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Two readings of Galen: Rhazes (9<sup>th</sup>-10<sup>th</sup> cent.) and Leonhart Fuchs (16<sup>th</sup> cent.)

Galen was the basis of medical learning in the Eastern Medieval period. The translations of his works into Syriac and Arabic were studied and commented mostly as vivid knowledge, leading to an autonomous medicine. The critical examination of Galen, evidence of attentive reading and great esteem, shed light on his accomplishments, but also on his weak points. Rhazes uses Galen as a medical authority, in order to broaden his own medical thinking.

In the Renaissance, the majority of the translators and commentators of Galen, all Hellenists, tried to establish a boundary between the “authentic” Galen, and the Arabic one. Galen was thus supposed to facilitate the emergence of a medicine directly transmitted from Antiquity to the West. The German Leonhart Fuchs is a typical example of such a reading.

Our aim is to point out that both Rhazes and Fuchs contributed to medical education. We would like to fuel the debate about the evolution of knowledge and the role of “error” in the construction of “truth”, and about the status of medical knowledge and of knowledge in general, as a heritage from the past continued into the present.

We will study some examples of Rhazes’ *Doubts about Galen* and *The treatise of smallpox and measles*. Concerning Fuchs, we will focus mostly on his *Paradoxa medicinae*, with some references to his commentary on the four Galenic treatises *De morbo et accidenti* (*On the differentiae and causes of diseases and symptoms*).

#### 1. Time line: from Middle Ages to Renaissance, Rhazes’ reading of Galen

The physician, alchemist and philosopher Abū Bakr Mohammed Zakarīyyā al-Rāzī was born in about 865 A.D. in the city of Ray, near Tehran in Iran. He died in *ca.* 925. Known as the “*Arabic Galen*”, he was famous for his medical treatments, for his excellent general book learning, and for his knowledge of Galen’s works. He describes Galen as his master, but when his theoretical position, analysis, and practice diverged from those of Galen, Rhazes explains clearly the reasons for these differences. Here, we analyse three examples of divergent opinions between Rhazes and Galen, selected from various books:

- 1- Divergence in search of causality
- 2- Divergence in therapeutic treatment
- 3- Divergence in diagnosis and treatment.

#### ***First case: Divergence in search of causality, relation between the intrinsic composition of the medicine and its effects***

In his book *Doubts about Galen* (*Shukûk ‘ala Jâlînûs*) Rhazes expresses some criticism against Galen. He first presents Galen’s position on a subject and then exposes his argumentation to refute it. Here we examine the paragraph concerning vinegar, which was a very useful aliment and medicine in the Antiquity and the Middle Ages. Rhazes expresses two critics concerning this subject:

1- In his *De Simplicium Medicamentorum Temperamentis et Facultatibus* Galen indicates that vinegar is hot and cold at the same time, and specifies that he ignores the reason for this. Rhazes, using an alembic (retort and still) demonstrates that he can dissociate the vinegar into two distinct matters, one hot and the second cold (in the context of medieval natural science).

2- However, the major critic against Galen is philosophical: Rhazes argues that for a physician and practitioner, the quality and effect of each medicine is the result of observations, skill and empirical deduction, gathered through a long history of therapy. Such information does not require supplementary demonstration.

***Second case: Leprosy (Hansen leprosy) and the ineffective treatment***

According to the theory of the four humors, dysfunction of black bile can produce diseases such as cancer, melancholia or leprosy.

For leprosy, which was regarded as a fairly hopeless disease, Galen suggests snake flesh, a legendary remedy. Snake flesh is found in the Greek, Arabic and Latin pharmacopeia.

However, Rhazes claims that this treatment did not work *in his hands*:

“The *Ancients* [Greek physicians] have claimed that snake flesh and theriac made from it can heal [the patient] of leprosy, but I do not have such experience, even though its reputation is famous.”

To introduce snake flesh as a treatment, Galen refers to various collected stories and legends and then mentions his own experience. Rhazes also presents his own experience, which is negative. He suggests another treatment, which could be effective only during the first stage of the disease.

***Third case: Etiology, diagnosis, therapy for old symptoms and “new” diseases***

Rhazes’s treatise on *Smallpox and measles* or *al-Djudarî wa al-hasba* has marked the history of medicine as far as differential diagnosis is concerned. According to Grmek, smallpox and measles were not described in antiquity and if a body were covered with spots, terms such as: *exanthema* – or in the plural *exanthemata*, *herpes*, *boubon* or *loimos* were used. For the time of Galen, some retrospective diagnosis has been carried out. It seems that Rhazes was the first to give a description of smallpox that remains the best one.

In the introduction of this treatise, Rhazes criticizes those who claim that Galen never mentioned this disease, and argues against them based on his personal erudition. In the course of his bibliographic research, whose value is instrumental before starting an innovative work, Rhazes did not restrict himself to the Arabic version of Galen’s works, but interviewed Greek- and Syriac-speaking persons about versions extant in these languages. Rhazes presents four short passages taken from four different works attributed to Galen, in which, according to him, Galen apparently alludes to this disease. He thus promotes Galen’s knowledge and regards Galen’s works as essential reading for medical education. The works of Galen mentioned by Rhazes were translated into Arabic by the famous 9<sup>th</sup>-century translator Hunayn Ibn Ishâq (804-877), or his collaborators:

1- *De compositione medicamentorum per genera*,

2- The “pulse saga”, 6 works (*De pulsibus ad tirones*, *De pulsuum differentia*, *De dignoscendis pulsibus*, *De causis pulsuum*, *De praesagitione ex pulsibus*, *Synopsis Librorum Suorum de pulsibus*)

3- *De usu partium corporis humani*,

4- *De iis quae medice scripta sunt in Platonis Timaeo* (fragment, extant only in Latin).

Rhazes informs us about the medical contents of each Galenic quotation concerning smallpox. They contain etiological indications, although imprecise and undefined. There

is a treatment by an ointment, which is used without any specification regarding a disease; a name is given for numerous kinds of diseases that are similar to smallpox. All these quotations strikingly demonstrate that in Galen's Arabic translation, smallpox has no clear or complete description, and no particular and satisfactory treatment.

Rhazes ends his remarks on Galen's work on smallpox by saying:

***"I was much surprised by this, and also how it could be that Galen overlooked this disease that occurs so frequently and requires such a careful treatment, when he is so eager to find out the causes and treatments of other diseases".***

In the medical part of the treatise, there is no real important quotation from Galen or other ancient authors. After the introduction, Rhazes refers to several contemporary authors. This demonstrates the high quality of his bibliographic research. Symptom description, comparison between diseases, nutrition therapy, and medical therapy are the result of Rhazes' bibliographic researches on contemporary authors or of his own personal observations and inventions. One can wonder why Rhazes needs to refer to Galen in these four short extracts mentioned above. The reason is that for him, medical education and training are required in order to be able to innovate. By giving these quotations, Rhazes demonstrates his deep knowledge of Galen's works and reveals himself as one of the great readers of Galen in Arabic.

It must be noted that Rhazes is the author of a treatise *"on accounting for Galen's extant books which are not mentioned by Hunayn or Galen in his catalogue"*. Rhazes bases his study of medicine on a solid book foundation, and on practice. This is confirmed by his personal bibliography, practical observations and experience, brought together in a book, *Kitâb al-Hâwî (Continens)*, compiled by his close friends and students after his death.

He made some remarks on smallpox and cite two quotations from Galen; the first remark is semiological, the second is etiological; Rhazes then writes:

***"Galen mentions smallpox, but no particular type\_of treatment; he considers the disease to be a kind of crisis."***

2. Fuch's statements in the dedicatory epistles, the prefaces, introductions, and epilogues.

Leonhart Fuchs (1501-1566), the Tübingen professor of medicine, the botanist, the anatomist introducing Vesalius into Germany, the Hellenist, Hebraist and Latinist marked by the Lutheran Reformation, the polemist, thinks that his principal mission is the "revival" of ancient sources, corrupted because of mistranslation or misreading. He provides a 2-volume commented Latin edition of Galen (Paris 1550) and uses Galen as his principal source-text (along with Dioscorides, Hippocrates, and sometimes Pliny or Paul of Aegina) in his *Paradoxa medicinae* (1535, 1555), a work entirely devoted to "errors" committed by the Arabs and "physicians of our time".

The present study is based on the 1555 edition of the *Paradoxa*. The copy digitalized in Gallica (the French National Library digital catalogue) comes from "the surgeon's general office library, Washington D.C., n°54653, the 16<sup>th</sup> cent. section collection". Its *ex libris* mentions the date of 14 October 1584 in Montpellier, and the name of a "doctissimus vir" (perhaps the owner). The copy of the commented edition of Galen,

according to the *ex libris*, comes from the library of François Rasse des Neux (1521-1587), a Parisian protestant surgeon. Both works seem to have been used as medical sourcebooks.

The title of the *Paradoxa* stresses that criticism is completely new, never put forward before by anyone. This rather pretentious statement is a Renaissance topic, but also underlines the erudition of the author: Fuchs aims to provide an overview of what he regards as the “true” medical theory and practice, so he targets the Arabs, his favorite source of “errors”, associating them with his contemporary physicians and some Medieval ones.

In the dedicatory epistle (to 2 eminent members of the Függer family, Johannes and Georgius, *studiorum patrones* who funded a hospital) of his commented edition of Galen, Fuchs insists on the necessity of getting rid of old Latin translations, which were always copying one another without collation of Greek sources. He also draws attention to the Arabs presenting Galen’s opinions as their own. The “men of the past”, when the “Sarracenic affairs were flourishing” are not as blamable as Fuchs’ contemporaries who are persisting in their ignorance of Greek texts and good Latin translations now available, considering themselves successors of Avicenna, not of Galen.

In the dedicatory epistle of the *Paradoxa* (to Ulrich von Wurtemberg, *pietatis et studiorum Maecenati* p. 8-22) one can find general principles, as well as the aim of this specific work: to explain ἀμαθέστερον καὶ σαφέστερον (in a simpler and more precise way, Greek words in the Latin text) what was superficially mentioned by his predecessors; to promote the most “accurate authors” (*probatissimi autores*), first of all Galen; not to “criticize”, but to establish the truth. In response to those who would probably blame Fuchs for lacking originality (“a boaster without his proper plumage, like the *Aesopica cornix*”), he exposes the idea of what we call intertextuality in our modern vocabulary: many ancient authors (like the geographer Solinus who draws upon Pliny, the comic author Terentius who draws upon Menander) were “good readers” of their predecessors, and yet produced original work. Medical authors did the same: Oribasius drew upon “others”, Paul of Aegina upon Galen and Oribasius. It is important to distinguish “intertextual” reading from mere imitation: the Arabs were imitators of the Greek medicine. Concerning his specific method of text study, Fuchs refers to his own misjudgments: the Greek MSS he came across in the past were of poor quality, and his knowledge of Latin was not so advanced, therefore he committed some errors he promises to correct, using a supposedly “scientific”, not speculative, method.

A second epistle (p. 23-34) is addressed to the reader: Fuchs emphasizes the devaluation of the Arabic authors, so as to prevent scholars, especially beginners, from reading them. He stresses the plan of his work: book 1 deals with *materia medica*, the fundamental medical knowledge (Fuchs as a botanist insists on the importance of this part, the longest of the 3); then comes in book 2 the study of diseases and symptoms, and finally book 3, anatomy. In book 1, the most cited Greek author is of course Dioscorides, followed in almost every case by a Galenic citation. Galen is the most cited author in the 2 other books, followed by Hippocrates, Pliny and some others.

Each book includes an introduction. In the introduction of book 2, Fuchs blames those who draw their medical knowledge only from “what is written in papers” (i.e. books): books are to be read within the general framework of a complete medical education, the theory connected with the personal search for truth, and practice. Fuchs’s aim is not

“encyclopedic”: his endeavor is to improve the education of those who practice medicine. A physician must be an *artifex*, at the same time an “artisan” and an “artist”.

At the end of the third book, in the peroration, Fuchs repeats his core motifs: to shed new light on scholars’ errors and to be followed by many others seeking to establish the truth. He does not care about others blaming or criticizing him; he is the only one in *Germania* who never shrinks back, his commitment is beyond any doubt.

### 3. Fuchs on concrete medical subjects

It is impossible to include here an overview of all the cases where Fuchs uses and quotes Galen (the original Greek text, only a couple of exceptions in Latin) in the 520 pages of the *Paradoxa*: what follows is a limited and subjective selection of examples. Fuchs’ main purpose is undoubtedly to promote Galen, but he does it in a twofold way: the Arabs and their followers are always failing without Galen; in some cases the Arabs are right, because they agree with Galen; in these cases, Fuchs’ polemic is leveled at physicians who have neglected Galen.

Fuchs is principally targeting Avicenna, “a calumniator, not an interpreter of Galen” (*Commentarium* p. 251-252, on *De sympt. causis* book 1, K. 7, 117-118). Despite his mostly ideology-based introductory statements about medicine being under the Arabic threat, when he wants to prove that Avicenna is wrong, Fuchs proceeds methodically, and quotes accurately: one has to read the Avicennic (Latin) text, in order to understand what is contrary to Galen, or contrary to rationality and experience, what reveals imperfect skill, or stubbornness. Fuchs also criticizes Rhazes, Averroes, Avenzoar (Seville, † 1162).

#### 3.1. The Arabs fail, Galen never fails

One of the central points of interest is the use of the exact Greek term to define medicinal substances. The “errors” consist in confusion (taking a substance for another), superficiality (the “name” is more important than the “nature” of the substance), imperfect knowledge of the therapeutic efficiency, or ancient knowledge in decline:

where	Term in scope	Error consists in...	Fuchs’ commentary
Book 1, ch. 6	Gr. Τὸ μάννα/ἡ μάννη Lat. manna/mica turis Arabic manna	Galen ( <i>De methodo medendi</i> )+Dioscorides= manna is “grains of incense”, astringent Arabs= manna is a liquid substance, “drops of dew/of honey”, emollient Giving the same name to 2 different substances whose properties are opposed	The <i>medicinae studiosi</i> must distinguish what is manna and what is <b>called</b> manna
Book 1, ch. 11	Gr. Κενταύριον μικρόν/μέγα Lat. centaarium minor/maior Ar. centaarium (only	Galen ( <i>De simplicium medicamentum facultatibus</i> )+Dioscorides= (little) bitter, astringent; (big) acrid, sweet, astringent The Arabs= no different	Decline of botanic knowledge, pharmaceutical substances no longer in use or no longer for sale (the big

	one)	properties, erroneous description (little=not straw-colored, but purple), wrong season to collect it (not summer, but autumn), preference (the little is preferred over >the big)  Ignore the nature, the history and the therapeutic use of each one: Galen uses the little centaury to cure serious wounds	centaury): The Arabs are responsible for this impoverishment
Book 1, ch. 22	Gr. Χαμελαία/χαμαιλέων Lat. camelaea/chamaeleon (spurge olive/chameleon) Ar. Mezereon (camelaea)	Galen ( <i>De simplicium medicamentum facultatibus</i> )+Dioscorides= <i>camelaea</i> is a medicine, <i>chamaeleon</i> has a poisonous root  The Arabs= Mezereon is a “a milky plant” ( <i>lactaria herba</i> )  No distinction between 2 different plants of similar name, erroneous properties attributed to the “mazereon-camelaea”	Arabic sources about plants are untrustworthy and risky. Beware “not to fall into the Arabic brothels” ( <i>Arabica lupanaria</i> ). Destroy their “fortifications” ( <i>illorum castra oppugnare</i> ). Those “pests” want to exterminate men, above all Christians
Book 1, ch. 34	Gr. Σανδαράκη (or σάνδυξ) Lat. sandaraca Ar. sandaraca	Galen ( <i>De simplicium medicamentum facultatibus</i> )+Dioscorides= a metal  The Arabs= a kind of gum  Giving the same name to 2 different substances	The <i>doctorculi</i> , misguided by the the Arabs are confusing properties, using the “so-called sandaraca” (the gum, Gr. έριθάκη Arist. <i>HA</i> 554a17, 627a22 bee-bread) which, “as Pliny says”, does not have any medical properties

Fuchs underlines the appalling ignorance of what he calls “our plants” (*nostrae herbae*) not “local” medicinal herbs, but the ones tested and approved by Galen and Dioscorides, considered to be different form “theirs”, the ones of the Arabs and their followers who are ignorant (*agniti*).

Concerning therapeutic and doctrinal issues, one has to imitate Galen, who is always based on personal experience:

where	Subject in scope	Error consists in...	Fuchs' commentaries
Book 1, ch.	Use of the κανθαρίδα	Galen ( <i>De simplicium medicamentum facultatibus</i> )+Dioscorides= do not	The Arabic recommendation

39	(weevils) to cure urinary troubles: with or without heads and wings?	remove them; Galen ( <i>In Hippocratis de victu acutorum commentaria</i> ) mentions a physician who misunderstood Hippocrates and gave his patient a medicine without heads and wings, causing his death in a couple of days  The Arabs= the very opposite recommendation, "remove them"	of this medicine for internal use is hazardous.
Book 1, ch. 42	The Lemnian earth and Galen's experience through his travels	Not taking into account personal experience: Galen travelled around the Mediterranean (Cyprus, Near East, he stopped at Lemnos on his way home) so he provides the exact description of the Lemnian earth	If physicians and druggists want to know what the Lemnian earth is and how to prepare it, they have to read the Greek sources, instead of neglecting them.
Book 2, ch. 1 and Commentary on <i>De morborum causis</i> p. 147-148	Are there 3 causes of diseases, <i>primitiva, antecedens, coniuncta</i> , as Avicenna pretends, or only 2, external and internal, as Galen says?	Avicenna= removal of the <i>causa continens</i> heals the disease (fever), no need for further action  Galen ( <i>De morborum causis</i> )= an internal (προηγούμενη) and an external antecedent cause (προκατάρχουσα/προκαταρκτική)  fever: Galen recommends removing "corruption" (the cause) <b>and</b> refrigerating the patient	Avicenna is based on spurious Galenic treatises ( <i>Definitiones medicae, Introductio sive medicus</i> ); one has to heal disease, not only remove its cause. Sébastien de Monteux (born 1480, author of the <i>Annotations in the errors collected by Fuchs</i> , Lyon 1534) who follows Avicenna against Galen is "an old man aged of 60, driveling" ( <i>sexagenarius deblateret senex</i> )
Book 2, ch. 16	Elephantiasis vs. <i>lepra</i>	Following the Arabic erroneous tradition and considering it one and the same disease: the Arabic <i>lepra</i> is different from the Greek	Monteux is arguing in favor of one <i>lepra</i> because of the



		elephantiasis; there is a Greek λέπρα, different from the elephantiasis	Gospel miracle of Jesus healing a man suffering from leprosy (Hebrew//The Arabs). Fuchs thinks that there was no “medical” miracle: Jesus reintegrated this man to the community and thus he saved him. Monteux’s parallel is unreliable
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Practical medicine needs to take into account the unique organism of each patient. Fuchs’ *caveat* is not theoretical; his concern is about professional efficiency:

where	Subject in scope	Error consists in...	Fuchs’ commentaries
Book 2, ch. 6	Purgative medicines and the age of the patient	Giving strong purgative medicines regardless of the age or the resistance of each patient, or the character of the disease: contemporary half-learned physicians pretend that an aggressive treatment prevents humor accumulation  Hippocrates ( <i>Aphorisms</i> )+Galen ( <i>Commentary on Aphorisms</i> ): priority to “mild” methods of evacuation, applied to particular cases; ( <i>De naturalibus facultatibus</i> ): the most important thing is to prevent humors from becoming harmful	Contemporary physicians are “butchers” ( <i>carnifices quam medici</i> ). Why give a patient a medicine “to swallow”, if one can cure the disease by means of an appropriate diet?
Book 2, ch. 11	Evacuation of blond bile	Avicenna= thin humors such as blond bile have to be turned into thick in order to be easily	Avicenna’s method is contrary to common sense. No need to change what is good by nature and ready to be expelled

		evacuated Galen ( <i>De methodo medendi</i> )= blond bile is naturally thin, and, as such, can be easily evacuated without any medicines	from the body
Book 3, ch. 11	The ventricles of the heart	Avicenna, Alexander Benedictus= there are 3 ventricles, according to Aristotle ( <i>HA</i> 496a 4, 496a 19-22, 531a 27-531b 1) Galen ( <i>De usu partium</i> )= there are only 2	Aristotle's error is put forward by Galen "whose <b>experience in dissection</b> is much wider than that of Aristotle". Yet Aristotle has more scholarly (i.e. scholastic) prestige than Galen, that is why he was followed by scholars in the past
Book 3, ch. 12 and Commentary on <i>De symptomatum differentiis</i> 3 p. 353	Does the oesophagus have muscles? How to swallow?	Avicenna= swallowing is a voluntary movement of the attractive function, not a natural one Galen ( <i>De motu musculorum</i> )= muscles are not useful for natural movements such as swallowing Commentary= the swallowing organ, the oesophagus, needs no muscles; "for further explanation, see the <i>Paradoxa</i> "	Avicenna's "error" is repeated by Jacobus de Forlivio († 1413) who misunderstood Hippocrates and Galen, and Alexander Benedictus: it is a logical error, i.e. if swallowing is "natural", it cannot be composed of both a "voluntary" <b>and</b> a "natural" movement, because these 2 movements are opposed to one another

### 3.2. When The Arabs do not fail: a subtler criticism

Fuchs in some cases uses arguments put forward by the Arabs, when they confirm Greek theory and praxis. What is at stake here is not the autonomous Arabic thought, but its utility when used against Medieval or contemporary physicians. There are few examples, but they are worth noticing as evidence of the contradictions and limitations of Fuchs' criticism:

where	Subject in scope	Arabic author(s)	Fuchs' criticism and commentaries
Book 2, ch. 15	Renal calculus and the use of clyster	Avicenna= moderate use of suppository or "light clyster", in order to lighten pain Rhazes= mild baths and	Monteux, who promotes clyster, is wrong: It would be preferable for him to agree to a moderate use of clyster; instead of that, he insisted in promoting its use in any circumstances. He thus gave Fuchs the opportunity to explain

		<p>medicines contribute to the evacuation of renal calculus by urine</p> <p>A “spurious Greek treatise” says the same thing (Pseudo-Galen, <i>De affectum renibus insidentium dignotione et curatione</i>)</p>	<p>all that, and lost a good occasion to be silent. Monteux's erroneous theory is not acceptable. The Arabs, as well as the Greek anonymous author, are right</p>
Book 2, ch. 13	How to heal dysentery	<p>Avicenna= purgative medicines must probably provoke ulcer and be very harmful to the intestines. One shall be very cautious in prescribing such medicines, although evacuation is needed</p> <p>Galen (<i>Ad Glauconem de methodo medendi</i>)= no need of medicines to facilitate evacuation in case of fever provoked by <b>diarrhea</b></p>	<p><b>A parallel is to be stressed between diarrhea and dysentery:</b> that is why Avicenna's method of healing dysentery is the right one. One has to follow the “prescriptions of the ancients” (<i>veterum placita</i>)</p>
Book 3, ch. 3	Description of the jejunum	<p>Avicenna= the jejunum is not straight, but it is indeed empty</p> <p>Galen (<i>De usu partium</i>)= the jejunum has convolutions and is empty</p>	<p>Rhazes', Mundinus' (Mondino dei Luzzi, 1270-1325) and Alexander Benedictus' description of the intestine system (including the supposedly straight jejunum) are wrong. Galen is the “champion” of anatomy because of his long and accurate experience in dissections</p>

#### 4. Conclusion: how to read the books of the past?

The readings of Galen examined here present different approaches to the ancient sources and to the past in general, in two different historical periods.

Rhazes lives in an inclusive, multi-lingual and multi-cultural empire. He is an example of a physician, a philosopher, and a teacher. As a physician, his responsibility is to diffuse his discoveries and help other physicians; as a philosopher and as a teacher, he respects but also criticizes his predecessors and in this case, Galen.

For Rhazes, medicine and medical studies cannot be pursued simply by observation of patients or hospital visits. The physician should also have a detailed knowledge of his predecessors, and only after travelling this long road can his own contribution be made.

When one knows how voluble Galen was, the short Galenic quotations about smallpox are evidence of absence of both information and scientific data. However, for Rhazes, these quotations prove that it is impossible to innovate in medicine without both book

learning and personal observation, which are the two complementary sides of the same coin.

Rhazes' and Fuchs' attitude towards medical theory and practice, professional skill and ethics, their goals and methods differ, but they both aim to provide accurate and useful medical education. Rhazes promotes a "criticism-based continuity" from Galen to his epoch and forward. Fuchs, on the contrary, needs a "criticism-based break", in order to establish medical innovation. Rhazes' scientific genealogy is a chain where each link matters. Fuchs skips the recent past, in order to attract attention to the remote one: the chronological gap does not matter to him. Although he urges his readers to a personal reading of the sources, he totally lacks critical distance towards Galen, whose treatises are regarded as the undeniable truth.

Fuchs' reconstruction of the past is more understandable in the context of the German humanism, where there were no innovative academic institutions such as the French Collège Royal (Collège de France, founded by François 1<sup>er</sup>) opposing the conservative Sorbonne. The Medieval German universities were supposed to change in order to adopt the humanistic curricula: for teachers, academics such as Fuchs, highly involved in the revival of the ancient culture and the development of a critical reading of the sources, it was of the utmost importance to clearly differentiate themselves from the scholars of the previous periods.

Two different readings, one ideal: never surrender in the unbreakable search for truth through expanding knowledge and broadening experience; always serve on active duty in the utterly humane art of care and healing.

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