

**THE MEDICAL DISCOURSE AND THE PLAGUE EPIDEMICS
IN THE LATE MIDDLE AGES.
A CASE STUDY: SEBASTIAN PAUSCHNER'S
"KLEINE UNTERRICHTUNG ÜBER DIE PEST" (SIBIU, 1530)**

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As a result of the plague epidemic in Europe in the years 1346-1351 more than a third of the population perished. For good reasons, the name *Black Death* became generally known for this disease. The contemporaries spoke of a *magna mortalitas*, of the "great death", "black plague", "great plague", "black death", "thick death", all these names being proofs of the terrible anguish people felt towards the disease and underlining the uncommonly high number of deaths it caused. Of course, concrete data lack, the chroniclers of the time not mentioning them or brutally exaggerating the numbers. Anyhow, for a population counting approximately 73.5 million Europeans, the percentage of 30-35 % is surely an impressive number. Starting in the Gobi desert, at the end of the 1320^s, without anyone knowing why it came to being, the plague spread by precisely following the geography of the medieval commercial routes, both on sea and on land, with a tendency of settling rather in urban areas. Its way from the Orient to Europe could hence be reconstructed quite easily: the Near East, the Mediterranean space, through Central Europe to the North and, finally, returning to Russia. The plague epidemic stretched its tentacles with an amazing haste. Therefore, over a short period of time, it took million of lives.

Contemporary with the Great Plague, the testimonies of some important personalities of the age come to underline this mass-death phenomenon: for instance, Boccaccio, would write, in the opening of his *Decameron*: "it is believed without any manner of doubt, that between March and the ensuing July upwards of a hundred thousand human beings lost their lives within the walls of the city of Florence, which before the deadly visitation would not have been supposed to contain so many people"¹ or "How many grand palaces, how many stately homes, how many splendid residences, once full of retainers, of lords, of ladies, were now left desolate of all, even to the meanest servant! How many

¹ I have used here the English translation of the *Decameron* by J.M. Rigg, London, 1921 (first printed 1903), available on the "Decameron Web" created by the Italian Studies department at the Brown University: <http://www.brown.edu/Research/Decameron/>

families of historic fame, of vast ancestral domains, and wealth proverbial, found now no scion to continue the succession! How many brave men, how many fair ladies, how many gallant youths, whom any physician, were he Galen, Hippocrates, or Æsculapius himself, would have pronounced in the soundest of health, broke fast with their kinsfolk, comrades and friends in the morning, and when evening came, supped with their forefathers in the other world!"². The Byzantine emperor Ioan Cantacuzino (1347-1355) describes in his writings the pneumonic form of the plague: "With some patients, the lungs would be affected from the beginning... Their chests hurt immensely, their spit was full of blood and their breath had a terrible smell. The back of their throats and their tongues, burnt with high fever, were black and bloodstained. Those who would drink didn't feel any better than those who drank less. They couldn't sleep and were extremely agitated."³ On its way, the plague also affected Russia, a local chronic stating that "there was a great disease in Smolensk, Kiev and Suzdal, and the entire country of Russia was infested with cruel and unbearable and swift death. And, at that time, in Ghihovo there wasn't anybody left alive, everybody was dead, and the same happened in Belo-Ozero."⁴

Although most of the chroniclers tend to exaggerate the number of deaths (some of them even allege that 9/10 of the population died as a result of the disease), the plague epidemic of 1348-1350 certainly was the most merciless in the entire history of mankind, spreading across three continents (Asia, Europe and Africa), only in Europe the death toll rising to ca. 20-25 million people. When trying to approximate the total number of the disease's victims we must also consider the fact that it used to linger for some months in a region, followed by a certain period of calm, for it to reappear and call once more for human victims. Between 1348 and 1353, there were many places in which the "black death" returned for three or even four times⁵. Yet, the plague epidemics weren't something new, for plague is one of the diseases that, during the course of history, caused pandemics with many millions of deaths⁶.

In the Transylvanian area, the calamity was first registered in the official documents by the Bishop of Oradea, on the 26th of June 1349. Moreover,

² *Ibidem*.

³ Translated from Romanian by I.C., quoted in G. Brătescu and M. Lucian, *Epidemiile de-a lungul timpurilor (Epidemics throughout Time)*, București, Ed. Științifică, 1968, p. 31.

⁴ *Ibidem*, p.35.

⁵ *Ibidem*.

⁶ Some examples: "Justinian's Plague", the first plague pandemics – in the 6th century – covers the whole Mediterranean area and kills over fifty years more than 100 million people; "The Black Plague" – in the 14th century, 1348-1350 – kills more than a quarter of the European population of the time, and goes out very slowly (only after 500 years). In 1891, the plague reappears in China, expanding over territories that hadn't been affected by the disease until that time (the American continent, Australia, Southern Africa, etc.); on Romanian territory, the greatest plague epidemics were "The Iași Plague" – 1770 and "Caragea's Plague" – 1812-1814, brought in the country, as it seems, by Ion Caragea's court from Constantinople: approximately 90 000 people die, out of which 30-40 000 only in București.

between 1349 and 1526, sources attest for Hungary and Transylvania 26 plague epidemics: in Braşov and Țara Bârsei, in the 14th century – one epidemic, in the 15th century – four epidemics, in the 16th century – seven epidemics, in the 17th century – ten epidemics.⁷ Up to the 18th-19th century, the mortality rate as a result of plague infection was of 60-70%, even greater in the older centuries.

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Being the most terrible epidemics that haunted the Middle Ages and the following centuries, the plague also became the reason for dedicated medical writings to appear, which rapidly turned into an unique genre: the so-called “Pestbücher” / “Plague Books”, that contained recommendations regarding preventive hygiene, curative means, rules to be respected in the epidemic centers (“Pestregel” / “Rules for the Plague”), as well as specific prayers, addressed to saints, who were believed to protect against the disease: Virgin Mary, St. Sebastian, St. Pantaleon, Jan Nepomuk, etc.⁸. The first printed plague treaty appeared in 1473, at Johann Zainer’s printing house in the German city of Ulm; it was called “Büchlein der Ordnung” (“The Book of Order”), and was written by the humanist physician Heinrich Steinhöwel (*Weil der Stadt [Württemberg] 1412, † Ulm 1482 or 1483).

In the Middle Ages, the healing professions – medicine and especially surgery – weren’t – but for very few exceptions – taught at the universities. These were trades mainly performed by barbers, who learned and practiced them within their guilds. Hence, besides cutting hair and shaving, barbers also knew how to extract teeth, fulfilling the role later played by dentists; they knew how to treat wounds, mend broken bones, and even perform small surgery.

Till the 15th century there weren’t any doctors or pharmacists in Transylvania, who might have followed and graduated special university courses; until these specialists appeared, their profession was substituted by the above-mentioned “surgeon-barbers”, who therefore enjoyed at the time a huge importance. The latter used to be schooled by a master for three or four years, after which they earned the rank of a journeyman. After another couple of years, these journeymen could become masters themselves, but not before being thoroughly tested by the guild. Transylvania did not have, until the end of the 19th century, any own medicine faculty, either, hence those who wanted to learn the secrets of this trade needed to have sufficient funds both to travel abroad, to the towns where universities existed in which medicine was taught, and to be able to subsist in these countries, for the studies often lasted many years. The first medical professionals in Transylvania were, therefore, of foreign origin.

⁷ Arnold Huttman, *Medizin im alten Siebenbürgen*, Sibiu, Ed. Hora, 2000, p. 256.

⁸ G. Brătescu and M. Lucian, *op. cit.*, p. 40.

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In the following, we will concentrate on the town of Sibiu, because this is the place where the first Transylvanian typed book appeared – in German language –, whose main subject was the plague: “Eine Kleine Unterrichtung: Wie Man sich halten soll, In der Zeidt, der ungütigen Pestilentz”, written by Sebastian Pauschner and printed in the typography of Lucas Trapoldner.

The town of Sibiu was in the Middle Ages not only a commercial and craftsmen city with renowned guilds, but also an important cultural centre. As early as 1292, the medieval Sibiu had a hospital – the first in the country to be documentary attested. Also in Sibiu, in 1330, Dominican monks established the very first manuscript library. At the end of the 14th century, the same town had a catholic school. In the year 1494, after opening a new hospital, meant to replace the old one that was turned into an asylum, the first pharmacy in the country was opened here. A city of such cultural and civilizing importance couldn't but realize from the very beginning the advantages of the books printed by Gutenberg, especially due to the fact that Sibiu permanently communicated with the Western World.

Sebastian Pauschner, the author of the plague treaty analysed in the present article, was one of the first physicians whose existence and work was historically attested. Pauschner originated from Zips and studied in Krakow (where, in 1513, he also published a mathematics handbook). Between the years 1524 and 1528, Pauschner was the “Stadtphysikus” – the town physician of Braşov / Kronstadt, and between 1528 and 1538 (the year of his death), head physician of Sibiu / Hermannstadt. His treaty was dedicated to the inhabitants of Brasov, for whose health he cared before settling in Sibiu.

Sebastian Pauschner was not the author of the first medical writing on the plague in Sibiu. The physician Johann Salzmänn (Salius), born in the Austrian city of Graz, who worked most of his life in Sibiu, signed the first work of this kind that appeared in the town on the Cibin river – nevertheless, written in Latin. His book was published in printed form in Vienna in 1510, being kept today in the Austrian National Library. The title of his work, translated after the death of the author into German: “De Praeservatione a pestilentia et ipsius cura...”. The above-mentioned Dr. Salzmänn played a remarkable role inside the city walls of Sibiu: he was the first to apply rigorous quarantine measures, “hence saving the town from extinction”⁹.

In medieval Transylvania it didn't exist any kind of sanitary administration, managed and guarded by the state, or sanitary legislation, as we would have it today. The first town physicians – such as Sebastian Pauschner or Salzmänn before him – appeared only at the end of the 15th century, their main mission being to fight disease and to treat the poor inhabitants of the city. (As

⁹ Arnold Huttmann, *op. cit.*, p. 94.

regards the western European world, designated physicians and different kinds of surgeons existed as early as from the 10th century)¹⁰.

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Sebastian Pauschner's small treaty on the plague was sadly kept only in a manuscript form from the 17th century, in a *miscellaneum*-type volume with leather covers, along with other handwritten works, located at the Romanian State Archives in Sibiu. The original printed version of 1530 got lost¹¹. The first page of the handwritten version also bears, along with the already mentioned title ("Eine Kleine Unterrichtung: Wie Mann sich halten Soll, In der Zeidt, der ungütigen Pestilentz" – "How We Are to Behave When Plague Strikes") and the author's name – "Doctoris Sebastiani Pawschnery", specifications concerning the place and publishing year: "Gedruckt in der Hermanstadt durch M. Lucam Trapoldner Im Jahr deß Herren 1530" ("Printed in Sibiu by M. Lucas Trapoldner in the Year of our Lord 1530"). The name of the author and of the publisher, the works' title and the language are hence clear, as well as part of the context in which it was written¹².

¹⁰ *Ibidem*, p. 112-113.

¹¹ Gedeon Borsa, scientist of Hungarian origins, author of an impressive number of studies in the field of the history of the printing craft – many of them in German, included in the Gutenberg Yearbook, speaks about the printed original version. His study on this version appeared first in 1966 in the "Bibliothek und Wissenschaft" journal and was written in German; it concentrates on the first Transylvanian typography in Sibiu and the first two works that appeared here – Thomas Gemmarius' Latin grammar and the small plague treaty of Sebastian Pauschner. Gedeon Borsa's article – *Die erste Buchdruckerei zu Hermannstadt in Siebenbürgen*, along with its Hungarian version, *Az első szebeni nyomda Erdélyben* – can be consulted at the Hungarian Electronic Library, as electronic texts, at the internet address http://www.mek.iif.hu/porta/szint/tarsad/konyvtar/tortenet/borsa/html/bgkvti_1/bgki0110de.htm. From the same author, with relevance for the life and medical activity of Sebastian Pauschner, as well as for his plague book: *Orvostörténeti Közlemények* (Communications ex bibliotheca historiae medicae Hungarica) 27. (1963) 257-271 and *Die Buchdrucker des XV. und XVI. Jahrhunderts in Ungarn*, in "Bibliothek und Wissenschaft" (Heidelberg) 2. (1965) 3-4. Other studies, more or less discussing Pauschner's work: Arnold Huttmann, *Începuturile medicinei raționale în Brașov, în secolele XV-XVII (The Beginnings of Rational Medicine in Brașov in the 15th-17th Centuries)*, in "Revista Medicală", 4, Tg. Mureș, 1958; C. T. Jiga, *Povățitorii sănătății. Crestomanția educației sanitare în România (The Counsellors of Health. Chrestomathy of Sanitary Education in Romania)*, București, 1971; Gernot Nussbächer, *Das älteste Pestbüchlein des Landes*, in "Aus Urkunden und Chroniken", I, București, Kriterion, 1981.

¹² The name of the plague treaty's author has often been misspelled, the most frequent confusion regarding the first letter (P/B) "Bauzner", "Bausner", "Bauszner", in some places even his first name being faultily written: "Stephanus". But also the title, and even the language of the treaty have been subject to confusions, as well: given the fact that most of those who have registered this book in the course of time didn't actually hold it in their own hands, being informed about its existence by means of other bibliographical resources, but also because many works of this kind used to appear, at that time, in Latin, Pauschner's book was registered in some bibliographies as having been conceived in Latin. There were even cases when the volume was registered as having two linguistic versions – in German *and* in Latin, the latter bearing titles such

Gedeon Borsa shows, in an article of great interest for the present article¹³, arguments in favor of the existence of a typography in Sibiu, where – in the year 1530 – Sebastian Pauschner’s treaty also appears – the first book printed there (in the year 1529) being a small Latin grammar handbook (at that time, this kind of handbooks were of greatest importance in the field of elementary education)¹⁴. In the late Middle Ages, the printing craft enjoyed great reception in the Transylvanian region. The Saxons settled in this area in the 12th century lead a relatively free political life, sustaining a flourishing economy, thanks to the privileges acquired from the Hungarian kings. One of the main centers of the Transylvanian Saxons was Sibiu (germ. Hermannstadt, hung. Szeben, Nagyszeben). The Saxons maintained tight relationships with the cities in the German world, from where they imported the new discovery in the field of book production.

One of Borsa’s important arguments in favor of the authenticity of the plague booklet published in 1530 in Sibiu was that its author, Pauschner, mentions in his writing that he was of catholic faith – it would have been quite unlikely, says the author of the study that appeared in “Bibliothek und Wissenschaft”, for him to still be a catholic after 1543, when the Saxons passed to Lutheranism – also given the fact that he occupied an important position (Sibiu’s town physician). Moreover, it is known about the printer of the treaty – Lukas Trapoldner of Sibiu, as the manuscript shows – that he was the notary of the same city between 1531 and 1545 and that, before he died, after the 24th of December 1547, he was a city senator, a thing that once more confirms the publishing year of Pauschner’s work, the one which appears on the cover page of the manuscript – 1530. In addition to that, the plague epidemic had reached its peak on Transylvanian ground around 1530, and especially in the town of Braşov, later (especially towards 1550, the other publishing date mentioned by some sources as being probable for the above mentioned work) plague strikes being much rarer. Moreover, the name of Braşov’s designated judge, Johann Schirmer, mentioned in the foreword of the treaty¹⁵, appears in the documents

as *De remediis adversus luem pestiferam* or *Tractatus de peste ejusque curatione*. Gedeon Borsa, *Die erste Buchdruckerei zu Hermannstadt in Siebenbürgen/ Az első szebeni nyomda Erdélyben*, Bibliothek und Wissenschaft, Wiesbaden, 1966, III, 1-12 (electronic version at the internet address: http://www.mek.iif.hu/porta/szint/tarsad/konyvtar/tortenet/borsa/html/bgkvti_1/bgki0110de.htm). See also the work of the preacher and historian from Sibiu, Johann Seivert (1735-1785): *Nachrichten von siebenbürgischen Gelehrten und ihren Schriften*, Preßburg, 1765, which documents the fact that Pauschner’s treaty was conceived and printed in German.

¹³ See footnote no. 16.

¹⁴ Thomas Gemmarius, author of the first work to be printed in Sibiu, was the rector of the town’s school. His grammar was for sure meant to be used in this institution. The same happened with Sebastian Pauschner’s work, which was dedicated to measures of preventing and protecting from the plague the residents of the town, whose health he cared for. See also Gedeon Borsa’s study, *Die erste Buchdruckerei zu Hermannstadt in Siebenbürgen*.

¹⁵ In the foreword, the treaty’s author enounces: “Sebastianus Pauschnerius, der Sieben freyen Kunste undt Artzney Doctor, wünschet den Nahmhafften Wohlweisen Herren Johanni

of the age in a very clear context (on a specific date, February the 2nd 1530, when he led, along with two members of his town's council, discussions with the local authorities in Sibiu), him being, alike to Pauschner, not alive anymore in 1550¹⁶.

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But let us approach now in more detail Sebastian Pauschner's small plague treaty, let us place it in the context of the age it was conceived in and – what we believe to be of special importance – in the context of what was known in that period of time about the mortal disease, hereby revealing the lacks of expertise which led to the terribly high mortality rates.

An ideal attitude in treating infectious diseases – as the physicians of the 20th and 21st century put it¹⁷ – should include both *prophylactic measures* (preventive measures – isolation of contaminated persons, disinfection measures, treatment + hygiene, food control, avoiding crowds, etc.), and *curative measures* (hygienic and dietary treatment – bed rest, maintaining an optimal temperature of 22 degrees C in the room, periodic airing of the room, plus keeping an appropriate diet; symptomatic treatment – keeping track of the particularities of the evolution and of the accused suffering; *pathogenic* treatment – conjoined therapies with the purpose of fighting the infection). One might be surprised to find even in Pauschner's work elements fitting these specifications, even if the rules on the grounds of which these elements have been shaped were elaborated rather by common sense than as a result of medical discoveries of the age. Until the bacillus found guilty of provoking the plague was discovered – actually even later, when the first medicine treatment was discovered¹⁸, none of the plague treaties could cover at the whole extent the way

Schirmer, Richter undt Rahtleuten, und der Stadt Crohn, gnadt undt friedt, In Christo Jesu unsem Herren” – “Sebastianus Pauschnerius, doctor in the seven liberal arts and doctor in medicine, wishes the much esteemed and very wise Mr. Johanni Schirmer, judge, as well as the members of the Council of the town of Braşov, grace and peace, in the name of Christ, our Lord”. Sebastian Pauschner, *Eine kleine Unterrichtung...*, Romanian National Archives, Sibiu County, Inv. Mss. Var. I 47, p. 503.

¹⁶ Gedeon Borsa, *Die erste Buchdruckerei zu Hermannstadt in Siebenbürgen*.

¹⁷ See the modern medical treaties, such as: Mircea Chiotan, *Boli infecţioase (Infectious Diseases)*, Bucureşti, Ed. Naţional, 2000; Anca Valeriu, *Ghid de boli tropicale (Handbook of Tropical Diseases)*, Bucureşti, Ed. Ştiinţifică şi Enciclopedică, 1980; L. Kelemen, *Pesta (Ciuma) (The Plague)*, in M. Voiculescu (ed), *Boli infecţioase (Infectious Diseases)*, vol. III, Bucureşti, Ed. Medicală, 1961 etc.

¹⁸ The plague is an infectious disease, caused by *Yersinia pestis*, an aerobic bacillus, gram negative, with the size of 1-5 microns, mobile, with bipolar coloration, pleomorphic, family: Brucellaceae, kind: Yersinia. Discovered in the year 1894 (the year of the Hong Kong plague epidemics), as a result of parallel researches, on different locations, by Yersin and Kitassato, who find in the bubonic purulence and in the organs of plague infested rats the pathogen agent of the disease. Later on, Somond recognizes the role of the flea as agent that transmits the disease, characterized by an auto-limiting evolution of great severity, with different chemical forms and

to handle this terrible disease – thing proven by all writings that appeared on the topic during the centuries haunted by the plague¹⁹. Pauschner's instructions are, therefore, only of historical value, bearing the purpose of showing us from a close perspective the way in which the people of the time understood to fight the epidemic. The value of the small treaty for the medical world is also quite insignificant, of interest only for the medicine historians, having at some point even anecdotic moments, as we will see later.

Pauschner starts his "Small Lecture on the Plague" with a general presentation – of himself, as the town physician, of the medical situation and the epidemics in the city, trying, in the chapter "Von Ursachen der Pestilenz" ("On the Causes of the Plague") to detect the reasons behind the outbreak. Here one can find biblical clues referring to divine punishment, but also speculations on factors such as poisons that have infested the air in order to infect the people²⁰. His descriptions are permanently accompanied by invocations and prayers addressed to God, whose mercy – "Gottes Gnade" – he requests. Pauschner quotes here, as in many other places of his work, the Roman physician Claudius Galenus of Pergamum (Galen)²¹ (131-201), medical authority of the 2nd century and author of over 500 medical treaties and *materia medica* (prescriptions, formulae, etc.), works that were of great influence up to the 16th century, since they summed up all the knowledge of the age on medical remedies.

high mortality rates. The disease can appear in the initial bubonic or pulmonary form, both possibly evolving towards the lethal septicemic form. The first forms of antibacterial fight appeared in the 19th century and were used at births and surgical interventions. The real antibacterial therapy and prophylaxis enforces only in the 1920s and 1930s, when the German Chemistry School discovered the first antibacterial substances, the so-called "sulfonamides". The first antibiotic, penicillin, was only discovered in 1941, being followed by others, such as streptomycin (1944), neomycin (1949), chloramphenicol (1949), kanamycin (1957) or gentamycin (1963). Mircea Chiotan, *op. cit.*, p.40-82 and p. 574; L. Kelemen, *op. cit.*, p.625.

¹⁹ At the end of the Middle Ages only, hundreds of plague treaties were written. See also: T. Mayer-Steineg and Karl Sudhoff, *Illustrierte Geschichte der Medizin von der Vorzeit bis zur Neuzeit*, Paderborn, Voltmedia, 2006, p. 158. Extremely relevant in this respect: Karl Sudhoff (ed.), *Pestschriften aus den ersten 150 Jahren nach der Epidemie des "Schwarzen Todes" 1348*, ArchGeschMed 17, 1925.

²⁰ Sebastian Pauschner, *op.cit.*, p.503-508. See also the clues referring to Ezekiel: "Now is the end come upon thee, and I will send mine anger upon thee, and will judge thee according to thy ways, and will recompense upon thee all thine abominations." (Ezekiel 7,3). "Violence is risen up into a rod of wickedness: none of them shall remain, nor of their multitude, nor of any of theirs: neither shall there be wailing for them!" (Ezekiel 7,11). "The sword is without, and the pestilence and the famine within: he that is in the field shall die with the sword; and he that is in the city, famine and pestilence shall devour him." (Ezekiel 7,15). At this point, Pauschner may have "borrowed", as he already did in some other passages of his treaty, fragments from the writings of some personalities – in this case, biblical models –, quotes by other authors in their works. We must, nevertheless, insist on the fact that the word "plague" or "pestilence" (gr. loimos, lat. pestis) does not only stand for this particular disease, it being also translated as "general infection", "disease", in a broad sense, or even as "calamity" or "disaster".

²¹ Although Galen apparently did not write anything on the plague! See Erwin H. Ackerknecht, and Axel Hinrich Murken, *Geschichte der Medizin*, vol. III, Ferdinand Enke, Stuttgart 1992, p. 62.

The explanations Pauschner tries to give in regard to the causes of apparition of the plague are not at all different from the ones prevailing in the period he elaborated his treaty, but also in the one before it and moreover, many years after the “Small Lecture” appeared – none of the works of the time, trying to “figure” the way of the epidemics, being able to detect the real causes. Hence, most of the treaty authors thought the plague was nothing but the expression of divine punishment, “well deserved by mankind, sinful beyond any reason”²². Obviously, the scientific circles of the time, made up by non-clerics, were not satisfied with this explanation, trying to solve the mystery by... observing the skies: in the year 1348, at the peak of the epidemics, King Phillip of Valois asked the physicians and scholars at the Medicine Faculty in Paris to provide him with a viable explanation. After long debates, they tell him that the main culprit was a peculiar astronomical event that took place on March 24th 1348 – the conjunction of Saturn, Mars and Jupiter, which “corrupted” the air and charged it with epidemic factors²³. Though, there are also some other possible culprits: the Jews accused of poisoning fountains and smearing the doors of honest people houses with the purulence from the buboes of the infected. Accused of wanting the death of the Christians, the Jews were being persecuted throughout the whole Europe, especially in the German speaking regions (Switzerland, Germany). In Strasbourg, on February 14th 1349, 2000 Jews, who allegedly conspired against the Christians, were burnt at the stake. Overall, in the 14th century, approximately 50 000 Jews were killed, evidently, the reasons behind the executions being mostly of an entire different nature than the ones publicly pronounced (e.g. erasing the debts towards Jewish money-lenders etc.)²⁴.

Over the years, the astronomic and religious theories were abandoned, the conclusions drawn starting to become more correct from a medical point of view: people start realizing that the plague was transmitted from an individual to another, the most popular theory being the one of the “miasma”. Uncertainty

²² G. Brătescu and M. Lucian, *op. cit.*, p.36.

²³ *Ibidem*, p.37.

²⁴ Even before the plague, Jews were accused of poisoning wells, being hereby made responsible for the great losses of human lives resulting from the terrible disease. Nevertheless, as soon as the Middle Ages, there were chroniclers who found more reasonable explanations, of financial sort, for the committed excesses, sustaining that the plague was only used as a pretext. See Michel Mollat Du Jourdin and Andre Vauchez (eds.), *Die Geschichte des Christentums – Religion, Politik, Kultur – Die Zeit der Zerreißproben (1274-1449)*, vol. 6, Freiburg-Basel-Wien, Herder, 1991, p. 865-866. About the Jewish pogroms during the great plague epidemics, see also: Doerthe Winter, *Judenpogrome in Basel, Freiburg und Straßburg im Jahre 1349*, in *Beiträge zur Geschichte der Judenverfolgungen im Mittelalter*, Historisches Institut der RWTH Aachen, 1995, p. 149-164; Frantisek Graus, *Pest-Geissler-Judenmorde – Das 14. Jahrhundert als Krisezeit*, Göttingen, Vandenhoeck&Ruprecht, 1987, p. 377-389; Karl Georg Zinn, *Kanonen und Pest – Über die Ursprünge der Neuzeit im 14. und 15. Jahrhundert*, Opladen, Westdeutscher Verlag, 1989, p. 174-176; Norbert Ohler, *Sterben und Tod im Mittelalter*, München / Zürich, Artemis, 1990, p. 257-259.

ruled the medical world though, and the physicians' recommendations were rather of a hygienic nature, than of prophylactic and curative kind. The physicians and barbers used to make the buboes suppurate, considering that this was the way to evacuate microbes and toxins (many physicians died as a result of this practice, by getting infected with the bacilli evacuated from the buboes). Moreover, the physicians of the time insisted on prescribing so-called "antidotes" ("theriacs", sedatives, substances that would make the patients sweat), thought to detoxify the organisms attacked by the plague. Many illustrations and recommendations of the ages haunted by this terrible epidemics show us the way in which physicians understood to protect themselves and the non-infected against the disease: their mouth and nose covered with a rags impregnated in purifying vinegar, avoiding physical contact with the infected, even making "anti-plague" costumes (see, for example, the "bird"-uniform represented in a lithography of the 17th century)²⁵.

The middle- and especially the lower-class population was the most affected by the epidemics. Reasons: very poor hygiene and alimentation, which altered its resistance capacity. Moreover, the disease seemed to affect more children, women and old people, who mainly stayed in their houses and were hence more exposed to flea stings²⁶.

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In the following, we will see how Pauschner chose to advise his fellow citizens about the plague. In a separate chapter about "Anzeigung zukünftiger Pestilenz" ("The Signs that Foresee the Plague"), he enounces: "Wie voll und viel und mancherley Zeichen Zukünftign Pestilenz bedeutet haben, so will ich hier umb kürzer willen allein die aller gemeinsamsten erzählen" ("I will shortly explain to you here the most common signs – multiple and diverse – that foresee the plague"). These signs were, in the author's opinion: comets appearing on the sky, the unusual growth of the number of dangerous animals ("Ratten, Katzen, Frösche, Schlangen, Mäuse" – rats, cats, frogs, snakes, mice), sudden changes of the skies and of the temperature – "als kalt, im warm oft wandelt" – "when cold frequently turns into warm (weather)", atypical climatic manifestations, when winter is warm and dry and summer is cold and rainy etc.

"Wie man sich vor Pestilenz bewahren soll" – "How to Protect Ourselves against the Pestilence": this is the chapter that contains both *preventive* measures – "(wie man) sich zu früher Zeidt vor Pestilenz zu bewahren" ("How to protect ourselves in time against the pestilence"), and some measures of *curative* nature, so that "wenn so einer krank wird, gesund zu machen"²⁷ ("when

²⁵ G. Brătescu and M. Lucian, *op. cit.*, p. 44. See also Paul Münch, *Lebensformen in der frühen Neuzeit – 1500 bis 1800*, Frankfurt a.M. / Berlin, Propylaen, 1992, p. 462.

²⁶ L. Kelemen, *op. cit.*, p.625; see also Alfons Labisch, "Homo hygienicus" – *Gesundheit und Medizin in der Neuzeit*, Frankfurt a.M. / New York, Campus, 1992, p. 42-54.

²⁷ Sebastian Pauschner, *Eine kleine Unterrichtung...*, p. 509.

somebody falls ill, for him to get well soon”). Pauschner reminds his readers of some well-known cases in his age, when skilled persons managed to cure even entire cities from the plague²⁸.

Then, Pauschner enumerates the things people have to avoid, in order not to get infected: first of all, they should avoid contact with contaminated houses and animals carrying the disease – mice, dogs and cats, “die bei Ihnen In Häusern wohnen” (“that live in your houses”). Then, dangerous as well, are the clothes of the ill (“vor allem Kleider, die von solchen Menschen kommen”), which are not to be touched²⁹, and the rooms in which the infected lived and died, nobody should step in for as long as three months (“In Zimmern darinnen krancker gelegen sindt, sollen außer wenigsten in drey Monath nicht wohnen”). Moreover, people have to avoid crowded places, such as public baths and churches – “gemeiner Badt undt kirchen” (although he later recommends personal hygiene and imploring divinity to put an end to the epidemic). People should necessarily avoid the contact with any kind of “krancke undt abgestorbene Menschen” (“sick and dead people”), Pauschner disapproving the unhealthy habit of “Ungesaltzne crohner Fräule” (“ill-mannered Brassover ladies”) to kiss the deceased before the funeral and requesting the town authorities to forbid this practice³⁰.

Pauschner also recommends people to leave epidemic centers, this being, in his opinion, the most efficient method of preventing plague; he nonetheless does not make any reference to important measures such as isolation or quarantine, although these had, at the time when his work appeared (1530), propagated quite well, their role in preventing and fighting the disease being well known. From the oldest times, people used – as a reaction to the epidemic outbreaks – to leave the places haunted by disease and to avoid the infected corpses. In the Middle Ages, in order to avoid infection, the houses of the

²⁸ “... wollen wir mit unserm vollen Glauben, wollen ausrufen, dass der Arzt aller Ärzte, [...] des Erlösers Erwählte, durch sein Werkzeug den Jünglingen Sebastianumm der gantz Lumbardia von Pestilentz erlädiget hat” (“let us remember, trust and believe that the greatest doctor of them all, [...] chosen by our Savior Himself as His instrument, the young Sebastian, who has relieved the whole Lombardy from Pestilence” (*ibidem*, p. 510).

²⁹ This belief, of contaminating oneself by merely touching the clothes of the infected, also appears with Boccaccio: “I say, then, that such was the energy of the contagion of the said pestilence, that it was not merely propagated from man to man, but, what is much more startling, it was frequently observed, that things which had belonged to one sick or dead of the disease, if touched by some other living creature, not of the human species, were the occasion, not merely of sickening, but of an almost instantaneous death. [018] Whereof my own eyes (as I said a little before) had cognizance, one day among others, by the following experience. The rags of a poor man who had died of the disease being strewn about the open street, two hogs came thither, and after, as is their wont, no little trifling with their snouts, took the rags between their teeth and tossed them to and fro about their chaps; whereupon, almost immediately, they gave a few turns, and fell down dead, as if by poison, upon the rags which in an evil hour they had disturbed.” – <http://www.stg.brown.edu/projects/decameron/engDecShowText.php?myID=d01intro&expand=d ay01> Also, see T. Mayer-Steineg and Karl Sudhoff, *op. cit.*, p. 158.

³⁰ Sebastian Pauschner, *op. cit.*, p. 511; see also Arnold Huttman, *Medizin im alten Siebenbürgen*, p. 259.

diseased were sometimes marked with a white cross or another sign, many times the ill being moved into lazarettos or into uncovered pens out of the cities' boundaries³¹. The first isolation measures appeared in Ragusa (Dubrovnic), in 1377 – actually in form of the *trentina* (not *quarantina-quarantine*) travelers or people suspected of having been infected being confined in isolation camps for thirty days, time in which one could see who was sick and who was healthy (the risk was sometimes on the side of the healthy ones, who, being put next to the diseased, would get infected as well). Anyhow, these measures have led to the decrease of the number of infected persons and, implicitly, of the deceased. Five years later to, Marseille, a port that was heavily affected in the first epidemic wave of the century, established the *quarantine*, the 40 days isolation, a name that was later adopted in the general vocabulary of quite all populations of the world.

Sebastian Pauschner also insists, in his small treaty on the plague, on some elements, essential for keeping one's health during the outbreak: "Luft" (air), "Essen undt Trinken" ("food and beverage"), "Schlaffen" ("sleep") etc., aspects to which he dedicates small separate sequences, as follows:

"Von der Luft" ("On the Air"): here, Pauschner makes a distinction between "good" and corrupted air, infected with pestilence, and recommends, since "wir wollen oder nicht, so müssen wir einen jeden Luft zu geben" ("we want it or not, everybody must have air"), the following: "Hüte dich vor Abendt Luft und der von Mittag kommt, den von Mitternacht laß zu dir, so der von der Sonne gereinigt ist" ("beware of evening and of midday air, let the midnight air come into your house, for it got cleansed of the sun's rays")³². Moreover, in order to reach optimal effects, people have to keep in their rooms a perfumed compound, with purifying effects and some mixtures, available to everyone: mixtures of vinegar and camphor, just vinegar and water – or more complicated versions, with ingredients such as turpentine, rose water or laudanum.

Before the discovery of the microbial agent responsible for the disease, theoreticians accepted on a large scale the principle of the so-called *miasmas* (poisoned emanations, coming from swamps or the corpses of both humans and animals). The Greek and Roman civilization was the first to sustain the "miasmatic" theory regarding the causes of the outbreaks.

"Von Speiß und Tranck" ("On Food and Beverage"): in this sequence, Pauschner quotes Avicenna – great physician of the Arab world, also known as Ibn – Sina, whose knowledge of curing different diseases rely on vegetal remedies, by promoting moderation, on the formula "ohne Hunger ißt nicht" ("do not eat unless you feel hungry") and by suggesting recipes and food with beneficial effects. As for beverage, the author recommends to his readers to entirely give up wine or drink it only mixed with as much water as possible.³³

³¹ G. Brătescu and M. Lucian, *op. cit.*, p. 45.

³² Sebastian Pauschner, *op. cit.*, p. 513.

³³ For the sequences "Von der Luft" and "Von Speiß undt Tranck", also see Boccaccio, with a similar recommendation: "Not a few there were who belonged to neither of the two said

In his chapter dedicated to *sleep*³⁴, Sebastian Pauschner recommends for night sleep to start after at least “zwey Stunden nach dem Abendt Essen” (“two hours after dinner”), for it to be calm and unperturbed, and speaks, in the following, about *other diseases* that weaken the human body, for “Viele unbarmhertzige Kranckheit kömbt nicht allein von böser Luft, Speis und Tranck etc.” (“many ruthless illnesses do not appear only as a consequence of soiled air, food and beverage”)³⁵. By evoking once more the advice given by renowned physicians – Hippocrates and Avicenna –, Pauschner underlines the major role that age, environment and diet played on the disease, by dedicating a special section to physical exercise (“Von Übünge”)³⁶, in which, quoting Fulgentius, he advises his readers to exercise as often as possible (“Übung und Bewegligkeit”), hence keeping their health. He reminds his public of the case of a town that had lost all its inhabitants as a result of the plague epidemics, but for those “die sich aller tage mäßig bewegt haben” (“who had exercised a little every day”). “Übung... behütet uns vor viel Kranckheiten” (“Exercise protects us from many diseases”), explains Pauschner, inspired by Galen.

In the sequences “Von Geschickligkeide des Gemüchts” (“On the States of Mind”) and “Von Unreinen Werken” (“On Impure Deeds”)³⁷, the doctor’s – i.e. Pauschner’s – advice is for “Alles war unser Gemübte machet, solltu meiden sonderling Zorn” (“no matter what you do, always avoid getting angry”). “Sey mäßig, fröhlig” (“Be temperate and merry”), he suggests to his patients: people must hence care to always keep their good mood and to be moderate, being advised to avoid the situations that could distress them.

A special section – and maybe the most interesting of the whole treaty – is “Von Artzeney die vor Pestilentz bewahren” (“On the Medicines that Protect us from the Plague”)³⁸: in this chapter, the author recommends – in a well-structured order, probably suggesting the importance and frequency of use – eighteen preventive means, as follows:

- “Aderlaßen” – a widely spread mean of “purifying” the body of the diseased, of “taking out” the harmful elements – by opening the veins with a specific device (sometimes even with a mere knife) and letting the blood flow in a bowl. Obviously, this practice did not have any positive results, first, because

parties, but kept a middle course between them, neither laying the same restraint upon their diet as the former, nor allowing themselves the same license in drinking and other dissipations as the latter, but living with a degree of freedom sufficient to satisfy their appetites, and not as recluses. They therefore walked abroad, carrying in their hands flowers or fragrant herbs or divers sorts of spices, which they frequently raised to their noses, deeming it an excellent thing thus to comfort the brain with such perfumes, because the air seemed to be everywhere laden and reeking with the stench emitted by the dead and the dying, and the odours of drugs”.
<http://www.stg.brown.edu/projects/decameron/engDecShowText.php?myID=d01intro&expand=day01>

³⁴ Sebastian Pauschner, *op. cit.*, p. 519.

³⁵ *Ibidem*, p. 521.

³⁶ *Ibidem*, p. 524.

³⁷ *Ibidem*, p. 524-526.

³⁸ *Ibidem*, p. 527.

the procedure would eventually lead to the exsanguinations of the patient, who, deprived of his last vital resources, would die even faster; secondly, because of the danger for the blood collected in the bowl to be thrown away in the nearby waters, hereby infecting them and contributing to a great extent to the contamination of more people, as well³⁹.

- *Mixtures with preventive purpose*: a recipe based on “Thyriack” (theriak)⁴⁰, in combination with rose water and wine, that had to be drunk four hours before a meal – “dort halte ich mich an Avicen: und Galle:” (according to mixtures recommended by Avicenna and Galen themselves!), which praise the benefits of the almighty theriak. Other prescriptions: “Nim alle Tagen des Morgens... Eine Nuß und Zwanzig Rosenblätter, oder fünff Cronerbeer” (“take each day in the morning... a nut and twenty rose petals, or five cranberries”), “Nimb Citer Äpfel Saamen, Thyriak, tormentil⁴¹, nimb es zusammen undt nütze es” (“take cider apple seeds, theriak, Tormentil, mix them and then use them”), “Nimb alle Tage mit Eßig undt Rosenwasser guten gezuckerten diptam⁴² (“Take sugared diptam every day with vinegar and rose water”), or drink the juice of a plant called in Latin *scabiosa*⁴³ – “undt in 12 Stunden erlediget von aller Pestilentz” (“and in 12 hours you will get rid of all pestilence”). “Nimb Zucker Candi 1½ Untze, ... Diptan 3 dragma, Saffran 1 halb dragma, Camfor 1½ dragma, ...mit ein wenig Eßig ...oder Ampfer⁴⁴ Waßer.” (“Take 1½ ounce candy sugar,

³⁹ Compare all this with the advice given by a physician from Montpellier in one of the oldest plague treaties (1349), transl. by I.C. from: Bernd Ingold Zaddach, *Die Folgen des Schwarzen Todes (1347-51) für den Klerus Mitteleuropas*, Stuttgart, Gustav Fischer, 1971, p. 24: “If a priest, doctor or friend want to visit a plague-diseased, they should tell and advise him to close his eyes and cover them with a linen cloth. Only after that they may treat, listen and touch him, and do all the necessary things as follows: in the warm season, they should keep in front of their noses a sponge drained in vinegar. In the cold season they should keep in their hands rue and caraway, carrying them as often as possible to their noses, and they should keep away from the breath of the diseased.”

⁴⁰ *Thyriak* – Theriak, first mentioned by Nicandros and prepared, as it seems, by the most renowned physicians of the ancient world (Galen, Herophilus of Alexandria and Apolodorus), was a panacea of colossal spreading in the middle ages, being considered almost unbeatable and, of course, being used also during the plague epidemic. Among the ingredients that made up this “wonder-drug” one could find opium, angelica and valerian. Theriac was also known as “Venetian Theriac”, probably because one of the most important markets where this “product” could be found was Venice (and thanks to this city’s flourishing relations with the Orient, opium in pure form could be acquired without many difficulties).

⁴¹ *Tormentil* – Shepherd’s Knot / Bloodroot – *Potentilla Tormentilla*, *Potentilla Erecta*, plant from the family of *N.O. Rosaceae*, whose roots and leaves, with significant concentrations of tannin, are still used for their astringent properties.

⁴² *Diptam* – *Dictamnus* – *Dictamnus albus*, with a high concentration of etheric oils, often used in the Middle Ages as an antidote for different poisons.

⁴³ *Scabiosa* – *S. caucasica*; *S. graminifolia*; *S. ochroleuca*; *S. atropurpurea*, etc., known in traditional pharmacy for its properties of curing irritation of the skin.

⁴⁴ *Ampfer* – *Sorrel*. *Rumex spec.*, very popular plant, whose roots and leaves hold a high degree of vital substances.

...3 grains of Diptam, half a grain of saffron, ...1½ grain of camphor, ...with a little vinegar... or sorrel”), or a combination of sandal, theriak, diptam, tormentil, camphor, sugar and pimperl⁴⁵, etc.

The most common ingredient used in these preventive “prescriptions” appears to be theriak, followed by tormentil and diptam, in various combinations. Avicenna is most of the times, as the author-physician admits, the source of inspiration, closely followed by Galen and Hippocrates.

Pauschner does not forget those who have already contracted the disease: “Hülfe, so einer an Pestilentz krank ist” (“Assistance for Those Who Have Gotten Ill with Pestilence”) makes up a distinct chapter in which the doctor recommends, among others: “Iß balt, oft undt wenig” (“Eat soon, often and in small portions”). Regarding beverage, he advises all infected persons to drink a lot of water and very little wine. In the same chapter, Pauschner also presents the signs of the disease – what we would call today the “clinical picture of the disease”: he speaks of anguish, loss of consciousness, thirst and sweating⁴⁶. Eliminating the blood by opening the veins – “*Aderlassen*” – is a measure bearing special benefits, he sustains, for the plague-diseased. Pauschner also holds a cure for recovering those people weakened by the above mentioned intervention: “Campher und Rosenwasser”, “Sirup von Amphor”, “Granatpffelsaft”, “Sandel”, “Essig” (“camphor and rose water”, “sorrel syrup”, “pomegranate juice”, “santal”, “vinegar”) are meant to strengthen the body and to launch the final attack against the illness.

For the proposed prescriptions to be as precisely prepared as possible, Sebastian Pauschner also offers a list of the used measures⁴⁷:

“Merck daß Gewicht

| | |
|-----------------------|-----------|
| 20 Gerstenkorn machen | 1 Scrupel |
| 3 Scrupel machen | 1 Dragma |
| 8 Drachma machen | 1 Untzen |
| 12 Untzen machen | 1 Pfundt” |

⁴⁵ *Pimpernell* – *Pimperl*, *Sanguisorba minor*, fam. *Rosaceae*, a plant with high vitamin C content, present in almost all medieval prescriptions regarding the plague (see German proverb: “Ist die Krankheit noch so schnell, / heilt sie doch die Pimpinell!” – “Be the illness even great, *pimpinell* will get you straight”). Another German name for it: *Theriakwurz* (it is not a coincidence!, this name being also used for another herb often used in preparing *theriak*, as well as other medieval remedies, the so-called “angelica”, *Archangelica officinalis*).

⁴⁶ Today’s medicine also speaks of these manifestations – given the fact that the incubation period of the disease is short (1-6 days, a little shorter in case of the pulmonary form), with short-time invasion, of approximately two days, manifestations such as fever, chills, general sickness, headaches, delirium, agitation, anguish appear rapidly. See also Chiotan, Mircea, *Boli infecțioase*, Ed. Național, Bucharest, 2000, p. 576 or the thorough description of the disease provided by the US Department of Health and Human Services – Centers for Disease Control and Prevention at <http://www.cdc.gov/ncidod/dvbid/plague/index.htm>

⁴⁷ Pauschner, Sebastian, *op. cit.*, p. 539.

(“Please respect the following measures
 20 barleycorn is 1 scruple
 3 scruple is 1 grain
 8 grain is 1 ounce
 12 ounce is 1 pound”)

The small plague treaty ends with a special prayer. An interesting aspect that has to be taken into consideration as regards this prayer is the form that the person that hand-copied the printed work gave to the text. We will probably never know if this special form also appeared in the original version, or if the manuscript’s author wanted here through to lay his own imprint upon the work. The prayer discussed here is laid in form of an hourglass, actually a quite often used motif at that time, a symbol of the time passing inevitably towards death. The two mixtures on the last page of the manuscript, following the closing prayer, are to be included in the same category. There is no mention concerning their positioning – a possible explanation would be that the author of the handwritten copy has added himself the two recipes (although the ingredients used here are quite the same recommended by Pauschner). Another explanation would be that the copier of the original printed version – or maybe even Pauschner himself – had forgotten to add the two prescriptions to the according chapter. Anyway, it is more likely for the work to have closed – like other works of the genre – with the final “amen” of the prayer, than with the two separate prescriptions, totally out of the context.

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Great epidemics have tragically marked the turning points of human history from the oldest times. The dreary picture of the epidemiologic past of human kind shines not only through the historical documents, but in other expression forms as well, especially in the artistic ones. Perspectives that in former times would have been nothing else but gloomy, have today turned to be more encouraging – the progress made in the fields of biology and medicine have led to the fact that the threat of the most terrible epidemics was almost completely wiped out from the face of the earth. Today one can notice a steady decrease of the death rate registered with epidemic diseases, which have caused, in time, great losses in the population numbers (plague, cholera, smallpox, and yellow fever). We can hence state that medicine recorded a real progress, the average lifespan was prolonged, the diagnosing possibilities have become more and more accessible and the illness treatment capacity has increased.

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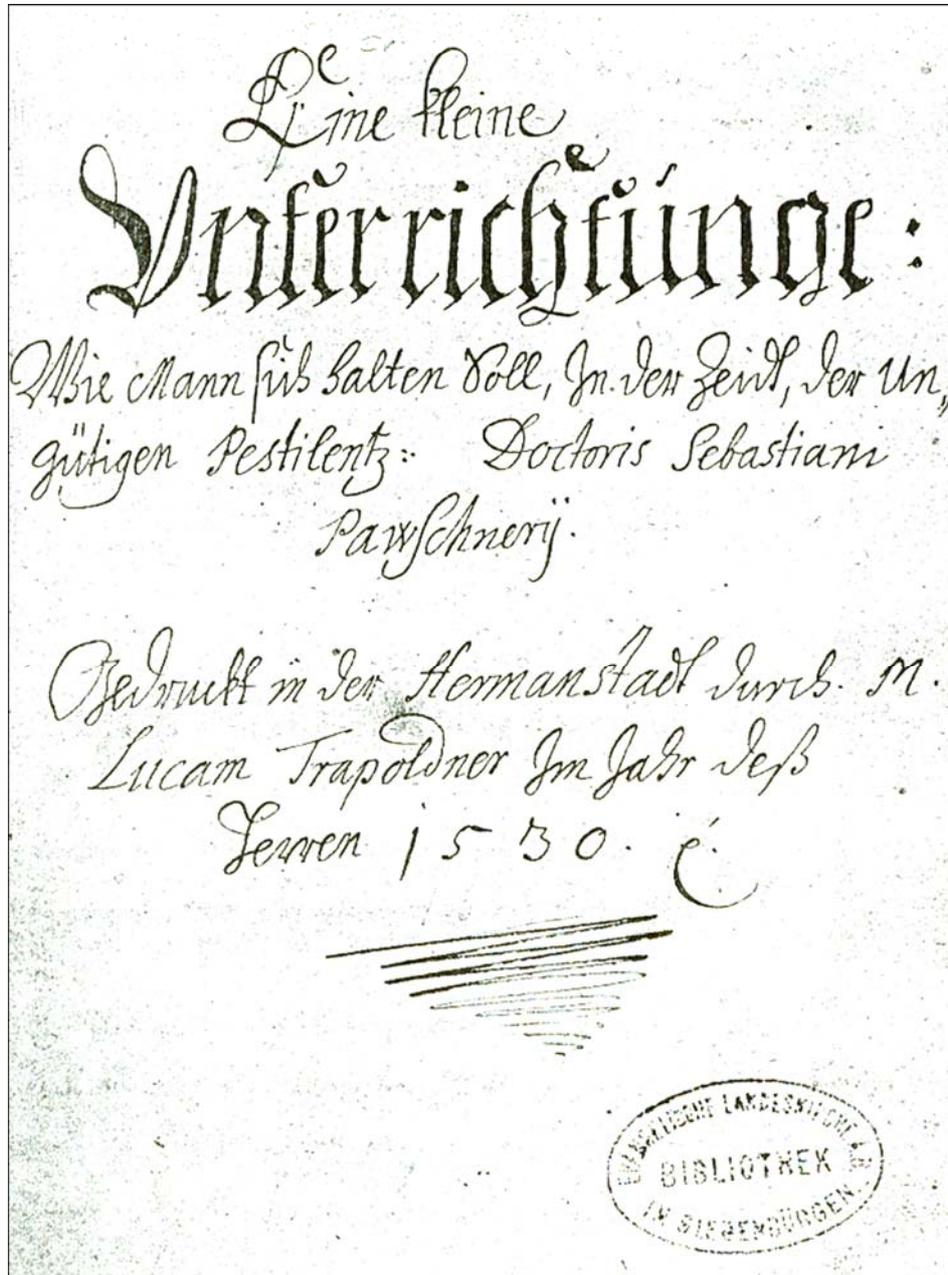


Fig. 1: Manuscript: title-page

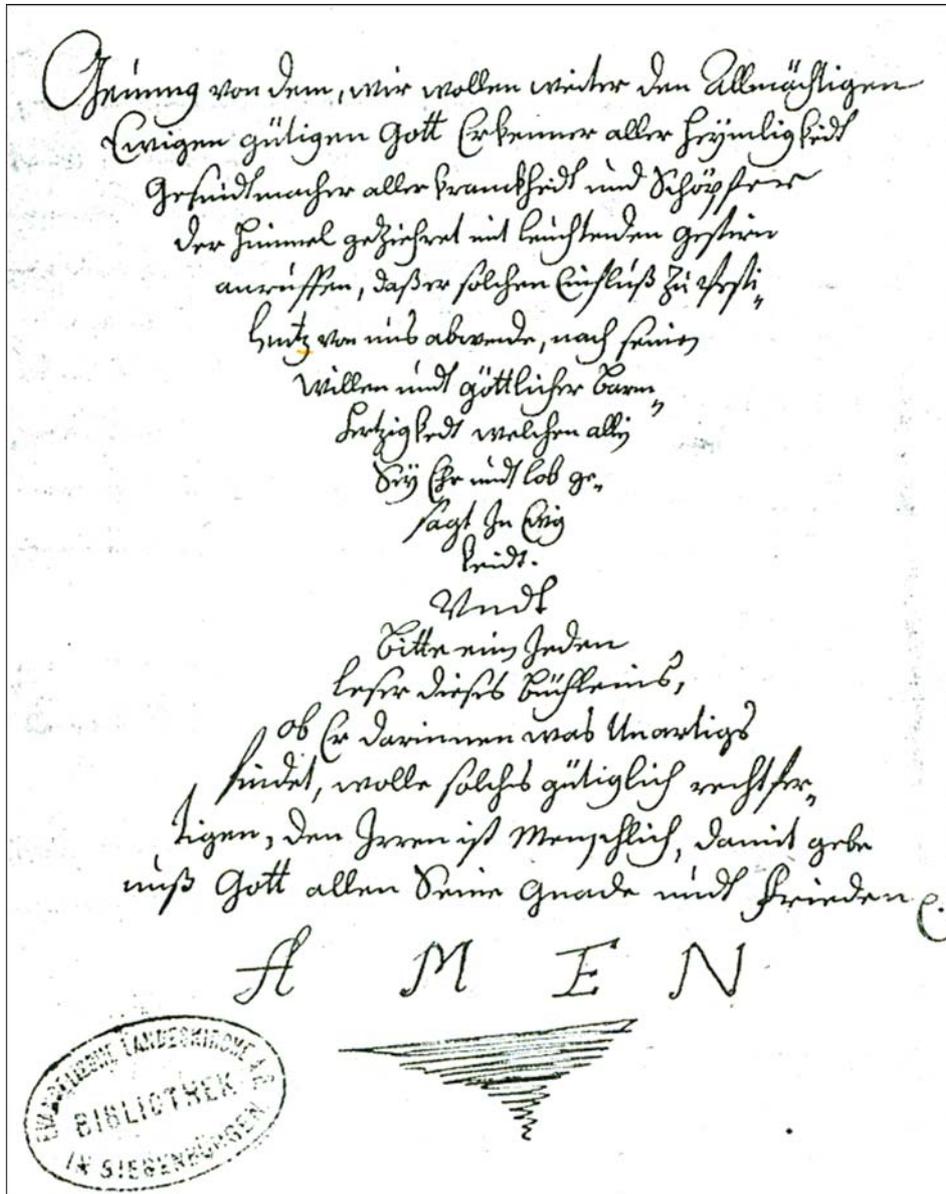


Fig. 2. : Manuscript: prayer