

MEDICAL INNOVATION OR MEDICAL MALPRACTICE?
OR, A DUTCH PHYSICIAN IN LONDON:

JOANNES GROENEVELT, 1694-1700*

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At the end of the 17th century, in London, a physician was tried for malpractice. This was the case of Dr. Joannes Groenevelt, or John Greenfield, as some of his English friends called him. In the early 1670s he had come from The Netherlands to London, where he engaged in general medicine and the treatment of urinary problems.¹ In the course of his practice, he also surgically removed bladder stones, cutting them out himself. Over the twenty years he had lived in London, he had developed a successful medico-surgical practice, first among the Dutch community there and then among the English as well. He had also written several books that were important enough to be noticed by the 18th and early 19th century medical encyclopedists.² Then, in 1694, when he was 46 years old, an Englishwoman by the

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¹ Until now, the few somewhat inaccurate summaries of his life have been derived from the short entries in William Munk, *The Roll of the Royal College of Physicians of London*, 2nd ed. (London: Published by the College, 1878), vol. 1, pp. 429-430, and Gordon Goodwin's entry on "Groenveltdt," in the *Dictionary of National Biography*, (London: Smith, Elder and Co., 1890), vol. 23, p. 269. For the derivative notices, see August Hirsch, ed. *Biographisches Lexikon der hervorragenden Aerzte aller der Zeiten und Volker* (1st publ. 1884-1888; Berlin: Urban & Schwarzenberg, 1929-1934), vol. 2, p. 862; *Nieuw Nederlandsch Biographisch Woordenboek* (Leiden: Sijthoff's, 1911), entry by A. Geyl, vol. I, pp. 978-979; G. A. Lindeboom, *Dutch Medical Biography: A Biographical Dictionary of Dutch Physicians and Surgeons 1475-1975* (Amsterdam: Rodopi, 1985), pp. 730-731.

² Joannis Jacobi Mangeti, *Bibliotheca Scriptorum Medicorum, Veterum et Recentiorum*, 2 vols. (Genevae: Perachori et Cramer, 1731), vol. 1, pp. 526-527; Albrecht von Haller, *Bibliotheca Chirurgica. Qua Scripta ad Artem Chirurgicam Facientia a rerum Initiis Recensentur*, 2 vols. (Basle & Berne: Scheighauser & Haller, 1774), vol. 1, p. 392; *idem*, *Bibliotheca Medicinæ Practicæ qua Scripta ad Partem Medicinæ Practicam Facientia a Rerum Initiis Recensentur*, 4 vols. (Basle & Berne: Schweighauser & Haller, 1779), vol. 3, pp. 270-271; *idem*, *Bibliotheca Anatomia. Qua Scripta ad Anatomem et Physiologiam Facientia a Rerum initiis Recensentur*, 2 vols. (Tiguri: Orell, Gessner, Fuessli, et socc., 1774), vol. 1, p. 726, vol. 2, p. 489; Stephani Hieronymi de Vigilius von Creutzenfeld, *Bibliotheca Chirurgica in qua Res Omnes ad Chirurgiam Pertinentes Ordine Alphabetico*, 2 vols. (Vindobonae: Joannes Thommae, 1781), vol. 1, pp. 455-456, 1624; N.F.J. Eloy, *Dictionnaire Historique de la Médecine Ancienne et Moderne: Ou Mémoires Disposés en Ordre Alfabétique pour servir a l'histoire de cette*

name of Suzanna Withall made a very serious complaint about his practice to the Censors of the London College of Physicians. Over the next five years, the malpractice case against Groenevelt developed into a cause célèbre in London, with important consequences for the whole medical community.³

Because Groenevelt's case dragged on over several years, and because it was so important, the documentation on the case is unusually extensive. Not only the chief protagonists but many of their friends and allies took up arms for or against Groenevelt. Consequently, the controversy surrounding Groenevelt's practice can tell us much about the general medical struggles in London at the end of the seventeenth century. In these medical struggles, some of the issues had to do with whether the new medical ideas being developed on the Continent would be accepted in England. In short, the case pitted a Dutchman who consciously set out to discover new and powerful specific remedies against a more cautious and traditionalist English medical establishment.

In later years, Groenevelt's trial for malpractice became known in Europe as an example of the conservatism of the English physicians. While authors writing in the English language have often been given to contrasting the advanced scientific ideas of English physicians like William Harvey with their more "backward" colleagues on the Continent, and especially in France,⁴ people on the Continent sometimes saw things the other way around. Certainly, insofar as the development of new surgical and medical treatments and clinical teaching counted as "advanced," the contemporary Dutch outpaced the English.⁵ Some Englishmen with Dutch educations therefore found Groenevelt's life to be a telling example of the conservative nature of the English medical establishment, who had ruined Groenevelt with their prosecution of him for malpractice, although his example had "taught his

science, vol. 2 (Mons: H. Hoyois, 1778), pp. 389-390; Guilielmus Godofredus ed Ploucquet, *Literatura Medica Digesta sive Repertorium Medicinæ Practicæ, Chirurgiæ atque Rei Obstetriciæ*, 4 vols. (Tübingen: Joannem Georgium Cottam, 1808), vol. 1, pp. 169, 178, 182, 184, 187-189, 194, 205; *Dictionnaire des Sciences Médicales: Biographie Médicale*, vol. 4 (Paris: Panckoucke, 1821), pp. 525-526; Dezeimeris, *Dictionnaire Historique de la Médecine Ancienne et Moderne*, vol. 2 (Paris & Brussels: Béchét Jeune, MM. Leroux et Périchon, 1834), pp. 632-633; Bayle et Thillaye, *Biographie Médicale par ordre Chronologique; D'après Daniel Leclerc, Eloy, etc.*, vol. 2 (Paris, 1855; reprint Amsterdam: B.M. Israël, 1967), pp. 92-93.

³ For a brief discussion of the case, see Harold J. Cook, *The Decline of the Old Medical Regime in Stuart London* (Ithaca: Cornell University Press, 1986), pp. 240-243. Unfortunately, G.N. Clark, in his *A History of the Royal College of Physicians of London* (Oxford: Clarendon Press, 1964-1966), pp. 453-455, dismisses the Groenevelt case as an instance of the Censors acting against a quack, writing off Groenevelt with the sentence: "little is known of his practice except that he claimed to be a specialist in gout and stone" (p. 455).

⁴ The controversy between Harvey and Jean Riolan, Jr., is often used to illustrate the "backward" nature of French medicine. For an attempt to alter this view, see L.W.B. Brockliss, "Medical Teaching at the University of Paris, 1600-1720," *Annals of Science* 35, 1978, pp. 221-251.

⁵ See esp. Owsei Temkin, "The Role of Surgery in the Rise of Modern Medical Thought," *Bulletin of the History of Medicine* 25, 1951, pp. 248-259, who begins by referring to the Dutch of the turn of the 18th century before moving on to the turn of the 19th century French. Also see Harm Beukers, "Clinical Teaching in Leiden from its beginning until the end of the Eighteenth Century," *Clio Medica* 21, 1987/1988, pp. 139-152.

envious Prosecutors the Safety and Value of his Practice."⁶ So, too, the contributor to an early 19th century French medical dictionary, who clearly favored "heroic" therapies, discussed Groenevelt's case and concluded that despite the success he had with his powerful new remedy, the London College of Physicians sentenced him to Newgate in 1693 (in fact it was 1697), which ruined him. The moral was that "On y retrouve les progrès de la science entravés également et par l'abus et par l'enthousiasme."⁷

There is no need to argue about which nation's medicine was better during the late seventeenth century. The point is simply that there were many medical traditions in the 17th century, not only among various European regions but within local medical communities: each had its own high moral and intellectual standards; each had its own view about what constituted good medicine. The questions surrounding the practice of Joannes Groenevelt therefore nicely bring out some of the issues at stake in the London medical community during the 1690s.

The Malpractice Complaint

On 27 July 1694, over a year after the event in question, Suzanna Withall and three other women appeared before the *comitia censorum* of the College of Physicians in London.⁸ This committee was composed of the President and Registrar of the College, together with four Censors chosen each year at the end of September by a vote of all the Fellows of the College. One of its several duties was to investigate medical complaints: complaints of people practicing medicine in London without the license of the College, or complaints about those practicing badly.⁹ At this meeting in July, one part of the business of the *comitia* was to hear the complaint

⁶ Henry Bracken, *The Midwife's Companion, or, a Treatise of Midwifery* (London, 1737), p. 24. Bracken had studied under Boerhaave in Leiden, to whom he dedicated his book. I am very grateful to Cathy Crawford for this reference.

⁷ Entry by Al. Cazenave, *Dictionnaire de Médecine, ou Répertoire Général des Sciences Médicales*, 2nd ed., 30 vols. (Paris: Béchét, 1834), vol. 6, p. 345.

⁸ According to a later account of Groenevelt's, Mrs. Withall and her friends had first tried to complain of his practice in 1692-1693, but since one of the Censors that year, Josiah Clerk, had had good experience with the remedy Groenevelt had used, the Censors dismissed the complaint: Joannes Groenevelt, *De Tuto Cantharidum in Medicina Usu Interno* (London: Typis J.H. prostant venales apud Johannem Taylor, 1698), reader's preface. There is no record of the complaint of 1692-1693 in the Annals of the Royal College of Physicians. Clerk was no longer a Censor in 1693-1694. An important source for Groenevelt's ideas, *De Tuto* had a second edition from the same publisher in 1703 as *Tutus Cantharidum in Medicina Usus Internus*, which is identical to the first except for some additions (pp. 135-157); and it had an English translation in 1706: John Greenfield, Dr., *A Treatise Of the Safe, Internal Use of Cantharides in the Practice of Physick ... Now Translated into English with his Approbation, By John Marten, Chyrurgeon. To which are added, Several further and very remarkable Observations and Histories of the said Doctor, also of the Translator and others* (London: Printed for Jeffrey Wale at the Angel in St. Paul's Church-yard, and John Isted at the Golden Ball against St. Dunstan's-church in Fleet-Street, 1706). I have compared all the editions, and where necessary will refer the reader to the appropriate page numbers of each.

⁹ For more information about the way in which the *comitia censorum* functioned, see Cook (n. 3), *Decline of the Old Medical Regime*, pp. 77-93.

of Suzanna Withall, a local Englishwoman, about how she had been harmed by the practice of Dr. Joannes Groenevelt, a licentiate of the College. She was supported in her testimony by three other witnesses, all from the parish of St. Mary Overy, or St. Saviour's parish, located at the south end of London Bridge in Southwark.¹⁰

The testimony that Mrs. Withall and her three companions gave this day, later supplemented by the declarations of Mr. Withall and two other women, became the foundation for the case against Joannes Groenevelt that would go on for several years, as Groenevelt's case slowly made its way through the College of Physicians and then the common law courts. On succeeding occasions, the Censors asked the women to repeat or to verify their statements; while some details were added to the original testimony and small contradictions crept in, their story remained fairly consistent with their first complaint. As a matter of fact, some of the very words the Registrar used to record their initial testimony were later set down in the depositions written out for them to swear to before a notary, suggesting that the College officials placed their own faith in the Registrar's transcription of the original testimony. Thus, to avoid repetition, it is possible to integrate the various versions of Mrs. Suzanna Withall's story given between 1694 and 1697 into one account.

On about 20 March 1692/3 – a year and a half before the first recorded complaint to the Censors – Groenevelt attended Mrs. Suzanna Withall, later identified as the wife of William Withall, a chapman (an itinerant retailer of small goods).¹¹ She had seven children,¹² one just recently born. As usual in the period, medical practice was not a private affair, but conducted in front of friends, family, and attendants. When Groenevelt arrived at her rooms, he found Mrs. Withall being cared for by four women from the same parish: Prunella Beckett, a nurse; Joanna Walding, wife of William Walding; Jane Daylight, a midwife (and a Quaker); and Barbara Curtis, the wife of John Curtis, a cordwainer (leather worker).¹³ When all her attendants later swore to their depositions, they all made their marks on the document rather than signing their names; and perhaps Mrs. Withall herself was illiterate.¹⁴ In short, Groenevelt found himself called on to help an ordinary woman of the period, who was as usual being helped in time of need by two people who seem to have been paid for their services (nurse Beckett and midwife Daylight), and two who were probably friends or neighbors (Joanna Walding and Barbara Curtis).

When Groenevelt arrived, Suzanna Withall told him that she had "received a

¹⁰ For a recent account of this neighborhood, see Jeremy Boulton, *Neighbourhood and Society: A London Suburb in the Seventeenth Century* (Cambridge: Cambridge University Press, 1987).

¹¹ Annals 7:100. I would like to thank the Royal College of Physicians for permission to cite and quote from their records, and the Librarian, Geoffrey Davenport, for his assistance over the years. On the chapmen, see Margaret Spufford, *The Great Reclothing of Rural England: Petty Chapmen and their Wares in the Seventeenth Century* (London: Hambledon Press, 1984).

¹² Annals 6:154-155.

¹³ These identifications come from the depositions they swore, recorded in Annals 7:100-103.

¹⁴ Withall herself did not swear to a deposition.

hurt in her Labour".¹⁵ According to nurse Beckett (later supported by the testimony of all the other women) Mrs. Withall was suffering from a "soreness in her lower parts, which she complained of after her lying in";¹⁶ and although she remained able to walk and go to church, she had already consulted a leading male-midwife, Dr. David Hamilton, for her complaint, apparently without success.¹⁷ Someone (who was never identified) had then advised Mrs. Withall to send for Dr. Groenevelt.

So far, Withall was doing what typified the medicine of the period: people did what they could by themselves before sending for help, and then called in someone who could treat them. If that did not help, they called in someone else.¹⁸ But they did not do so randomly: people depended on information about practitioners gathered mostly by word-of-mouth but supplemented by the increasing flood of medical advertisements. Mrs. Withall did not just send for anyone, then, she sent for Dr. Groenevelt, and she did so because of a recommendation.

Presumably, Groenevelt had been recommended to Mrs. Withall because he had a reputation for being able to treat her complaint. As it happened, Groenevelt had tried to make himself better known for the treatment of urinary problems just the year before, when he published a little pamphlet proclaiming that he had a remedy that would provoke urine gently. The pamphlet was ostensibly written on the subject of the gout, which his new remedy cured marvelously, Groenevelt said. He tried to defend himself against the accusation of being "accounted only a pretender to what I profess" (that is, a "quack") by citing both his M.D. and his license from the College. In the course of treating the stone successfully "both by inward remedies and manual operation," he wrote, he had discovered that gout was a disease just as painful as the stone and "altogether of the same origin." He had therefore turned his attention to treating it, and "by the blessing of God" had discovered "a seldom failing method for the cure of, and preservation from that disease."¹⁹ The pamphlet went on to explain his theory of the cause and cure of gout, concluding with his announcement that he had a special remedy of his own,

¹⁵ Annals 6:154-155.

¹⁶ Annals 6:155; repeated 7:100.

¹⁷ Although Hamilton was a licentiate of the College, the record does not show what he might have said about Withall's condition prior to Groenevelt's treatment. Hamilton, who had studied at Leiden and then Paris, became a Fellow of the College after Queen Anne made him one of her physicians-in-ordinary. He also later obtained a knighthood. Munk (n. 1), *Roll of the Royal College*, vol. 2, pp. 12-13.

¹⁸ On the subject of patients' behavior in early modern England, see especially the many publications of Roy Porter, including his "The Patient's View: Doing Medical History from Below," *Theory and Society* 14, 1985, pp. 175-198; *idem*, ed., *Patients and Practitioners: Lay Perceptions of Medicine in Pre-industrial Society* (Cambridge: Cambridge University Press, 1985); *idem*, "The Language of Quackery in England, 1660-1800," in *The Social History of Language*, ed. Peter Burke and Roy Porter (Cambridge: Cambridge University Press, 1987), pp. 73-103; *idem*, and Dorothy Porter, *In Sickness and in Health: The British Experience 1650-1850* (London: Fourth Estate Press, 1988); *idem*, *Health for Sale: Quackery in England 1650-1850* (Manchester: Manchester University Press, 1989).

¹⁹ Groenevelt, *Arthritology: or, A Discourse of the Gout* (London: Printed for the Author, 1691), sigs. A2-A3. In Martin's translation of Groenevelt's *Treatise* (n. 8), pp. 287-288, it is said that Groenevelt first wrote the tract on gout in Latin, and that it was translated into English by Groenevelt's colleague, Dr. Richard Brown, then physician to His Majesty's fleet.

which brought off urine gently but in large amounts, without the necessity of bleeding. And although Groenevelt's special diuretic had been advertised in a pamphlet on the gout, he implied that his medicine might be used to treat other complaints – like Withall's.

Mrs. Withall seems to have known very well what she wanted from Groenevelt, for when Groenevelt came, she "related her griefs" to him and "desired him to administer some thing to her, that might recover her." The question of diagnosis figured into the testimony hardly at all until the Censors later questioned Groenevelt about it: the witnesses probably thought Withall's own description of her problem good enough, and they probably had already decided what kind of medicine would be useful for her illness. But in answer to direct questioning, Groenevelt said that he had examined Withall's lower parts "with an instrument, which was stained by the matter" it brought away from her bladder.²⁰ He later mentioned his use of a silver probe for diagnosis in several cases of urinary problems,²¹ although Nurse Beckett and Barbara Curtis directly contradicted him in Withall's case, saying that Groenevelt had not used an "instrument or probe" in examining Withall, but only his hand.²²

Whatever the diagnostic technique, Groenevelt declared Mrs. Withall to have an ulcer of the bladder, which he could treat. Since ulcers in the bladder were a possible sign of venereal disease, Withall's claim to a vague hurt being caused by her recent lying-in may have been more than a simple lay person's confusion about what was wrong. Provoking urination was also one of the commonly advertised treatments for venereal disease: it is therefore quite likely that Groenevelt had been called upon by Mrs. Withall because someone already thought that the medicine he had, which would bring on copious and gentle urination, would do her good.²³

Negotiation between Mrs. Withall and Dr. Groenevelt then followed, as was also typical in the period. Again it is nurse Beckett who added details: she stated that the doctor claimed to be able to "take away" Mrs. Withall's problem in three days. Mrs. Withall agreed to his treatment, and they then negotiated a price: he would be paid £4, half of which would be paid to him at once, with the other 40s. to be paid "when he had performed the Cure." This was an expensive treatment, suggesting that the Withalls were well-off by contemporary standards; the agreement to pay half in advance and half upon cure was a common practice, although

²⁰ Annals 6:175-176.

²¹ For instance, Groenevelt (n. 8), *De Tuto and Tutus*, pp. 97-98; *Treatise*, pp. 109-110.

²² Annals 6:176-177.

²³ That cleansing the bladder was one of the more common methods of treating syphilis is evidenced by a handbill distributed by one of Groenevelt's neighbors, one T.C. living on "Frogmorton" street, London, at the sign of the Golden Ball opposite Drapers' Hall, who had practiced in London for 20 years (Groenevelt lived in Throgmorton street next to Drapers' Hall). He advertised "A pleasant Drink which purges by Urine, at 2s. 6d. the Bottle ... well known to be the most successful, both for preventing, and curing, perfectly and speedily the Venereal Pox." This handbill is no. 139 in the collection of 231 small medical advertisements collected in the British Library, 551.a.32.

frowned upon as quackish by most learned physicians. Mrs. Withall also declared that Groenevelt told her that if his treatment did not work, "she might apply her self to the College of Physicians, whereof he himself was a Member, and she should have redress." The use Groenevelt made of his position as a licentiate of the College to reassure Withall about the efficacy of his treatment was also common: he himself had announced his membership in the College in his pamphlet on the gout, and the medical advertising of the period, including frontispieces of medical books, often included phrases linking practitioners to people or organizations of high prestige. Still, the Registrar presumably noted this down as important because he disliked such a use of College affiliation. Nurse Beckett, Joanna Walding, and midwife Daylight, who were present at the negotiations, all later confirmed the price and Groenevelt's reassurance about complaining to the College, Daylight only adding that Groenevelt had also promised "to return the money if he did not cure" Mrs. Withall.²⁴ While such financial arrangements were common, then, they smacked too much of quackery for some of the Censors, and so each time they interviewed the witnesses the Censors elicited testimony from them about payment being received before the remedy had been administered.

At some point thereafter, Groenevelt returned with "a Dose of Pills" (small round balls containing medicine that Mrs. Withall was to eat),²⁵ which everyone agreed were eighteen in number. The doctor freely admitted that he had made up the pills himself, rather than leaving instructions about what to get at the apothecary's. He also later argued that he had brought another eighteen pills for Withall to take along with these first eighteen, but none of the witnesses supported his testimony on this. Withall was to take three pills at a time, a dose every three hours, the whole to be taken in twelve hours.²⁶ Groenevelt also instructed Barbara Curtis to make sure that Withall took "great quantities of Chicken Broth" in between the pills, and Curtis testified to buying "the fowles to make it and saw her take it";²⁷ William Withall, the husband, also later testified that his wife took the first three pills whole, but that the others were broken up in a spoon and taken in chicken broth. Groenevelt later said that he himself administered the first fifteen pills to Mrs. Withall,²⁸ and Barbara Curtis swore that she and Groenevelt were

²⁴ Annals 6:154-155.

²⁵ "*Pilula* is a solid Medicine, made like a little Ball of Powder, Gums, Extracts, etc. mixed with a glutinous Liquor" to hold it together: Stephen Blancard, *A Physical Dictionary*, transl. J.G. [Joannes Groenevelt?], (London: Printed for J.D. and are to be sold by John Gellibrand at the Golden-Ball in St. Paul's Church-yard, 1684), p. 231.

²⁶ Annals 7:104. What Groenevelt seems to have had in mind was counting in the same way that physicians counted "tertiary" fevers: the first and the last recurrence were counted, so that according to our counting practices a three-day fever had a two-day periodicity. In other words: he ordered three pills to be taken in hour one; three to be taken on the third including the first hour, or what we would call the third hour; three to be taken on the third hour after, including the third hour, which is what we would call the fifth hour; etc., according to what we would call "every other hour," finishing on what we would call the eleventh hour, "within" twelve hours. But also see the other way he described his course of treatment, p. 19 below.

²⁷ Annals 7:103.

²⁸ Annals 7:105.

both present when Mrs. Withall took her first pills;²⁹ but Curtis was never questioned about this further and the other witnesses flatly contradicted Groenevelt, saying he was not present when Withall took the pills. William Withall later claimed that he had risen at five o'clock in the morning to give his wife the first three pills himself.³⁰

But the women quickly began to suspect that something was wrong with the pills. As soon as she took them, Withall said, "they instantly put her into such a racking Torture, and miserable Condiçion, as cannot be expressed." Withall herself began to suspect that the pills were "not proper for her Distemper" and entreated Groenevelt to give her nothing that had poison in it. Groenevelt assured her that the pills had nothing like a poison in them, for "they were prepared according to Art."³¹ Curtis said that while she and Groenevelt were both present, Withall took some pills which "put her into a great pain, yet [Curtis] persuaded her to take them on according to order."³² Nurse Beckett also said that Withall soon "had occasion often to make water, which was at first with great pain, and bloody, but afterwards she made perfect blood to the quantity of six quarts, or thereabouts."³³ Midwife Daylight noticed that the pills caused Withall to make bloody urine followed by "perfect blood, with a small lump of Flesh."³⁴ Barbara Curtis "further said that soon after the taking said Pills [Curtis] did see a Bason full of blood and water with skins at the bottom of the bason, part of which she was by, while the said Susan Withall made, which she did with great pain and Torment."³⁵ Despite the painful urination and shedding of lumps of matter, Suzanna Withall managed to take fifteen of the pills.

But midwife Daylight grew increasingly concerned, and finally sent for Groenevelt to return immediately. If Mrs. Withall began to take the pills around six or seven in the morning (allowing for a little exaggeration on Mr. Withall's part), if the pills were counted according to the suggestion above, and if Withall stuck to Groenevelt's orders, the fifteenth pill would have been taken about two or three o'clock in the afternoon. The doctor seems to have come immediately: Mr. Withall said Groenevelt returned about "four of the Clock that day," presumably from somewhere near his home near the stock exchange, north of the river. He apparently returned to a frantic household. Mrs. Withall must have been exhausted by now, and she continued to urinate with great pain and much blood. Withall herself confronted Groenevelt. He explained that his pills "were of such virtue, that

²⁹ Annals 7:103.

³⁰ Annals 7:105.

³¹ Annals 6:154-155.

³² Annals 7:103. This testimony also implies that Groenevelt was present, at least at the beginning of the treatment.

³³ Annals 6:155.

³⁴ Annals 6:155.

³⁵ Annals 7:103.

if the College knew the worth of them, they would value them at a high rate,³⁶ testimony confirmed by midwife Daylight.³⁷ But Groenevelt grabbed up the remaining three pills and threw them into the fireplace. When Withall's husband "ask't him why he did so, he replied he was but a man, and had he come sooner he would have thrown more of them away."³⁸ His own later explanation to the Censors was that the "clamour of the people" around him forced him to get rid of the remaining pills.³⁹

One pill, however, escaped the flames, and midwife Daylight fished it out, wrapped it in paper, and gave it to the "nurse" (presumably Beckett) to preserve.⁴⁰ The pill soon made its way into Mr. Withall hands, who returned it to midwife Daylight later on. She broke it open, "and doth believe it was made with like to Spanish Flies."⁴¹ Nurse Beckett reported that when she had "bruised" the pills with a spoon to make them easier for Withall to swallow, she had observed "some shining greenish things" in them, which she told Withall seemed to be Spanish Flies. Mr. Withall took the remains of the pill to the nearby hospital of St. Thomas, "to show it to the physicians, and Chirurgeons."⁴² The "severall able Physicians, and others" there, all agreed that the pills "were for the most part Composed of Spanish Flies, and other things altogether improper for her Infirmary." Joanna Walding said that Groenevelt himself "did tell her that the Pills were made of Spanish Flies."⁴³

All the witnesses also testified that since having taken the pills, Mrs. Withall "hath been troubled with great pains, and burnings in her back, with Convulsions, and violent sweats." She herself described her present condition as one of "extream weakness" and a great "Indisposition," so that she could not now stand, walk about, or dress herself, and grew worse every day, "by which means, [Groenevelt] hath not only undone her, but her husband, and seven Children."⁴⁴ Another nurse from the neighborhood, Jane Butterfield, swore that after having taken Groenevelt's pills, Mrs. Withall came to her to ask her "to look after her as a Nurse, and [she] accordingly attended her Twenty Two Weeks, during which time she made great Complaints of pain in making water, and was in so weak and Languishing Condition during all the time aforesaid that ... Mrs. Withall expected every night to have died."⁴⁵ All the women continued to swear even four years after the event that

³⁶ Annals 6:154-155.

³⁷ Annals 6:155; 7:102.

³⁸ Annals 7:105.

³⁹ Annals 6:176-177.

⁴⁰ Annals 6:155.

⁴¹ Annals 6:155; 7:102.

⁴² Annals 6:155. It may be significant that while midwife Daylight saved the pill and urged Mr. Withall to show it to the practitioners at St. Thomas, as an illiterate woman she did not go there herself but had the one man connected to the sufferings of Mrs. Withall go instead.

⁴³ Annals 6:155; 7:100.

⁴⁴ Annals 6:154-155.

⁴⁵ Annals 7:104.

Suzanna Withall continued to be in a very weak and "languishing" condition, which might still result in her death.⁴⁶

The question then became whether Groenevelt's use of what Nurse Beckett and midwife Daylight called "spanish flies" might have caused these terrible problems for Withall. The physicians and surgeons at St. Thomas's confirmed that spanish flies were present in the pills, and Groenevelt himself admitted it when questioned directly. Spanish flies were also known as blister beetles, or cantharides. Many contemporaries thought there were more than one kind of beetle known as spanish fly: Groenevelt himself wrote that there were two kinds, a smaller kind being cantharides proper, and a larger kind (called "Buprestis" in Latin and "Burn Cow" in English) also going by the name.⁴⁷ The most thorough contemporary study of the cantharides beetle (including careful microscopical investigations) also dealt with two kinds.⁴⁸ The smaller beetle, or cantharides proper, was defined by one contemporary as a footed, winged, hard-shelled, oblong insect, the size of a rather large fly, of a shining green and gold color, found on grains, roses, ash trees, and olive trees in Spain and Italy, of a biting and corrosive taste.⁴⁹ The beetles contained both a yellow and a green oil, the second of which gave its color to the whole powder;⁵⁰ moreover, their glittering green wings retained their color after powdering: they were probably the "shining greenish things" noticed by Prunella Beckett.

Since the ancients, these beetles had been collected, dried, and powdered for medicinal purposes; they remained one of the few animals left in the contemporary pharmacopoeia.⁵¹ Among the authors known to Groenevelt as having mentioned the usefulness of cantharides in medicine were Hippocrates, Dioscorides, Ovid,

⁴⁶ Annals 7:101-104.

⁴⁷ Groenevelt (n. 8), *De Tuto* and *Tutus*, p. 10; *Treatise*, p. 11.

⁴⁸ Joh. Daniel Geyer, *Tractatus physico-medicus de cantharidibus* (Lipsiae et Francofurti: Prostat Apud Georg. Heinr. Oehrlingium, Excudit Joh. Zach. Nisius, 1687). Currently, the "spanish fly" beetle proper goes by the names of *Lytta vesicatoria* (Linnaeus), but the drug cantharidin can be obtained from a number of beetles of the genera *Lytta*, *Mylabris*, and, to a lesser extent, *Epicauta*: John D. Pinto, and Richard B. Selander, *The Bionomics of Blister Beetles of the Genus 'Meloe' and a Classification of the New World Species*, Illinois Biological Monographs, no. 4 (Urbana, University of Illinois Press, 1970), pp. 9-10.

⁴⁹ Stephen Blankaart, *Lexicon Medicum Renovatum*, 1st ed. 1679 (Leiden: Samuel Luchtmans, 1735), p. 172: "Cantharides, est insectum pedatum, alatum, vaginipinne, oblongum, muscae majoris magnitudine, colore viridi, & aureo, lucente, reperiendum in frumentis, rosis, fraxinis, oleastris, in Italia & Hispania, saporis acris & corrodentis ..." Other authors thought the beetle could be found in parts of the eastern Baltic, and the northern Netherlands; the English physician-naturalist Martin Lister even included "Cantharus major" among English beetles (Martin Lister, "Scarabaeorum Anglica terrestrium historia cum figuris Dris. Richardo Myddleton, Maney, etc.," British Library, Sloane 88a., first picture).

⁵⁰ *Dictionnaire de Médecine*, 6: 336, article by E. Soubeiran: "L'huile grasse jaune, ainsi que l'huile verte, n'ont pas la propriété vésicante. La première est insoluble dans l'alcool; la seconde se rapproche des résines et y est très soluble. C'est à elle qu'il faut attribuer la couleur verte des cantharides."

⁵¹ The *Pharmacopoea Ultrajectina* (Utrecht, 1656), p. 19, lists cantharides among the fifteen simples under "animalia, eorum partes, & excrementa," but gives no recipes containing it, even among the unguents and plasters.

Pliny, Galen, Serapion, Silvaticus, Rhasis, Avicenna, Varignana, Scaliger, Redi, Cardan, Fallopius, Aldrovandi, Capivaccius, Riverius, Fabricius ab Aquapendente, Hoffman, Bartholin, Trincavellus, and Baglivi.⁵² Cantharides had come to be used most commonly as an externally applied blistering agent to draw off phlegmatic humors. But the Dutch author and secretary to the Prince of Orange, Constantijn Huygens, wrote in his *Korenbloemen* of 1672, that a blister of spanish fly behind the ear could restore sight.⁵³ Later in the century, N. Lémery recommended the external use of cantharides behind the ears and shoulders for diseases of the eyes and nose, apoplexy, and paralysis, and applied to the legs for rheumatism and sciatica.⁵⁴

But taken internally, cantharides were also known popularly as a dangerous substance that had to be given only with great care. Ovid wrote: "When given by a parent, you ought to drink the juices of cantharides."⁵⁵ The reason why only a watchful *pater familias* ought ever to give cantharides had to do with both its reputation as a poison, and its reputation for causing intense irritation of the urinary tract, stimulating the sexual organs. For instance, in the early eighteenth century, the President of the College of Physicians, Sir Hans Sloane, received a long report from someone claiming to have found that his wife had been plied with several doses of cantharides by an elderly male visitor in order to get her to lie with him. "I have since inquired of this, and find it's common for the Boys to buy it at the apothecarys and give it the maid. Oh! horrid thing that renders Conversation dangerous."⁵⁶ Thus, many people knew of the use of Spanish fly as an external blister or a dangerous internal aphrodisiac. While Groenevelt had a rationale for using this ingredient in a medicine to be swallowed (which we will examine below), most people thought of its internal use as risky at best.

In short, even allowing for some exaggeration in the testimony, many people – including the College Censors – thought that Groenevelt's pills had caused Suzanna Withall great harm because they contained cantharides. Given the seriousness of the charges and the extent of the testimony from reputable people, the Censors of the London College of Physicians decided to investigate further. Over the course of the next several years, the Censors heard and reheard the testimony of Withall and her companions. Groenevelt himself was called before

⁵² Groenevelt (n. 8), *De Tuto and Tutus*, pp. 9-22; *Treatise*, pp. 10-26.

⁵³ Huygens, *Korenbloemen*, vol. I, p. 617: "k Heb Spaansche Vliegen sien gebruycken achter d'orren/ Met merckelicke baet, voor menschen die het licht/ Begonn te schemeren en 't klaerden haer gesicht." Quoted in J.B.F. van Gils, "Spaansche Vlieg," *Nederlandsch Tijdschrift voor Geneeskunde*, 90/1, 1946, pp. 377-380, on p. 377.

⁵⁴ Lémery, *Traité Universel des Drogues Simples*, 1699, cited in Van Gils (n. 53), "Spaansche Vlieg," p. 378.

⁵⁵ "Cantharidum sucos dante parente bibas." Ovid, *Ibis*, ed. Frideric Walther Lenz (Torino: G.B. Paravia, 1956), line 306, p. 36. Martin translates this passage freely as "From Parent or Physician I advise/ Thou may'st receive the juice of Spanish Flies," in Groenevelt (n. 8), *Treatise*, p. 10.

⁵⁶ Anonymous letter to Sloane, addressed as President of the College of Physicians, 27 November 1731, British Library, Sloane 4034, fol. 77. Also see Henry E. Sigerist, "Alexandre Ricord's Dissertation of 1824," *Bulletin of the History of Medicine* 9, 1941, pp. 468-474.

them to answer the charges on two occasions, although his full reasons for administering pills of cantharides were not recorded in the Annals of the College by the Registrar.

Space does not permit a full examination of all the twists and turns of the legal case, nor a complete explanation of why it took so many years to come to a conclusion: the explanation has to do with divisions within the College of Physicians itself. Very briefly, the College Censors found Groenevelt guilty of malpractice for prescribing pills in which 36 grains of cantharides were to be taken in a period of 12 hours. They decided to fine him the large sum of £20 and send him to the King's prison of Newgate for 12 weeks,⁵⁷ and after being given a few days to think things over, Groenevelt had indeed been hauled off to prison by the College Beadle on Thursday, 15 April 1697 (although he obtained his freedom on a plea of *habeas corpus* on the 21st).⁵⁸ Groenevelt sued the Censors for false imprisonment (a case finally resolved in the Censors' favor in 1700), while the Censors in turn supported Mrs. Withall's suit against Groenevelt for £2000 damages – a highly unusual proceeding. In the public controversy that followed, the Censors continued to portray Groenevelt as a general danger to the public, someone who should be prevented from practicing: in short, a common quack, like the cataract-remover Cornelius Tilburg and other empirics who were flooding into London from The Netherlands and Germany at the end of the seventeenth century.⁵⁹

But was this Dutchman, Joannes Groenevelt, simply a quack? Indeed, who was he? And why would he give a woman with bladder problems large quantities of cantharides?

Joannes Groenevelt

Jan Groenevelt was baptized on 14 May 1648 in the Dutch Reformed Church of Deventer,⁶⁰ a thriving market city and former member of the Hansa league, sited on the IJssel River in the east of the United Provinces. Jan was the only surviving son of older parents: Frans Groenevelt,⁶¹ a well-to-do glass engraver, and Goedekint ter Kloeken,⁶² who had been twice widowed before. The family lived Op de

⁵⁷ "Warrant for Commitment of J. Groenevelt to Newgate," [9 April 1697], Sloane 1786, fols. 157-8; *The Post Boy*, No. 305, Sat. April 17th to Tues. April 20th, 1697; Annals 7:110-111.

⁵⁸ His *habeas corpus* received notice in *The Protestant Mercury*, No. 154, Wed. April 21 to Fri. April 23, 1697, which agrees with the report in the Annals about his case being heard on "the first day of this Terme" (Annals 7:110, 112), since the Easter term usually began 17 days after Easter, which was on 4 April in 1697: C.R. Cheney, ed., *Handbook of Dates for Students of English History* (London: Royal Historical Society, 1970), pp. 67-68, 159.

⁵⁹ There are many examples of such people found in Charles J.S. Thompson, *The Quacks of Old London* (London: Brentano's, 1928).

⁶⁰ Klapper Hervormde Dopen Deventer: 1647-1656, Gemeentelijke Archiefdienst Deventer.

⁶¹ Doopvermeldingen, Gemeentearchief Zutphen.

⁶² Klapper Hervormde Dopen Deventer 1591, juli 2 - 1616, mei 28, Gemeentelijke Archiefdienst Deventer.

Graven in Deventer, on the north side of the market square that borders the Grote Kerk, in the center of town. Although his father died when Jan was not quite 17 years old,⁶³ all Frans' estate went to his widow as long as she did not remarry.⁶⁴ She did not.⁶⁵ Jan was able to attend the Latin school, and then at age 19 he matriculated into the recently established Illustrious School.⁶⁶ The Deventer Illustrious School was one of the best of the many excellent *athenaea* springing up throughout the Netherlands in the mid-seventeenth century.

After a year and a half at the Illustrious School, Groenevelt went on for further education in medicine at Leiden. At Leiden, he studied under François de Le Boë Sylvius.⁶⁷ Sylvius was one of the great teachers of medicine his day, a teacher who, like the professors in the humanist Italian schools, stressed the practical ends of knowledge. He took students with him on his rounds of one of the local hospitals in Leiden, and he established a laboratory in his house in order to give further instruction in chemistry.⁶⁸ Groenevelt also witnessed many anatomical dissections performed by Sylvius; and as a student he also witnessed the surgical lithotomies of Noach Smaltius, then city surgeon of Haarlem.⁶⁹ Smaltius had begun to cut for the stone in Haarlem in 1668, following the novel technique of the French surgeon Collot, who had in turn demonstrated his approach to the operation in Amsterdam.⁷⁰

Groenevelt went on to complete his medical education at Utrecht, probably because of the terrible epidemic that came to Leiden at the end of the summer and during the autumn of 1669, which forced the university to close for a time.⁷¹ In Utrecht, Groenevelt had continued his medical studies under Ysbrand van Diemerbroeck. Van Diemerbroeck, too, was a good teacher, who like Sylvius emphasized

⁶³ Boedelinventaris, 1518-1811, vol. I, fols. 141a, 513: 18 March 1664, inventory of the property of Frans Groeneveld, Gemeentelijke Archiefdienst Deventer.

⁶⁴ "Testamenten in den peste van 't Jaar 1656 Verleden voor een Krankbesoeken volgens Stadregt 1655-1657," RA 108.a, fol. 121, will dated 6 August 1656, Gemeentelijke Archiefdienst Deventer.

⁶⁵ There is no record of any further marriage by her in the Deventer archive.

⁶⁶ Jacob Cornelius van Slec, *De Illustre School te Deventer 1630-1878* ('s-Gravenhage: Martinus Nijhoff, 1916).

⁶⁷ He mentions Sylvius with much appreciation in his thesis, *Disputatio medica inauguralis, De calculo vesicae* (Utrecht: Ex Officina Meinardi a Dreunem, 17 March 1670), esp. sig. B^v.

⁶⁸ E.D. Baumann, *François de Le Boë Sylvius* (Leiden: E.J. Brill, 1949); Harm Beukers, "Het Laboratorium van Sylvius," *Tijdschrift voor de Geschiedenis der Geneeskunde, Natuurwetenschappen, Wiskunde en Techniek* 3, 1980, pp. 28-36; Beukers (n. 5), "Clinical Teaching in Leiden."

⁶⁹ Groenevelt, *De calculo vesicae*, B^v-B2^v. Smaltius became city surgeon in Leiden in 1672: "t boeck van de Mr. Chirurgijns," *Gilden Archieven* No. 350, fol. 5, Gemeentelijke Archiefdienst Leiden. Also see H. Bitter, "Stadsoperateurs en Steensnijders in de 17de en 18de eeuw, te Haarlem," *Nederlandsch Tijdschrift voor Geneeskunde* 58, No. 2, 1914, pp. 569; and Jelle Banga, *Geschiedenis van de Geneeskunde en van hare Beoefenaren in Nederland* (1868; facsimile, Schiedam: Interbook International, 1975), p. 509.

⁷⁰ The cutting of Collot and Smaltius in Amsterdam caused the city to pass new ordinances governing lithotomy in 1668: *Privilegien, Willekeuren en Ordonnantien, Betreffende het Collegium Chirurgicum Amstelaedamense* (Amsterdam: Pieter vanden Berge, 1736), pp. 84-86.

⁷¹ This explanation for his move to Utrecht was suggested by Harm Beukers, based upon his understanding that many students shifted from Leiden to Utrecht at that time for that reason.

practical medical experience.⁷² After six months at Utrecht, Groenevelt finished his thesis on *De calculo vesicae*, and was promoted on 18 March 1670. He had completed one of the best medical educations available in Europe, an education that had introduced him to questions about medicine, surgery, and chemistry that might lead to the development of new medical techniques and treatments.

Groenevelt went on to further medical investigations. After marrying Christina de Ruijter of Amsterdam on 4 March 1672,⁷³ he entered into a joint practice with the surgeon Henricus Velthuys. Velthuys was distinguished enough to be made one of the two Amsterdam city surgeons, and had an especially good reputation as a lithotomist. Even in the dark time following upon the "Ramp Jaar" of 1672 – the disaster year, when the English attacked the Dutch by sea and the French, aided by the Bishop of Munster, invaded overland, conquering almost the whole of the country up to the "water-line" in Holland – the young Groenevelt became Velthuys' assistant, learning how to treat and cut for the stone from him. On Velthuys' deathbed Velthuys gave Groenevelt his instruments.⁷⁴

Not long after the death of his excellent surgical teacher Velthuys, Groenevelt borrowed 100 guilders in Amsterdam and took ship for London.⁷⁵ Earlier in 1674 the English had unilaterally made peace with the Dutch, leaving Louis XIV to carry on by himself. Groenevelt's home town of Deventer remained in difficulties caused by the French invasion, and elsewhere the Netherlands was full of well-educated medical doctors, restrictive municipal regulations, and economic difficulties caused by the ongoing war. Groenevelt therefore decided to try his medical fortunes abroad. Like many other skilled Dutchmen, Groenevelt travelled to England. The first child born to Joannes and Christina, a son, was baptized at the Dutch church at Austin Friars, in London, in early May 1675.⁷⁶ Six weeks later, Groenevelt finally obtained his papers of denization from the English Crown, allowing him the right to own property and to carry on his art in England.⁷⁷

Groenevelt had come to England in the belief that an Edict issued by Charles II during the war, in July of 1672, would allow him to practice medicine without hindrance. The edict had been published during the war in three columns of English, Dutch, and French, encouraging people from the United Provinces to resettle in England.⁷⁸ With Edict in hand, Groenevelt went about trying to establish

⁷² However, Diemerbroeck did not have ready access to a teaching hospital; I again thank Harm Beukers for sharing his observations with me.

⁷³ Ondertrouw register, Gemeentelijke Archiefdienst Amsterdam.

⁷⁴ Groenevelt, *Dissertatio Lithologica variis Observationibus et Figuris Illustrata* (London: J. Brighthurst, 1684), "Ad lectores." Velthuys was buried on 18 May 1674: Begraven register, Gemeentelijke Archiefdienst Amsterdam.

⁷⁵ Cancelled receipt, 29 November 1674, Sloane MS 2929, f. 5, British Library.

⁷⁶ Wm. J.C. Moens, *The Marriage, Baptismal, and Burial Registers, 1571 to 1874 .. of the Dutch Reformed Church, Austin Friars, London* (Lymington: Privately Printed, 1884), p. 29.

⁷⁷ Wm. A. Shaw, *Letters of Denization and Acts of Naturalization for Aliens in England and Ireland, 1603-1700*, Publications of the Huguenot Society of London, vol. 18 (1911), p. 114.

⁷⁸ English State Papers, 12 June 1672, SP 29/311/86-93, Public Record Office, Chancery Lane.

a medical and surgical practice in London in the usual ways. He met other people and practitioners who could refer patients to him, especially trying to make himself known to the large Dutch community in London: he and his wife became full members of the Dutch Reformed church at Austin Friars within a year and a half of their arrival in London.⁷⁹ To make himself better known to English patients, he set about translating his medical thesis into their language, which was published as '*Lithologia*': *A Treatise of the Stone and Gravel* in 1677.⁸⁰ Groenevelt not only translated his thesis from Latin into English, he cut out the references to other medical authors, making it more digestible to the general reader (and making himself look wiser).

Groenevelt also met members of the Royal Society of London, because his old friend from Deventer, Willem ten Rhijne, who now practiced in the capital of the Dutch East Indies, Batavia (now Jakarta), had sent a letter to Henry Oldenburg about a book manuscript he had written, a treatise containing information on moxibustion and acupuncture, practices he had learned about on a trip to Japan.⁸¹ Ten Rhijne asked the Royal Society whether they would like to publish the manuscript. The members of the Royal Society, especially Theodore Haak and Robert Hooke, were indeed very interested in what he had to say.⁸² Hermann Busschoff, a minister in Batavia, had earlier written on the use of moxibustion in treating diseases,⁸³ which had come to the attention of Christiaan Huygens, who had in turn written to his friends in the Royal Society about it. Huygens also recommended it to the English ambassador in The Hague, Sir William Temple, for his gout.⁸⁴ Temple did find relief from his gout by burning the moxa on his toe.⁸⁵

⁷⁹ J.H. Hessels, ed., *Register of the Attestations or Certificates of Membership, Confessions of Guilt, Certificates of Marriages, Betrothals, Publications of Bannes, etc. Preserved in the Dutch Reformed Church, Austin Friars, London, 1568 to 1872* (London and Amsterdam: Publ. for the Consistory of the London-Dutch Church, 1892), p. 106.

⁸⁰ Groenevelt, '*Lithologia*': *A Treatise of the Stone and Gravel; Their Causes, Signs, and Symptoms, With Methods for their Prevention and Cure. And some account also of The manner of the Collotian section. Written in Latin ... and rendered into English* (London: Printed for H[enry] C[rutindin] for J.T. and to be sold by R. Clavel at the Peacock in St. Paul's Churchyard, 1677). Parts of titles in single quotations are transliterated from Greek.

⁸¹ Wilhem ten Rhijne to [deceased] Henry Oldenburg, 23 July 1681, LBC.8.240-242, Royal Society of London. Because it was received after Oldenburg's death, the letter is summarized (No. 3138) rather than printed in A. Rupert Hall and Marie Boas Hall, eds., *Correspondence of Henry Oldenburg*, vol. 13 (London and Philadelphia: Taylor and Francis, 1986), p. 368.

⁸² Meeting of 18 January 1681/2: in Thomas Birch, *The History of the Royal Society of London*, vol. 4 (1756-1757; facsimile, Hildesheim: Georg Olms Verlagsbuchhandlung, 1968), p. 119.

⁸³ Herman Busschoff and Henry van Roonhuysse, *Two Treatises, The one Medical, Of the Gout, And its Nature more narrowly search'd into than hitherto; together with a new way of discharging the same. The Other Partly Chirurgical, partly Medical* (London: Printed by H.C. and are to be sold by Moses Pitt at the Angel in St. Paul's Church-yard, 1676). This work was published at the request of the Royal Society.

⁸⁴ J.A. Worp, *De Briefwisseling van Constantijn Huygens (1608-1687)*, vol. 6, 1663-1687 ('s-Gravenhage: Martinus Nijhoff, 1917), Letter No. 6995. "Aan H. Oldenburg," A la Haye, ce 16/26 Nov. 1675," pp. 368-369: "Si vous prenez la peine, Monsieur, d'en expliquer la substance au college, et si ce qu'il y a de medecins ont la bonté d'admettre un theologien *in suam messem*, je pense qu'on aura du plaisir à bien raisonner sur une these non encor soustenue en Europe, que je sache, et qui ne me semble pas manquer de toute apparence, si vous persistez dans le beau dessein de *nullius in verba*."

Antoni Leeuwenhoek went on to investigate moxa with his microscope, also reporting on it to the Royal Society.⁸⁶ This interest in moxibustion soon led Thomas Sydenham to mention it favorably in his book on the gout, as well.⁸⁷ In short, the Royal Society was indeed interested in seeing what Ten Rhijne had to say about moxibustion and the as yet unheard of practice of acupuncture. Some members of the Royal Society therefore went to visit Groenevelt, with whom Ten Rhijne was exchanging letters.⁸⁸ They authorized him to try to obtain Ten Rhijne's manuscript for publication, which he did. Groenevelt had a copy of Ten Rhijne's manuscript sent over from mutual friends in Amsterdam, and saw it through the press for the Royal Society.⁸⁹ Groenevelt's contacts with members of the Royal Society also helped his medical practice – for he soon proudly reported to his friend in Amsterdam, Casparus Sibelius, that he had successfully cut the son of a great person for the stone.⁹⁰

It was at about the same time, too, that Groenevelt established good relations with several other non-Anglican London physicians with whom he soon set up a joint practice: John Crell, a German Protestant and chemical physician, also educated at Leiden; Philip Guide, a French Huguenot refugee from Paris; Richard Browne, an English physician and excellent translator of many works from Latin into English; and John Pechey, a prolific author and the first translator of Thomas Sydenham's Latin books into English. It may have been Pechey who introduced Groenevelt to Thomas Sydenham himself in 1682.⁹¹

Together, these men established the only known example of a contemporary joint practice, which they called the Repository: a place where they collected a

Letter No. 7001 (6 January 1676, p. 371) is to Buschoff; and in letter No. 7011 (24 February 1676) again to Buschoff, Huygens passes on Temple's greetings to him (p. 373).

⁸⁵ [Sir William Temple], *Miscellanea* (London: Printed by A.M. and R.R. for Edw. Gellibrand, at the Golden-Ball in St. Pauls Church-yard, 1680), "An Essay Upon the Cure of the Gout by Moxa. Written to Monsieur de Zulichem. Nimmeguen June 18, 1677," pp. 189-238. Temple's story is summarized in George Rosen, "Sir William Temple and the Therapeutic Use of Moxa for Gout in England," *Bulletin of the History of Medicine* 44, 1970, pp. 31-39.

⁸⁶ A. Leeuwenhoek, letter of 14 May 1677, *Philosophical Transactions*, vol. XII, No. 136 (June 25, 1677), pp. 899-895 [sic for 905]. Leeuwenhoek possessed a copy of Busschoff's book and the Dutch translation of Ten Rhijne's book: L.C. Palm, "Italian influences on Antoni van Leeuwenhoek," in *Italian Scientists in the Low Countries in the XVIIth and XVIIIth Centuries*, ed. C.S. Maffioli and L.C. Palm (Amsterdam: Rodopi, 1989), pp. 161-162.

⁸⁷ Thomas Sydenham, *Tractatus De Podagra et Hydrope* (London, 1683); transl. into English in 1684 by James Drake, and several times thereafter. The passage occurs at the third paragraph from the end.

⁸⁸ Thomas Birch, *The History of the Royal Society of London for Improving of Natural Knowledge* (1756-57; Hildesheim: Georg Olms Verlagsbuchhandlung, 1968), vol. 4, pp. 122, 140.

⁸⁹ Letters of Groenevelt to Casparus Sibelius of Amsterdam, British Museum, Sloane MS 2729, fol. 109 (24 January 1682), fols. 116-117 (31 March 1682), fol. 118 (2 April 1682), and fol. 140 (30 May 1683); letters of Secretary of the Royal Society, Francis Aston, to Sibelius, fol. 119 (25 April 1682), fol. 137 (10 May 1683).

⁹⁰ This was the son of Sir John Godwin, the King's commissioner to Chatham: letter of Groenevelt to Sibelius, 9 May 1682, Sloane MS 2729, fols. 120-120A.

⁹¹ Letter of Groenevelt to Sibelius, 27 June 1682, Sloane MS 2729, fols. 122-123.

large store of drugs, and where they also took turns seeing patients and selling from their stock the drugs they prescribed. Each of them in turn would also serve for one week to visit the sick at their homes. At the end of every two weeks they counted the money, replenished the store of drugs, and divided the profits. They made sure that each of them had two weeks vacation in the countryside every year.⁹² They also published at least two editions of a unique and very interesting little book, called *The Oracle for the Sick*, which contained a series of medical questions.⁹³ The questions mimicked the questions that a doctor would ask upon seeing a patient, and after each question was a list of answers. The reader was supposed to underline or circle the appropriate answer, and depending upon his or her reply, the patient was instructed to go on to one or another new set of questions. The patient was also to indicate on three illustrations (a human back, and a male and a female front) where any pains or signs were located. Then they could send the filled-in book to the Repository through the newly established penny post system, with a fee, and receive in the return post the appropriate remedy with instructions on use: real mail-order medicine.⁹⁴

Perhaps because he was becoming better known in London, Groenevelt decided to join the College of Physicians in April 1683 – about the same time that his associates in the Repository practice did.⁹⁵ As a foreigner without an English medical degree (and as a non-conformist), he remained a licentiate rather than a Candidate or Fellow of the College; but Groenevelt also made further medical contacts through this body. One of his friends in the College seems to have been Edward Tyson, later a famous comparative anatomist who was quite interested in Dutch medicine: he even guaranteed the cost of translating and publishing in English Jan Swammerdam's book on the mayfly.⁹⁶ But ironically for Groenevelt, the coming of William and Mary to the English throne in the fall of 1688 indirectly made life more difficult for him. A new wave of Dutch immigrants soon came across the North Sea, with a consequent rise in the xenophobia of the English.

Moreover, in the early 1690s, the College of Physicians began to try to discipline its members more. Pechey and Groenevelt's other English friends, who had close contact in their medical practices with apothecaries, surgeons, and unlicensed practitioners in London, became subject to new rules, forbidding them

⁹² "Manuscripts of and relating to Dr. Philip Guide," Sloane MS 2655, fols. 153, 154, 156, 157.

⁹³ Joannes "Greenvelt," Richard Browne, Christopher Crelle, John Peche, and Philip Guide, *The Oracle for the Sick* (London: [privately printed], 1687). There were at least two editions of the book, with Browne appearing first on the title page in the other.

⁹⁴ For a short description of this group, see G.C. Peachey, "The Two John Peachey's, Seventeenth Century Physicians: Their Lives and Works," *Janus* 23, 1918, pp. 121-158, 129-133; and Cook (n. 3), *Decline of the Old Medical Regime*, p. 224.

⁹⁵ 2 April 1683, Annals 4:11b.

⁹⁶ M.F. Ashley Montague, *Edward Tyson, M.D., F.R.S., 1650-1708, and the Rise of Human and Comparative Anatomy in England: A Study in the History of Science*, American Philosophical Society, Memoirs, no. 20 (Philadelphia: American Philosophical Society, 1943), pp. 121-126. Tyson's published dissection of an "orang utang" (a chimpanzee) showed him well aware of Nicholaas Tulp's previous description of the animal.

to have contact with such people. The College officers especially harassed the members of the Repository practice: for example, they sued Pechey for unpaid dues, although he got off on a legal technicality and dared them to sue him again.⁹⁷ And Groenevelt not only associated with the wrong kind of people, he also published his little pamphlet advertising his ability to cure the gout with a new remedy, which had all the marks of an empiric's self-promotion, being printed by Groenevelt himself rather than by a bookseller.⁹⁸

Thus, despite his excellent education and long medical experience, the comitia censorum of the College of Physicians had reason to think of Groenevelt as one of the more quack-like among their licentiates. When Mrs. Withall complained to the officers of the College of Physicians about the quality of Groenevelt's medical practice, they were therefore quite willing to treat him not like one of their own but like someone who needed to be investigated carefully and if necessary disciplined. The Censors usually assumed that members of the College were people with an upright character and a good mind; unless they had reason to think otherwise, the Censors assumed that if something went wrong in a particular case, there was a reasonable explanation that did not result in more than a minor fine. But Groenevelt could not count on such assumptions in his case. The Censors were neither willing to give him the benefit of the doubt in his practice, nor to hear an intellectual justification for his treatment.

Groenevelt's New Remedy

Having caught a glimpse of the background to Groenevelt's case, let us then return to the medical issues and see what things looked like from Groenevelt's point of view. He had published his pamphlet proclaiming that he had a remedy that would provoke urine gently. Within a year, Mrs. Withall had asked him to give her his remedy, having already heard from someone else that he could treat her condition successfully. Groenevelt had diagnosed her problem as an ulcer of the bladder. In such cases, administering diuretics was common. So he gave her his remedy to provoke urine. He did not want to divulge its secrets, but when prosecuted by the Censors, he tried to give his explanation for what he did. For when Groenevelt gave substantial testimony to the Censors a second time, on 6 December 1695, he either revealed more about his reasoning than previously, or Registrar Gill for the first time took the trouble to record it.

This time, the record says that Groenevelt claimed he could safely administer even fifty-six grains of cantharides or more. He did this, he explained, by making up not only eighteen pills of cantharides, but also another eighteen pills of bread crumbs and two scruples (that is, forty grains) of camphor. These pills he later called his

⁹⁷ See Cook (n. 3), *Decline of the Old Medical Regime*, pp. 224-225.

⁹⁸ Groenevelt (n. 19), *Arthritology*.

"antidote of the Cantharides."⁹⁹ The method of taking these medicines in combination was first to swallow five pills of cantharides, followed three hours later by five pills of camphor, "and a quart of Drink between each dose." Every three hours the cycle was repeated. He claimed to have given the first three cycles – fifteen pills of cantharides together with fifteen pills of camphor – to Mrs. Withall with his own hands.¹⁰⁰

As noted above, he had precedent for administering cantharides inwardly as something other than an aphrodisiac. Hippocrates had recommended cantharides internally for hydropsy and amenorrhoea (according to Galen, Hippocrates had used only the head, wings, and legs of the beetle); and Dioscorides had advised taking the hard parts of the beetle as an antidote to the poison contained in its juices.¹⁰¹ Not only did Groenevelt know these precedents, some of his Dutch contemporaries were also interested in the use of cantharides internally.¹⁰² One tincture with cantharides as an ingredient went by the name of "lithontriptic of Tulp," named after the noted Amsterdam physician.¹⁰³ The well-informed Constantijn Huygens not only described the use of cantharides as a blister to clear eyesight, but went on to write that while they bite and they sting, they truly cured people who took them.¹⁰⁴ More importantly, not only educated men of the world like Huygens, but physicians like Groenevelt's teacher Sylvius and his contemporary Cornelis Bontekoe were developing new theories that suggested new uses for

⁹⁹ Annals 7:105.

¹⁰⁰ Annals 7:9-10.

¹⁰¹ Groenevelt (n. 8), *De Tuto* (see note 52 above); Van Gils (n. 53), "Spaansche Vlieg," p. 378, citing Hippocrates' *De diaeta in morbis acutis*, and Andres de Lagune, *Dioscorides .. ad cerca la Materia Medicinal, y los venenos mortiferos*, 1566, p. 155. Van Gils thinks that using the hard parts of the beetle internally would certainly not be poisonous. G.E.R. Lloyd, in his *Science, Folklore and Ideology: Studies in the Life Sciences in Ancient Greece* (Cambridge: Cambridge University Press, 1983), p. 82, writes: "To the usual list of potent and possibly dangerous drugs (such as hellebore) commonly prescribed by the Hippocratic writers, the gynaecological treatises add some for which they show their own particular predilection, notably cantharides."

¹⁰² Busschoff, *Two treatises*, asks: "What think you of Spanish Flies, now of so frequent use; of which Jobus van Mekerem writes in his Observations, that he hath used them with much benefit against the Gout, following the advise of Dr. Vopiscus Fortunatus Plempius?" The answer is that cantharides are too dangerous (pp. 91-92). Plempius was a noted physician of Amsterdam and then professor of medicine at Louvain.

¹⁰³ *Dictionnaire de Médecine*, vol. 6, pp. 334-335, where the article of E. Soubeiran notes: "M. Chaussier a préconisé une teinture composée de cantharides, connue sous le nom de *Lithontriptique de Tulp*. Elle est faite avec cantharides, 1 gros; petit cardamome, 1 gros; alcool, 1 once; acide nitrique, demi-once." There was also a cantharides-based "tinctura antinephritica Tulpii" in use to provoke urine in cases of gonorrhoea, which Bartholin had apparently invented: Thomas Bartholinus, *Historiarum anatomicum & medicarum rariorum. centuria V. & VI. accessit viri clarissimi Joannis Rhodii mantissa anatomica* (Hafniae: Typis Henrici Godiani, Reg. & Acad. Typogr., 1661), Cent. V, Hist. 82, "Cantharidum usus internus," pp. 159-161; Hermanni Boerhaave, *Praelectiones Academicæ de lue venerea* (Lugduni Batavorum: apud Cornelium de Pecker, 1762), p. 225; also in Boerhaave, *Traité des Maladies Vénéériennes*, traduit du Latin (Paris: Huart & Moreau, 1753), pp. 140-141, 188-189.

¹⁰⁴ "Sulck goedje schaff ick hier; sy bijten en sy steken/ Maer sy genesen weer de menschen haer gebreken;/ En 't bijten heeft sijn nutt, en 't steken heeft sijn' vrucht/ En sijn tucht meestendeel, en altijd sijn' genucht./ My dunckt het sou by ons geen slechte Doctor wesen,/ Die siecke menschen kost met kittelen genesen,/ En in plaats van gewalgh, van krimpigh en gesteen,/ Die 't volck all lachende kost helpen op de been." Van Gils (n. 53), "Spaansche Vlieg," p. 378.

medicaments like cantharides.

If we return to the theory offered in Groenevelt's little book on the gout, we can now see strong hints about how he had adopted some contemporary theories in making his new medicine.¹⁰⁵ His theory of the gout was rooted in his teacher Sylvius's chemical doctrines. Groenevelt wrote that the four humors present in the body had qualities: "bitter, salt, acid," and others. In healthy conditions, all these qualities were properly mixed together, but when one of the qualities "is divided or separated from the rest, and exists by itself," it causes great pain. In short, when the salt and acrid qualities became separated, the salt falls upon the "sensible parts about the joynts," where it creates the pain of gout, just as it might breed stones.¹⁰⁶ It happened this way: the salt was "lodged in the serum" of the body, which was acidic. This acidic serum also contained "a certain thicker matter, which we may call the terrene faeculency," from which "nodes" and stones were generated. The salty serum "is contained about the extremities of the muscles, tendons, ligaments, *periosteae*, and the nervous parts of the joints." When present in large amounts, this thicker salt caused the pain, heat, and endurance of the sickness.¹⁰⁷ As long as "the use of the things non-natural is moderate, all goes well." But if excesses led to the generation of less perfectly mixed blood, then the blood would become "corrupted by divers humours," while the non-natural heat rising from the poorly mixed blood would grow so high, that it would be "forced to undergo a fermentation like new beer," which forced "those sharp and foreign juices" deeper into the body. The guts could get rid of excess salty serum via "a watery looseness," the kidneys "by plenty of urine," and the fleshy parts "by the pores of the skin." But the joints had no way of getting rid of the excess, so the thick serum worked its way "into the inmost recesses and interstices of the nervous parts" of them, causing the pains of gout.¹⁰⁸

Groenevelt here followed Sylvius's theory. In his chapter on urines, Sylvius had written that salt made the urine very thick, because when salt was mixed (*concretio*) with the blood, it dissolved in the serum, making it thick. Thick urine was consequently a sign of the thick, salty serum in the blood. The thickening of the serum happens especially in men – who have an abundance of thick gummy moisture (*abundat pituita viscida*) – and at the beginning of fevers, especially in intermittent fevers.¹⁰⁹ The thick and salty serum sometimes developed into stone and gravel, which blocked the ureters, a problem which was hard to remedy since once the passages were blocked remedies could not penetrate to the site of the blockage to dissolve them.¹¹⁰ Thus, Groenevelt had found gout to be a disease "altogether of

¹⁰⁵ Further confirming the link between his little treatise on gout and his ideas on the use of cantharides is the fact that Martin reprints most of Groenevelt's *Arthritology* (n. 19), in *Treatise*, pp. 288-309.

¹⁰⁶ Groenevelt (n. 19), *Arthritology*, pp. 2-3.

¹⁰⁷ *Ibid.*, pp. 3-4.

¹⁰⁸ *Ibid.*, pp. 4-16, quotations from pp. 4-6.

¹⁰⁹ Franciscus dele Boë Sylvius, *Idea praxeos medicae*, in *Tres Libros Divisae* (Frankfurt: Hummanis, 1671), Book I, cap. iv, para. 8, p. 589.

¹¹⁰ Sylvius, *Idea praxeos medicae*, Bk. I, cap. lvi, para. 1-5, p. 593.

the same origin" as the stone and gravel. Not only were these passages in Sylvius on urine of great interest to someone treating the stone, but on at least one occasion Groenevelt recommended treatments straight out of his teacher, Sylvius: we can be sure that Groenevelt had read Sylvius' book carefully.¹¹¹

Of course, the best recommendation for the gout that Groenevelt could give his readers was prevention: to keep from the excessive breeding of this thick salt in the serum. People should avoid certain foods (especially "wines which have much Tartar in them"), gluttony and drunkenness, intemperance, studying too hard (especially at night), afflicting cares, and "above all immoderate Venus."¹¹² But people who already had the gout wanted it cured. One way to treat it was to evacuate the offending humor by vomits, purges, sweats, urination, and bloodletting. But another and better method was to evacuate the salt and tartar by administering "volatile salts," or alkalies, such as salt of harts-horn, greater burdock-root, "a decoction of germander, and several things called antipodagricks." In general, "discutients" made from fixed or volatile salts worked best, because they scoured "the impacted humors, and corroborate the weakened parts."¹¹³

In short, with his attention to volatile spirits, Groenevelt elaborated his theory about the causes and cures of gout in terms of the doctrine of acids and alkalies, which had its origin in the early 1660s among Continental iatrochemists influenced by Cartesianism.¹¹⁴ Dutch savants particularly advocated this theory in conjunction with their ideas about animal physiology as being made up of vessels and liquids.¹¹⁵ One of the most vigorous advocates of the acids and alkalies theory had been Groenevelt's teacher, Sylvius.

But the English had not been nearly as enthusiastic as the Dutch about the theory of acids and alkalies. This was particularly so after the theory had been attacked by Robert Boyle in 1675, who probably aimed his remarks specifically at the teachings of Groenevelt's professor.¹¹⁶ Although Boyle exercised his usual caution in carefully saying that while the doctrine had grave philosophical weaknesses it might be useful to chemists and physicians in devising remedies, his

¹¹¹ In one of his letters to Sibelius, Groenevelt tried to remember what he had prescribed for one Dirk Wouters, thinking that it might have been one of the prescriptions out of Sylvius: "indien 't een puppa geweest is, 't was dat van Sylvius gepraescribeert. prax. med. cap. 2 p.m. 22. paragraph. 32." Groenevelt to Sibelius, 31 March 1682, Sloane 2729, fols. 116-117.

¹¹² Groenevelt (n. 19), *Arthritology*, pp. 11-16, quotation p. 14.

¹¹³ *Ibid.*, pp. 20-22, quotations from pp. 21-22.

¹¹⁴ C. Louise Thijssen-Schoute, *Nederlands Cartesianisme* (1954; Utrecht: Hes Uitgevers, 1989), pp. 258-260; Marie Boas Hall, "Acid and Alkali in Seventeenth Century Chemistry," *Archives Internationales d'Histoire des Sciences* 34, 1956, pp. 13-28; Hélène Metzger, *Les Doctrines Chimiques en France du début du XVIIe à fin du XVIIIe Siècle* (Paris: Librairie Scientifique et Technique, 1969), pp. 199-219.

¹¹⁵ See Edward G. Ruestow, "The Rise of the Doctrine of Vascular Secretion in the Netherlands," *Journal of the History of Medicine* 35, 1980, pp. 265-287.

¹¹⁶ Robert Boyle, *Experiments, Notes, &c. about the mechanical origin or Production of divers particular Qualities: among which is inserted, a Discourse of the Imperfection of the Chemist's Doctrine of Qualities; together with some Reflections upon the Hypothesis of Alkali and Acidum* (1675); E.D. Baumann, *François dele Boë Sylvius* (Leiden: E.J. Brill, 1949), p. 206.

opposition to the theory nevertheless carried great weight in England.¹¹⁷ Still, the idea that the chemical world could be divided into acids and alkalies had a power and simplicity that made it increasingly popular. As one English practitioner put it about the time of Groenevelt's case:

It is scarce possible for a Man to converse with Persons that are ill, let the Distemper be what it will, especially such as have any smattering in Physic, which most now a days have, but they presently tell you, their Blood is so very acid, that unless the Acidity can be corrected, it is impossible for 'em to be well: And accordingly they fly to Alkalious Medicins, as Pouder of Pearl, Coral, Crabs eyes, or something of that nature ...¹¹⁸

Thus, one of the most pointed rebuttals to Boyle by a Continental defender of the doctrine of acids and alkalies had a translation into English in 1689.¹¹⁹ Some English physicians also began to adopt the theory in the later 1680s and early 1690s. It seems to have been in Thomas Sydenham's circle that the theory found its most articulate English defenders – a group of people with whom Groenevelt had associations.¹²⁰ So it was that Groenevelt let it be known publicly just at that moment that he, too, advocated the theory of acids and alkalies.

If we turn to a passage in the medical work of another Dutchman who strongly defended the doctrine of acids and alkalies, Cornelis Bontekoe, we can better see precisely what Groenevelt was up to.¹²¹ Bontekoe put it bluntly: some helpful remedies can be found among animals, which are useful as volatile salts. In

¹¹⁷ Boyle's Works, ed. Thomas Birch (1772; reprint Hildesheim: Georg Olms Verlagsbuchhandlung, 1966), vol. 4, p. 291.

¹¹⁸ John Colbatch, *A Physico-Medical Essay Concerning Alkaly and Acid, so far as they relate to the Cause or Cure of Distempers* (London: For Dan. Browne, 1696), Preface.

¹¹⁹ François André, *Entretiens sur l'acid et l'alcali, où sont examinées les objections de M. Boyle contre ces principes* (Paris, 1672, 1677, 1681); transl. by "J.W." as *Chymical Disceptations: Or, Discourses upon Acid and Alkali. Wherein are Examined the Objections Of Mr. Boyle against these Principles* 2A (London: Printed for Tho. Dawks, on Addle Hill in Carter-lane, and Benj. Allport, at the white Horse in Little Britain, 1689). Also see Hall (n. 114), "Acids and Alkali," p. 17; Metzger (n. 114), *Les Doctrines Chimiques en France*, pp. 207-208, 217-218. André was a royal physician to Louis XIV and professor of medicine at Caen; what little is known of him is summarized in the *Nouvelle Biographie Générale* (Paris: Didot Freres, 1857-1866), vol. 2, col. 556.

¹²⁰ For instance, the physician Walter Harris, friend of Thomas Sydenham, warned readers not that alkalies were of no use, but that too many people had a great enthusiasm for fixed alkali salts and needed reminding of the useful natural alkalis like pearl, oriental bezoar, crabs-eyes, chalk, coral, "etc.": Harris, *Pharmacologia Anti-Empirica: Or a Rational Discourse of Remedies both Chymical and Galenical* (London: For Richard Chiswell, 1683), p. 85; Harris also believed that children's diseases were caused by the moistness of children degenerating into acids, and hence that they were best treated with alkalis: Harris, *An Exact Enquiry Into, and Cure of the Acute Diseases of Infants*, Englished by W[illiam] C[lockburn] (London: For Samuel Clement, 1693), p. 5.

¹²¹ Bontekoe, *Fragmenta, dienende tot een onderwys van de beweginge, en vyandschap ... van het acidum met het alcali* (1683), transl. into Latin by Cornelis Blankaart as *Fundamenta Medica, Sive de Alcali et Acidi Effectibus per modum fermentationis et effervescentiae. Accedit item, Anonymi cujusdam authoris Pharmacopoea Ad mentem neotericorum adornata* (Amsterdam: Ex officina Corn. Blancardi in platea Vulgo de Warmoes straat, 1688). I have used the text found in Bontekoe, *Alle de Philosophische, Medicinale en Chymische Werken* (Amsterdam: Jan ten Hoorn, 1689), vol. 2, pt. 2, pp. 186-267.

particular, cantharides were a penetrating salt.¹²² He went on to explain that most chronic diseases were helped by diuretics, since such diseases were caused by acidified serum (*sappen*). What was needed were remedies to drive the serum onward by thinning it and causing proper transpiration, circulation, and urination. One of the best diuretics was cantharides, an alkaline substance, although the fly had to be used carefully so as not to cause deadly hemorrhaging or satyriasis.¹²³ The association of cantharides with diuretics and lithontriptics is to be found even earlier among chemical physicians in northern Europe.¹²⁴ But the similarity between Groenevelt's reasoning and Bontekoe's is unmistakable. Both wrote about the importance of provoking urination in treating chronic diseases, and about using volatile salts to thin the thick serum in the blood. Groenevelt probably knew of Bontekoe's work, since he had hosted in London Jacob van de Velde, the Amsterdam publisher of Stephen Blankaart, who was in turn the physician who had not only translated into Dutch parts of Ten Rhyne's book (which Groenevelt had seen through the press), but had translated Bontekoe's Dutch into Latin.¹²⁵ Even if Groenevelt did not know these passages in Bontekoe, they had studied in the same tradition.

Of course, it is one thing to say that cantharides are a volatile salt and alkaline, and good for use as a diuretic, another to go ahead and administer them in large doses. Everyone knew quite well that they caused satyriasis, and had to be handled very carefully. Prescribing as much as Groenevelt did could mean trouble for a patient, indeed. The trick to Groenevelt's new remedy, then, was the use of cantharides in combination with camphor.

¹²² "Men kan verscheyden den Remedien uyt de Dieren vinden, evenwel schijnt het dat sy alle ons anders geven als een Sal volatile ... De Cantharides om het penetrante Sout ..." Bontekoe (n. 121), *Fragmenta*, p. 224.

¹²³ "De Diuretica, zijn die remedien welke de pis drijven, en dese zijn de hercules om meest alle de morbi chronici te geneesen, te meer om dat de diuretica, temperantia, en flauwe sudorifera, of transpiratie bevorderende zijn. Nu alle de morbi chronici komen van versuurde, vergoorde, lijmige, taaye en stil staande Sappen, van verstopheden, van trage, ongelijke, en seer belemmerde omloop van bloed en humeuren, tegens alle werken qualen men strijden moet men temperantia, met diuretica, met remedien die verdunnen, die transpiratie, circulatie, en pis bevorderen ... De Cantharides, en hun vlugtig Sout, als ook de Millepedes, de Byen, de Sprink-hanen, de Padden, en soo voorts, schijnen besondere diuretica te wesen: ook de Kreeft-oogen, ende sommige lapides, en preparatien van kalk, ende andere alcalia, als mede van Antimonium, maar in dese scherpe Souten moet men de dosis wel reguleren, om geen doodelijke haemorrhagie, of satyriasis te veroorsaken." Bontekoe (n. 121), *Fondamenta*, pp. 262-263.

¹²⁴ Johannes Schroeder, *Pharmacopoeia Medico-Chymica, Sive Thesaurus Pharmacologicus, Quo composita quaeque celebriora; hinc Mineralia, Vegetabilia & Animalia Chymico-Medice describuntur, atque insuper Principia Physicae Hermetico-Hippocraticae candidè exhibentur* (1st publ. 1641; Lugduni-Batavorum: Apud Feleceem Lopez d'Haro, 1672), pp. 864-65, on cantharides: "Calidae sunt & siccae sit valide, adeoque corrosivae seu vesicatoriae, diureticae, emmenagogae. Hinc usus creberrimi in vesicatoriis. Internus earum usus rarissimus est, quippe inter venena vulgo recensentur: vesicae nimirum urinariae adeo infensae sunt, ut vel extrinsecus cuti alligatae eam exulcerent. Sunt nihilominus audaculi, qui diureticis eas admiscunt."

¹²⁵ Letter of Groenevelt to Sibelius, 20 May, 1684, Sloane 2729, fol. 160. Blankaart's *Lexicon Medicum Renovatum* (n. 49) concluded its entry on cantharides with: "their blistering power when applied to the skin is remarkable, and they moreover promote diuresis" ("cujus vis vesicatoria, quando cuti applicatur, est insignis, diuresin utcumque movens"), p. 172.

Camphor had entered the European pharmacopoeia recently, being refined from the sap of a tree that grew in East Asia. The plant grew in China, Sumatra, and Borneo, but the best camphor came from Japan.¹²⁶ That placed the trade in camphor firmly in Dutch hands, and the Dutch sold it to the rest of Europe for a long time.¹²⁷ It was apparently Groenevelt's friend Ten Rhijne who sent a specimen of the camphor tree to England, where it was living in the garden of the Society of Apothecaries at Chelsea.¹²⁸ Refined for medical purposes, the liquid from the camphor tree took the form of a white, pelucid, very fragrant, and volatile liquid.¹²⁹ Because in this form it evaporates quite rapidly, camphor was typically used in salves to soothe hot and inflamed sores or aching limbs.¹³⁰ But camphor could also be taken inwardly. Groenevelt knew of both the noted philosopher Scaliger and Mr. James Wasse, a London surgeon, using it to ease pain.¹³¹ The distinguished Leiden botanist, Paulus Hermann, who had spent a considerable period in the Dutch East Indies, told Groenevelt that it was a sort of sal volatile oleosum.¹³² Later authors noted that camphor behaved somewhat like nitric acid, which the *Lithontriptique de Tulp* used to rectify the cantharides – perhaps Groenevelt had some similar ideas.¹³³ He certainly thought that camphor, too, had interesting effects on the kidneys, bladder, womb and genitals.¹³⁴ In fact, one of the better-known effects from inhaling or swallowing it was the suppression of sexual

¹²⁶ Blankaart (n. 49), *Lexicon Medicum Renovatum*, pp. 167-168.

¹²⁷ *Dictionnaire de Médecine* (n. 7), vol. 6, p. 242: "Pendant long-temps les Hollandais ont connu seuls l'art de purifier le camphre, et toutes les autres nations de l'europe étaient tributaires de la Hollande pour se procurer cette substance."

¹²⁸ Birch (n. 88), *History of the Royal Society*, vol. 4, p. 169.

¹²⁹ Blankaart (n. 49), *Lexicon Medicum Renovatum*, pp. 167-168: "Camphora non est gummi, sed potius refina, alba, pelucida, odoratissima, volatilis, & tritu difficilis ..." For Groenevelt's description of camphor, see Groenevelt (n. 8), *De Tuto and Tutus*, pp. 34-44; *Treatise* (to which Martin has added material), pp. 36-45.

¹³⁰ For instance, it was recommended as an ingredient for an eye ointment and a plaster in the *Pharmacopoea Ultrajectina* (n. 51), pp. 76, 78.

¹³¹ Groenevelt (n. 8), *De Tuto and Tutus*, p. 46; *Treatise*, pp. 52-54, to which Martin added his own testimonies, pp. 54-55.

¹³² Groenevelt (n. 8), *De Tuto and Tutus*, pp. 44-45; *Treatise*, 45-46: "we will give you the Opinion of the famous Hermannus of Leyden in Holland, that most worthy Professor of Botany ["now among the Blessed," is added in Martin's translation], which we had from his own Mouth, when he visited us at London, viz. that Camphir is a sort of Sal Volatile Oleosum, drawn out of a Tree of the same Name, ..." Martin also adds that Nicasius Le Febvre speaks of camphor in his book on chemistry (*Treatise*, pp. 46-52). On Hermann, see G.A. Lindeboom, *Dutch Medical Biography: A Biographical Dictionary of Dutch Physicians and Surgeons, 1475-1975* (Amsterdam: Rodopi, 1984), cols. 846-847.

¹³³ *Dictionnaire de Médecine* (n. 7), vol. 6, p. 244: "Les praticiens sont depuis long-temps diviés d'opinion sur les propriétés immédiates du camphre, comme sur celles de l'opium et de plusieurs autres médicamens ... C'est un médicament qui, comme plusieurs autres, semble se refuser à la symétrie de nos classifications et qui n'est comparable qu'à lui-même." Nevertheless, the author of the entry on camphor several times compares its actions to "acide nitrique," which is given as one of the ingredients in the *Lithontriptique de Tulp*, on pp. 334-335.

¹³⁴ Groenevelt (n. 8), *De Tuto and Tutus*, pp. 57-60; *Treatise*, pp. 72-74, with Martin's additions, pp. 74-77.

activity,¹³⁵ a property of camphor known to Groenevelt's contemporaries.¹³⁶ In short,

From what has been said we hope any one that searches the qualities of Camphir, will find it endowed with Alexipharmick Vertues, taking away all preternatural Heats and Ferments, and will also most clearly see and judge that therefore, and by reason of the penetrating Oil its endowed with, it is the most proper Medicine to obtund, and correct the sharp and noxious Particles of Cantharides, and with its benign Sulphur to temper and lenify their acrid, diuretick Salts.¹³⁷

Thus, Groenevelt had excellent precedent for thinking along the following lines: the body's vessels needed to be kept open; if they were not, nasty chronic diseases like the gout and the stone would ensue. Of central importance in keeping the vascular physiology working well was maintaining a correct balance of acids and alkalies. In both the stone and gravel and in the gout, and in other chronic diseases of a similar nature, the breeding of a thick acidic serum caused problems in the vascular circulation, resulting in serious medical problems. The remedies required would have to be diuretic in nature; they would have to scour the vessels in order to reopen them; since the thick serum was acidic, they would have to attack the problem by being alkaline. Cantharides had all the necessary properties, and since the time of the ancients had been recommended for careful internal use in attacking complaints like the stone; but it needed to be handled very carefully indeed, especially because of the way it stimulated the sexual organs. However, combined with another diuretic, camphor, the potentially dangerous and stimulating effects of cantharides could be canceled out. The result was a powerful, effective remedy for a number of chronic diseases. This was Groenevelt's special medicine, which he had been reluctant to divulge publicly. He had not prescribed cantharides for Mrs. Withall without reason; and some physicians thought that Groenevelt had hit upon an important new medicine.¹³⁸

Here then, was Groenevelt's practice: he administered large quantities of

¹³⁵ According to the early 19th century *Dictionnaire de Médecine* (n. 7), camphor was a well-known anaphrodisiac, calming erections in cases of gonorrhoea and even causing the organs of generation to disappear in people who breathed the scent of camphor too much (pp. 255-257). It may even have been known to the medievals for such an effect. "L'action sédative du camphre sur les organes de la génération était si bien établie parmi les anciens praticiens, que l'école de Salerne a prétendu que son odeur seule suffisait pour rendre anaphrodite: Camphora per nares, castrat odore mares" (p. 256). The anaphrodisiac properties of camphor caused it to be used in the 19th century as a treatment for priapism, gonorrhoea, satyriasis and nymphomania: Sigerist (n. 56), "Alexandre Ricord's Dissertation," p. 472.

¹³⁶ Schroeder (n. 124), *Pharmacopoeia Medico-Chymica*, p. 717: "Illis vis venerrem ac libidinem compescendi, inflammationesque extinguendi." I have been informed that until fairly recently, the Dutch army mixed a bit of camphor in the bread served to soldiers while they were in camp to help keep their sexual appetites low during periods away from home.

¹³⁷ Groenevelt (n. 8), *De Tuto* and *Tutus*, p. 60; *Treatise*, p. 78.

¹³⁸ Martin thanks "that great and learned Physitian and favourer of Learning, Dr. Edward Tyson," for suggesting some of the things to insert, in *Treatise* (n. 8), pp. 185-186; Martin Lister discussed his use of cantharides about the same time as Groenevelt's case in his *Octo Exercitationes Medicinales* (London: Apud Sam. Smith & Benj. Walford, Regiae Societatis Typographos, 1697), pp. 253-254; and the surgeon James Younge praised Groenevelt's remedy in a letter dated 17 July 1702, published in the *Philosophical Transactions*, vol. 23, No. 280, pp. 1210-1212.

cantharides combined with camphor and a lot of drink, which scoured the vessels of the body, counter-acted the acid in the thick urine, opened the passages, and cast out the bad salts by provoking a great deal of urination, and without the harmful effects of cantharides taken alone. He had thought that this remedy would cleanse Mrs. Withall's bladder and so remove the ulcer. He was so convinced of the efficacy of his remedy that he could only think that his prosecution had been due to "a pique" on the part of one of the Censors, Richard Torlesse.¹³⁹

Moreover, Groenevelt had a very different version of the facts of the case than his accusers. According to a pamphlet published after the trial, Groenevelt had been sent for because he had developed a cure for previously incurable ulcers of the bladder. He had found Withall suffering not only from an ulcerated bladder, but also "a scyrrhus" (a hard swelling without pain) "in the Vagina Uteri, and Cancerous Piles." When he sent her his pills, he also sent her instructions telling her not to commence her treatment until he had arrived. She nevertheless took the pills of cantharides without the "corrector" of camphor, consequently suffering pains and bloody water, and thereupon sent for the doctor in haste. He chided her for not waiting for him, but he still "took off" the pains and bloody urine "immediately," and then sent her to the country, attending her almost daily, to cure her of the ulcerated bladder, in which he succeeded. Her other medical problems he could do nothing about.

His side of the story further claimed that Withall had first tried to blame her remaining troubles on the midwife Mrs. Salloway, who cleared herself only by calling in doctors Coatesworth and Gibson, who found the source of Withall's pains to be the cancerous piles, Groenevelt having cured the ulcer by then. Two years later, Groenevelt had been "thought on at the Instigation of one of the Censors [i.e., Richard Torlesse], whom the Doctor had exasperated, as he easily will be." After Groenevelt had obtained his release from Newgate on *habeas corpus*, the idea of Withall herself suing Groenevelt had been put into her head by the Censors: Dr. Burwell's servant John Cole had been sent by the College lawyer to another solicitor, Mr. Ambrose, who took Cole to Withall's house to deliver a message. Shortly after the visit, she had brought suit. In short, Mrs. Withall was a sick and untrustworthy woman,¹⁴⁰ who had brought her complaint against Groenevelt only in an attempt to recover the 40s. she had already paid him, and when she got no redress from the College, tried to "jump into an Estate" by suing for £2000.¹⁴¹

Given his firm medical views and his sense of being attacked because he was

¹³⁹ The reference to Torlesse appears only in *Treatise* (n. 8), author's preface. Torlesse was one of the physicians to St. Thomas' Hospital, where Mr. Withall had first taken Groenevelt's pill.

¹⁴⁰ She was called "one of the looser Gang of Pedlars, that offer good Pennyworths of Muslin, under pretence of a Seamans *Covert Baron* and *Long Reach*."

¹⁴¹ Lysiponius Celer, *The Late Censors Deservedly Censured* (London: Printed For the Author, and are to be sold by B. Billingsley at the Printing-Press under the Royal Exchange in Cornhill, 1698), pp. 14-16. It has been suggested that Groenevelt is the author of this tract (British Library catalogue, and *Dictionary of Anonymous and Pseudonymous Books*, vol. 3, p. 239), but I rather suspect it was authored by one of his allies. The evidence does not allow a definite attribution.

an outsider, Groenevelt fought back. He sued the President and Censors of the College for wrongful imprisonment, receiving money from the Society of Apothecaries to help with the legal expenses of the suit.¹⁴² He also gained the support of several of the physicians of the College who were disaffected from the current policies of the officers.¹⁴³ Over the next few years, Groenevelt's case became a cause célèbre in London, with many of the newspapers and pamphlets taking his side against the College.¹⁴⁴ His suit against the Censors for wrongful imprisonment even created important legal precedent in England.¹⁴⁵ In the midst of the controversy, Groenevelt published his defense in Latin (only years later allowing it to be translated into English), which explained his medical ideas concerning cantharides and camphor.¹⁴⁶ He wrote it in Latin to appeal to the educated doctors of Europe, and they, too, noticed.¹⁴⁷ The internal use of cantharides became widely accepted in the eighteenth century¹⁴⁸ – perhaps in part because of Groenevelt.

Conclusion

The medical significance of Groenevelt's malpractice case is, then, as important as its legal significance. Medically, Groenevelt's English opponents continued to argue that physic should be practiced conservatively: that is, physicians should adhere to tried medicines rather than experimenting with new remedies, especially when previous opinion gave good reason for arguing that the medicines would cause harm. Moreover, one should stay away from anything that seemed like a specific: a remedy that would be good for any specific disease in any person in any circumstances. On the other side were Groenevelt and his allies, who tried out new remedies based upon the latest Continental theories. After all, Groenevelt claimed,

¹⁴² "Wardens' Account Book, 1692-1718," London Guildhall, Guildhall MS No. 8202, vol. 3 (unpaginated), 17 January 1697/8.

¹⁴³ When serving a Censor, Edward Tyson refused to go along with the attempt to punish Groenevelt; during Groenevelt's trial, Sir Richard Blackmore, William Gibbons, and Francis Bernard testified on his behalf, and became the subjects of Groenevelt's dedication in *De Tuto* (n. 8).

¹⁴⁴ For example, William Salmon, *A Rebuke to the Authors of A Blew-Book; call'd The State of Physick in London* (London: Sold by E. Whitlock, near Stationers-Hall, 1698), p. 17; Lysiponius Celer, *The Late Censors Deservedly Censured*; Ned Ward, *The London Spy*, part 6 (April 1699).

¹⁴⁵ Louis L. Jaffe and Edith G. Henderson, "Judicial Review and the Rule of Law: Historical Origins," *Law Quarterly Review* 72, 1956, pp. 345-364; and S.A. De Smith, *Judicial Review of Administrative Action*, 3rd ed. (London: Stevens and Sons, 1973), pp. 94-96, 513.

¹⁴⁶ Groenevelt (n. 8), *De Tuto*.

¹⁴⁷ "I am much made on abroad by persons of learning who move their difficulties to me in ye use of that insect [cantharides], and they have my answer as far as I am capable." "Correspondence on the inward use of Catharides," 1706/7, Sloane 2146.

¹⁴⁸ For example, "The great Use [of cantharides] is in Blister; but People who know how to manage powerful Medicines, give them internally with great Success, in Tinctures": [Richard Goade], *Boerhaave's Materia Medica, or the Druggist's Guide* (London: Printed for the Author, 1755?), p. 69. Also see J. Worth Estes, "Drug Usage at the Infirmary: The Example of Dr. Andrew Duncan, Sr.," Appendix D in Guenter B. Risse, *Hospital Life in Enlightenment Scotland: Care and Teaching at the Royal Infirmary of Edinburgh* (Cambridge: Cambridge University Press, 1986), pp. 370-371.

in the end his remedies had cured the woman of her bladder complaint, if not her other problems, so who cared if some authors had said that the internal administration of large quantities of cantharides was bad?

The issue might be put this way: what was more important to medical practice, experimental knowledge or good character? If experimental knowledge, then trying out new specific medicines and mixing the practices of surgery, medicine, and pharmacy – as Groenevelt and his friends were doing – was a good thing. But if educated judgment ought to be preeminent, then the most necessary thing for medical practice was the character of the physician himself, and his ability to understand his patient, more than simply the administration of drugs. On this score, Groenevelt's character as well as his medical judgment was found to be wanting. His character had not been shaped by an English university, he was not Anglican, and by engaging in surgery he clearly lacked the proper dignity and gravity of the learned physician. Moreover, he associated with licensed empirics, unlicensed troublemakers, and generally behaved like a quack. He had to be disciplined, obeying his dignified superiors or suffering the consequences.¹⁴⁹ But the fact that Groenevelt escaped imprisonment by appealing to the public, to the Parliament, and to the common law courts shows that he was not only industrious and ingenious in his own defense, but that the English public increasingly valued the newer, more experimental medicine practiced by Groenevelt and his friends more than the older, academic physic of grave and dignified men.¹⁵⁰

The point is not to recommend the internal use of cantharides. It is, rather, that Groenevelt's problems in part reflected differences between English and Dutch medicine, and differences in the respective concepts of what constituted a good physician. It is too simple to say that Groenevelt was a quack. Perhaps the conservative English notions of medical dignity and gravity were more aristocratic than the Dutch traditions that focused more directly on the particulars of medical knowledge in a heavily urbanized society. The view of medicine as flowing from the character of the physician continued to exercise a deep influence among English physicians.¹⁵¹ Also, the profound differences between the humanist and predominantly Dutch Reformed university professors of The Netherlands and the more scholastic and universally Anglican professors of the English universities emphasized different things about the make-up of medical knowledge. This was changing; but for physicians on the Continent (and for some even in England) Groenevelt's malpractice case became a clear example of the desperately conserva-

¹⁴⁹ For another example of how these matters affected the College's view of medical practitioners, see my "Sir John Colbatch and Augustan Medicine: Experimentalism, Character and Entrepreneurialism," *Annals of Science*, 47, 1990, 475-505.

¹⁵⁰ I have elaborated this point in my "Practical medicine and the British armed forces after the 'Glorious Revolution'," *Medical History* 34, 1990, pp. 1-26, and in my "The Rose Case Reconsidered: Physicians, Apothecaries, and the Law in Augustan England," *Journal of the History of Medicine and Allied Science* 45, 1990, pp. 527-555.

¹⁵¹ See esp. Christopher Lawrence, "Incommunicable Knowledge: Science, Technology and Clinical Art in Britain 1850-1914," *Journal of Contemporary History* 20, 1985, pp. 503-520.

tive nature of the English medical establishment.

Groenevelt's battles therefore helped to undermine the public ability of the traditionalist physicians to judge the practices of others. For better or worse, the Dutchman Groenevelt, despite the difficulties he encountered, aided his English brethren in breaking the legal power and undermining the moral authority of the older academic physicians, giving the lead to the apothecary-doctors and surgeon-physicians who would come to dominate England in the eighteenth century as they were already dominating The Netherlands. Whether this was better or worse for the patients must be left to the reader's own good judgment.

Summary

During the 1690s, an important malpractice case wound through the London College of Physicians and the common law courts. It charged a Dutch physician-surgeon, Joannes Groenevelt, who had lived in London for twenty years, with doing grave damage to the health of Suzanna Withall. The records are unusual in letting us get a close-up look at a case of medical practice in the period. It turns out that Groenevelt was no ordinary "quack," but a very well educated and highly skilled practitioner. The remedy he used of cantharides and camphor may have been a new and potentially dangerous specific, but Groenevelt thought he had strong intellectual justification for using his medicine, justification based on the medical theories he had been taught in the Netherlands. It would seem, therefore, that in part this malpractice case shows the reluctance of the English medical establishment to accept some of the medical ideas and values of their Continental colleagues.

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