

Benjamin Marten and His "New Theory of Consumptions"

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INTRODUCTION	521
MARTEN'S THEORY	521
ORIGINS AND ANTECEDENTS	523
REFERENCES TO MARTEN'S THEORY	525
MARTEN'S LIFE	526
LITERATURE CITED	528

INTRODUCTION

Although historians of microbiology find an embarrassing wealth of material on towering figures, such as Pasteur, Koch, and Winogradsky, extreme difficulty attends efforts to uncover details on contributions and lives of the "unknown soldiers" of science. The role played by less distinguished persons is as important in its way as later, epic syntheses, but early arrivals at the scene of great victories seldom are heralded as heroes. The history of the germ theory of disease is not especially well documented, and the following essay on the efforts of an obscure figure to apply animalcular information of the late 17th and early 18th centuries to the causes of tuberculosis and other infectious diseases may be a case in point.

Early in 1720, a small volume (186 pages) titled *A New Theory of Consumptions: More Especially of a Phthisis or Consumption of the Lungs* (16) was published in London. In addition to the text, this book (price, three shillings and sixpence) consisted of a 12-page preface signed, "Benjamin Marten, From my House in Theobald's-Row near Red-Lyon Square in Holbourn, Sep. 1st, 1719." The title page is dated 1720. There is a 22-page table of contents at the end of the book. Briefly, Marten's theory stated that "the prime, essential, and hitherto accounted inexplicable cause of that disease" was, in fact, a specific animalcule infecting the lungs. This remarkable proposal was experimentally verified by Robert Koch 163 years later.

The notion of a possible relationship between animalcules and infectious organisms became commonplace shortly after Leeuwenhoek's discovery of bacteria in 1676, but little was made of this for over 150 years. Benjamin Marten and the antecedents of his theory have elicited little interest among medical microbiologists and historians (10, 22, 27) concerned with the genesis of the germ theory of disease. This neglect may be due partly to Marten's obscurity; indeed, only one serious study on Marten has been published, and that was in 1911 (22).

MARTEN'S THEORY

The world in general and readers of London coffeehouse sheets in particular were first informed of Marten's book in a series of identical advertisements placed in one-penny papers. Advertisements for nostrums, unctions, ointments, and elixirs, as well as for pamphlets and books on medical subjects, appeared in the coffeehouse sheets of Queen Anne's London. They generally were written by quacks and charlatans and promised spectacular cures and remarkable recoveries for such ailments as consumption, plague, gonorrhoea, syphilis, and various skin diseases. Hence, Marten's book was simply one among many.

According to the *Weekly Journal or, British Gazetteer* for Saturday, 19 March 1720 (p. 1558), the fatal diseases reported for the previous week included "aged-54, consumption-78, convulsion-143, fever-88," and a few deaths were ascribed to intriguing causes, such as "gripping in the guts-10, rising of the lights-1, water in the head-5, and worms-4." Definite identification of the cause of consumption (tuberculosis), and its possible cure, obviously would have been of interest to a number of persons, including not only victims, but also physicians of the time.

The number of copies of *A New Theory* published in the first edition is unknown—perhaps only a few hundred at most—but, in any event, there appeared in the *Post-Boy* of Tuesday, 3 April 1722 (no. 5102), an advertisement stating that "this Day was publish'd the 2d Edition, Corrected of A NEW THEORY OF CONSUMPTIONS:" the remaining text was an unaltered reprint of the old 1720 advertisement, and, as then, it was printed in several other sheets, namely, the *Weekly Journal or Saturday Post* and the *British Journal*. There is doubt as to the propriety of designating this work as a "second edition," since the only change was the addition of two new paragraphs to the preface (dated 7 February 1722), the text remaining unaltered.

Whatever Marten's formal educational back-

ground might have been, there is no doubt that he was a fairly skillful writer, although he demurs in the preface, "Correctness of Stile, and Beauty of Expression, is what I make no Pretensions to, all that I have endeavor'd, in respect to the Language, is, to be as plain and intelligible as possible, and to deliver my Sentiments as clearly, and in as few Words as conveniently I could, to be well understood" (16, p. iii). Clearly, the book was not addressed to physicians of the day. In fact, Marten stated, "It is not the most uncommon Thing in the World for Authors, especially in Physick, to declare the Publick Good was the sole Motive of their Works; for my Part I shall not say so, but this I do solemnly aver, that if I had not really believed what I have wrote would be serviceable to my Fellow Creatures, and particularly to those unhappy Persons who are afflicted with a Phthisis or Consumption of the Lungs, it should never have been printed" (16, p. ix-x).

Chapter 1 describes specific symptoms of "Consumption of the Lungs," and it is a perfectly understandable exposition of phthisis as it was observed at the time. The medical knowledge evinced here in terms of diagnosis, symptoms, and signs appears accurate and current. One of Marten's principal sources of information may have been Richard Morton's (1635-1698) *Phthisiologia*, first published in Latin in 1689 but translated into English by S. Smith and B. Walford in 1694. Morton's work is alluded to in this chapter, as are treatises by Etmüller (14), Willis (28), Dolaeus (13), and Baglivi (6), all of which were available in English by 1720. One may assume that Marten read translated Latin medical texts, and in fact, many of his cited quotations obviously are taken directly from, or are paraphrases of, the English translations.

Although the picture of 18th-century tuberculosis was graphically painted by Marten, he was optimistic about recovery chances of the victims: "And indeed no greater Harm can be well done to Consumptive Persons, than for People to tell them they are incurable, or even to act, look, or any way seem as if they thought so; when on the contrary, it is doing them real Service to be chearful in their Company, to tell them they look better, and to strengthen their Hopes of soon getting well, by the help of proper Means, as all who are acquainted with the prodigious Effects the Mind has upon the Blood and Juices, very well know" (16, p. 4). Marten recognized the contagiousness of phthisis, and Morton, Etmüller, and others are quoted in support of this view, and he wrote, "For this Distemper as I have observed by Frequent Experience, does infect those that lie with the sick Person, with a certain taint" (16, p. 7-8).

The material contained in chapter 2 is of most interest and importance to modern medical microbiologists and historians concerned with the conquest of infectious diseases. This chapter is titled "An Enquiry Concerning the Prime, Essential, and hitherto accounted Inexplicable Cause of Consumptions, etc." It is a theoretical statement of the germ theory of epidemic diseases that is entirely consistent with what one finds in any modern textbook of medical microbiology. Chapters 3 and 4 review current methods for treating phthisis and include Marten's own recommendations.

After reviewing opinions on the cause of phthisis as proposed by various writers, Marten wrote, "Thus I have given the Opinion of the Ancients, and some of the most eminent Modern Authors, concerning the cause of a Consumption of the Lungs, who yet, I think leave us in the Dark, as to the true and original Essence of it; for what the vicious Saltness or Sharpness of the Catarrhus Humour of the Ancients, or the Saltness or some other way viscidousness of the *Chymist's* Tarter, or *Helmont's* singular strange Ferment, or *Sylvius's* Salt Acrimony, *Willis's* Sourness of the Juices, *Dolaeus's* sharp Volatile Particles, *Etmüller's* Acrimony and Sharpness of the Blood and Lympha, or *Morton's Malignant, Ill-Natur'd*, or *Peculiar Quality* of the Humour included in the Tubercles or Swellings in the Lungs, really and essentially are, they have left us at a Loss to guess" (16, p. 47). Then, alluding to "modern Discoveries and Microscopical Observations," we are introduced to Marten's new theory. "The *Original* and *Essential Cause*, then, which some content themselves to call a vicious Disposition of the Juices, others a salt Acrimony, others a strange Ferment, others a malignant Humour (all which seem to me dark and unintelligible) may possibly be some certain species of *Animalcula* or wonderfully minute living Creatures, that, by their peculiar Shape, or disagreeable Parts, are inimicable to our Nature; but however capable of subsisting in our Juices and Vessels, and which being drove to the Lungs by the Circulation of the Blood, or else generated there from their proper *Ova* or Eggs, with which the Juices may abound, or which possibly being carried about by the Air, may be immediately convey'd to the Lungs by that we draw in, and being there deposited, as in a proper Nidus or Nest, and being produced to Life, coming to Perfection, or increasing in Bigness, may be then spontaneous Motion and injurious Parts, stimulating, and perhaps wounding or gnawing the tender Vessels of the Lungs, cause all the Disorders that have been mentioned, viz. a more than ordinary Afflux of Humours upon the Part, Obstruction, Inflammation, Exulceration, and all

other the *Phaenomena* and deplorable symptoms of this Disease" (16, p. 51-52).

Marten postulated infection by contact with specific entities in the cases of itch, leprosy, and "venereal distemper." Regarding the latter, he wrote, "... I conceive ... Venereal Disease to be communicated after the same manner; only as we may conjecture Animalcula abounding in the purulent Matter flowing from the small Ulcers in that Distemper are of a different Species, Shape and Magnitude from those of Itch..." (16, p. 67).

Chapter 2 concludes with this statement: "These Speculations are indeed of a very nice Nature, and may not admit of being very easily demonstrated, as beforesaid, but I have often admired that the Learned Gentlemen of our Profession, who have so excellently well acquitted themselves in mechanically accounting for many Distempers, upon the grand Philosophick Principle of Sir *Isaac Newton*, viz., that of Attraction or Gravitation, or the Universal Tendency that one part of Matter has towards another, have not at the same time considered what Injuries the Body of Man may receive from the spontaneous Motion of voluntary Agents or *Animalcula* in our Fluids and small Vessels, which *Animalcula* can hardly be suppos'd to regulate their Motions by Rule and Compass, but act and move according to the natural Instinct, the Divine Author of all Beings has implanted in them" (1, p. 89-90).

ORIGINS AND ANTECEDENTS

Fifteen of 19 papers published in the *Philosophical Transactions* before 1720 and indexed under "Animalcula" were written by Antony van Leeuwenhoek (1632-1723); furthermore, 57 papers and notes are listed under "Microscopical Observations," and, although there is some duplication among these two entries, 51 of the latter also are by Leeuwenhoek (19). Marten was aware of Leeuwenhoek's fantastic discoveries, and his animalcular theory of infectious disease was based upon these experimental results rather than on theoretical and philosophical constructs (11). Since Leeuwenhoek is not mentioned in any of the medical texts current in Marten's time, it may be assumed that he read the Dutch master's work in the *Philosophical Transactions*. Marten also knew of Robert Hooke's (1635-1703) *Micrographia*. This great English work appeared in 1665, and several pages of it are quoted by Marten (16, p. 74-76).

The work of Nicholas Andry (1658-1742) (5) influenced Marten in the development of his theory. For example, Andry wrote: "...if we consider the Eggs of Caterpillars, Flies, and other small Insects with the almost infinite num-

ber of those little Animals, which Microscopes discover to us in Liquors, and generally in all Bodies, we shall easily find that there is nothing in Nature, into which the Seed of Insects may not insinuate it self, and that a great Quantity of them may enter into the Body of a Man, as well as into those of other Animals, by means of the Air and Aliments. Then since Heat is sufficient to bring forth the Worms contained in these Eggs, when these Eggs meet with a convenient Matter, it is easy to comprehend, that several Species of them may be produced in the Body of a Man according to the different Matter they find there ... so that a Man, whose Body abounds with a certain sort of Humour, will produce Worms of a certain sort, whilst he who abounds with another Humour will produce Worms of another" (5, p. 8-9; this is directly quoted by Marten [16, p. 56]). The words "little animals," "animalcules," and "ova" or "eggs" and the notion of these occurring in the air, in food, and in bodies were current during Marten's time, and he obviously adopted them. It is noteworthy that Marten did not believe in abiogenesis (12), for he wrote, "... there being no such thing as *Equivocal* Generation, as the Learned World now all agree, every such minute living creature must be produced from an *Ovum* or Egg..." (1, p. 55-56). The learned world probably included W. Harvey (1578-1667), but specific works or references leading Marten to this conclusion are not given.

There is a letter to Andry written by Nicolaas Hartsoeker (1656-1725) reproduced in the former's book (5) in which he stated, "To tell you my thoughts, Sir, I believe that Worms occasion most Diseases with which Mankind is attack'd; and likewise that those who have the Distempers that are called *Venereal*, nourish in their Bodies an infinite number of invisible Insects, who grow and deavour everything that comes in their Way, and occasion all the Disorders that are known to attend that Distemper" (5, p. 213). Marten was strongly influenced by this idea and borrowed it (16, p. 67-68).

Another idea appropriated by Marten was probably derived from his acquaintance with William Oliver's (1659-1716) *Practical Essay on Fevers* (20). The specificity of animalcules and the diseases they generate was proposed in the course of a discussion on smallpox. Oliver wrote: "Thus the Seed once sown has propagated its Poison in all Ages since, and when it will be worn out God knows. I call it a Seed because I find Diseases keep regular Types and have particular Attributes that distinguish them one from the other, as the Seeds of Plants do their particular Species" (20). Almost two centuries elapsed before this notion was experimentally

demonstrated by Robert Koch and Louis Pasteur.

The idea of "volatile insects" capable of spreading diseases was incorporated into Marten's theory in modified form from a paper written by F. Slare (1647?-1717) (23). In observations on a "Murren" of cattle, Slare noted that this disease had spread in a progressive manner from Italy into Switzerland and thence into Germany. To account for this it was proposed that the infection was carried by a "volatile insect." The agent was thought to be volatile in the sense that it was transported over a distance through the air and insect in that it would have properties of smallness and infectivity, and, as Marten believed, "... we may then easily conceive how they [infectious entities] are convey'd to and from Distant Countries or Climates, viz. by such Volatile Animalcula or their Ova or Eggs being deposited in the Bodies or Cloaths, or Goods of Travellers, etc." (16, p. 66). Slare's note, published in the *Philosophical Transactions*, most certainly echoes in Marten's theory, and, like Marten, Slare was skeptical of current ideas on the causes of infectious diseases. He wrote: "For the account of the Ancients concerning the grand pestilential Contagions is very little satisfactory to the Age, who derive from it a blind putrefaction, from the incantations of ill Men; or from the conjunctions of inauspicious Planets. I wish Mr. Leeuwenhoek had been present at some of the dissections of these infected animals. I am persuaded He would have discovered some strange Insect or other in them" (23). Earlier observations by Pierre Borelli (1629?-1689) and Theodore de Mayerne (1573-1655) also influenced Marten, but, although he quotes both these authors, it is not clear that he ever read their works. Nonetheless, Borelli had seen tiny insects on bandages placed on fistulous ulcers and observed, "Thus we are held of many Diseases which come from invisible Animals, or such as can only be perceived by Microscopes" (16, p. 72). de Mayerne also wrote about "... Thousands of Living Creatures in the Cancerous Brest of a Woman" (16, p. 72), and ideas of insect infection as a prime cause of infectious diseases were still being considered by John Crawford (1746-1813) in the early 1800s (11).

In addition to using works of authors on medical topics to support his arguments, it is interesting to discover that at least two essays by literary figures influenced Marten. Joseph Addison (1672-1719) is not named by Marten, but he used two quotations written by that illustrious figure in his coffeehouse sheets, *The Tatler* and *The Spectator*. In the former, Addison wrote: "I have lately apply'd my self with much Satisfaction to the curious Discoveries that have

been made by the help of Microscopes—There is a great deal of Pleasure in prying into This World of Wonders which Nature has laid out of Sight, and seems industrious to conceal from us. Philosophy has ranged over all the visible Creation, and began to want Objects for her Enquiries, when the present Age, by the Invention of Glasses, opened a new and inexhaustible Magazine of Rarities more wonderful and amazing than any of those which astonished our Forefathers—If we consider those Parts of the Material World, which lie nearest to us, and are therefore subject to our Observations and Enquiries, it is amazing to consider the Infinity of Animals with which it is stocked" (2).

Several years later, Addison wrote in *The Spectator*: "Every Part of Matter is Peopled: Every green Leaf swarms with Inhabitants. There is scarce a single Humour in the Body of Man, or of any other Animal, in which our Glasses do not discover Myriads of Living Creatures. The Surface of Animals are also covered with other Animals, which are in the same manner the Basis of other Animals, that live upon it; nay we find in the most solid Bodies, as in Marble it self, innumerable Cells and Cavities that are crowded with such imperceptible Inhabitants as are too little for the naked Eye to discover" (3). Marten was so impressed by these speculations that he quoted them completely, but referring merely to "... the most ingenious Author of the best Essays that were ever wrote and publish'd, with design at once to improve and divert Mankind" (16, p. 53-54), rather than directly acknowledging Addison.

In Johnathan Swift's (1667-1745) *Bickerstaff Papers and Pamphlets on the Church* (26), there is a passage (written in 1708) as follows: "I remember some Years ago a Virtuoso writ a small Tract about Worms, proved them to be in more Places than was generally observed, and made some Discoveries by Glasses. This having met with some Reception, presently the poor Man's Head was full of nothing but Worms; all we eat and drink, all the whole Consistence of human Bodies, and those of every other Animal, the very Air we breathe; in short, all Nature throughout was nothing but Worms: and by that System, he solved all Difficulties, and from thence all Cases in Philosophy" (p. 76). It appears, therefore, that some literary figures in Queen Anne's time were privy to the same ideas as Marten.

Addison's views on microscopical studies were not always enthusiastic, as, for example, in his essay titled "Will of a Virtuoso" (1). Referring to Nicholas Gimcrack's collection of microscopic specimens, he wrote that such persons represent "... a sort of learned men who are wholly em-

ployed in gathering together the refuse of nature . . . able to discover the sex of a cockle, or describe the generation of a mite . . . the mark of a little genius to be wholly conversant among insects, reptiles, animalcules, and those trifling rarities. . . Whatever appears trivial or obscene in the common notions of the world, looks grave and philosophical in the eyes of a virtuoso" (1)

REFERENCES TO MARTEN'S THEORY

It has been noted that Marten's book reappeared as a "second edition" in 1722, so we may surmise that it was of sufficient interest, perhaps only among laymen, at least, to merit this action. The book probably did not strike a proper note with physicians of his day, but two new paragraphs in the preface of the second edition proclaim, "It may not be amiss in this Second Edition to add concerning this *Theory*, that it is no small satisfaction to me to find many learned Gentlemen approve of it; and that since these Papers were first wrote, several have given into it, in respect to the Cause of many Diseases who had no Idea of it before" (17, p. xii). Marten never identified these "many learned Gentlemen," but he says, "And I do verily believe it may be easily proved that *Animalcula* are much more probably the true and direct Cause of the Plague we at this time so much dread, than whatever else has or can be conjectur'd; and that they are not the Effect only of Pestilential Putrefaction, as supposed by a very learned and worthy Physician, who has lately published a Piece on that subject, but the real and absolute Cause of it" (17, p. xii).

Singer (22) was unable to discover any direct mention of Marten's theory in the medical literature on phthisis published at the time, but he does mention two possible slighting allusions to Marten. There are, in fact, at least two direct references to the "new theory."

In 1724, Cotton Mather (1663-1728), in Boston, completed a lengthy manuscript titled *The Angel of Bethesda*. This was essentially a compilation of various medical pamphlets and unpublished papers written by Mather over a period of time. The work was first analyzed in depth by Beall and Shryock (9), and later by Jones (18). Indeed, *The Angel of Bethesda* was never published in Mather's time, and the complete text first appeared in print in 1972 (18). Perhaps the nature of this work may be sensed from the following evaluation by Oliver Wendell Holmes: "The divine takes precedence over the physician in this extraordinary production. He begins by preaching a sermon at this unfortunate patient. Having thrown him into a cold sweat by his spiritual sudorific, he attacks him with his material remedies, which are often quite as un-

palatable . . . Everything he could find mentioned in the seventy or eighty authors he cites, all that the old women of both sexes had ever told him of, gets into his text, or squeezes itself into his margin . . . He piles his prescriptions one upon another, without the least discrimination. He is run away with all sorts of fancies and superstitions. . ." (15). Cotton Mather was familiar with the writings of Kircher, "Lieuwenhoek," and others, and it is not too surprising that he alludes to them in *The Angel of Bethesda*. Remarkable, though, is the fact that he was the only early American medical writer who immediately seized upon Marten's theory as a valid explanation for the cause of many diseases. Chapter 7 of *The Angel* is titled "Conjecturalies, or some Touches upon, A New Theory of many Diseases," and this exposition is the sole 18th-century American work dealing with the animalcular hypothesis of disease.

Chapter 7 contains long passages copied directly from Marten's book. Marten's references also were included, with little indication of their being "borrowed," so that an unwary reader would likely assume that he was reading Mather's rather than Marten's words. Mather believed that the origin of most human ailments was the stomach and that if one knew what factor(s) induced this organ to become a proximate cause of disease, one would have found the key to many human ailments. Mather was convinced that Marten had hit upon the essential factor. But, as Beall and Shryock noted, "'The Angel' was never published, and even if it had been, it is doubtful whether the local medical men would have been in a mood to give it serious attention. Mather, then, failed in his effort to introduce the animalcular concept into American medicine" (9, p. 92).

The other work that noted Marten's theory was written by Edward Barry (1696-1776), a book titled *A Treatise on A Consumption of the Lungs* (8). Barry, however, rejected Marten's ideas, as the following passage indicates. "... I cannot well avoid mentioning the Author of a late Hypothesis [i.e., Marten (16, p. 50-51)] which some may be more inclined to believe, since no less than *Ocular Demonstration* is offered to confirm the Truth of it. This Person takes Notice, that *Ulcers* in the *Lungs*, when narrowly viewed with *Microscopes*, are covered with several *Insects*; and from thence concludes that they take their first Origins from such *Animalcules*, which being inspired with the Air, fix their Situation on the *Lungs*, and erode and ulcerate the *Vessels*: and from the same irregular Way of Reasoning, these *Animalcules* have been by others supposed the Cause of Several *Distempers*, and particularly such as are *Contagious*:

But these Appearances may be easily accounted for, as the unavoidable Effects, not the Cause of these Diseases: For it is certain, that there is almost an infinite Number and Variety of such Animalcules perpetually floating in the Air, whose chief Business consists in searching out a Place where they may find Nourishment, and a proper Situation for themselves and their Young: But every living Part of a human Body has a perpetual Pulsation, which, tho' imperceptible to our Eyes, is sufficiently strong to give the most uneasy Motion to these *Animalcules* so minutely small and entirely prevents them from fixing there for any Time" (8). So, Marten is dismissed, and we do not hear of him again, although others may have used his ideas without acknowledgment. Singer put it correctly when he wrote, "Thus vanishes into darkness a meteoric prophet of the parasitic nature of the infectious diseases" (22, p. 98).

MARTEN'S LIFE

Until the present time, the only clue to Marten was in his book, namely, an address listed at the end of the preface, "From my House in Theobald's-Row near Red-Lyon Square in Holbourn. . . ." Theobald Road in London exists today, as does Red Lion Square, but the former is a wide, multiple-lane motorway, and the latter is a pleasant little park completely surrounded by public housing apartment buildings. Any traces of Benjamin Marten's dwelling place must have been obliterated long ago.

What can be deduced about Marten's life comes mainly from advertisements appearing in coffeehouse sheets published from 1705 to 1722. John Marten, a London "surgeon" who flourished at this period, was notable for the popular books on medical topics that he wrote and subsequently advertised. His special forte was venereal diseases, and his book *A Treatise of all the Degrees and Symptoms of Venereal Diseases in both Sexes* had gone through seven editions, the last published in 1711. The various unctions and medicines recommended and the quick cures claimed in this book were disrupted continually in the form of counteradvertisements by another probable quack, John Spinke, "licence'd practitioner in physick and surgery." Spinke, it seems, also wrote a book on the subject of venereal diseases and hence was in competition with John Marten for readers.

One of the most informative of Spinke's counteradvertisements appeared in Daniel Defoe's newspaper, *A Review of the State of the British Nation* (Tuesday, 5 April 1709, 6:4): "The Hatton Garden Clap-Preventer [this was John Marten, of course!] that treats his Patients with

poisonous Mercury Sublimate, is desir'd to take Notice that Mr. Joshua Stephens . . . tells People that he is the Author of the translation of Dr. Greenfield's Book that is printed with the Name of John Martin in its Title Page. This makes People suspect, that the said John Martin is an imposing, cheating quack, and an ignorant pretender, and that his Letters, Stories of Cures, pretended Medical Secrets, etc., are (like his Pretensions of being the Author of the said Translations) but so many Shams and Impositions on the Publick; as to which Particulars, the said Martin is desir'd to publish the Truth of the Matter, in some one of the News-Papers, that he has impudently monopoliz'd for his own, his Brother Ben, the Chymical Soap-Boiler, and his Brother Spooner, the Taylor. . . ." Thus, we infer that Benjamin Marten had at least two brothers, namely, John and Spooner. Singer (22) wrongly denied that John was Benjamin's brother. Spinke's small book (24), published later in 1709, was titled *Quackery unmasked: or reflections on the sixth edition of Mr. Marten's treatise of the venereal Disease, and its appendix; and the pamphlet call'd, the charitable surgeon, etc.* Inside the front cover, opposite the title page, was pasted an addition which stated, "N. B. Since the Publication of this Book, I am credibly inform'd that Mr. Benj. Marten never was (as I was told) a *Soap-boiler*; but he has by his own Industry, acquir'd a competent Knowledge of the Theory and Practice of Physick; and does on all Accounts behave himself as a Gentleman, meriting a good Character, which in justice to him, I thought myself oblig'd to publish."

One may surmise from this that in the first decade of the 1700s, Benjamin Marten absorbed much of "the theory and practice of physick" by reading his brother John's books. Perhaps he occupied himself with preparing his brother's medicines. In any event, Spinke's book supplied further information on the Martens. For example, one learns that "... your Taylor, I presume to be Mr. Spooner . . . But, Sir, that *Taylor* having, as I'm informed, marry'd your own Sister (in point of good Manners) ought not, by you to be call'd a Quack; especially, he only vending, as I am also inform'd, Medicines prepar'd by *Ben*, the *Chymical Soap-boiler*. . ." (24, p. 49). From this passage it appears that (Taylor) Spooner was not a brother of John and Benjamin and, furthermore, that they had at least one sister. In the second edition of Spinke's book (25), we learn that John Marten was a poor tailor's son who obtained his medical knowledge by working as a surgeon's apprentice. Spinke also mentioned another brother, James, and, indeed, the Company of London Apothecaries' book (Guildhall

Library, London, manuscript 8206/1) noted that on 8 February 1706, James Marten was liberated from his apprenticeship to James Tubb, "having served his full term of his appt. sworn and made free."

We may infer that Benjamin Marten, one of several sons of a poor tailor, was continuously exposed to both medical and apothecary lore and practice in his early youth. It comes as no surprise to discover, then, that in 1717 he received an M.D. degree from the University of Aberdeen, Aberdeen, Scotland. This degree was often awarded on application and recommendation, without the necessity of taking formal courses or examinations, and thus it was for Marten. In *Officers and Graduates of University and King's College, Aberdeen, 1495-1860*, there appears the following entry under the date 9 December 1717: "Dr. Benjamin Marten Anglus, M.D. (£ Stg. paid)" (4). In addition, the manuscript minutes for King's College, University of Aberdeen (King's College Library, manuscript K41), show that on that day "the said day Dr. Patrick Urquhart mediciner with the principall and Masters subscribed a Diploma in favour of Mr. Benjamin Marten of London as Doctor of Medicine and appointed the humanist to append the Colledge seall thereto and to receive from Dr. Urquhart the four pounds Ster due to the Bibliothek. (Signed) George Chalmer, Principall."

Shortly before Marten bought his medical degree, he married one Hannah Fisher (7), who was either a widow or a spinster (unmarried women over 30 years of age were commonly referred to as "Mrs."). The marriage register of St. Stephen's Walbrook states, "On Nov. 17, 1716. Mr. Benjamin Marten of St. Michael Bassinshaw, b., & Mrs. Hannah Fisher, of St. Botolph without Adersgate, London, s. Lic. L. B. L." (7). The "b" signifies "bachelor," the "s" signifies "spinster," and "Lic. L.B.L." means "licensed by the Bishop of London." The list of "London Marriage Licences 1715-1719" (p. 241) at Guildhall Library shows: "Marten, Ben. and Fisher, Hann 6-11-13." This would be 13 November 1716 rather than 17 November as shown in the St. Stephen's register. It is of interest that the "Names of Inhabitants" of St. Michael Bassinshaw fails to identify Benjamin Marten as a member of that church.

John Marten died at Middlesex on 8 January 1737, and his will reveals that he was an affluent man (Guildhall Library, manuscript 2501/1). The important part of this document is the following: "I thereby give to my Brother Benjamin Marten Doctor of Physick, one Shilling and to my sister Elizabeth Spooner One Shilling and

to James Marten the only Surviving Son of my late Brother James Marten . . . Apothecary One Shilling." Here, then, we have named the sister and brothers of Benjamin Marten. Apparently, John Marten did not believe his relatives to be in need of money or else did not wish to endow them with any degree of his wealth, since one shilling was considered a token gift.

"Boyd's Burial Index" (Guildhall Library, roll 11 [3] item 21722) shows that only three men named Benjamin Marten were buried in London in the 18th century. They were all members of St. Dunstan's in the West and were interred in 1758, 1764, and 1782. St. Dunstan's is far removed from Theobald's Road. It should be emphasized that the names Martin, Marten, Martine, etc., were often misspelled and erroneously transcribed in documents of the time. There is, in fact, one administered will in the Public Records Office, Chancery Lane, London, dated May 1751, for a Benjamin Martin (AA Probate 6, p. 224, 1751). This will was administered by the city of London and reads "Benjamin Martin on the Twenty Third day Admcom of the Goods Chattels and Credits of Benjamin Marten late of the Parish of St. James Clerkenwell in the County, of Middsex a Widower deceased was granted to Russell Marten the natural and lawful Son of the said deceased having first made a Solomn and Sincere Declaration of Affirmation according to Act of Parliament duly to agr. May 1752." Among the reasons for believing that this was our Benjamin Marten is that the date is about right. If Marten was born circa 1690-1695, he would have been 56 to 61 years old when he died. Clerkenwell Road is continuous with Theobald's Road and hence is situated where Marten lived. A survey of 35 church burial lists for the 18th century† did not reveal anyone named Benjamin Marten, and the brevity and the lack of a legally prepared will and testament suggests that he may have been poor when he died—perhaps even buried at public expense. No other published evidence of Benjamin Marten for the period 1722 to 1751 has been uncov-

† St. Vidast; St. Helen's, Bishopsgate; St. Paul's, Covent Garden; St. Martin, Outwich; St. Benet and St. Peter; St. Mildred, Bread Street; St. Margaret Moses, Friday Street; St. Mary le Bow; St. Olave, Hart Street; St. Mary le Bone, Middlesex; St. Marye Montham; St. Dionis, Backchurch; St. Mary Aldermarie; St. Thomas the Apostle; St. Michael's, Cornhill; St. Antholin and St. John Baptist; St. James, Clerkenwell; Stourton County; Wilts; Christ Church, Newgate; Bath Abbey; St. Mary Somerset, London; St. Mary the Virgin, Aldermanbury; St. Mathew and St. Peter Cheap; St. Mathew, Friday Street; St. Clement, Eastcheap; St. Martin Orgar; St. Lawrence Jewry; St. Mary Magdalen, Milk Street; St. Michael, Bassinshaw; St. Catharine, by the Tower; St. Dunstan, in the East, London; St. Edmund the King and Martyr; Temple Church; St. Giles in the Field; St. George the Martyr.

ered after a search of numerous British archives, libraries, and repositories of 18th-century materials. Singer (22) said that Marten was not a member or fellow of the Royal College of Physicians in London, but only doctors who qualified at Oxford or Cambridge were eligible for election to this body (21).

ACKNOWLEDGMENTS

I thank Janet H. Doetsch for invaluable assistance in library research carried out during the course of this investigation. Deep appreciation is expressed to the numerous helpful librarians and officials at the British Museum, London; the Public Records Office, Chancery Lane; Guildhall Library; the Greater London County Council; the Wellcome Institute of the History of Medicine Library, London; the National Library of Medicine, Bethesda, Md.; the University of Maryland, College Park; and to the patient vicars and vergers of London churches.

The work was made possible by grants from the National Library of Medicine (LM-02669) and the University of Maryland.

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