, *I trattati in volgare della peste e dell'acqua ardente di Michele Savonarola* (Michael Savonarola's vernacular treatises on the plague and on the burning water), *Pel LIV Congresso Nazionale della Società Italiana di Medicina Interna*, Roma, 12-14 Ottobre. 1953; p. 49 ff.
15. Brandy obtained by distillation either of wine or of mare. It generally reaches a proof of at least 45°.
16. It is also worth observing that Savonarola calls it "aqua ardens" (burning water) just in the title of his treatise. Cf. L. Belloni, *I trattati*, etc. quoted in note n. 14.
17. Cf. S. Musitelli, *The Galilean revolution, in Europe- the cradle of Urology*, History Office of the European Association of Urology, Arnheim. 2010; p.40 ff.
18. To which Malpighi himself was not indifferent. Cf. *Consulti di Marcello Malpighi* (Marcello Malpighi's consultations) edited by G. Plessi & R. A. Bernabeo, Istituto per la Storia dell'Università di Bologna (Institute for the History of the University of Bologna). Bologna. 1988.
19. For instance: Malpighi is still considering goat milk as a real "heal-all!".