

MEDICAL RELATIONS BETWEEN THE NORTHERN AND THE SOUTHERN NETHERLANDS IN THE 16TH AND 17TH CENTURIES

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Introduction

"As soon as one tries to go into the subject of medical relations between the Northern and the Southern Netherlands in the 16th and 17th centuries, one is struck by the relative scarcity of data". On the one hand this might well mean that there were no medical relations worth mentioning between the Northern and the Southern Netherlands, on the other this statement by Lindeboom is in a sense a challenge to check whether this is indeed the case.

Perhaps when we speak of 'relations' would it be better to speak of an 'exchange' of knowledge which, as far as medicine was concerned, was a one-way communication only, i.e. from the South to the North ? Perhaps we better had replaced the word 'relations' with the word 'influence', the stimuli effecting this 'influence' coming mainly from the South ? Should this be the case then surely incidental to this scientific 'influence' from the Southern Netherlands was an increase in scientific relations between both parts of the Netherlands, the Northern Netherlands in turn also stimulating medical scientific thinking in the South ?

In order to analyze these questions we need to widen our perspective and to be able to answer them, also take the political and economic structures of both regions during this period into consideration. Politically and economically stable situations always have great influence on the development of arts and science. Generally speaking it may be stated that a period of peace and quiet in a country has a positive

influence on the development of arts and science; for economic prosperity furnishes the necessary means to let arts and science flourish. Apollo and Athena live by the grace of Mercury.

If we consider the development of medical scientific relations between the Northern and the Southern Netherlands from this perspective, it will be clear that there were great political tensions in Europe in the 16th and 17th centuries and that great shifts in the balance of power between the two countries took place. In a time span of about ten years, between 1575 and 1585, there were great changes which on the one hand put an end to prosperity and growth in Flanders and on the other for the Northern Netherlands ushered-in a period which is known as the Golden Age.

If we take a closer look at this period, it appears that in the period before 1575 political rapprochement had been effected between North and South, united under the rule of Burgundy, which had gained control of Flanders in 1384, Brabant in 1430, and Holland, Zealand and Hainaut in 1433. In this period the Southern Netherlands was clearly the political and economic centre.

Because of its industry and business acumen the South was far ahead of the North where the dissensions between the Hoeksens and the Kabeljauwen blocked the development of arts and science. Students of Latin schools there, some of which were quite renowned (Zwolle and Alkmaar), could not continue their studies at a university centre in the North. It should be stated that as early as the latter half of the 15th century the Northern Netherlands occupied an important position as regards printing and publishing books. Especially in Deventer : of the approximately 1860 titles which were published in the Netherlands, between 510 and 560 were printed in this town on the IJssel. In this field Deventer was far ahead of towns such as Antwerp, Gouda, Delft and Zwolle. Not until 1515 did the production in Deventer lessen; after 1517 Antwerp took the lead.

Leuven (Louvain) University

How different was the situation in the Southern Netherlands! Towns such as Antwerp, Bruges, Ghent and Brussels were centres of trade and industry. As a result of this economic prosperity the need arose and means were available to further develop arts and sciences.

So it is hardly surprising that the South was first in this part of Europe to obtain a university, founded in 1425 by Jan van Brabant. Pope Martin V [1368-1431; chosen at the Council of Konstanz 1417] ratified the foundation in December of that year by his Bull : *Sapientiae Immarcescibilis*.

On 18 October 1426 the medical faculty was one of the first to be opened, Jan van den Neel being the first titular. This first professor of the medical faculty of Leuven came from the Northern Netherlands, from Breda, a town which is now situated in the province of North Brabant in the Netherlands. Teaching at the Leuven medical faculty was scholastic and consisted of reading out and then elucidating the writings of the Classics : Hippocrates and Galenus. The works of Arab physicians were also studied. Thus it is not surprising that Vesalius was awarded his doctoral degree at Leuven for a paraphrasis of Rhazes. At first medical studies at Leuven took four years and were concluded by an examination, after which one was allowed to use the title of Licentiate, which granted the titular the right to practice medicine. The title of Doctor was aspired mainly by those who had the means required and who had the ambition of holding a professorate.

For a century and a half Leuven was to remain the only university in the Netherlands and thus attract many students also from the Northern Netherlands.

Northern Netherlands medical students at Leuven

Of these students a number is worth mentioning who are still great

names in *historia medicinae*, such as Theodoricus Gerardus Gaudanus (1491-1530), from Gouda. He was enrolled at Leuven on 21 May 1510 for the study of medicine. Particularly from Gouda there was quite a surge of students to Leuven university in those years, also because numerous scholarships were available especially for "natives of Gouda". It would happen that four Gouda alumni were enrolled at Leuven on one and the same day.

Although a chronic illness was already undermining his health, Gaudanus was able, in the last months of his life, to proofread his translation of the second work by Galenus, which was published after his death at the end of 1530 : "De simplicium medicamentorum facultatibus libri undecim."



Fig. 1 : The University-building (Palazzo del Bò) of Padua in 1654

For many northerners Leuven was a stop on their journey to the universities of France and Italy. Especially the French universities in



Fig. 2 : Petrus Tiara, the first Rector Magnificus of the Leyden University.

Paris and Montpellier and the Italian ones in Padua and Bologna were already attractive centres of higher learning, where many were awarded their doctoral title after a few months of studying. Thus Petrejus Tiara (1514-1586) from Workum in Frisia obtained this university degree in Italy after his medical studies in Leuven. He is known to have been professor at the university of Douai from 1559-1565 for the teaching of Greek after having practised medicine in Delft for some years. In 1575 he became the first vice-chancellor of Leyden University, founded in that year, where he devoted himself to the study of Hippocrates' writings in Greek. There is an exchange back and forth of physicians who move their practice from north to south or vice versa. Thus Boudewijn Ronsse (1527-1596) from Ghent was approached by the town council of Gouda to become town physician. In 1541 he had enrolled as a student of medicine at Leuven. So that he must have been a fellow student of 'the Dutch Hippocrates' Pieter van Foreest (1521-1597), who was taught philosophy there. The well-known Jodocus Lommius (1500?-1572), from Buren in Guelders, was town physician in Doornik before he started a medical practice in Brussels. Cornelis van Baersdorp (1484-1565), scion of a distinguished Zeeland family, rose to first physician of Charles V. These are but a few names from a much greater number of physicians who could be mentioned in this context.

Political unrest

The religious question, which resulted in the Northern Provinces rebelling against Spanish authority, also caused a split on a political level between central authorities in Brussels and the States of the Seven United Provinces. The first result of the revolt of the Northern Netherlands against Philips II was unrest. This unrest caused a temporary decline of Leuven university. Financial means were lacking, teaching stagnated and the professors fled the town.

That the acts of war, the political unrest and religious persecution had great economic consequences for the prosperous merchant towns in Flanders, is known only too well. Many sought refuge elsewhere. A town

such as Antwerp which had 100,000 inhabitants round about 1560, fell to a number of 30,000 inhabitants in the course of thirty years. With this flood of refugees trying to escape Inquisition for their Calvinist, Lutheran or Mennonite beliefs, the Spanish Netherlands lost a great deal of spiritual capital of knowledge, energy and experience. Thousands of merchants, intellectuals, printers and publishers, scholars and scientists, and artists fled to the north. In this flood of emigrants to the Northern Netherlands which lasted for many years are a great number of people who contributed considerably to the flourishing of the economy, of culture and science, particularly in places such as Amsterdam, Leyden, Haarlem and Delft. Many of these Southern Netherlanders are known by name, but this subject is outside the scope of this paper.

An exception, however, should be made for the Antwerp printer and publisher Plantijn and for a number of physicians still known today. Through his great production of medical books Plantijn exerted an influence on the spread of medical knowledge in his days and thus had an influence on the medical relations between the Northern and Southern Netherlands.

In order of importance medicine came second in Plantijn's production with 49 works printed, immediately after geography. However, among the medical works he printed and published are no standard books, such as he put on the market for cartography and botany. Most of them are shorter writings dealing with some subspecialism, such as a book (booklet?) on fevers by Pieter van Foreest, on treatment of wounds and bloodletting by Arcaes and Botallus respectively. There are also various books on the frequent plague epidemics, which decimated the population repeatedly, also that of the Low Countries by the Sea. Special attention should be paid to some publications on hygiene and health care which were novel items in medical literature in the latter half of the 16th century. Many of these books were published in the vernacular, so that also those who had no Latin, the language of learning and science at the time, could become acquainted with them and a greater population of those interested could be reached.

Plantijn is known to have been university printer at Leyden. His first visit to Leyden occurred as early as July 1579. On the 27th of that month he wrote his contribution, beginning with the motto "Labore et Constantia" in the album amicorum of Leyden town secretary Jan van Hout. Undoubtedly he was then staying with Justus Lipsius, whose works were nearly all published by Plantijn. Contrary to the many refugees who left Antwerp in 1585 Plantijn returned to the town on the Scheldt in that very year. The reason for this departure from Leyden remains a mystery. His son-in-law, Franciscus Raphelengius continued the Leyden printing business. The many publications which were spread from the Leyden Plantijn annexe in the eighties of the 16th century have certainly contributed to making Leyden university and its teachers better known in contemporary Europe.

Physicians from the Southern Netherlands, working in the Northern Netherlands

Among the great number of emigrants were also numerous physicians, a number of which still have a certain reputation in *historia medicinae*. Particularly Matthias Lobelius (1538-1616) should be mentioned. He was born in Rijssel (Lille), then still a Flemish town. In 1677 Rijssel was to be annexed by Louis XIV as part of France, so that there is justification in saying that Lobelius is of Southern Netherlands origin.

After Clusius and Dodonaeus, Lobelius is the most important botanist of his time; but he also practised medicine, although we do not know at which university he studied.

It is certain that he practised medicine in Antwerp round about 1565, which may be deduced from a sentence in his publication "Stirpium Adversaria Nova" of 1605 in which he says that he would often prescribe a certain potion in Antwerp : "... quale habuimus saepe dejustasse memimus Antwerpiae, quadraginta iam elapsis annis".



Fig. 3 : Matthias De L'Obel (Lobelius) (1538-1616) van Fr. Dellarame, 1615. Uit A. Arber.

In about 1578 he fled from Antwerp and was employed as court physician by William of Orange, who resided in Delft since late 1572. On the list of personnel belonging to the royal household his name is mentioned under 'Councillors and Secretaries'. In 1581 he dedicates his "Kruydboeck" (Herb Book), published by Plantijn, to the Prince. The title page states : "Medecyn der Princ. Exc.^{am}". It may have been before the violent death of the Prince that Lobelius left Delft to go to Zealand. In 1585 we find him in Middelburg, where he is 'Stadsmedecyn' (town physician). Up to and including 1596 he is paid a salary of 16:13:4 pounds. In 1597 his name is no longer mentioned in Middelburg and this amount is distributed among three other Middelburg town physicians, so that we may assume that he is no longer employed there. He then leaves for England and is employed by Lord Zouch, his task being to supervise the laying-out of the garden of the latter's country estate at Hackney near London.

As the South remained unsafe for protestants also after the pacification of Ghent (1576), Nicolaas Mulerius' father settled in Leyden where Nicolaas completed his medical studies by defending his Ph.D. thesis on 24 March 1589. Mulerius, born at Bruges in 1564, had a flourishing medical practice at Harlingen in Frisia until he was appointed 'doctor in de medicynen, van weghen der Stadt Groningen ende Ommelanden' (by the town of Groningen and its surrounding areas).

When the States of Groningen decided to found a Collegium Facultatum on 20 November 1612, Mulerius became the first professor of medicine and of mathematics of Groningen University opened on 24 August 1614. Mulerius served this institute of higher learning until his death in 1630.

Mulerius became known not only because of his strict Calvinist beliefs — among other things he tried to prevent the board of governors of Leyden University from appointing the tolerant Remonstrant theologian Vorstius as successor to Arminius — but also by publishing Copernicus' work : "De Revolutionibus orbium caelestium" in the Netherlands in 1617. However, this did not prevent him in his detailed

commentary on this work from rejecting totally Copernicus' heliocentric stand.

In addition to his Copernicus publication Mulerius also had some astronomical writings published, calendar calculations and tables for calculating eclipses and sines. In his booklet : "Zijne Practica met de beschryvinghe van de Comeet" (His Practical Work in describing the Comet) he alludes to the war between Spain and the Netherlands : "King, thou wouldst have attained the highest sphere of power, if thou hadst treated the Dutch more gently".

The Antwerp physician Carel Baten (c. 1550-1618) is also among those who after the fall of this town on 17 August 1585 avails himself as a protestant of the opportunity offered to leave Antwerp and move to Dordrecht. There he is appointed town physician on 20 February 1588. Baten, who left Dordrecht for Amsterdam in 1602, became especially known for his translation of Ambroise Paré's work : "La Chirurgie et les Oeuvres Complètes", which was published in Dordrecht in 1592 under the title : "De chirurgie ende opera van alle de wercken". Thus this book became accessible to Dutch surgeons and ship's surgeons who had no French.

There is no doubt that the South-Netherlander Baten through his translation of Paré's work influenced greatly the spread of surgical knowledge in the Northern Netherlands in his time.

Leyden university

If we now return to our subject proper : medical relations between the Northern and the Southern Netherlands, then the founding of Leyden university in 1575 is an important mile-stone in scientific development in our area. On the one hand it ended the unique position Leuven had held in higher education for 150 years; on the other hand Leyden university undoubtedly had a positive influence on the self-awareness of the young Republic and stimulated the pursuit of science in all faculties.



Fig. 4 : Detail of the inaugural pageant of the university of Leyden, 8 february 1575. The second figure of the left side is Pieter van Forest.

In the course of the 17th century it was to become clear that Leyden — not bound to centuries-old scholastic traditions — was open to new developments in the philosophy of nature, which also influenced new developments in medical thinking.

If we now limit ourselves to education as provided in Leyden at the medical faculty in the first twenty years, then we see that its professors, although not bound by conservative traditions, reverted to reading out and elucidating the prognostica of Hippocrates, the philosophy of Fernel, etc. For the first professors themselves had been taught at conservative universities. Gerard Bontius (1536-1599), who for six years was the only professor at the medical faculty of Leyden, had received his medical training, not at Leuven university but in Padua, where he got his doctoral degree and where he had already come into contact with the new insights which were breaking through into the field of medicine.

In the initial years of the existence of Leyden university no medical students were registered. Only on 21 September 1578 was the first medical student, the Englishman Jacobus Jaimes to enrol in the album studiosorum. In September 1581 a second professor was added to the medical faculty : Johannes Heurnius (1543-1601), who had studied at Leuven and who had obtained his doctoral degree in Pavia in 1571 after a perigrinatio through France and Italy. He too studied at Padua, attended the lectures of Fabricius ab Aquapendente there and was a friend of Pieter van Forest's.

This joint leadership of the medical faculty of Bontius and Heurnius was strengthened by the coming of Pieter Paaw (1564-1617), whose great merit lay in the field of anatomy. For 19 years, from 1598 onwards he gave public anatomical demonstrations in the theatrum anatomicum he established following what had been done at Italian universities for half a century. The governors of Leyden university also managed to employ two famous botanists from the Southern Netherlands : Rembertus Dodoens (1517-1585) and Carolus Clusius (1526-1609).

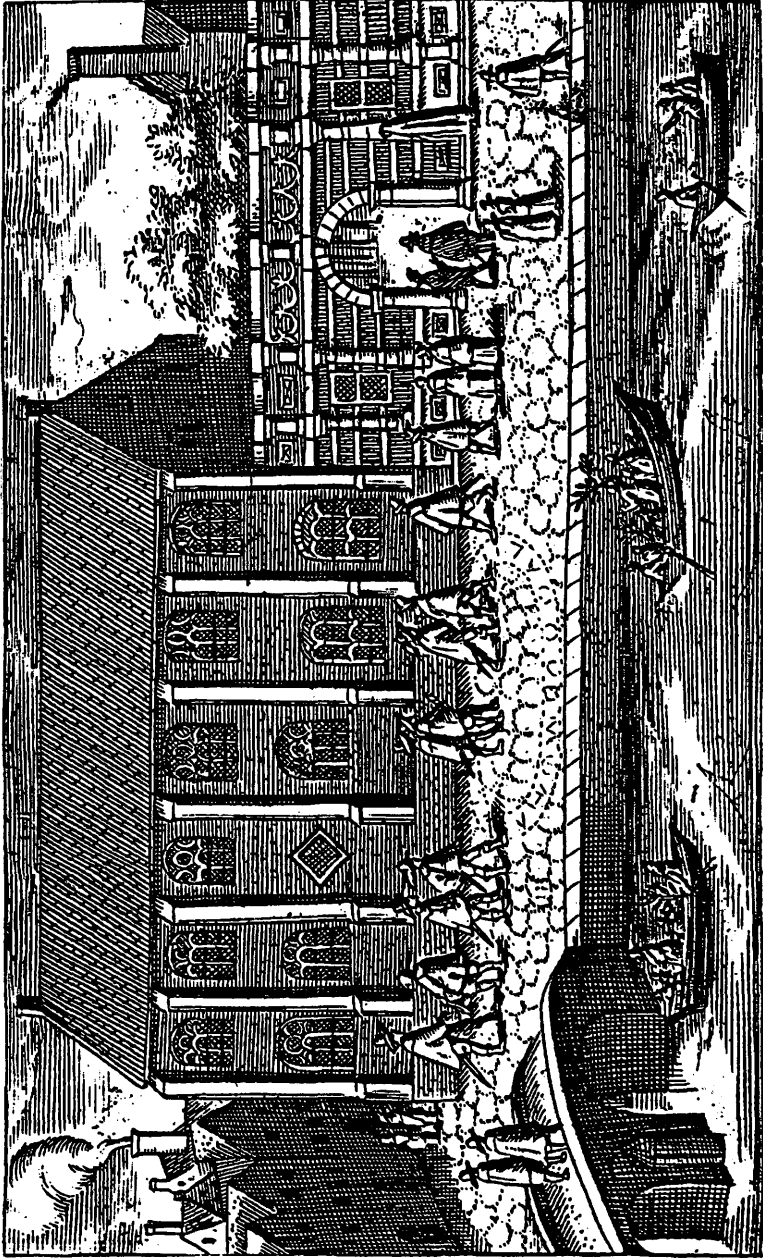


Fig. 5 : University Building of Leyden in 1614.

One would have expected the young university of Leyden to also attract students from the Southern Netherlands : this was, however, hardly the case. One of the reasons for these students staying away is the fact that Philips II forbade inhabitants of the provinces which had remained faithful to him to study at Leyden. Actually, Roman Catholics from the south would have been able to study at Leyden; for it was not necessary to be a Calvinist to be able to enrol as a student. In order to be admitted to Leuven university, however, one did have to be a Roman Catholic.

It was not long before the States of the Seven United Provinces forbade studies at Leuven at a penalty of Dfl. 300. Initially this prohibition may have made little impression; in any case the penalty regulation was repeated in 1595.

The influence of the teachings of Descartes

Before 1600, in spite of the system of the French education reformer Petrus Ramus, aristotelism and scholasticism were the guiding principles in education. Soon cartesian thinking, although authorities allowed it reluctantly and at first turned a blind eye to it, began to gain ground also in medical scientific thinking at Leyden university. In his philosophic system Descartes (1596-1650) regarded the world as one large mechanism, whose cogwheels could be studied in detail, while the human body could be considered to be a scaled down version of it which should be examined in the same way in all parts. It will be clear that in this mechanistic world view the study of the structure and functioning of the human body was assigned a place. Here Leyden university and especially the medical faculty led the way. This flexibility and tolerance of the authorities and the openness to 'modern' ideas and methods made it attractive for scientists and students to come to the Northern Netherlands and particularly to come and teach or study, respectively, at Leyden university. Elsewhere there were limiting measures of whatever nature : as regards the Southern Netherlands the censorship of books which were in contradiction with Roman Catholic teaching was the most important restrictive factor which was an obstacle to the printing and publishing



Fig. 6 : René Descartes (1596-1650).

of scientific works. In the young Republic greater freedom of the press resulted in a steady flow of books finding their way all over Europe. Elsevier in Amsterdam and Plantijn, the Leyden university printer, are only two of the many printer-publishers who were active in our country.

Harvey's theory of blood circulation and Plemp

The fertilizing effect of Descartes' ideas on medical thinking at first hardly touched Leuven university; the ideas were so much against the strict dogmatic principles which persisted at this university. One of the consequences was that the new and original ideas on blood circulation which Harvey had written down in a book were not accepted there. This was shown for example in the way Leuven professor Vopiscus Fortunatus Plempius (1601-1671) dissociated himself from Harvey's theories on blood circulation. This in contrast to Descartes, who in his "Discourse", published a year before Plemp's publication "Fundamenta seu institutiones Medicinae" (1638), showed himself as one of the first scientists in Western Europe to be a true advocate of Harvey's teachings.

Initially Plemp had studied medicine in Leuven before continuing his studies in Leyden in 1621. In 1624 he was awarded a doctoral degree in Bologna and from 1628 to 1633 he practised medicine in Amsterdam. There he belonged to the circle of friends of Nicolaas Tulp and the Fontein brothers, the elder of whom (Johan) became private physician to Prince Maurits in 1623.

During his stay at Amsterdam Plemp had frequent contact with Descartes, who had settled in the Northern Netherlands for the second time in 1628 and who then intensely occupied himself with medical problems, especially with comparative anatomy. In spite of their close contact, Plemp remained a confirmed Galenist and was not to be convinced by Descartes' ideas, among other things regarding the circulation theories. In his previously mentioned 1638 publication, "Fundamenta Medicinae", Plemp did give a detailed description of



Fig. 7 : Title-page of Harvey's "Exercitatio anatomica de motu cordis et sanguinis in animalibus" (1628).



Fig. 8 : Vopiscus Fortunatus Plempius (1601-1671).

Harvey's experiments, after he had corresponded about these theories with another advocate of Harvey's theories, Johan van Beverwijck, physician at Dordrecht. But "... nullam video ab ipso producta quae nos cogat musteum hoc dogma accipere rationem" (... I see no reason whatsoever which forces us to accept this new dogma).

This view of Plempius', however, was to change. After he had duplicated Harvey's experiments at the advice of his Leyden colleague, professor Johannes de Wale, he was convinced that the latter's views were right. In the second edition of his "Fundamenta Medicinae" (1644) Plemp frankly admitted that his previous judgment had been wrong. In so doing Plemp took an important step in forcing the conservative galenist stronghold, which Leuven was, to open up and become accessible to contemporary modern ideas, which have been of such importance for a new approach to medicine. This does not mean that Plemp was now a follower of the dogmas of Descartes; on the contrary, the controversy between Descartes and himself had not been removed by this admission. The two men, who at first had corresponded so courteously and had treated one another in such a friendly fashion, in the end bore each other a mutual grievance. When Gerard van Gutschoven, mentioned below, criticizes Plemp's book "Ophthalmographia" and in so doing expresses cartesian views, Plemp in his reply lashes without mercy those who merely swear by Descartes' words.

Gerard van Gutschoven and Descartes

Eventually the influence from the young Republic, especially from Leyden university, had major consequences for medical thinking and medical teaching at Leuven.

This line of development continued when Gerard van Gutschoven (1615-1668) was appointed as Plemp's colleague to lecture in anatomy, surgery and botany. Via his father who worked for Leuven university as a lawyer, Van Gutschoven already had close connections with this institute of higher education. In 1646, five years after having been

granted his licentiate in medicine, Van Gutschoven was appointed professor of mathematics and successor to Sturmius.

Van Gutschoven was a universal man of learning, who made a brilliant career for himself in many disciplines. For example in 1635 he drew a map of Leuven and its surroundings, which was engraved and published by André Pauli, while he was also charged with supervising the construction of some new town quarters at Leuven. Van Gutschoven — who, as a young man, is known to have helped Descartes with his comparative anatomical research — happened to come into contact, at 's Hertogenbosch, with Florentius Schuyt (1619-1669), who had taught philosophy at the Illustrious School there since 1640. This meeting with Schuyt must have been of great importance to the Cartesian Van Gutschoven. For as Schuyt had been so impressed by Descartes' work, he had, as early as 1662, made a Latin translation of the then not yet published work by Descartes "Over de Mens" (De Homine).

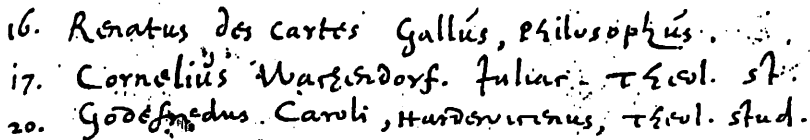
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16. Renatus des cartes Gallus, Philosophus.
 17. Cornelius Warendorf, Julius, Theol. St.
 20. Godefridus Caroli, Harsdornicus, Theol. Stud.

Fig. 9 : The name of Descartes in the Album Studiosorum of the Leyden University, 27 June 1630.

At the time Descartes' followers were eagerly awaiting publication of the philosopher's unpublished manuscripts, which were known to exist. Through this publication Schuyt managed to draw special attention to himself and this will have been one of the reasons why he was more or less considered to be a medical expert even before he was awarded a doctoral degree in medicine. In that same year he was to be appointed professor of medicine at Leyden.

This meeting at 's-Hertogenbosch between Schuyt and Van Gutschoven may have been an incentive for the latter to draw the illustrations for a French translation of "Verhandeling van de Mens" (Essay on Man). In 1664, fourteen years after Descartes' death and two

years after Schuyt's Latin edition, the French version was published : "Traité de l'Homme". The Frenchman Claude Clerselier (1614-1684), lawyer by profession but greatly interested in the philosophy of Descartes, had come into possession of the documents left by the French philosopher. Among these papers was not only the French text of the "Traité de l'Homme", but also two drawings by Descartes, which were to serve as illustrations. In the manuscript Descartes had also indicated precisely where the various illustrations were to be placed. It took Clerselier many years to find the right man who would be able to draw these illustrations following the instructions given by Descartes himself. For not only did the man have to be well acquainted with Descartes' teachings, but he also had to be a good illustrator. These two qualities were united in Van Gutschoven. Under the supervision of Clerselier Descartes' work could finally appear in French in 1664, annotated by the physician Louis de la Forge. Through a joint effort by men of learning from both the Northern and the Southern Netherlands the ideas of Descartes had also become accessible to French-speaking Southern Netherlanders.

Reinier de Graaf and Plemp

Finally we must not forget to mention the relation Reinier de Graaf (1641-1673) maintained all through his life with his Leuven teacher Plemp. In about 1658 de Graaf had enrolled as a student at Leuven university. He may first have studied for one or two years at the faculty of arts, but it is clear that it was already at Leuven that de Graaf applied himself to the study of medicine. In 1661 he returned to the Republic, where he continued his medical studies at the university of Utrecht. From 1663 to 1665 he followed the lectures of Dele Boë Sylvius and of Van Horne at Leyden. When after his perigrinatio academica de Graaf took up residence at Delft as medicus practicus, this did not by any means mean that his scientific research, started at Utrecht and Leyden, had come to an end.



Fig. 10 : Reinier de Graaf (1641-1673).

One of the things he applied himself to in Delft was constructing an enema syringe which the patient himself could use. In a detailed letter to Plemp, dated 14 March 1669, de Graaf describes the difficulties he had to overcome before arriving at a satisfactory result. Furthermore he informed Plemp that the instrument could be ordered from the well-known Leyden instrument maker Johannes van Musschenbroek. In this letter he also mentioned the "bysondere goetgunstigheyt, die U. Ed. my niet alleen tot Leuven, maar ook hier the Delft verwaardigt heeft te betoonen" (the extraordinary graciousness Your Honour deigned to show to me, not only in Leuven but also here in Delft), the personal contact between two physicians who practised medicine in the Northern and the Southern Netherlands respectively.

Conclusion

We have asked ourselves the question whether and if so, in what way medical relations existed between the Southern and the Northern Provinces of the Spanish empire in the 16th and 17th centuries.

When we assess this question it appears that the great political upheavals which accompanied the abjuration of Philips II in 1581, the fall of Antwerp in 1585 and the assumption of sovereignty by the States of the Seven United Netherlands in 1588 were of great influence in this context.

It is true that before this period of political unrest, violence of war and religious persecution the Southern Netherlands were the centre of culture, arts and science. But after the great exodus in the years around 1585 we see that with the expansion of the economy in the Northern Netherlands arts and sciences begin to flourish there as well.

The unique position Leuven had held as a university centre for 150 years ends when Leyden gets its university in 1575. We have seen that from both sides there was an exchange of medical practitioners, most of whom had received their medical training in Leuven before 1575.

The first professors at the medical faculty of Leyden were alumni of Leuven. It is curious that the first professor of the medical faculty at Leuven was from the Northern Netherlands.

Initially, as a result of the political unrest, decline set in at Leuven university, but there is no denying that the new insights in the fields of medical thinking and practice such as could develop at universities in the Northern Netherlands, had a stimulating influence on medical research and practice in the South. At Leuven too, Descartes' philosophy caused the old theories of Galenus to disappear, be it after more conflict and at a slower pace than was the case at, for instance, Leyden. A telling example of this is that the theories of Harvey were eventually accepted.

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