The FitzPatrick Lectures ON THE POST-HIPPOCRATIC SCHOOLS OF MEDICINE.

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[Abstract.]

(Concluded from page 143.)

THE METHODISTS.

THE school of the Methodists seems in a sense to occupy an intermediate position between the opposing schools of the Dogmatists and Empirics. This name of Methodist is doubtless more familiar to English ears as the sobriquet jestingly given by a Christ Church undergraduate to the small group of friends who gathered round the brothers Wesley in Oxford in the middle of the eighteenth century on account of their regular manner of life and behaviour. The name as originally given had of course reference to intellectual and not moral qualities. In any case it was not very appropriate, though the founders of the school did perhaps commit themselves to a more definite and precise theory of disease than either the Dogmatists or Empirics.

This school reduced medicine to very simple terms, which may remind us in some ways of homoeopathy, for in therapeutics they adopted the principle of "contraria contrariis curantur," which is analogous though antagonistic to the system of Hahnemann. According to the Methodists the body consisted of atoms and pores, a doctrine derived from Epicurus. To the atoms they paid but little attention, concentrating themselves on the pores. Now these pores were said to be either in a state of too great contraction or too great relaxation.

The foundation of the school of the Methodists synchronized with the migration of medicine from Alexandria to Rome as the centre of intellectual activity, and the entry of Greek medicine into Rome had been accomplished by the well known and popular physician Asclepiades of Bithynia, who had adopted the doctrines of atomism from Democritus and Epicurus. Themison of Laodicea (fl. 50 B.C.), a pupil of this Asclepiades, founded the school of Methodism. Though, like his master, he followed the doctrines of atomism, unlike Asclepiades he concentrated his attention entirely on the pores, paying hardly any heed to the atoms. For the Methodist generally, acute disease was a state of contraction (status strictus), while a chronic disease was a state of relaxation (status laxus). As regards therapeutics, there were for the Methodists only two indications: (1) to relax the pores when there was a constriction, (2) to constrict them when there was a relaxation. What could be simpler? Among the therapeutic agents which were thought to have the desired effects were:

Relaxing Agents.

1. Venesection; but they practised this with caution, because "bleeding" tended to draw off the finer, the more vital atoms first, leaving the coarser ones behind.
2. Cupping; of this they made frequent use—sometimes they would cover nearly the whole body with cupping glasses, as they paid no attention to the part affected.
3. Softening plasters.
4. Warm drinks.
5. Diaphoretics.
6. Warm air.
7. Sleep.
8. Exercise carried to the point of fatigue.

Constricting Agents or Astringents.

1. Darkness.
2. Cool air.
3. Cold water and acid drinks.
4. Decoction of quinces.
5. Red wine, pure or diluted with water; the cold water had to be taken in small quantities, for fear that if the patient took much it would soften the tissues and cause relaxation.
6. Vinegar, solution of alum, powdered chalk, lead plasters.

During the first three days of an illness they enjoined strict abstinence; then they administered food only every other day. Remedies were not given till the third day. During the days of abstinence the patients only washed their mouths with water and drank a little; apart from this they were covered with plasters and wool steeped in warm oil if the disease was one in which the pores were contracted, and in

cold oil if the disease was one in which the pores were relaxed.

By means of these summary methods of diagnosis and cure the Methodists thought they could dispense with all further research. They made no inquiry into causes whether remote or proximate, for, from the moment the causes had produced their effect—that is to say, from the moment the disease was formed—it was this, they said, which one had to cure. It was from the disease itself, they said, its nature, character, and cause, that one had to find the indications for treatment, and not from anterior circumstances, which had no influence; and the nature of the disease consisted in having the pores too much constricted or too much relaxed.

The best known member of this school, and by some regarded as the real founder of it, though an absolute charlatan, was undoubtedly Thessalus of Tralles. He was the son of a weaver, which occupation he followed in his youth, and had enjoyed none of the elements of a liberal education; from this resulted the pride of ignorance and scorn for the observations of his predecessors. He considered that medicine could be learnt in six months. He reversed the famous aphorism of Hippocrates that "Life is short and Art is long" by saying that "Art was short and Life was long"! On a monument in the Appian Way he styled himself "Conqueror of Physicians," and he wrote to the Emperor Nero saying that his medical predecessors had contributed nothing to science—the kind of statement which Nero might well have appreciated. So little did he know of Greek that he accused Hippocrates of causing the death of his patients by overfeeding them.

"I have," said Thessalus, "founded a new sect, which is the only true one, being obliged to do so because none of the physicians who have preceded me have found out anything useful for the preservation of health nor for banishing diseases, and Hippocrates himself has uttered many harmful maxims on this subject."

By dint of great flattery Thessalus insinuated himself into the houses of the great. According to Galen, who was, however, the bitter enemy of the Methodist school, the manners of Thessalus were submissive and slavish, very different from those of the ancient physicians, the descendants of Aesculapius, who gave commands to their patients like a general to his soldiers or a prince to his subjects. Thessalus, on the contrary, obeyed his patients like a slave his master: if his patients wished to bathe he let them do so; if they wanted to take ice or snow he gave it them. Naturally Thessalus attracted a large number of pupils, mostly from the artisan class, who were anxious to become doctors in six months; he himself wrote five large volumes which would require almost that length of time to read through.

Of a far higher calibre was Soranus of Ephesus, who may be regarded as one of the chief ornaments of the Methodist school. He came to Rome in the time of Trajan and Hadrian (A.D. 93–138). He was the first of the school to offer a plausible reason for the rejection of the use of purgatives—namely, that they got rid indiscriminately of humours which were wholesome and those which were vicious. He always used venesection in pleurisy, because it clearly arose from a status strictus. He wrote a book on gynaecology which showed that he had a wide knowledge of anatomy, a subject as a rule despised by the Methodist school, and his ideas on anatomy seemed to have been based on human and not merely on animal dissection, as had been the case with most of his predecessors. The great theologian Tertullian spoke of him as "methodicæ medicinae instructissimus," and his reputation lasted well on into the Middle Ages.

We should know but little of the Methodist school were it not for the writings of Caelius Aurelianus, who lived in the fifth century; he was a native of Sicca, in Numidia, but practised and taught in Rome. Like most other members of the Methodist school his education had been very imperfect, and this perhaps explains the barbarism of his style and his complete ignorance of the Greek language. On the other hand, no ancient author has more clearly set forth the diagnosis of each disease, and it was a fortunate circumstance that in the Middle Ages the monks selected him before all others for their guidance in the treatment of disease.

As examples of acute diseases which depend on constriction, Caelius Aurelianus gives us (1) madness, (2) lethargy, which involved a stronger constriction than madness, (3) catalepsy, (4) pleurisy and pneumonia, (5) tumours. Chronic diseases depending on constriction were (1) headache, (2) giddiness, (3) asthma, (4) epilepsy, (5) jaundice, (6) obesity, (7) suppression of the catamenia, (8) melancholy, (9) paralysis, (10) phthisis, (11) colic.

As an example of acute disease caused by relaxation he gives cholera, and of chronic diseases haemoptysis and diarrhoea, excess of the catamenia, and wasting.

Since these two general states of the body were sufficient to guide the physician in the knowledge and treatment of disease all etiology became superfluous, for there is no object in knowing the cause of constriction, for instance, so long as we are able to cure it.

The Methodist school certainly possessed the merit of endeavouring to cure disease by the simplest measures, such as air and food. In order to make use of air for the purpose of relaxing the pores they put their patients into rooms which were very light, moderately warm, and large. When, on the other hand, they wanted to have the constricting effect of air they placed their patients in rooms which were dimly lighted and very cool. They also paid great attention to posture in bed, and considered the sort of covering patients ought to have, whether they should sleep on a mattress or on a bed of feathers, whether the bed should be large or small; and its relation to the windows. In a word, they were most particular about all such things as other physicians passed over more lightly.

The school of the Methodists was astonishingly successful, at least in gaining students, partly, no doubt, because their system could be acquired in a very short time; in fact, it demanded the minimum amount of knowledge, and so it satisfied the natural appetite of the human mind for generalizations, which the Empirical school had done nothing to supply. Finally, it occupied an intermediate position between Dogmatism and Empiricism, appearing to unite the advantages of both schools without the inconvenience of either.

The philosophy which had most influence upon the school of the Methodists, and which in fact formed their intellectual background, was that of Epicurus. He was born in the island of Samos about 342 B.C., some two hundred years later than Pythagoras. At the age of 18 he went to Athens and began life there as a teacher of grammar, until his attention was drawn to philosophy, owing, it is said, to the inability of his teachers to explain what Hesiod meant by chaos. At the age of 35 he purchased for 80 minae his famous garden in Athens, and there he taught for the remainder of his life, till his death at the age of 72. Epicurus was one of the most prolific of Greek writers, and is said to have written some three hundred volumes. He prided himself on being self-taught, and boasted that he was entirely independent of all his predecessors, yet it is quite obvious that he was largely indebted to Aristippus and the Cyrenaic school of pleasure on the one hand and the atomic theories of Democritus on the other. He took no part in political affairs, his maxim being "to live secluded." The main purpose of the philosophy of Epicurus was the moral life; thus, physics were regarded as merely ancillary to ethics, which were the beginning and end of the Epicurean teaching. Thus he regarded philosophy as part of the daily business of speech and thought with a view to securing a happy life. According to Epicurus it was not necessary to have read deeply or thought profoundly; literature and education were often more of a hindrance than otherwise.

The popular conception of Epicureanism as encouraging an unrestrained luxury is entirely removed from the facts, and is due to our knowledge of his teaching having come down to us through the writings of his enemies. A single instance will be sufficient to show us the kind of life advocated by Epicurus. In writing to a friend he says: "For myself I can be pleased with bread and water, yet send me a little cheese in order that when I want to be extravagant I may be." He is also responsible for the saying, "It is more blessed to give than to receive." To Epicurus the world presented itself as a mechanism, and within the limits of this mechanism it was the business of man to arrange his life as well as he could, but it was not necessary for him to know more of this mechanism than that on which his own weal or woe depended. So long as one realized that everything had natural causes it mattered little what the causes were. He adopted the atomic theory of Democritus because this harmonized best with his ethical individualism.

Although the doctrines of Epicurus never took so great a hold upon the ancient world as Stoicism, yet his immediate disciples adopted and followed his teaching with scrupulous conscientiousness, and they became devoted to their master in a way which has been hardly equalled in ancient or modern times. They are said to have committed his works to memory; they had his portrait engraved upon rings and

drinking vessels, and they celebrated his birthday every year. Athens honoured him with bronze statues, and the number of his pupils and friends is said to have exceeded the population of whole cities.

It is well to remember that at the time when Epicurus was living at Athens the Grecian world had seen the downfall of Thebes, the exile of Demosthenes, and the shipwreck of the whole Hellenic State system. Political freedom having to a large extent disappeared, the philosophers endeavoured to establish an internal freedom based upon ethical principles and to maintain it in spite of outward oppression. It was this inward freedom which the Epicureans no less than the Stoics set themselves to supply.

It is not to be imagined that the average physician of the Methodical school busied himself much about the Epicurean or, indeed, any other philosophy; but he was none the less surrounded by it, as the ordinary man is enveloped in the atmosphere, about the weight and composition of which he is not concerned to inquire. What we have specially to note is that the Epicurean philosophy, by its close concentration on the moral life of man, together with its inadequate and most superficial way of dealing with physics, helped to promote the decidedly crude and superficial way of regarding disease which we have seen to be characteristic of the school of the Methodists.

THE PNEUMATISTS.

Though in some ways the least influential and certainly the most short-lived of these post-Hippocratic schools of medicine, their very name has a certain fascination about it which draws one's thoughts to the schools of philosophy.

The Pneumatists may be regarded as an offshoot of the Dogmatists, who began to take on this name when the sect of the Methodists was at its zenith. Physicians who did not want to follow the Methodist school embraced that of Pneumatism so as to have solidly-established principles which they might oppose to the Methodists. For, unlike the Methodists, the Pneumatists believed much in dialectic and regarded it as indispensable to the perfection of science. The name "Pneuma" was given by them to what they regarded as an active principle which was the determining factor of health and disease. Platonic theories had already laid the foundation of the doctrine of this aerial substance, but Aristotle gave the first clear idea of it when he described the way in which the pneuma is introduced into the body and the circulatory system.

The doctrine was still further developed by the Stoics, and they exercised a great influence over the Pneumatists and so upon the further evolution of medicine. They were of opinion that the aerial substance passed from the lungs into the heart and arteries and was then disseminated throughout the body. The Pneumatists maintained their theories with the greatest enthusiasm and pertinacity; Galen says of them that they would rather have betrayed their country than abandoned their doctrines.

The founder of this school was Athenaeus of Attalia in Cilicia, who practised in Rome in the reign of Claudius, about the middle of the first century. In his teaching Athenaeus maintained that the Pneuma was the World Soul, the living Self-conscious God, from whom the souls of men, animals, and plants proceed, and who was also the creator and framer of all matter. Its unimpeded movement was in the last resort the cause of all physiological and pathological happenings. As a Stoic Athenaeus adopted all the doctrines of the Peripatetic school, but he developed the theory of the elements more or less after the manner of the Methodists.

It was from this school that there emanated some curious teaching about the pulse at different ages; thus, in the newborn the two short syllables of a verse—a short systole and a short diastole; in older persons the pulse is like a trochee, while in still older people the pulse with a long systole and long diastole becomes like a spondee.

Far better known than Agathinus was his disciple Archigenes of Apamea, who practised medicine at Rome in the time of Trajan, and enjoyed among his contemporaries a great reputation which endured for several generations. Like the Stoics Archigenes placed the seat of the soul in the heart, which not unnaturally made the explanation of the sensory nervous system a matter of considerable difficulty for him. His doctrine of the pulse was famous in antiquity, and he described eight different kinds of pulse according to its size, force, velocity, frequency, fullness, regularity, equality,

and rhythm. Each of these species was divided into several varieties.

Archigenes made use of a large number of drugs, mostly of a mild variety, preferring mild laxatives to drastic purgatives. At the height of the disease he had recourse to warm fomentations, especially to sponges soaked in warm water, in order to lubricate the pores and favour coction. He gives an excellent account of dysentery, which he attributed to ulceration in the large intestine, and he prescribed for it preparations of opium and astringents. He further described the signs for recognizing an abscess of the liver, and explained its formation and termination. With regard to insanity, Archigenes, like most Greek physicians, showed remarkable enlightenment. Seeing the priests of Cybele scampering and flagellating, and cutting themselves after their manner, he said, "They are insane; do not leave them to those bloody gods of the East; send them to me." His treatment of the maniac was to feed him up and soothe him with music. On the other hand, so little consistent is the mind of man, he sometimes in his treatment had recourse to amulets and other methods of superstition.

Of the same school and about contemporary with Archigenes was Aretaeus of Cappadocia, to whom we are indebted for some of the best medical writings which have come down to us from antiquity. In all probability he flourished in the second half of the second century of our era and was contemporary with Galen. Unlike the Empirics, Methodists, and most other Pneumatists, he paid great attention to anatomy, and his knowledge in this department was far superior to that of his predecessors; thus he thought the lung was insensitive, made of some substance like wool, provided with a very small number of nerves, and entirely devoid of muscles. On the other hand, the pleura was endowed with a high degree of sensibility and was the seat of the pain in inflammation of the chest, when the patient experiences keen suffering. It was, he said, in consequence of the insensibility of the lung that phthisical patients retained so much hopefulness as they approached the end of their existence. He credited the heart with far greater pathological significance than any other author, and syncope, of which he gives an excellent description, he considered to be a cardiac affection.

Aretaeus in his dignity, integrity, and love of his art, was a true disciple of Hippocrates. He differed from Hippocrates in thinking that the physician should attend even cases of incurable disease, though he might be able to do nothing but express sympathy. Next to Hippocrates he was the best observer in antiquity, and seems himself to have seen nearly all the diseases of which he gives so clear and graphic a description. Like Hippocrates, too, he laid stress on individual differences of constitution and of climate and on the changes of the seasons. Like the rest of the Pneumatist school he often derived diseases and their symptoms from the temperature of the elements; among others, he found in cold and dryness the causes of old age and of death—indeed he made various chronic affections issue from the cold and damp. The liver he thought to be the organ assigned by Nature for the preparation of the blood, and, like the rest of the ancients, he made this viscus the seat of desire.

We have seen how the Dogmatists were influenced by Plato, the Empirical school by the Sceptics, the Methodists by the Epicureans, and now, finally, it was the most fashionable philosophy of the Roman world—namely, Stoicism—which exercised most influence over the school of the Pneumatists. The whole idea of the Pneuma, at least the elaboration of it, was, of course, Stoic in origin. No doubt the Hippocratic idea of innate heat was something of the same nature, and the same idea in later times may be found in the *Archæus* of Van Helmont, though that was perhaps a more mystical conception, and even indeed in the *élan vital* of Bergson. But the Stoics, like the Epicureans, were not primarily interested in physics or in theories about the Cosmos, nor did they have any high opinion of medicine, for their essential aim was to find some philosophic basis for the guidance of everyday life—how, in fact, life was to be lived rationally and nobly in the world; unlike the monastic ideal of the Middle Ages, which was rather how life was to be lived out of the world. Zeno, the founder of the Stoic school of philosophy, some three hundred years before the epoch we are now considering had endeavoured to discover for men a way of escape from fear and desire by adjusting their wills to everything which might befall them. "I am happy," he said, "when I do not want things to be any other than they are."

According to Zeno the world was governed by the same divine reason which dwells in the breast of each individual, and the universe, animated by this reason, was striving to realize values which the human reason would appreciate as good if it could but know the whole. Human reason coincided with the universal reason which governs nature, and this indeed, according to Zeno, was the source of the moral law. To establish a physical basis for his ethics Zeno went back to Heracleitus and believed that all individual things in the world are only oppositions of one and the same thing, and that there is but one law which governs the course of nature and ought to govern the actions of man. The ultimately real was regarded by the Stoics as corporeal, and spoken of as warm vapour or fire, for it is warmth which begets, enlivens, and moves all things.

The essential aim of the Stoic physics was to show that the power operating in the universe was rational; Zeno believed in a rational process controlling the world. When Zeno said, "God is body," he showed his repugnance to any teaching which would dissolve God into an abstract idea; it was the crude expression of an intense conviction that God was real, was indeed concrete. For the Stoics the universe was a living being, and we should therefore regard their doctrine as pantheistic rather than materialistic. Chrysippus, a successor of Zeno, was of opinion that without the study of physics it was not possible to distinguish between good and evil, yet, as a matter of fact, the Stoics did not really go very deeply into the question of physics and investigation of nature.

As we have seen in the case of the Epicureans, so too with the Stoics the free and purely scientific contemplation of the world which characterized the old Ionian philosophers had disappeared coincidentally with the loss of political freedom due to the rise of the Macedonian hegemony, and the chief value of philosophy was sought more and more in the refuge with which it provided men against the miseries of life. The concentration, then, of Stoicism upon conduct and the moral life is perhaps its chief title to fame. It cannot therefore be said that the Pneumatist school of medicine received any great stimulus to the investigation of nature from the Stoic philosophers, but what it did receive was a belief in a rational principle pervading nature—that, indeed, nature is governed by rational laws, to which it is the business of man to accommodate himself. Such a belief was undoubtedly a source of stability to the intellectual life of those physicians among the Pneumatists who unconsciously followed the Stoic teaching and raised them to a loftier mental standpoint than that occupied by the Empirics and Methodists.

In the long run the belief in reason can hardly fail to have a favourable influence on the progress of medicine, and therefore the Stoic philosophy offered this indirect help to medicine. But Stoicism, in ordinary parlance, calls up the vision of rather hard, unamiable people, indifferent to all outward things, careless alike of the major and minor aesthetics of life, and clad in an impenetrable carapace of spiritual pride. This picture of the Stoics has been drawn by all the world's satirists from Horace onwards. Yet it is not a true picture till we come to the later phases of Stoicism, when that philosophy was passing into the unpleasant eccentricities of the monastic ascetic. The earlier Stoics, with whom we are more concerned, busied themselves but little with physics and the structure of the external world, but they were not averse from a life of action, they maintained an ideal of civic virtue, and had not learnt to be indifferent to the welfare of the State, even though a somewhat abstract cosmopolitanism was teaching them to transcend the limits of nationality. The medical school of Pneumatists seems to me to have been exceptionally free from the taint of charlatanism and to have maintained an ethical standard distinctly above the average of the profession in their day. Is it unduly fanciful to imagine that the noble moral grandeur which characterized the great Stoics, such as Seneca, Marcus Aurelius, and Epictetus, may have instilled itself into the physicians of the Pneumatic school?

A CONGRESS of French-speaking neurologists and alienists will be held at Besançon in August under the presidency of Dr. Henri Colin. The subjects to be discussed will include psycho-analysis, crimes resulting from narcomania, and nervous trouble resulting from supernumerary ribs.

A SOCIETY has been organized at Copenhagen to endow Pasteur scholarships for Danish medical men who desire to take courses of study at the Paris Pasteur Institute or at similar institutions in other countries; Dr. S. P. L. Sorensen was elected president of the society.