In presenting the accompanying Thesis for the Degree of Dr. Litt., I declare that it has been composed entirely by myself. Not any part of it has been presented for a degree in any University.

I beg to state also that I am an M.D. (Thesis Gold Medal-list) ; D.3C. and Parkin Prizeman of the University of Edinburgh; a Fellow of the Royal College of Physicians of Edinburgh; a Barrister-at-Law of Lincoln's Inn; a Fellow of the Royal Society of Edinburgh and of many other learned societies.

I lectured on the subject of Forensic Medicine in the Extra-Mural School of Medicine in Edinburgh for many years and was Examiner in this subject in several universities.

I have written several works including a "Manual of Medical Jurisprudence" (5 editions), another on "Public Health" (4 editions); another on "Medical Conduct and Practice", etc.

1st Oct. 1932.
THE DETERIORATION OF MEDICINE DURING THE
MIDDLE AGES.

A Thesis presented for the Degree of D.Litt.

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- Physiology, Pathology, Diagnosis, Diseases,
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- Drugs, Cures, Treatment, Dietetics,
- Midwifery, Surgery, Insanity, Venesection,
- Anaesthetics, Humours, Poisons, Education,
- Ethics, Proprietary Medicines,
- Astrology, Quacks, Cosmetics.
The object of this thesis is to show that in my opinion not sufficient attention has been paid to the fact that not only did the practice of Medicine make no progress during the middle or dark ages, but that on the contrary it underwent a profound deterioration or degradation.

The term "Middle Ages" is a very elastic one. It has been employed to cover a comparatively limited interval, as in the case of literature, where the dark ages extended from the fall of the Roman Empire (c. 476) to the eleventh century.

For the purpose of this inquiry however, it is desirable to extend the period of deterioration not only backwards but also forwards to a much later date.

It is impossible in the limits of this investigation to enter with any detail into the state of Medicine during the Egyptian, Assyrian, Greek or Roman periods. It must be taken for granted that the reader is more or less familiar with them. It is sufficient to say that Medicine, Surgery and Therapeutics had reached a high (though unequal) stage of development in each of these empires.

**Egyptian Medicine.**

What has come down to us shows that the Egyptians seemed to have been much more concerned with the preservation of good health rather than with the cure of the same when diseased. This is much more in line with our present conception of the proper
The dates in brackets after the names do not refer to the life-time of the authors, but to the editions of their works quoted in the second volume.
function of medicine than it has ever been previously. In the Egyptian ritual elaborate directions are given as to how best to attain this well-being. Practical applications of hygiene to every-day life seem to have been thoroughly carried out. Indeed in many cases personal cleanliness seems to have been carried to the length of being a fetish. Thus the priests in the temples were required to put on clean clothes after every occasion on which they bathed, and this they were compelled to perform three times each day and twice during each night. In addition, the whole body had to be shaved every third day.

The Ebers papyrus (written somewhere about 1550 B.C.) indicates that the Egyptians had a very adequate idea of anatomy, though their physiological deductions were in many instances far astray. They recognised the pulse and its indications, they knew how to treat fractures, and so well had this been done in many cases, that the broken bones in mummies exhibit a complete and perfect union.

It was however in diagnosis and therapeutics that they chiefly demonstrated their knowledge. Over 250 diseases are very well described and especially is this so in the case of affections of the stomach. As aids to diagnosis they were in the habit of employing inspection, palpation and auscultation. Even Herodotus refers to the specialists who practised among them and who devoted their entire energies to the cure of diseases of the Eye, Stomach, Liver, etc.

The list of drugs which they used is an extensive one and is
derived almost entirely from inorganic and vegetable materials. It is to be regretted that the greater number of these are as yet unidentified with those in use at present. There is however mention of the use of the gall and the blood of the lion, ox and hippopotamus, and coprotherapy was not unknown.

The classification of their drugs was very much on the lines of our present-day nosology, chologogues, oxytocics, myotics, mydriotics, etc. as well as sedatives, narcotics, antidotes, disinfectants, etc.

Greek Medicine.

Owing to the professional abilities and literary excellence of the Greek medical writers, we are furnished with a more or less complete exegesis of their system of medicine. The whole practice of medicine which was gathered together by Hippocrates was in all respects excellent, and this even when compared with our present standards. One of the best of his aphorisms and one which is often forgotten now-a-days, was that one ought to leave the organism to cure itself because it contains all the reparative actions necessary to its own cure; all that was required was to place it in a good and suitable environment.

The list of drugs which were employed by the early Greek writers was short and almost all the drugs then in use are so now or were so until very recent times. Hardly any of the Greek drugs were repellant in character.

There were agents which acted on the four specific humours,
and so they ought to be administered in suitable cases; thus if the secretion of bile were above the normal, a enologogue ought to be given; if the blood were in excess of the normal, bleeding ought to be practised, and so on. In order to help Nature to work a cure one should promote excretion by means of baths, drugs and friction.

The great object of medicine was the endeavour to secure a healthy mind in a healthy body. This was attained by suitable gymnastics, by the selection of a healthy dwelling in a healthy country, by securing a healthy site, a pure air and water supply.

The Hippocratic treatment of surgical affections was excellent and far surpassed the treatment advocated by medical men at much later periods.

Roman Medicine.

As a type of the Roman medical practitioner, Celsus may be taken. He lived during the hey-day of the Empire's glory (65 B.C.) and may have had as contemporaries Horace, Ovid and Virgil. Celsus was a voluminous writer not only on medicine and surgery, but on philosophy, rhetoric and history. Having studied at Alexandria, his writings convey a good idea of the state of knowledge at that university at that time.

On the whole his surgical knowledge and practice is probably better than his medical. Much of what he taught is in use today. With all the advantages which anaesthetics afford to the surgeon in his work now, I doubt if there is anywhere a better description of the operation "cutting for the stone" than that
that which Celsus gives. He is equally happy in describing the operations for hernia and for relief of retention of urine.

Celsus believed greatly in "frictions" or rubbing in the treatment of affections of the joints as well as for many other diseases. Precious stones are not mentioned in his pharmacopoeia. He makes little use of polypharmacy.

Galen followed Celsus after an interval of about a century. He also received part of his medical education in Alexandria. He enjoyed a great reputation during his lifetime as a practitioner and after his death this was carried on through his numerous medical works which were however written in Greek. In no case is it more true that one's works live after them than in the case of Galen. His works regulated medicine and medical education for centuries after his death. Indeed so slavish was the subservience paid to Galen as the Prince of Medicine that it lasted well into the seventeenth century. During the whole of the Scholastic period (1200-1600) medical education to a very great extent consisted in a study of the works of Galen. A knowledge of what he taught and of the annotations made on his writings by subsequent observers constituted almost all that was deemed necessary to enable one to secure the right to practise medicine. Nothing was deemed higher than the 'authority' of Galen. Even as late as 1559 a Dr. Geynes was called before the Royal College of Physicians of London for daring to doubt the infallibility of Galen. On acknowledging his error, and having made a humble recantation, he was received back into the College.
Galen gives excellent descriptions of surgical affections, but he evidently devoted himself mainly to the practice of medicine, and (let us hope by the aid of an assistant) he kept a shop for the sale of drugs in the Via Sacra in Rome.

After this period there is a very long interval before we come across any really noted names. It has been asserted that the spread of Christianity was the cause of this lull. As the martyrs had shown their faith in Christ by their death, so the early Christians evidenced their lesser faith by patiently suffering pain or sickness as being instruments sent by God to try them or to punish them for their sins or shortcomings. They had no need of physicians, for as God had sent them afflictions, so He would cure them in His own good time.

This may or may not have been one cause for the declinature of medicine, though personally I very much doubt it, because about this time the whole of the then known Europe seems to have been turned into an armed camp. When the forces of lawlessness and disorder are let loose, little opportunity is given for the advancement of any intellectual pursuits. The inhabitants of the cities in the civilized countries had either to defend them or to go afield to oppose the incursions of the Goths (c.250) the Vandals (400), the Huns (450), the Vikings and other northern and eastern invaders.

The long period of the dark ages had set in and the gloom continued with hardly any intermission up to and even beyond the eleventh century. This period embraced all the intellectual activ-
ities, but I shall endeavour to show that in the case of medicine there was not only merely stagnation but an actual deterioration which continued for several centuries later.

It is a remarkable fact that the Byzantine Empire, founded in 395, continued to prosper in spite of molestations from Slavs from 488 onwards, incursions of Persians from 540, from Saracens (635). Continual attacks from the Turks served only to narrow the borders, until at last Constantinople fell to them in 1453. It was here alone in the whole world that the ancient classical Greek language was kept alive, and consequently on the fall of the Byzantine Empire, the fleeing scholars took with them their learning and manuscripts to more Western schools and universities. In this way the ancient learning had been preserved and was now diffused over many lands.

The seat of medical learning seems to have been transferred to Bagdad for the Arabian School took its origin there somewhere about the year 800 A.D. Perhaps the most famous writer and teacher in this school was Avicenna who lived and laboured there about 1000 A.D. He and his colleagues had studied the Greek medical writers and had translated their works into Arabic. His "Canon of Medicine" became the text book and was used in the Universities of Montpellier and Louvain as late as 1150.

Avicenna made one observation which experience has proved true through the ages, namely, that one disease may cure another pre-existing one; thus he states that a quartan ague often cures a case of epilepsy. His classification of Waters is excellent,
but follows closely that of Galen. Both refer to the dangers which are connected with drinking certain waters.

This Arabian School originated little or nothing of any importance in medicine or surgery. To a very large extent they were mere copyists of the Greek or Latin authors. Their original works are mainly controversial in character; many are taken up with denunciations of the methods and practises of their fellows.

After the Moorish invasion of Spain in 1145, the Arabic language became common in the Universities of Spain, Southern France, and even in those much further afield.

As the sands of the Arabian School of Medicine were running out, so the Italian School was developing, and this mainly at Salerno. In time this became the chief seat of learning in Europe, and reached its apogee about the middle of the thirteenth century, fostered no doubt through the exertions of Frederick II, King of Sicily, and known as the patron of learning.

What is known popularly as the Revival of Learning or the Renaissance began during the 15th. and 16th. centuries, and though many famous names are cited as being the authors of this resuscitation, probably none of these had so much to do with it as the diffusion of learning brought about by the invention of printing. Clever men had existed long ere this, but there were no means by which they could publish abroad what they had thought or found out. They could only teach viva voce or to a very limited audience by written books. Now a new world was opened to them.
The study of Greek had almost disappeared at this time in Europe and as the best minds in medicine had expressed their thoughts and experience and teaching in that language, it was unattainable to those who wished to study the healing art. There were no medical treatises in their native tongues and there were no translations from the Greek or Latin. In England, it was only after Thomas Linacre had taught his pupils the Greek language, that the works of Hippocrates and Galen became known.

Linacre has been called "the Restorer of Learning," and it was the result of his residence in Italy, where he obtained his knowledge of Greek medicine, that he advocated a return to the classic writers and a relegation of the Arabian School.

This might well have formed a starting point for the progress of Medicine. Instead of this however it would seem to have been a stumbling-block. All that was desired of the medical practitioner was a slavish adherence to early writers. There would appear to have been no desire to improve upon them, but the reverse.

Had they really employed the methods of Hippocrates, they could not have gone far astray, but on the contrary any methods which they introduced or new drugs which they employed were on the down-grade. With the exception of Anatomy, which was awakened by the assiduity of Vesalius (1543), the sleep which had overtaken medicine lasted (with few exceptions) until well on in the 18th century.

As one example to show the state of medicine, we may take the "Dispensarium" or "Dynameron" of Nicolas Myrepsus (1260) which
contains 3000 recipes or 'cures'. The list includes the ointment used in anointing the feet of Christ. As might be expected, the curative powers of this unguent were as numerous as they were marvellous. An antidote which was used to relieve the pains of the unfortunate being after torture, was at the same time a cure for many deadly poisons.

The Renaissance which had stirred into life Literature and Art simply passed over Medicine without awakening it. Still more unfortunate was the fate of our profession for it very largely fell into the hands of Astrologers. Many of these were mere quacks with no medical training whatever. Others again were actually medical practitioners, as Paracelsus (1493-1541), Cardanus (1501-1576), Robert Fludd (1574-1637), Culpepper and many others.

As the science (?) had by the observations of the shepherd-astronomers in Chaldea and Babylonia, so had it been developed and practised by the Arabian School of Medicine.

No science could make any progress as long as it was under the controlling influence of Astrology which was fed on superstition and quackery. The practice of Medicine therefore remained in thraldom for many a century until it at last shook off the bonds of this quasi-scientific nonsense.

That this belief should have had such a hold on the minds of men was not by any means due to a want of learning. This was far from being the case. In every country there were learned men who demonstrated their culture chiefly in arguments and disput-
ations, and these were mainly about matters which we would now call trivial and unimportant. As those of an argumentative frame of mind find a wide field for this exercise in the abstract sciences, so we find the learned of former days spending days and even weeks in assemblies and diets controverting one another.

As Medicine at that time was far more an abstract than a practical science, it also furnished many subjects for discussion. Thus we find Sir Kenelm Digby upholding the virtues of "The Powder of Sympathy" in "a solemn Assembly of Nobles and Learned Men at Montpelier in France" in 1658.

The question of Bleeding has furnished themes for endless discussion from the earliest times. One of the latest of these was held at Gottingen in 1749 under the Presidency of the famous Haller, "Disputatio Medico-Chirurgica de Venae Sectione".

While those who might have advanced the science of Medicine and who might have made it into an art, wasted their energies in fruitless argument, the actual practice fell into the hands of the ignorant and badly educated. The consequence was that every country was over-run by quacksalvers, mountebanks and barbers. The legitimate practitioners had great difficulty in competing with these charlatans who were not in the least bashful in extolling their nostrums or in vaunting their own abilities to cure. The almost servile position of the doctors is not infrequently displayed in the subserviant attitude they adopted towards their patrons and in the fulsome praise which they lavished upon them in the prefatory addresses of their medical writings.
The abuse of medicine by these quacks grew greater and greater as time passed and the natural indignation of the practitioners increased by equal steps. This anger showed itself not only in voice but also in writings.

Dr. John Hall wrote in 1565 "An Historiall Expostulation against the beastlye Abusers both of Chirurgerie and Physyke in our tyme". Drs. Boorde, Primrose, Clowes, Ramesay, Mackaill, Pitt, and many others unite in railing at the quacks.

Another very potent reason for the decay of medicine was the despised position which it occupied. Few men of any standing were attracted to it. Even in Roman times the practice of the art had been entrusted to slaves, and in England until very recent times the profession was held in no estimation; surgeons were classed with barbers, and the distinction between physicians and apothecaries was often hard to define.

It is humiliating to think that the practice of medicine passed into the hands of men who in only too many cases must have followed the advice of 'old wives.' Dr. James Cooke treated cases of cancer by giving frogs choked with butter stuffed into their mouths and distilled. He cured a fistula by slitting a live hen through the back and applying it to the part. (1647)

Yet in their tentative gropings they struck sometimes on ideas which only recently in medicine have been revived. Hear what Culpepper said: "In what part of the body the faculty which you would strengthen lies, take the same part of the body of another creature in whom the faculty is strong, as a medicine,
as testicles, also creatures that are fruitful, being eaten, makes them fruitful that eat them, as crabs, lobsters, prawns, pigeons, etc. The dried stones of the Fox or Bear are good. The Heart of a Male Quail carried about the Man and the Heart of a Female Quail carried about the Woman causeth mutual Love and Fruitfulness."

Many of the remedies were absurd and ridiculous, and even at that time it is remarkable that men, and men of intelligence and learning, should have been able to convince themselves of their value. Not only so but they elaborated arguments to prove the truth of their opinions. It would appear that the more grotesque the remedy, the greater was the assurance of the prescriber.

It was however an age of credulity, greater perhaps than in any preceding or succeeding age. Even in our own day however not only the laity but our own profession also is often ready to believe what is to most people a manifest absurdity, as for example 'Abram's Box' of famous memory.

Only slowly and fitfully did glimmerings of better and saner methods of treatment arise. Inquiring minds such as those of Harvey (1628), van Helmont (1620), Willis (1650), Sydenham (1674), Hooke (1675), Malpighi (1660), Boerhaave (1700) began to raise Medicine from the morass in which it had lain so long. Thus by degrees it progressed, until about the middle of last century the scientific study of medicine began and since then it has advanced not by steps but by bounds.
In the following pages it will be my endeavour to show, not how Medicine has progressed through the ages, but how much it had deteriorated from the ancient classic times and how the Revival of medical learning was so long in arriving after that of literature and art.

It is by no means an enviable task to demonstrate the weaknesses either of societies or institutions, but from a historical point of view everything is of importance. Much greater credit is given to him who is a 'laudator temporis acti' than to him who only criticises. In this inquiry I merely wish to place on record what were the medical practices in former days, and though one may be very sympathetic with the unfortunate patients who were subjected to heroic and often brutal forms of treatment, it would be unworthy to comment adversely on the authors of these methods. Especially would it be contumelious in us who have reaped the experience of all those who have laboured and struggled often against great odds to advance our science, to utter a word of an abusive character, though

"Indignis si male dicitur, maledictum id esse dico: Verum si dignis dicitur, benedictum est, meo quidem animo."

(Plautus).

It has been my endeavour to place the state of medicine in former times, under separate headings, and though these often overlap, yet they keep the different aspects fairly distinct. Examples are taken from various authors whose works are more fully detailed in the second volume, to which the reader is referred for fuller
information.

Instead of making short extracts to illustrate my thesis from many medical writers, I have chosen rather to take more copious notes from a comparatively small number of writers who may be taken as good representatives of the better educated members of our profession from very early up to relatively recent times. From these authors I have made freely selected passages to show not only what they were thinking as regards physiology, pathology and treatment, but what were actually their methods of treatment. In this way we arrive at a fairly clear idea of their mental outlook as well as the state and condition in which Medicine was at the time in which they wrote.

It will be seen from such a survey that many of the streams which went to form the river of Medicine, became more and more foul the longer they flowed. That the stream of Materia medica was especially dirty is not surprising, for into it as time went on, almost everything which could be used and called a drug was thrown in. It often passes one's comprehension to find that substances which are apparently of no therapeutic value whatever were advocated as cures for different diseases. Not only so but many of those who employed certain agents wrote treatises upholding their virtues and powers to cure.

It is not for a moment to be thought that all those who used such materials were quacks or cheats or even the victims of self-deception, except in so far as we are all apt to be blinded by our own inventions.
It is impossible to compare the intellectual processes of our predecessors with those of the present time. We are scarcely able to follow the ratiocination which they employed in many discussions; it often conveys little or no meaning. Indeed if we are able to follow their line of reasoning, we frequently far from convincing. Their ideas are in only too many cases lost in verbiage, and we who are accustomed to concise and clear statements, leave off after much reading with but a vague idea of what it was which the writer intended to convey. I have given instances to show how impossible it is to understand what the writer meant.

Of course in former times by far the greatest proportion of the people were ignorant; books were few and so expensive that they were confined mainly to the rich. Learning was dearly bought and consequently highly prized and not to be lightly parted with. Almost all the medical books were written in Latin or Greek. Certain practitioners, vexed that the public were not able to obtain medical knowledge in works printed in their own language, either translated well-known books or wrote them from their own experience. In the latter class of books intended to instruct the general reader, the author might convey much information, but there might be certain lines of treatment which were particularly his own. The author might therefore be at pains to conceal what he did not wish to reveal, so he made these passages difficult or impossible to understand. It seems to me that this is the only explanation of many passages in these old medical works.
In order to demonstrate how and in what manner and degree medicine underwent so marked a deterioration during the period under review, I propose to examine the question under various headings. In these I give a few selections from the authors whom I have selected to prove the gradual but progressive degradation which went on during the centuries.

Much fuller information is however contained in the second volume in which will be found much longer extracts together with criticisms of the state of Medicine at various periods.
Physiology.

The actions of the different organs of the body seem to have been much better understood by the ancient classical writers than it was to their successors of a much later date. If indeed they only speak in broad general terms of the action of the organs, at least they never try to explain what they were ignorant of. Up till a comparatively recent period we find medical writers becoming hopelessly involved in an endeavour to explain what indeed they were totally uninformed about. One has grave doubts if they themselves thought that they had any real knowledge of the subject, perhaps in many cases they were only trying to cloak their own ignorance by what is now called "throwing dust in the eyes" of their readers, with the idea of obtaining a reputation for knowledge.

Take for example such a passage from Dr. Peter Lowe (1597):—

"An Apostume is a disease composed of three divers maladies, to wit, evil complexion in the similar parts, evil composition or constitution in the instrumental parts and dissolution in continuity in both similar and instrumental parts offending the actions of the member where it is." And again;—

"Congestion is a mass of matter contrarie to the nature engendered of the superfluities of the third concoction, of the aliment and food which are distributted for the nouriture of the parts of the bodie, which chaunceth when the aliment is not so digested, as it may well be appropriated to the parte which should be nourished."

It is difficult to understand why the ordinary physical processes of the human body were so long in being understood.
It was only on 1628 when Harvey actually proved the circulation of the blood, though several observers had been very near to finding it out previously. The whole process seems to us to be so remarkably simple that one would have thought that it would have been discovered centuries before. Yet even after Harvey's demonstration there were still medical men who spoke of air being mixed with the blood.

Heart. Wirzungen (1598) states that the heart is hotter than any other member, it warms the blood and spreads it abroad over the whole body. It is also the dwelling place of the vital spirits and of all inclination of the mind, as mirth, vexation, sorrow, fear, care, hope, love, hate, anger, malice, merice, etc. He also makes the curious observation that the heart of those who have died from Cardiaeca or Swooning or from poison, cannot be burnt.

Even as late as 1651, Dr. Vicary states that "the Artier which arises from the Heart bringeth with him to the Lungs blood with the Spirit of Life to nourish the Lungs withall, and also that Artier bringeth with him from the Lungs ayre to temper the fumeous heate that is in the Heart."

This author also makes the statement that the menstrual blood is changed into milk in the woman's breast.

Stomach. The seat of the soul is in the stomach if we wish to believe what Dr. Godfrey (1674). He proves his assertion by stating that one feels the heavy burden there when God withdraws His Holy Spirit from one.

Fioravanti (1582) was also of the opinion that the stomach
was the seat of all evil. Then he goes on to say that his own
*Universal Medicine*, Petra Philosophalle, is able to help any infir-
mity. " For ye may see how the animalles terrestriall never helpe
them selves of other infirmity than of the stomacke, and when thei
will helpe them selves thei eate hearbes the which causeth them
to vomitte and this death signifie that thei have no other infir-
mitie than the aforesaid. So by the experience of the animalles
I approve that the infirmitie is caused by the stomacke.... If the
body be ever so little infirmed the stomacke also suffers."

**Brain.** It was thought that the brain was like all other organs
and had a discharge. This was evacuated mainly through the nose,
though Peter Lowe says that it also escapes obscurely through the
eyes and ears.

Peter Droet (1580) states that there is a perpetual drawing
of air into the brain at every breath by the nostrils and through
the Ismoidal bones into the foremost ventricile of the brain and
that infection is carried to the brain before it reaches the
heart. " But a man shall not easily persuade the common people
or the News Wayters in this point as that the filthy and stynking
kennels and dirty places of the citye doo onely hurt the braine."

Cooke (1647) thought that one could free the brain from
diseased matter nestled there by the use of Errnhines or Sternut-
ories which were stromger and so draw the matter through the nose,
or by Masticatories which draw Flegm plentifully from the brain
through the mouth by their heat and acrimony.
Dr. Vicary (1651) says: "As to the Braine, in every part God hath ordained and set singular and several vertues; First in the foremost Ventricle, God hath founded and set the common Wittes, otherwise called the five Wits......and in one part of this Ventricle there is the vertue called Fantasie.

In the Middle Sell or Ventricle there is founded and ordained the Cogitative of Estimative Vertue, and in the Third and last Ventricle is founded the Vertue Memorative.

Also the Braine hath this property, that it moveth and followeth the moving of the Moone. For in the waxing of the Moone, the Braine followeth upwards, and in the Wane of the Moone, the Braine descendeth downwards and vanisheth in substance of vertue; for the Braine shrinketh together in it selfe, and is not so fully obedient to the Spirit of Feeling; and this is proved in Men that be Lunaticke and mad, and also in men that be Epulenticke, that be most grieved in the beginning of the New Moone ........

Two Sinews spring from the foremost Ventricle of the Braine and go one to each eye. These sinewes be hollow as a Reede for two causes. The first is that the visible Spirit might passe freely to the Eyes. The seconde is, that the form of visible things might freely be presented to the common Wittes.

According to Gratarolus (1550) the Brain is the coldest part of the body and therefore his natural heat must be conserved. "Therefor everie day when thou arisest after thou hast beene at the
stoole, rubbe thy heade with a cleane drie linnen cloath somewhat warme. Avicen affirmeth that it is not good to suffre the heare of the heade and bearde to growe longe, because they gather and retayne mucche grosse filthe and baggage, stoppyng the pores about the rootes if thei be not washed awaie."

**Nerves.** Quite erroneous ideas seem to have been prevalent as to the functions of the nerves. They were thought to convey nutritive juice from the loins to the brain and spinal marrow. Thus Dr. James Cooke (1647) remarks "The Nerves, especially the Sixth pair of the Head, do convey the Nutritive Juice (or rather the nervous juice) some say from the Mesentery Glandules of the Loynes and Thymus to the Brain and Spinal Marrow, whence 'tis imparted by the Nerves to the parts of the Body for Nutriment. The motion of the juice is by intervals slow and gentle to the Brain in sleep and to the Members after Sleep (it seems taking a nap first). The cause of the motion is the Midfiff, Brain and Nerves themselves."

**Head.** Vicary agrees with other writers in thinking that the head was made neither for the Wittes, nor yet for the Braines, but merely for the Eyes." For Beasts that have no heads, have the organs or instruments of Witts in their breasts. Therefore God and Nature have reared up the Head of Man onely for the Eyes for it is the highest member of Man, and as a Beholder or Watchman standing in a high Tower to give warning of the Enemies, so doth the Eye of Man give Warning unto the common Wittes, for the defence of all other members of the Body."

In describing the uses of the hair of the head, Vicary states
that one of them is "that the fumosities of the Braine might ascend and passe lightlyer out of them. For if there were a sad thing, as the Skinne, the fumosities might not passe through so lighty, as it does by the Haire."

**Urines.** To diagnose the disease by Urinoscopy was of course in former times an almost universal practice. Nor must we be supercilious in thinking that our predecessors were either self-deluded or endeavouring others to delude others completely. A careful inspection of the urine often reveals much as regards the health of the patient, but by a mere inspection we are unable to affirm that the patient was pregnant as could our old practitioners, though a recent discovery may allow this diagnosis to be made after a physiological experiment.

Peter Droet however published a small work "The Seeing of Urynes and all their Colours" in 1580. In this he shows how we may diagnose the disease which is present and may also find its appropriate treatment by such an examination.

**Ovaries and Uterus.** Chamberlain in 1665 writes that womans' seed is more moist, thin and waterish than that of man (and thats the reason women have no beards on their faces.).

"It is approved by daily experience that the womb is much affected by the savours and smells ...... of things which yield a strong smel and that very suddenly because it is a part of exquisite sense. (He then enters into an involved reasoning as to why this is so).

If the womb delights in sweet savours, why then does the smell of
of Ambergrece, musk and such like bring suffocation to the Mother.

...Sweet smells doe instantly affect the brain; the membranous womb is presently drawn into consent with the brain and moved, so as these bad vapours are now stirred and raised up by the arteries or other blind passages into the Midriffe, the Heart and the Brain itself, and so becomes the Suffocation or Fits of the Mother," and so on in sentences difficult of comprehension.

Menses. Wirtzun}17 (1617) says that all learned men testify that the Terms of Women bring innumerable sicknesses with them. Wherever they happen to fall, no fruit will grow, the vines are spoilt, the must turns to vinegar, herbs wither, trees die, iron rusts, all metals become dark. If they be taken, they make a man mad and chiefly dogs. Bees leave their hives. The breath of menstruating women darkens all bright looking-glasses, the air becomes poisoned and children bewitched.

Tonsils. Peter Lowe}1590 (1590) says that the chief use of the tonsil is for receiving the humidity of the brain, which if it fell opely on the tongue, would trouble the speech, and also that the tongue should be moistened, otherwise it would be dry in speaking.

Dew. Moffett}1605 (1605) asserts that " some go out early before the dew is off and the sun up, which is very unwholesom; others also walk at night after the dew falling; which is as perilous, for the dew to mans' body is as rust to iron, in so much that it blasteth the face, and maketh it scabby if a man do wash himself with it."
Pathology.

The investigation of disease by an examination of the body after death is but a comparatively recent procedure. Orders from the Coroner for a Medico-legal examination of the dead body have been in force for some two hundred and fifty years, but this is not the same as an examination for pathological purposes. There has always been a prejudice against cutting up the body after death, and this has persisted long after the the embargo of the Church against 'anatomising' had fallen into desuetude. This want of experience on the part of clinicians formed a great hindrance to the development of Medicine, with the result that the diagnosis of diseases was difficult and even the recognition of what organs were affected was often impossible.

Many of the explanations which the old practitioners gave are so complicated and involved that it is impossible to understand what the writers meant to convey, if indeed they really knew themselves. Perhaps they only wrote down a mass of words so as to impress their readers with their learning which they were unable to comprehend. Did they really intend to mystify their readers very much as the metaphysicians did in our youth or as psychologists do at present?

Here is Dr. Cooke's explanation of the "Cause of Delusions or Raging Fever" as he calls it. "It is Bile peccant both in a more salt Acrimony and a more acid Oiliness which diminisheth the viscousness of the Pancreat Juce, and so causing a vitious effervesency, which being made sharper frames a Humor not much unlike black Bile."
Cary (1583) gives the causes of Yellow Jaundice as.

i. The biting of a venomous beast. ii. Chiefly during the declination of a hot fever. iii. Inflammation of the liver. iv. Weakness of the Gall which is not able to suck from the liver the choleric humor. v. Obstruction of the passage from the Gall into the bowels.

He explains the causes of Stone as being due to the following:

The chief is an earthie, grosse, thicke and slimie humor.

The formal cause is the heate of mans bodie digesting or baking the said humor untill it be harde.

The actual causes are the eating of certain foods, heating the back at the fire, lying long on the back, great use of pepper, ginger and spices.

"Dolor dentium or Toothache is caused sometimes through hot or cold distempers, sometimes through flowing of humours out of the head into the rootes of the teeth, which through their sharpenesse either doe gnaw about them or else with their aboundance they engender greise in the teeth as if inflammation lie about the fleshy parts." (Enchiridion)38

Trance. Chamberlen (1663) says that doubtlesse many women are buried in such fits (for they last sometimes 24 hours or more and the bodies grow cold and rigid like dead carkasses) who would return if time were waited on and means used. Those women who are afflicted with these terrible passions, doe onely live by transpiration, that is by such aire as is drawn through the pores of the Skin, into the Arteries, and so reacheth into the Heart.
But the sure and safest way is, not to make over haste to bury women (except you have a mind to be rid of a trouble) especially such as die suddenly and not upon evident cause, till two or three days be over, for some have been known to revive after they have been placed in their coffins."

**Monsters.** Chamberlen (1665) discusses the causes of their formation, e.g., The will of the Almighty; the Agency of the Starres; Deficiency of Spermaticall Matter or Overplus of it, (this may lead to monsters with double heads or four arms, etc); Sodomy; Bestiality; Strong Imagination, as in the case of the woman who brought forth a child full of hair like the hair of the camell, because she was wont to kneel before the picture of John Baptist who was clothed in Camell's hair."

**Fleshy Hole.** "This may be caused by the Seed of the man being imperfect barren or weak or in too small a quantity so that it is choked by the menstrual blood and being not sufficient to form the infant instead thereof produces this mass of flesh. Further it is caused by women carnally accompanying with their husbands in the time of their monthly purgations, and this also causes leprous, monstrous, crooked and imperfect children—imperfect in body and perverse in manners.

**Digestion.** Godfrey (1735) states that the stomach merely triturates, macerates and expands the aliments by the addition of warm, watery liquids, "for to imagine a fermentation is a dream."
Cause of Pleurisy.

Here is Robert Godfrey's idea as to the cause of 'pleurisy' as he spells it (1674). "I asked her what she had lately been eating of....She replied that last night, she had too freely eaten of a thing she loved, but it did not agree with her. This confirm'd 'twas a Pleurisy, and that her stomach not well digesting the last night's Supper, had sent a Pleuritical sharpness into the Blood..... I gave her a Medicine to stop the foreign Ferments in her Stomach and so expel the Acidity in the Pleura, and put the Blood in good order again without borrowing the least aid from the Lancet. When I visited her again in six hours, I found my patient had gone into the city and was quite recovered."
Diagnosis.

Since the accurate clinical descriptions of diseases which were given by Hippocrates, there were no sufficiently detailed observations left by his successors to enable us to recognise without any doubt the diseases which they intended to describe. This was either due to want of observation or to inability to convey in descriptive language what they had seen. Methodical teaching was of course unknown until very recent times, hence each practitioner had to evolve his own methods of diagnosis. This was more or less a groping in the dark, and it was only when an exceedingly brilliant observer arose that there was any advance made in the practice of medicine or surgery; as sciences they were non-existent.

We are certainly able to recognise the diseases which those old practitioners treated, but this is only by their mentioning some outstanding symptom or sign which renders the diagnosis unmistakable, as the exophthalmos in goitre. They fell far short of the able descriptions of the classical writers. Even Dr. John Hall's "Select Observations on English Bodies" (1657) are far removed both in accuracy of observation and in adequacy of detail from his prototypes.

It is only when we arrive at comparatively modern times when such clinicians lived as Sydenham (1624-89), Boerhaave (1660-1735), Hoffman (1660-1742), Willis (1621-74), that we find diseases narrated with sufficient detail to make their recognition easy.

These early physicians often arrived at their own conclusion as to the particular disease by the appearance of the eyes of the patient, or by his manner of speech or by the character of his
I think that this method of diagnosis must have come from China, where urinoscopy has been practised by 'healers' from time beyond record. The old Arabian practitioners employed this method of diagnosis and it continued in use until the end of the eighteenth century. No doubt observation of the urine may afford us much information, but to rely upon it entirely is absurd. To such an extent was this reliance on urinoscopy carried that Dr. Cooke (1647) was able to tell if a woman was pregnant from the mere appearance of the urinary deposit.

Dr. Garencières (1665) writes that "he had a peculiar Talent to judge of Diseases and the Remedies thereof, by the Inspection of Urines, and desireth those that will save charges or lives afar off to send their water; by the examination of which, they shall receive all reasonable satisfaction and for these purposes and others, he shall give his constant attendance at his own House from eight of the Clock in the morning, till eleven; and from three in the afternoon, till five. The rest of the time it will be known where he is and when he will be at home again."

Dr. Primrose however (1651) did not subscribe to this reliance on urines. Speaking of the "Deceitful Judgement of Urines", he asks, "If a very cholericke urine be brought, can the pisse-prophet tell which disease doth trouble the patient?" He goes on to say that neither can one determine the sex nor diagnose pregnancy from the urine.

Few true observations could have been made on Fractures of the Skull if we take the following from Dr. Cooke (1647) as an
example, "If after the blow, there be Vertigo, dimness of the Eyes, Bleeding at the Mouth, Nose or Ears, the party grown dumb and swoon suddenly; thereupon follow Delirium, Fever, Convulsion, Palsy, Faultering of Speech, Deafness; and if the Hair cut stand up in the Wound, there's a Fracture. In a word, the more Symptomes there are, the less Hope; and the more grievous they be, the more deadly. If the Bone grow black in the beginning, Death is at hand."

Signes of the Excrementes of the Belly. Bullein (1568) has a rhyming description of what diseases one may diagnose from an inspection of the alvine discharges.
Diseases.

Venereal Diseases. Fioravanti (1550) gives a very good description of early Syphilis and used the vapour of mercury in treating it.

Gary in 1583 says that "there is yet one other disease where with our Wantons in England are much troubled. They must to Physick, until they have so filled their bodies with drugs that they are sicker of their Physicke than of any disease. In this Griefe a little more Wit will be a present helpe, for so shall have heavier purses and lighter partes."

Andrew Boorde (1557) says that a "Gonery Passion" is the name for Gonorrhoea, and comes from Gomer and Sodome, which cities did sink to hell for their sinnes."

For Satyriasis, he recommends that the patient should leap into a great vessel full of cold water together with the application of nettles to the offending part.

"The burning of an Harlot or of an hoare. This impediment doth come when an harlot doth hold in his breath and clasp her handes hard together and toes in lyke manner. If one be burnt, let them wash their secrets two or three times with white Wine or else with Sack and water. And if the matter have continued go to some expert chirurgion to have helpe or else the gut will burne and fall out of the belly." (ibid)

Clowes (1596) used Quicksilver as an ointment in the treatment of syphilis and praises it highly.
Carnal desires are, according to Chamberlen (1665) often the result of eating peas, beans or such windy meats. They cause the Yard to stand up by their windinesse; and oftentimes in flatulent bodies, the violence of wind causes a præapism.

Dr. Archer (1673) if he had lived now, he would have been called a Quack, for he states that he has found an Infallible way to prevent infection from Venery though daily enjoyed which is the greatest secret which has been discovered to this sinful generation." Of course he keeps the secret to himself.

Treating of the Senses, he says that "there is a Sixth Sense which might for its dignity, be placed first. This is the Sense of Venery, otherwise called the Generat Faculty."

"The Pox (Syphilis) is caught mainly in the act of Copulation, but it may be caught by sitting on a Close-stooob, whilst the fume evaporates, or by lying in a hot Bed with the infected, whereby emission of putrid sweat thro' the pores penetrates the adjoining body." and so on. He adds the prices of his own medicines.
Horripilacio or the Standing up of a man's hayre. It may come of foolish fear, when a man is by himself alone and is afraid of a spirit of the buttery which bee perillous beasts. Let every man trust in God and what can any evill spirit or divell doe any man harme without his will. And if it bee my Lord God's will, I would all the divells of hell did teare my flesh all to peeces, for God is my will in all things.

Toothache. Sir Kenelm Digby (1668) gives this cure by Sympathy:—

"With an iron nail raise and cut the gum from about the teeth till it bleed and that some of the blood stick upon the nail; then drive it into a wooden beam up to the head; After this is done, you never shall have the tooth a-ch in all your life."

Headache. It would almost have been worth while to have had a headache if one had had Dr. Thomas Phaire (1553) to treat one with roses, violets, lettuce, etc. Though perhaps one might not have appreciated his 'sternulatories to make one pesc' so much.

Stone in the Bladder. Fioravanti (1582) says that you can break the stone by the use of the following: "You must give the powdered stone which is found in the bellies of ryng doves. These birds are so subject to this stone, that if kept in cages they soon dye, because their meate can not passe through them and that is because the poore bird can not goe and helpe hymselfe with that medicine which Nature hath taught hym. For those al likeilie flie unto the sea side and there finde a certaine kinde of small stone very harde, the whiche stone has vertue to dissolve the stone in the belie of the birde."
Culpepper (1651) says that Medicaments which drive out Small Stones and Gravel are the Shells of Wood-nuts, the Calx of the Shells of Eggs, the Stone of Spunges, the Winter Shells of Snails, the Bones of the Head of a Pike in powder, Crabs Eyes, etc. But for a Stone that is hardened and grown great, you must use the powder of a Bear's Tooth, the Ashes of a calcined Grasshopper; the Ashes and the Flesh and the Dried Blood of an old Cock, the Ashes of Young Swallowes, the Ashes of a Hare burnt Skin and all, also Hare's blood and Foxes blood dried, the Ashes of Scorpions, etc. Goats' blood must be taken from animals that have been kept in gardens of Saxifrage for a month, and so on.

Cary (1583) describes a method of Preventing and curing the Stone by a method lately discovered. This consists in using the Quintessence of Goats Blood, which he sells at his house for five shillings the wine pint.

The Falling Sickness. Fioravanti (1582) affirms that it is caused in young children by too great humidity in the head, and the cure is by giving drying things.

Culpepper assures us that this disease can be kept away as also Convulsions by wearing a piece of umbilical cord next to the skin. He also states that -

Incontinence of Urine in Children is due to the navel string touching the ground when the child is born.
Phaire recommends the following, "Take ii good handful of horadong, two races of ginger in powder. Put these in a clean linen cloth and put them in a newe pot to boyle, with two pints of white wine; drinke a draughte of this every mornynge and cover ye aswel as is possible and sweate."

"For the Fallyng eyyll. Take precious stones, mystletow of the oke taken in the moneth of Marche, and the moone decreasyng tyme, dyele and the stone that is founde in the bellye of a yonge swallow being the first brode of the dame. These hanged about the necke of ye childe, avert and preserveth it from the sayd sicknes.

"Quinsy. The chiefest remedy in this outrageous sicknes is ye poudre of a swallow brent with fethers and all and myxte with honey. They prayse also the poudre of the chylde to the chylde, and of a man to a man, brent in a pot and anoyned with a little hony." (ibid)

Fioravanti (1582) cured the Squinancie by making the tooth of a Bore into powder," And drinke the quantitie of two dragnes in linseed oyle."

Bleeding at the Nose. "Another singular medicine for to staunch bloud, and it is a thynge experte of all the good practitioners. Take Swines ' doung even as hotte as ye can have it from the swine and when ye have cleaned the congested bloud out of the Nose, wryng it through a cloute and let the juyce perce into the syde from whence the bloud cometh, and by the grace of God ye shall see it stanche anone." (Phaire, 1583): &
Pain in the Ears. " Yerth wormes with gose grece sodden is good, or an Adder's harne sodden in wine and the care bathed in it, helps those who have runyng with stinkyng matter with corripcion."

Dimness of Sight. This was relieved by Phaire by taking a pie (Magpie)" and burne and beate her to powder, and mingle it with fennel water and put it in your Eyes. Also water of young pies stilled is very good."

For "Bloudshotten eyes" he recommends the bloud of a stocke-dove to be dropped in each.

"Gogle Eyes ". Phaire describes a very remarkable method of treatment (q.v.) though he also says that this impediment is never healed but in a verie young childe.

Corneal Opacity. Phaire quotes Paul of Aegina (625 - 90) as advocating the dung of Crocodiles as a treatment in this affection.
Prevention of Disease.

One cannot wonder that our predecessors did little or nothing in the way of trying to prevent the onset of diseases or epidemics. How could one do anything to prevent the malign influence of the planet Saturn? What but prayer and supplication could appeal to an avenging God?

Hippocrates had indeed shown the influences which environment had on the health of a community in "De Aere, Aquis et Locis," but many centuries had to pass before there was even an adumbration of the incubation periods of infective disease. It was only in the twelfth century that the Venetians instituted a forty days detention of ships entering their harbour in the endeavour to keep out the plague. At a far more remote period of time the Levitical law had laid down certain rules of hygiene against the spread of leprosy. These were far in advance of many of the endeavours of so-called medical practitioners of far later dates. Though Galen calls attention to the infective nature of Phthisis, it is only within recent years that this has been thoroughly understood and acted upon.

Aldebrandino (1234) certainly insists on personal hygiene, and says that in order to keep the body in health, thousands of cares and attentions are necessary. One of the most important of these is a close consideration of diet. He devotes several chapters to Climatologo and to dietetics.

Cary (1583) writing of the plague says "while a good house-
wife was left at home to clean and purify the house, to air the bedding and open the windows, others were employed in making great fires in the cities, and the dwellers in close tenements were to betake themselves to the country, and there to indulge in moderate exercise in order to purify their bodies. Overcrowding was to be prevented and vagrants were to be driven out of the cities.

On the other hand, look at this evidence of superstition: Sir Kemein Digby (1658) states that in time of common contagion it is a custom to carry about the powder of a toad or a living toad or spider shut up in a box or arsenick which draws unto it the contagious air.

Farcy is a venemous humor in a horse, if a toad be hanged about its neck in a little bag, the horse will be cured infallibly. The toad which is the stronger poison drawing to it the venome which was within the horse.

Dr. James Cooke (1647) has very little better advice to give regarding the plague. "For preservatives against it in short use frequent Prayer to God. Fly (if your quality and condition of Life admit) early, far off, and be slow to return. But depend not too much upon it, for 'tis impossible to fly beyond the reach of God."

Peter Droet (1580) recommends that one should hang about the neck a nut filled with quicksilver, "it preserveth a man wonderfully against the Pestilence" or else one may wear a plaster of red arsenic over the heart. The oyle of Scorpions has been used with good success in the cure of the plague "that onelye with the anointing of this oyle they dryve awaye the evyll qualitye of the pestilent ayre."
Sir Kenelm Digby was superstitious to a degree but surely this must have tried the credulity of his contemporaries;—

Smallpox. To prevent a child ever taking smallpox, Digby says that the blood should be driven up the Umbilical Cord of the newly born child before ligaturing it. "This will cause that the child will never at no age, have the smallpox, though he or she should converse daily with those that are infected. This has often been tried." To prevent the marks of smallpox, he goes on to say, the face ought to be coated with gold leaf over oil or sheeps dung in sack ought to be drunk.

Epilepsy. Dr. Vicary (1651) states that if you give the child as soon as it is born, male piony roots gathered in the decrease of the Moon or the Magistery of Coral and Gold leaf it will never have epilepsy. You may also give Misleto of the Oak, Man's Skull, Amber or Musk.

Gratarolus (1555) was much more reasonable in treating of personal hygiene. He is in agreement with Galen and other classic writers in advocating exercise and labour in that it does away with the necessity of purging and taking other medicines. He describes the most suitable kind of exercise to take as well as the most suitable time in which to take it. In Spring, long walks are good for health, but short walks during autumn. In cold and damp weather climbing up steep places is good "till a man pant and fetch his breath thicke and often with difficultie, is a very good and commendible exercise."
Causes of Disease.

The anger of the Gods was supposed by the ancients to be the cause of devastating epidemics amongst men and animals. The more learned however saw that the true reasons lay much nearer home in the shape of unhealthy sites for cities, foul air or impure water-supplies. Such matters are fully discussed by Hippocrates, Galen and others. In Christian times however the avenging nature which is so prominently brought forward in many passages of the Old Testament seems to have impressed itself not only on the minds of the clergy but also on those of the medical profession.

Thus Dr. Cary (1583) has no doubt in ascribing a divine origin to the plague, which he says may be sent as a judgment of God for the sinnes of the people. In such a case it is vain for men to attempt cure, seeing that the power of the Almighty works to destroy. But as one does not know when this is the real cause of the disease (for there are many) one must not omit to give those remedies which are usually employed, else we may tempt God." It is always wise to have two strings to one's bow.

Fioravanti (1583) speaking of the uselessness of treatment in many cases, remarks that after having tried many remedies, "you shall understand that all cannot be helped, for that God has made us to die, and when our time cometh, medicines will do no good, but if that time be not yet come, by the help of God, medicines shall restore him to his former health."

William Ward, the translator of Alexis (1562) somewhat ambiguously affirms that disease is sent as a punishment to man for
his offences, but yet at the same time God hath created things to ease and remedy the disease.

It is evident that in spite of the laudation of their own remedies, our predecessors seem to have had little faith in their drugs, for many authors conclude their books by commending the patient to the cure of God alone.

Dr. Cooke (1662) advises his patients to escape plague by the "use of frequent prayer to God and to fly early and afar from the uninfected place."

Plague. According to Dr. Cary there are three main causes;

i. The just judgement of God for the sinnes of the people and then in vain worketh the policie of man unto health where the power of the Almighty worketh to destroie. Wherefore repentance and amendment of life is the onelie salve for this sore."

ii. Corruption of the aire. The weather is long, darke, cloudie, foggie vere hot and moiste; little frogs and toads, also flies, lobchestres and wormes of sundrie sortes (suche as commonly proceede of putrefaction) do greatly abound. The aire is particularlie infected by the savour of dead carcases.

iii. The evil effectes are often due to many living in small roomes.

Dr. Wirtzung (1617) asserted that the plague was due to "venemous vapours from the earth after earthquakes. Hot moist waters cloyed with the stench of dead bodies" and so on; the principal cause however was God's anger against us for our sins has sent plague as a rod of punishment to chastise this wicked world.

The signs of a coming plague are;
The appearance of comets, flakes of fire, falling stars;

ii. Heaps of beasts as frogs, grasshoppers, toads, mice, worms;

iii. When in winter South or East winds abound, misty or foggy weather.

According to Defoe ("Journal of the Plague.") rats and mice were destroyed in the Great Plague of 1664-6 in London and elsewhere as they were believed to spread the disease. This was known however in the East long before the Christian era as was also the knowledge that the mosquito spread malaria. These facts have only been rediscovered in the West within recent years. While known to these early investigators many centuries ago they could not prove their hypotheses as there were then no means of doing so.

Thomas Phaire (1553) gives four "rotes" or causes of the pestilence;

i. The Will of God rightly punisheth wyked menne;
ii. Saturn and Mars of all the planets are the most blameworthy;
iii. The stynche and filthy savours that corrupt the aire;
iv. The abuse of thynges not naturall, of meate and drinke, of sleepe and watchynge, of labour and ease, etc.

Bulleyn (1558) says that it comes "most chiefly to them under the place infected, then to sluttishe, beastly people that kepe their houses and lodynges unclyne, their meate, drinke and clotthyng most noysome."

Primrose (1612) says that in Moresfieldes, London, it was due to an unusual putrefaction in the waters. No one could walk there in the evenings because of the stench, stinking channels, venomous dens and mettalin spirits arising out of the earth. Often it happeneth
from the variable commition of the Planets, and then it is the
hidden and admirable scourge of the most just God for our sinnes.

EPILEPSY. According to Wirtz, the causes of this disease are;
i. Phlegma; ii. Melancholia; iii. Foods and drinks which fume up
into the head, as onions, garlicke, raw fruiites, wormes of the belly;
iv. Putrefaction of the detained naturall seede, of obstructed
terms in women, etc.

Lunacy in Children. This is caused by a two-headed worm which
reacheth the heart and often kills them through the intensity of
the passion. The medicine which is to be given will cause the worm
to come out dead with the seige. (Alexis of Piedmont, 1562)

Delirium or Raging Fever. Here is Dr. James Cooke's explanation
of the cause— if you can understand it— "Bile peccant both in a
more salt Acrimony and a more acid Oiliness which diminisheth
the viscousness of the Pancreat Juice, and so causing a vitious
effervescency which being made sharper frames a Humor not much
unlike black Bile."

Melancholy. Dr. James Primrose (1612) says that the use of
naughty meates and evill nourishment and chiefly when they are
not well digested, is oft times the cause of this evill. Widdowes,
and such as burne with immoderate love, are often affected with
this evill."

Phthisis. According to Dr. Cooke"phythysis is a wasting of the
nutritive juice, caused by an ulcer of the Lungs join'd with an
Hectick. 'Tis true the Pus infecting the Blood, makes it unfit to
nourish, and thence the body wastes."
Leprosy. Dr. Moffatt (1655) remarks that sudden change of air may cause sudden death or grave disease. This he shows by the case of "a rich clothier coming suddenly in an extreme frost from a very hot fire into the cold aire, his bloud was presently so corrupted that he became a leper, which is an ordinary cause of the same disease in high Germany."

Stomach. Culpepper (1652) says that those who "fare hard, and work hard, have sweeter and pleasant bodies than such as live idly, and fare deliciously. That which we call Cruditie is the imperfect concoction of food. If the stomach makes a corruption instead of a concoction, the Liver cannot turn that bad chyle into good blood... Then from corrupted blood, must needs proceed corrupted flesh, but by little and little it putrefies and breeds, first Diseases, secondly Death."

Fever. "An Error which seemed most worthy to bee laughed at, that the husband is thought to bee sick and troubled with the same symptomes wherewith a woman with child is wont. I had a patient sicke of f Fever who would not be perswaded of any other cause of his sicknesse, than his wife's being with childe." (Primrose)

Stone in the Bladder. This is caused by "eating veal, pig, green fish, eels, cheese and all gross slimy sweet or fat meates; sitting too much with one's back to the fire, or lying too much on the back". (Cary)

Lice. Speaking of Figs in one's diet, Dr. Moffatt says that "Plato so affected them that he was called the 'Fig lover', nay, he loved them so much that he died of lice, engendered of corrupt bloud which the figs made."
Drugs.

The *Materia Medica* employed by the Fathers of Medicine were comparatively few in number and almost entirely vegetable in origin. Hardly anything of an obnoxious nature was made use of.

It was far otherwise with their successors. They employed almost every plant, a large number of minerals and many of animal origin. As time went on it seemed to be their endeavour to collect whatever was most disgusting and give it as medicine apparently with the idea that the more horrible the drug was, the greater must be its efficacy. One would think that these early practitioners treated each disease as if it were the abode of a sentient being or devil which would rather flee from the patient than endure the horror of the filthy drug.

William Ward, the translator of Alexis of Piemont (1559) says that God has made everything for the use of man so that nothing is unprofitable, not the very dung of beasts and birds, but that it hath some wholesome operation for man's health. In all these things are certain secrete vertues, which be manifest signes of God's love and favour towards man, for hee created them to the intent that man should use them, glorifie him and give him thankes for them."

Andrew Boorde (1542) states that "God made pension that men might be holpen by the vertue which he did give to herbs, weedes, trees, rootes, fruites and stones. The properties of which, few men or none, doth know them except Doctors of Physicke."

The only system which in the least vies with our mediaeval one is that of the Chinese materia medica. In the latter in addition
to a huge catalogue of vegetable drugs there is a list drawn from almost every part of every known animal together with their excretions. Thus of the Domestic animals, calculi, pigs' bile, decayed bones, old drum skins, were and perhaps are still used. Lard which had been buried for 100 days was employed as an antidote to cantharides. The blood from the tail of the pig was good for Smallpox and also for getting serpents out of the body. Dirt from the ear of the pig was a cure for snake or dog bite. Pigs' faeces was a general antidote as well as a cure for jaundice.

The testes of the dog were good for the diseases of women. Dirt from the proximal end of a donkey's tail cooked with flour was a remedy for acute and chronic fevers. The faeces of the Lion were good as vermicides. From Man was obtained dandruff, wax from the ear, dirt from the knees, pubic hair, menstrual blood, perspiration, etc. Indeed the present-day medicines of China closely resemble those used in Europe in the middle ages and indeed up to the 18th. century.

We find Praepositus (II40) employing human blood, human bone, excreta of serpents, infants and wolves, the fat of the lion and the wolf, etc. In preparing serpents, he states that they must be beaten with small rods to infuriate them, then their heads and tails were to be cut off, and the body allowed to twist about the ground, and the more they bleed the better.

The present vogue of using agents of animal origin in therapeutics seems adumbrated in the materials employed by these early practitioners. It may have appeared to them that if a tissue or organ was diseased, then the administration of that same tissue or organ from a healthy animal might make good that deficiency or
stimulate it to a more normal action.

Our forefathers really practised endocrine therapeusis, and builded perhaps better than they knew, though their methods were crude and often repulsive. Now the disgusting part of the process is carried on in the laboratory, and the patient only sees the finished article. Thus Rondeletius of Montpellier (1560) is quoted by Chamberlen as having recommended the dried powder of the Secundines to be drunk in water in order to bring away retained membranes after child-birth. Does not this very closely resemble many of our attempts with opothrapy— the use of the dried ovary, corpora lutea, and such proprietary agents as Viriligen, testacoids, etc?

Perhaps our predecessors had even progressed beyond our present endeavours, for I do not think that I have seen advocated as vermifuges the powder of dried intestinal worms. This was actually used as late as the 17th century.

Culpepper in 1651 ridiculed the use of many of these disgusting agents and so brought down on himself the wrath of the College of Physicians of London. Such drugs as the following had to be kept in stock in the Apothecaries' Shops:

The Fat of many beasts, birds and reptiles

The faecal excretion of various animals including that of infants, as well as men and women

The Urine of various animals, including that of a man and that of a woman that is a maid and that is not a maid.

The Bazoar Stone and that taken from the bladder of a man, that from the head of a Carp, etc.
The Horn of an Elk, Rhinoceros, Unicorn, etc.
The Skull of a Man who has died a violent death.
The Moss from the Skull of a Hanged man.
The Guts of a Fox and Wolf.
Swallows' nests.
The Male organ of a Stag or Bull.
The blood of various animals.

These as well as a host of other agents appeared in the London Pharmacopoeias as late as 1745.

The Pharmacopoeia Collegii Regii Medicorum Edinburgensium 1699,

Contained ill animal agents, such as: - Stags horn, coral, crabs claws and eyes, Bezoar stone, precious stones, human skull, earth worms, horses' testes dried, vipers' flesh, oil of the fox, Frogs, human secondines, the faeces of many animals including man, etc.

The more costly the medicine was, the greater was its curative power supposed to be. Therefore Gold, Precious stones, Unicorns' horn and so on were frequently prescribed to the wealthy. It would be well for those who prescribe a certain proprietary medicine for the cure of phthisis to remember what Dr. Primrose said in 1661 that it was vain to employ Gold for the cure of consumption as it cannot be converted into our nature.

"Am Electuary of Precious Stones is a medicine proved against fainting and swooning, pensiveness and solitariness and Kings and Noble men have used it for their great comfort. It causes them to be bold spirited and the body to smell well" (Praepositus II 140).

Andrew Boorde (1537) says that the Electuary of Gems and the Confection named Alchermes be good to comfort ye soule or the Spirits of Man, soule and body being together here in earth.
The stone "Aetitis" (q.v.) had a marvellous power to bring forth both child and placenta. Culpepper (1651) gives a warning as to its use lest it bring away womb and all.

Lord Bacon (1620) in his Historia Naturalis says that stones possess fine spirits and may therefore work upon the spirits of men to comfort and exhilarate them. Those that have the best effect are the Diamond, the Emerald, the Hyacinth oriental and the Gold stone which is the yellow Topaz.

Other articles difficult to obtain were the Bezoar Stone (see "The Use of Stones in Medicine") the Horn of the Unicorn, the Horn of the Rhinoceros, the tails of Small Crocodiles of the Nile (the Confection of which moveth a man to Venery, says Praepositus), the root of the Mandragora.

Amulets. The use of these has come down to us from very early periods, and we know that even yet they are employed by the ignorant and superstitious. In former days however they formed an integral part of orthodox therapeutics.

Such an early practitioner however as Soranus of Ephesus (100 evidently had doubts as to their true value, though he says that he was not averse to their employment because they acted through the mind of the wearer and gave him hope.

Alexander of Tralles (525-600) on the contrary was a great believer in amulets and advocated the wearing of a Charm Stone as a preventive of many diseases. For the cure of Ague he advised that a live dung-beetle should be wrapped in a red rag and hung about the patient's neck. For Epilepsy, one should take a nail from
a wrecked ship, make it into a bracelet and set therein the bone of a stag's heart taken from its body when alive; wear this on the left arm "and you will be astonished at the result."

Chamberlen (1665) though he is not dogmatic, says "I confess that there may be more virtue in the skin of a snake or Leadstone applied, yet amulets may however do much good to the woman by strengthening her mind and abolishing her fears."

William Sermon (1673) affirms that "Amulets hung about the neck are, believe me, of excellent use. Thus; take a hazel nut, remove the kernel and fill with Quicksilver and close the hole. Hang it about the neck that it may touch the pit of the stomach. Or take the Head of a Toad well dried and wear it as above and they will prevent the Plague."

"Divers authors assure us that the Head of a Viper hung about the neck, hath a very particular quality to cure the Squinancy, and all other distempers of the Throat, and that the Brain of a Viper hung about the neck makes the teeth of children come forth." (Charls 37)

Plate 4. Magnetic Cure of Wounds. (For a full description of this see the article on "The Powder of Sympathy.")

In his Theatrum Sympatheticum, Sylvester Rattray (1662) describes his method of anointing the weapon with the Unguentum Armarium. This consisted of the Patient's blood, human fat, etc. The patient's wound was dressed with a simple wet rag.

Von Helmont (1577-1644) thoroughly believed in the efficacy of this Powder and that the material life of the body assumed almost
a personal form (to which he gave a name), thus, for example, Dropsy was due to the life of the kidneys being angered. This could be cured by frightening this spirit as by placing a live toad or a snake on the region of the kidney.

**Potus Antiochiae.** This contained twenty ingredients— all vegetable. Clowes (1596) says that it is "a drinke of singular vertues. The strange cures whiche the saide drinke hath done are wonderful to heare, and the wounded man ( a sword pierced his abdomen) was cured chiefly with this drinke of Antioch."

**Human Fat.** Clowes (1596) tells us that he cured a man of a poisonded bullet wound by applying an ointment composed of human fat, marrow of Stags' bones, the fat of geese and cocks, turpentine and wax.

**Urine.** The urine of man and animals had a place for long in Materia Medica. Bullein (1558) describes the many virtues which the urine of a boy exerts, and has a long poem in its praise. "Honey diluted with the urine of a boy and sponged on the face is good for cleansing the skin of them whose faces be uncleane."

It was John of Gaddesden who as early as 1314 recommended the patient to drink his own urine as a diuretic.

Bullein notes the diseases which may be helped or cured by taking the marrow, gall, braines, liver, horns, hooves, urine, blood or dung of various animals including man. He remarks that "the dung of manne is the beste in Medicin although most abominable to the sense of smellyng; a water made of it is goode to be
drunke against the Fallyng sickness, stone and the water betwenee the fleshe and skin (anasaren)

Mumia. It has often been asserted that it was only the bitumen or pitch with which the dead body had been preserved which was really the active part of the preparation. No doubt but this may have been the case in certain circumstances. There is no doubt however but that many practitioners really used the dried flesh of human bodies. Here is what we find in the Basilica Chymica cum notis Hartmanii; Prague 1608.

"Theriaca de Mumia. Mumy is alone one of the best remedies against all kinds of venoms. Tincture of Mumy is made by taking the cadaver of a man 24 years old, killed and collected on a calm day or night. The body must be illuminated by two windows as well as by the stars. The flesh after being dried is to be powdered with myrrh and aloes and digested with spirit. It is good for the plague, apostumes, carbuncles, pleurisy as well as for cases of poisoning. Many mummies are obtained from the sepulchres in Egypt. Paracelsus used only the flesh of those who had met with a violent death."

Far earlier than this however, Lanfranci (c. 1300) states that what was used in his time and sold by the Apothecaries was the very flesh of mans' body as it were burned to a cole, and indeed whole armes and whole legges have been here not rarely seen. It was employed in plasters and drinks, to consounde broken bones and to dissolve congeilrd bloud.

It appears in the Pharmacopoeia Londinensis Collegarum of 1661 and in that of the College at Edinburgh of 1699, and it was on
sale in the apothecaries' shops in Germany as late as the beginning of last century. Marvellous powers were attributed to this material; "so powerful is this drug, that it procures long life. A little put under the tongue of a speechless person, restores it."

The lower animals furnished many articles which were included in Materia Medica.

**Foxes and Badgers** supplied an oil which was good for Ach in the Joynts, the Sciatica, diseases of the Sinews and pains in the reins and back" This was prepared as follows; "Take a live Fox or Badger of middle age, of a full body well fed and aft, kill him, bowl and skin him. Some take not out his bowels, but only his excrement in his guts, because his guts have much grease about them; break his bones small that you may have all the marrow, this done set him aboil-ling in salt brine and sea water of each a pint and a half; this done set him a boiling in salt brine. In the end of the Decoction put thereon the leaves of sage, rosemary, dill, marjoram, pimpernell, and when he is so sodden that his bones and flesh do part asunder, strain all and keep it in a vessel to make liniments

**Geese and Cats.** "A precious Oyntment for the Gout is made by taking a fatte goose and plucke her and trimme her, then stuffe the bealy with two or three yong cattles wel chopped in small gobbetts with a handful of baye salte, roast her and kepe the dryppinge for a precious oyntment for the Gout." (Phaire 1553)

**Dogs, Scorpions and Worms.** Alexis (1559) tells us that the Cyle of a Red dog cured a Friar of a withered arm. The dog had to be kept three days without food and then strangled. He was then to be seeth-
ed in boiling oil until he was sodden in pieces. Then 80 to 100 Scorpions were to be put in a bason on the fire and burned thoroughly. The fil of the Dog was then to be added with a good dishful of Great Ground Wormes.

**Puppies.** The best cure for Gout was to go to bed with a litter of puppies. The patient was cured while the puppies slept.

**Mice.** "A mouse being roasted is good to be given to children that pisse their bedde." (Bullein 1580)

**Frogs and Toads.** Many prescriptions contain the powder of these animals as ingredients. Paracelsus asks, "Why is the Frog so strangely made, except that he should be a medicine for the plague? Therefore he has his signature thereto, for as there is no disease so disgusting as the plague, so disgusting is the frog also."

Von Helmont (1585) believed with Paracelsus that a special medicine existed for curing each disease, and as every country produced its own specific, there was no reason to import foreign drugs.

The Rook has been a favourite agent in supplying medicines throughout the ages. Pliny had recommended rubbing with the bird's nest as a cure for Quarten fever, while its flesh helped also as a tonic, and its brain relieved headaches and made the eyelashes grow. The eggs made into an oil was excellent for making the hair black, according to Alexis of Piemont (1559).

**Its excrement** "Is good for dysentery when taken in wine."

(Lemery 1723)

The dried livers of rocks or the dried and powdered dung of the goose, hen or sheep, cures jaundice, if Sermon can be relied on.

(1673) 38
Millepedae, Centipedes, Woodlice, Hoglice, and Slaters. The whitish ones are the best. They have a faint disagreeable smell and a brackish, sweetish, unpleasant taste. They are celebrated as resolvents, aperients and diuretics and are used in jaundice, asthma, scrofula, etc. But Dr. William Lewis (1761) questions whether their virtues are as great as is supposed. He had known 200 taken every day without any remarkable effect. "These insects may be commodiously swallowed entire as they spontaneously contract themselves on being touched, into the form of a pill. In the shops they are commonly reduced into a powder." ("An Experimental History of Materia Medica.")

*Lumbricus terrestris.* (Edinb. Pharmac.) They are prepared by washing, then moistened with wine and set in a cellar where they become almost wholly resolved into a slimy liquor. They have a diuretic and antispasmodic effect.

Moss from a Dead Man's Skull had a remarkable virtue in stopping any Bleeding from the Nose; "Make a soft Plaister and lay it on the Veines of the Forehead, or at the hair if for a Bloody flux." (Digby)

It was also good for the Colic. (Culpepper)
Of course the administration of the organs of animals has been celebrated as a religious observance almost from the earliest times. Again they have been eaten in order to increase bodily strength, to promote valour, to make the individual more virile or procreative, to prevent the action of poisons, or to confer length of days and health. Examples of all these are to be found in works dealing with Ancient and Modern Mythology and with the Manner and Customs of Past and Present Races of Mankind.

It is our present endeavour however to treat of the administration of the organs of animals for therapeutic purposes. We shall see that they have been used as such from the earliest times and that their employment continued down the ages until very recent years. Their use had however been almost entirely given up during the past century until the comparatively new vogue of animal therapeutics arose about fifteen years ago. At present the use of dried animal tissues or the extracts derived from them bids us believe that the use of such remedies will far exceed the employment of animal tissues in bye-gone days,
One cannot but remark how very similar many of the remedies used by our predecessors are to those of the Medicine-man of Africa and South America at the present time.

Thus for example, in certain parts of Brazil if anyone is bitten by a poisonous snake, the native doctor administers a soup made of the livers of snakes. At the same time he applies a poultice consisting of a Vampire bat split open and applied while still alive to the part which has been bitten. During the whole of the time he continues to utter magical words and incantations.
The Pharmacopoeias.

One gains perhaps a better knowledge of the state of medicine by a study of the different catalogues of medicines employed by the practitioners up to a comparatively recent time.

The first English Pharmacopoeia was published in London in 1618 and contains an enormous number of drugs happily now abolished. There were altogether nearly 2000 drugs, 271 being of vegetable origin and 91 of animal.

The number of drugs did not diminish as time went on, for in the pharmacopoeia of 1651 there were any number of most disgusting materials, e.g. Human skull, Mummy, the lungs of the Fox, priapus cervi, et tauri, the blood of pigeons, hares, partridges, pigs, ants eggs, the excrement of man, goat, dog, stallion, mouse, pig, calf, goose, etc. the urine of boys and men, goats and wild boar; the testicles of the horse and cock, Snakes' skin, puppies, ants, worms, millepedes, scorpions, frogs, toads, adders' flesh, the milk of women, cow, sheep, goat and ass; There are splendid examples of polypharmacy, e.g. the Electuarium Mithridatum which contains fifty ingredients, the Theriaca contains sixty-four. There were Trochisci de Vipera ad Theriacum made of the flesh of adders; Oleum Scorpionum made from living scorpions; Emplastrum de Rannis which contained six living frogs and earth worms. Two newly born puppies went to make the Oleum Catellorum. These are perhaps the most disgusting ingredients in the London Pharmacopoeis.

The Pharmacopoeia Collegii Regii Medicorum Edinburgensis of 1699 contained III animalia, earumque partes, excrementa, aliaque, ab iis desumpte.
The "Pulvis e Chelis Cancrorum compositus" contained red coral, "cornu cervi Philosophice praeparati", Bezoar stone, Margaritum, Crabs eyes, and crabs claws.

The "Pulvis de Gutteta" was made up of powdered elks' hoof, "cranii Hominis violenta morte extincti, drachmas tres", red coral, prepared hyacinth, musk, rue, red peony, etc.

"Pulvis ad Partum" consisted of dried liver and gall of eels, testicles of old horses, white sugar, etc.

We find also "secundinas humana", the Aetitis stone, the Eagle stone, many precious stones, the Bezoar stone, the stone in the head of the carp and of the paerch, the calculus in the gall-bladder of the ox and human vesical calculi.

The other drugs closely follow the list given in the London Pharmacopoeia.

It is quite impossible to discuss the uses to which vegetable drugs were put. Some of them seem to have been able to cure almost every disease. It would take far too long even to enumerate some of the actions with which they were credited.

Garlick, rue and sage were highly vaunted by our predecessors. In the "Regimen Sanitatis of Salernum" they are appreciated not only on account of their general virtues, but also as antidotes:

"If in your drinke, you mingle Rew with Sage
All poyson is expel'd, by power of those."

and again,

"But who can write thy worth (O sovereign Sage)
Some ask how men can die where thou dost grow."
Of course these British Pharmacopoeias were merely improvements of far earlier ones. It is said that the first list of drugs with their uses was compiled by the lawyer Mesue in 1015. Many editions were printed and it became what we may now term the standard work up nearly to 1700.

Nicholas Praepositus composed another in 1100. It also became famous, and Matthew Platearius compiled yet another in 1140.

Classification of Medicaments. Many authors show a strong predilection for classification, and in many cases the same drugs appear under different headings.

Peter Lowe (1590) gives in tabular form those drugs which are hot or cold in various degrees. He also classifies them as -

- Repercussives, Attractives, Resolvatives.
- Emollients, Suppuratives, Detergents,
- Incarnatives, Cicatrisants, Catheratics,
- Septicks, Caustics.

Antidotes. Some of these compounds which were known as "Universal antidotes are hoary with antiquity, as the Mithridatum and Theriac. There was the celebrated antidote of Mattioli which contained 230 ingredients.

Black Hellebore was used as a purgative and White Hellebore as an emetic in cases of poisoning from the time of Hippocrates, and were used as such right down to the beginning of the nineteenth century.
Dr. James Cooke (1647) was rather given to classification. He gives long lists of drugs under such headings as Cephalicks, Ophthalmicks, Thoracicks, Cardiacks, Splenetics, Utericks, etc.

Errhines he called Brain Purgers. Such drugs as White Pepper, pyrethrum, tobacco, hyssop, etc. "They empty the diseased matter nestled in the brain by way of the Nostrils and the Pallet."

Sternulories were stronger, thin and sharp, stirring the expulsive faculty of the brain more strongly. They may be blown into the nose through a quill.

To the Mouth are used Masticatories; these draw Flegm plentifully from the brain through the mouth by their heat and acrimony, by which they thin the Humour and stir up the expulsive faculty; such drugs as masturtium, origanum, anise, gentian, cloves and such like are used.

Vomits. Bullein (1560) says that "in Sommer vomentes ought to be taken to cleanse the upper partes as the lower members be purged by electuary in winter."

Dr. Godfrey (1673) denounced vomits. "In my youthful days, I took several of them to my great hurt." He describes several deaths as being due to them. They are supposed to clean the stomach, he says, but more often they defile it.
Polypharmacy.

Medical students are now taught to make their prescriptions as simple as possible; indeed if it contain but one active ingredient so much the better. To prescribe more than a very limited number—say five or six—would almost bring the prescriber under the condemnation of being a polypharmacist.

Yet our predecessors hardly ever wrote a simple prescription. They applied the counsel of the adage in actual practice, that in a multitude of counsellors (or drugs) there is wisdom.

I have already alluded to the Antidote of Matteoli; there were some 230 ingredients. Many other famous preparations contained an immense number though perhaps this Antidote surpassed all others. A Confection of Dr. Nicholas was made up of no fewer than 107 drugs, and one is not surprised to learn that it was "a perfect cure" for almost as many diseases.

The celebrated Antidote of ancient days was that taken by King Mithridates daily to render himself proof against poison. It contained 50 ingredients, chiefly vegetable, though the blood of certain animals was added. So great was its fame that it continued to be used down the centuries and appeared in the London Pharmacopoeia of 1651.

A Confection which produced great wonders at the hands of Wirtzungen (1617) contained some 40 ingredients including the stone of a Sore hog two years old, the pissel of a Stag shaven small, four pair of Foxe stones, 50 or 60 sparrow Braines, wild yellow Rapes, Satyrion, etc., confected in Sugar, Shaven Ivory, Cinnamon, the pissel of a Bull, Dates, Indy nut kernels, etc.
The ancient writers instead of using the term 'treatment' as we find in the text-books, only too often employ the term 'cure'. It would seem that they had no doubt as to the efficacy of the remedies which they prescribed. In present-day treatment we find lists of drugs or other agents which are recommended as being useful for certain diseases, but I do not think that they are ever labelled as 'cures'. It was otherwise in former times; with their crude preparations they were yet able to affirm that this drug or that combination was "a certain cure."

Indeed the confidence which the medical practitioners of the middle ages had in the efficacy of their own compositions is very much on a par with the vaunted cures performed by the quack medicine vendors of today. But as we shall see later, they were in the habit of calling each other quacks or other objectionable epithets.

The immense number of drugs which went to make up one prescription and the large choice there was of these 'certain cures' makes it almost certain that not one of them could have been effective. For example, the Diamargitum calidum contained twenty-eight ingredients, including "little balles of roses, little balles of violets, the bone of the heart of the red deer, etc. It comforteth the lively partes of those which be pensiful and sad, sighing or be in a consumption."

In many of the ancient works there are innumerable prescriptions any one of which may be used in different diseases and each one of which is a "perfect cure". If indeed one was such a cure, what was the use of a second?
It was not so with the classical writers. Their Materia medica was greatly limited as compared with those of the Middle Ages, nor did they label any of their compositions as "cures". They seem to have been straight-forward practitioners, who endeavoured to do their best for their patients without promising anything extravagant in the way of cure.

Listen to Dr. Sermon (1673) stating that "a perfect Remedy for Epilepsy consists in giving the Afterbirth of a sound Woman, dried and made into fine powder, one scruple at a time and given in Black Cherry Water.

Again according to Digby (1668) An Experimented Remedy for the Falling Sickness was to take Human Skull and Human Nail Parings of each 2 ounces. Reduce to a fine powder by grinding on a marble stone. Add certain vegetable ingredients, boil and mix with sugar and make into tablets. One to be taken three times a day."

Dr. Archer (1673) promises marvellous cures if his own prescriptions are used. His "Infallible way of Preventing Infection from Venery...is so sure an Antidote against Infection. If I do but consult the person before Copulation or the same day after it, I do promise a certain prevention of any fear of Infection which I do publish not to encourage sin but to hinder Sin and a quiere of Families...And I do here declare my belief that should a thousand men fall into the laps (or Hell) of a thousand corrupt Women, yet by the use of my discovery or Antivenerion next night after, I should not doubt the soundness of every man from this Pollution." Fioravanti (1582) says that "a goodly and easie sale to helpe all sortes of Fevers, consists in four things, viz. emetica, diuretic,
purge and sudorific. This may be done with great ease and will restore the patient to his health. But you shall understand that all cannot be holpe, for that God Almighty hath made us to dye, and when that tyme commeth medicines will doe no good, but if that tyme be not yet come, by the helpe of God, with these medicines he shall be restored to his former health."

"Of the Fever Quartane, by giving the patient Mercury precipitate, I have holpen more Quartanes more than any physician of our tyme."

Writing of the treatment of "Pain in the Mother" (Womb), Fioravanti says that it is only those who are expert in Philosophy who are able to know about this disease, because it is an operation of Natural things and which cannot be understood without great knowledge in Natural Philosophy.

Dr. John Hall (1637) writes that "I cured the Countess of Northampton perfectly by God's assistance, by giving her medicines which purged her 5 or 6 times each day." and again, "My own daughter was vexed with Tortura oris. Purges and Rye water were given ad lib. Thus was she delivered from Death and deadly diseases. To God be praise."

"One Hudson, a poor man, suffered from Vertigo. He was bled and purged. Lastly he took i ounce Peacock's dung dried from New Moon to Full Moon every night and was cured."

Veronoff had a rival in Alexis of Piemont (1559) who cured a man of old age by giving him certain herbs infused in dew, and says that a Withered Arm could be restored by roasting Scorpions and adding them to the oil seethed out of the red dog's body and
to which great ground worms formed an ingredient. This was applied to the affected limb.

In order to bring sudden strength to the weak, the blood of a healthful and fleshy man was to be distilled nine times, then leaves of gold and silver were to be added along with precious stones. This was to be given to the weakly individual and he would soon be well.

Old Age may be cured according to Bullein by taking a mixture made of an endless variety of herbs infused in dew. It is to be taken in "halfe a glassefull of the milke of a woman, now brought to bed of a man childe, or of a nurse that giveth a man childe sucke or else in Gotes milke."

Stone in the Bladder. It was John of Gaddesden who recommended the beetles which live in the dung of cows (Geotrupes stercorarius) and crickets should be extracted in oil and applied to the loins and chest. Again, "Take the stone that growth within the Gall of an Ox, grate it and drink of it in White Wine as much as will lie on a simpence."

Cary could prevent or cure this disease if the patient took the Quintessence of Goats Blood prepared and sold by himself at the price of five shillings the wine pint.

Cancer. Peter Lowe does not approve of removing the growth by cutting, but rather to follow the counsel of Paul Aegineta which is to foment the growth with the juices of certain plants. He had often used the urine of a young maid in the same fashion.

Dr. James Cooke (1647) found plates of Lead very good in the treatment of cancer. The Unguentum de Ran. Virid was excellent.
Take Green Frogs, fill their Mouths with butter, place them in an earthen pot full of small holes in the bottom, cover and lute up the pot close; then lute this in another pot without holes and set a gentle fire of charcoal about the upper pot to distill them. When the pots are cold, beat the Frogs to a fine powder, and with this make an ointment.

**Epilepsy.**

John of Gaddesden (1314) recommends that the head of a cuckoo should be hung about the neck. "I have tried this in many children with success and it acts because the bird has epilepsy every month and so draws the materies to itself."

According to DR. Sermon this disease could be cured by giving the patient Unicorn's horn or by administering the powdered skull of a man who had been hanged. A perfect remedy however consisted in the human placenta dried and powdered. Still another, "Take the Dung of a Peacock made into powder and give so much of it as will lie upon a shilling in succory water fasting" (Choice Manual 1664)

**Gout.**

Phaire (1553) recommends an ointment made from a fat goose stuffed with young cats well chopped and roasted.

**Asthma.** We find many of the ancient writers recommending the lungs of a fox as a certain remedy. The use of these may have arisen from the fact that when a coursing fox is at last caught, it makes so much noise in panting that this might have been mistaken for asthma, and as 'similia similibus curantur' the lungs of the animal may thus have come into use as a cure for the disease.

Our old friend Rhazes (850-932) while stating that owls' blood
is useless, recommends the lungs of the fox as a remedy.

Dr. Moffett (1605) relates that he cured Dr. John Penny of an attack of asthma after he had taken Hog-louse in Wine to no effect by making him 'smoak Brimstone through a pipe'.

Jaundice. While Dr. Cary (1583) was content to treat this disease with Bryony or Parsley infused in White or Rhenish Wine along with copious sweating, Dr. Sermon two hundred years later was still treating his patients by using as an infallible remedy a Live Trout or Tench cut open and applied to the pit of the stomach.

Smallpox. John of Gaddesden says that he cured the King's son by giving him red fluids to drink and red meat to eat. Everything about him was red in colour, and so he was cured without any vestige of the disease remaining.

Dr. Andre (1701) states that if in the beginning of the disease the patient's feet are bathed in milk, all the Smallpox falls into the feet and so the face is free of 'em. This is due to the fact that the worms which make the scabs or pustules of the Smallpox run to the milk."

Pleurisy. Horse dung seems to have been a favourite remedy from the time of Phaire (1553) to that of Sermon (1673). The latter says that Hens' dung or prepared Goats' blood are equally good.

Plague. One of the least pleasant cures for the plague must have been that of Alexis of Piemont (1559) who gave the dry and powdered "dunge or excrement of a yung boie" in two teaspoonful doses in a glass of White Wine.
Sir Kenelm Digby (1666) had a much better idea. It was to prevent catching the Plague. Cinnabar was to be mixed with turpentine and rolled into flat cakes. On one side of these was to be well-engraved the character of Mercury and this must be done on the day and hour of Mercury (i.e. each Wednesday). If such a plate were hung about the neck of any one in a Sarsnet bag or silver box, it will infallibly preserve them from the Plague. If on the other side of the plate you engrave the character of Jupiter on the day and hour of Jupiter, it will preserve from Witchcraft, Convulsions, Fits, and Falling Sickness if worn in a Sarsnet about the region of the Head.

Colic. Here is Phaire's prescription (1553) "Take the oldest Cocke ye can gett, the whiche must be well baeten with small roddes and then choppe of the head and put in a good sufficiency of water and scalde hym and trymme hym for to seethe and stuff the bealy with anise seedes" and so on.

Other sure remedies were "One dram of a Man's Skull prepered taken with one scruple of Annis seeds in a cold Cause" or again the Powder of the Testicles of a gelded Horse taken to one dram.

Incontinence of Urine. " Children have been oft cured with fryed Mice, stones of a Hare burned, Snails, Shels and all burnt..... so also the inner Skins of Hens gissards dried. Cocks Wesand dryed and poudered is good, the powder of a live-Toad burnt in a new pot hung about the neck in a Bag, and the Powder may be given in Red Wine, or Steel'd Water or Aq. Calc. Viv. There's also good Sow's
Bladder, burnt Ashes of a Hedg-hog, but above all is Pudenda Suilla, which is said also to be admirable in Convulsions" (Dr. Cooke 1647)

Worms in the Belly. Digby (1666) recommends that you "may put up in to the Fundament as far as you can, a long piece of fresh Beef in the form of a Suppositor, and let it remain there a good while. Worms will fasten to it, so that you will pull them out sticking to the Bief."

Apoplexy. Herophilus says that it is quite impossible to cure a strong Apoplexy, therefore the government and cure thereof ought to be committed to Priests and Divines.

Epistaxis. Phaire (1553) recommends Swine's dung put into a muslin bag and the juice allowed to enter that side of the nose from which the blood cometh. Sermon however (1673) affirms that it may be cured by taking the powder of a dried Toad in the distilled water of Hogs dung.

Bleeding from the Nose or from any other part may be cured by merely holding in the hand a bunch of Shepherds Pusse. (Bullein) Digby (1668) also recommends this also in very desperate and continual bleeding from the nose and says that if it is worn constantly it will prevent bleeding. It will suffice if one wear this Bursa pastoris put in their Pocket or in their Hat-Band.

Sermon (1675) counsels you to burn the Blood that comes from the patient's nose, and blow thereof up into the Nostrils, or powdered egg-shells or the Hair cut off the Belly of a Dog, made into a tent and put up the Nostrils.
Toothache. In the Rosa Medicinae (I314) John of Gaddesden says that his special cure was to lay the fat of a green frog on the particular tooth when it would immediately fall out. Another of his cures was to recite certain prayers or to prick the many-footed worm which rolls itself up into a ball (millepede) and then with the same needle to touch the aching tooth when the pain would disappear.

For swelling of the gums due to the eruption of the teeth, Dr. Cooke advocated that an ointment made of the fat of hens, geese, ducks, fresh butter, cock's blood from the comb, anointed with the finger. Hare's brains are also good."

Madness. The 'cure' for this was sharp and severe. Clysters were to be given, certain medicines were to be forced down the throat, the head was to be cauterised, music was to be played to him, and good counsel given to him preferably by some fair woman. This was the treatment recommended by Alexis of Piemont.

In the time of Celsus, the groundless fears of some of the delirious patients were combatted by appropriate means. Thus if he was wealthy and yet feared starvation, he was to be told that several rich people had died and had left him their money. If they were subject to unreasoning laughter, they were to be cured by reproof and threatening, and melancholy was to be banished by making him listen to noisy music.

The use of music was very general amongst the Greeks, and in the Asclepia or Temples of Health the patients observed soothing religious ceremonies. Massage was given to them and music was played to them and by these psychological means much good was often done to the patients. Pythagoras was one of those who advoc-
ated the employment of music as a therapeutic measure (c. 550).

I do not think however that music has ever been much employed as a curative agent since these very early days. It may have been casually made use of, but I am sure that medical men have not prescribed it. It has not been included in the recognised Materia Medica. In 1729 however, a Mr. Richard Browne, an Apothecary, published a work entitled "Medicina Musica or a Mechanical Essay on the Effects of Singing, Music and Dancing on Human Bodies." He recommended these as cures for melancholy, weak circulation, feeble digestion, etc.

"We may elevate the soul and cheer it even though the voice be harsh and inharmonious. When we are sad, singing is particularly adapted.... dark, gloomy ideas are chased away, and a joyful serenity of Mind ensues." He goes on to show that singing may be harmful in certain diseases, and prescribes the kind of music best adapted to individual diseases.

"Dancing has in all ages been of great esteem in the cure of Chronical Diseases. It helps digestion and Chylification, but especially it excels in the cure of the Spleen and Vapours."

In spite of this exordium, I fear that music still was not made much use of until the present time when perhaps we are having too much of a good thing. Instead of soothing, I rather fear that it may have the effect of irritating the patient; at least that is the complaint one hears by patients who live in tenements. They assert that they cannot sleep on account of the continual playing of music by wireless sets.
Fever. Dr. John Hall (1632) was cured of a deadly fever which then raged greatly killing almost all that it did infect. " Then was a Pigeon cut open alive and applied to my feet, to draw down the Vapours, for I was often afflicted with a light Delirium. Later I was afflicted with an Itch in the Scrotum, which was cured with our Decoction of Sarsa, so I became perfectly well, praised be God."

Bubo. A method of cure recommended by several of the old authors: "to draw out the venom from the botch or sore in Pestilence" was to pluck the feathers "from a quicke Hen round about the place where she layeth her eggs and set her upon the sore." In this way the poison would be drawn up, and shortly afterwards she (the hen, it is to be hoped) will die. Other writers recommend that a Cock or large Toad or a Green Frog should be kept on the sore until they died.

Prolapse of the Womb. According to Culpepper (1651) stinking things as Asafoetida, laid upon a prolapsed womb causes it to fly upward, but Zacutus cured this affection by tying a living mouse to the woman's thigh, the fright causing the organ to fly up.

Quartan Ague might be cured according to Trallianus by hanging a living beetle about the neck, or else the worms found in the thistle called Labrum Veneris.

A much more horrible cure was that of Alexander of Tralles (560) who recommended that the patient should drink menstrual blood and wear the robes of a lying-in woman.

Phthisis. Dr. Cooke (1647) advises that Decoction of Lignum
Guaiac, corrected with Red Sanders and Currans be given, also the Water of Swines' blood distilled. In all spittings of blood, the chewing of Roots of Nettles, and swallowing the juice down; yea, the juice of Nettles as also the Decoction is excellent, as I have tried.

Hydrophobia, Ramesay (1661) says that it may be contracted by chewing the clothing which a mad dog has bitten. Quoting from Aretaeus, he says that the disease may be got through the mere look of the dog. He devotes ten pages to the treatment of hydrophobia, and yet there is nothing of any value except that he advocates the application of a ligature above the part bitten.

Warts. Sir Kenelm Digby (1658) demonstrates how warts may be removed by washing the hands in a dry silver basin by the reflection of the moon beams alone which will afford sufficient humidity to do so.

Toothache. Bullein (1558) says that "if it come by Wormes, make a candell of Waxe with Henbane seedes and light it, and let the perfume of the candell enter into the tooth and gape over a dish of colde water and then may you take the wormes out of the water, and kill them on your nayle, and beware of pulling out any tooth, for pull out one and pull out more.

The Sympathetic Powder of Digby was also a cure for toothache.

Vipers Bite. Charas (1670) states that the Snake Stone possesses no virtu as regards the cure of a viper bite. The best treatment is to use the Volatile Salt of Vipers, the cause being subtile and spirituous, a remedy of like nature is required.
Treatment.

Henry of Mondeville (c. 1350) says that it is the duty of the surgeon to keep up the spirits of his patient in every way possible. To this end he recommends that a 'Joculator' (merryman or fool) be got to solace the sick man, or a musician who will play to him on a viol or on a ten-stringed instrument. Again false letters may be sent to the patient telling him of the death of his enemies or of the decease of him whose money or estates he hopes to inherit.

To bring back Strength, Alexis of Piemont (1550) tells us of "A verie good Receipt, which Pope Clement, took in his last sickness. To the distilled juice of many plants, a pound of man's blood of the body of a verie healthfull and fleshy man, and all to be redistilled nine times. Then leaves of gold and silver, precious stones and other ingredients are to be added. This brings sudden strength to the weak, prevents plague and sudden death."

Marasmus is best cured according to Dr. Moffett (1590) by making the patient suck the milk from a woman's breast. The nurse must be young, clear of skin, of a kindly smell, no wine-bibber, no ordinary wanton.

Vomiting. Elyot (1534) advocates the induction of Vomiting in various affections. Thus "for hym that hath muche spyttefell or his stomake wambleth, and for hym that removeth into sundrie places... But, to enforce one to vomite, whiche can not, is very odious and is to be abhorred."
Dropsy. Dr. Hall (1657) treated the Countess of Northampton for dropsy in a heroic manner. He administered to her a decoction of herbs. The first day this gave her 8 stools, the second day 18 stools, the third day 15 stools. Later she took an Electuary. It first gave her 2 stools, after that 2 vomits; after that 3 stools and one vomit. At last 12 stools, after which the Tumor was altogether removed.

For Pain in the Mother, Fioravanti (1582) used Cantharides and other drugs "put into the Matrix as hye as you can and there let it remain fower and twentie houres without movyng of it for it purgeth divinely. And this is a greate secrete whiche was founde out by me. You shall understand that whosoever woulde knowe the truthe of this disease, it were necessaire for hym to be expert in Philosophie, because it is an operation of naturall thynges, the whiche can not be well understoode without greate knowledge in Naturall Philosophie."

Prolapse of the Womb. It is to be hoped that Dr. Wirtzung (1598) found his remedy as potent as it was disgusting. "Take a stinking Egge from a Brood hen, and dip cotton in it and lay it upon the dependent necke of the Matrix, then will it forthwith be drawne up againe." This is almost on a par with the treatment we have already alluded to.

Stone in the Bladder. "To break the Stone in the Bladder. You must give the powdered Stone whiche is founde in the bellies of ryng Doves. These birdes are so subject to this stone, that if kept
in cages they soon dye, because their meate can not passe through them and that is because the poore birde can not goe and helpe hym selfe with that medicine which Nature hath taught hym. For these al likeilie flie unto the sea side and there finde a certaine kinde of small stone very hard, the whiche stone has vertue to dissolve the stone in the helie of the birde."

"To break the Stone which has grown hard and great. The Powder of a Beare's Tooth, the Ashes of a Calcined Grasshopper, the Kernels of Cherries, the Ashes and the Flesh and the dried Blood of an olde Cocke, the Ashes of an entire Hare, the Ashes of Earthwormes, Sow lice washed in White Wine, the Ashes of Scorpions, etc. These have all been employed in the attempted cure of this disease, according to what is told us in the Enchiridion (1612)".

Falling Sickness. Fioravanti (1582) says that in young children it is due to too much humiditie in the heade and the cure is with dryng thinges which dissolveth the humiditie," His treatment is to apply "ous Corotte Magistral along with Cantharides to the Nuke of the Necke and there let it lye at the least 8 or 10 daies."

In the Enchiridion (1612) many remedies for this disease are given. One is to open the skull with a trepan, so that the vapours and the matters from whence they doe ascend may be avoided and consumed.

Wirtzung (1598) recommends amongst a host of other remedies the water of Cow dung given in half ounce doses.

"The fish that is called Mustella fluviatilis hath two small bones lying upon the braines, which are to be dried and powdered
and given to the child. These are marvellous good but they must be taken out of an unsodden fish. "...... "There is also to be a great noyse to be made about the patient, to open his eyes, and hold great light before them.

Dr. Sermon (1673) prescribed remedies far worse than than the very abhorrent one employed by Celsus. He said that some patients had received benefit from drinking the hot blood of a slain gladiator. Sermon however advises that one may give the After-birth of a sound Woman, dried and made into fine powder; one scruple given at a time in Black Cherry Water is a perfect remedy. " Or give the Child in the very fit, all the Gall of a Black sucking Puppy (being choaked ) in the distilled water of Tile-flowers; but for a Girl, take the Gall of a Bitch Whelp." Another prescription is , "Take young Swallows, burn them with their feathers altogether in a new earthen pot covered closely; then add as much Castor and beat all well together, then add sour vinegar; let it stand three days, then distill in a Glass according to Art." He also employed the Powder of Sympathy to "cure this disease."

Apoplexy. " It is said to be impossible to cure, therefore I wish always that the Gouvernment and cure thereof might be committed to Priests and Divines. " ( Enchiridion 1612) 33

Lethargy. Arnold of Villanova(1320) in his Breviarum Practicae states that to cure this condition the following might be employed. A soldier suffered from lethargy, a pig was hanged to the head of the bed; the perpetual clamour of the beast so terrified him that
he could not sleep. Another remedy which he advises was to shave the patient's head and anoint it with honey. "The flies so infested him that he had to keep continually striking them off and so was cured."

Angina or the Squinacie. "A little piece of flesh may be tyed w
with a thread and given to be swallowed downe and presently
drawne backe againe, and so may a piece of Sponge he used." (1612)

Worms. Fioravanti (1582) writes, "Thou shalt understand that I
have a greate secrete againste the Wormes, more safe than any.
You shall anoynt all the bodie with our Balm Artificiall and give
the patient thereof to drinke one drage. Though the childe have
no wormes, yet this Medicine will doe hym greate goode."

Pestilence. Dr. Droet (1580) preferred two things most which
withstood the pestilential air. One was a "basyll nut" emptied
and filled with quicksilver and hung about the neck; "it preser-
veth a man wonderfully from the Pestilence."

Another was Arsenic beat into an egg and applied to the region
of the heart;" Surely in this one Point God wonderfullie declar-
eth his providence when he teacheth us to applye strong and dead-
yle poysons unto our Commoditie. " He advocates also the Cyle of
Scorpions or an Ointment of Laserpitium, the fat of venomous ser-
pents and vitriol, and many other remesies.

Ague. Alexander of Tralles, (Trallianus, c.500) affirmed that a
living beetle hung about the neck in a piece of linen tinted
with saffron was a sure experiment. Others however recommended
that the Worms found in the thistle called Labrum Veneris should be hung about the neck.

The Black Jaundice or Melancholia. "This is known chiefly by this, that they have always dry, withered and black bodies" according to Dr. Cary (1583). "It is hard to cure for it is a stubborn disease. Ceterack, ask, roots of the White Vine and parsley boiled in clarified whey ought to be given. Oil of Wormwood or oil of Bryony should be applied over the Girdlesteed where the Spleen lieth."

Haemorrhoids. Dr. Vicary (1661) recommends an onion roasted and applied to the fundament, or 12 snails without their shells bruised or as many Wood lice as you can get, bruise them with oil and apply.

Hydrophobia. Celsius advocated rather a drastic treatment. If the patient dreaded water and yet was thirsty, the remedy consisted in throwing him unawares into a pond. If he could swim, he should be allowed to drink in the water as he sinks, and to be elevated alternately. If he could swim, he should be repeatedly kept under water so that he may be compelled to drink, for this is the way to remove the thirst and the Hydrophobia. To obviate the risk of convulsions, he is to be taken from the pond and placed in a bath of hot oil.

From what we have already seen, the ancient practitioners do not appear to have improved on this method except in the way of increasing the cruelty.

For the Running of the Reins. "Take the pith of an Ox that
goeth down the back, a pint of Red Wine, and strain them together through a cloth, then boil them with cinnamon, nutmeg, mace and ambergris." (Rare and Select Secretes 1664)

To Stop the Bleeding of a Wound. "Take a Hound's turd and lay it on a hot coal and bind it to the wound, or else bruise a long W worm and make powder of it, or take the Ear of a Hare and make powder thereof and cast that on the Wound." (ibid)

Rheumatism. Our Englishman, Gilbertus (c.1250) said that he cured rheumatism by taking a puppy dog 30 days old and killing it. The painful part was anointed with its blood. Then the body of the puppy was boiled and a mixture made of it.

Preparation for Treatment. Dr. William Turner speaking of the Waters of Bath. (Vicary 1651) says, "If God have smitten you with any Disease, before you goe to any Bath for the healing of it, call to your remembrance how often and wherein you have displeased God and if any of your Sinnes come to your remembrance, exercise the same no more, but be heartilie sorie for it and desire of God for-giveness for it."
Dietetics.

Many of us are apt to think that the study of dietetics is a comparatively recent one. This is far from being the case. The character of individual articles of food and the care in selecting them to form suitable meals seems to have been dear to the older practitioners. In former times there was less—very much less—to distract the passions and emotions or to occupy the intellectual powers of the people. As a result much greater attention was paid to such sensuous delights as eating, drinking, hunting, wrestling, etc. Meals were often Gargantuan in character and prolonged for hours, the partakers finding cessation by falling asleep under or alongside the table.

Over-eating seems therefore to have been a not-uncommon ailment which required treatment from medical practitioners. The appetites of our forefathers seem to have been immense if we are to judge from ancient Cookery Books or Domestic Account Books which have come down to us. The quantities of food prepared and consumed appear enormous when compared to our present banquets.

Even in the time of Charles Dickens and Wm. M. Thackery the "spreads" must have been very lavish and one is not shocked to find that cases of apoplexy were a not unusual sequel to the feast.

Nearly all the old medical authorities devoted whole chapters of their books to the treatment of those who had "over-eaten" or had a "surfet". On the other hand the Greeks and Romans were as a rule very abstemious. It was only on the occasion of great festivals that they indulged in great banquets, and even then the
food was much finer in quality than it was in quantity. Celsus
gave the advice that one good solid meal was sufficient for anyone
in winter. In Spring one required little food, but in Summer the body
found it necessary to take food and drink more frequently. Autumn
was a dangerous time because of the risk of chills, hence one had
to partake of a richer diet, of a richer diet. Celsus very wisely
remarks that there is not anything more useful than well-timed
abstinence.

Sir Thomas Elyot (1534) comments on the continual: "gourmandise
in this realm, the spirit of gluttony.... drivyng us afore hym
as his prisoners into his dungeon of surfet, where we are tormented
with catarres, fevers, gouttes, frettyng of the guttes and finally
cruelly put to death by them."

William Bullein (1558) has a long poem describing the evil
effects of "banketyng".

"The abundance of wine, and lust of meate
Feastyng in the day and riot in the night
Inflameth the body with unnaturall heate
Corrupteth the bloud, and abateth the sight."

Digby (1664) gives several prescriptions or receipts for this dis-
gusting habit. One of these is that the sufferer should drink a
large draught of claret, and another recommends Aurum potabile as a
good remedy. Again, "Take the bottome of a wheate loaf, and rest it
at the fire till it is very brown and hard, and then take a good
quantity of Aqua vitae and put upon the same and put it in a single
linen cloath and lay it at the brest of the patient and with the
helpes of God, he shall recover and he shall vomit and purge soon
after". ("choice Manual or Rare and Select Secrets.")
Cary (1583) devotes a whole chapter to the cure of those who have had a surfeit.

Thomas Moffett (1605) tells us that his mother died after a surfeit of pigs' flesh.

Though these old writers deal largely with "meates and drinkke" they seem to have appreciated little or nothing as regards the digestibility or food-values of these.

One of the earliest writers on this subject was Aldebarandino (1234) who devotes the largest part of his work to the selection of food, the best ways of preparing it and the varieties to be used.

In the "Regimen Sanitatis" (c.1076) we find;

"Good dyet is a perfect way of curing
And worthy much regard."

Elyot (1534) wisely remarks that food which is relished, even though it be not so easily digested by the patient is to be preferred to meats which are less easily digested.

Culpepper (1652) says "If then your bodies be kept clear from corruption by a temperate Diet, there is nothing for the Disease to work upon....... A sober Diet makes men die without pain and mitigates the Violence of Passions and Affections. It also preserves the Memory and helps the Understanding."

Elyot devotes much space to "Meates and Drinkes makyng good Juyce", to those which "ingendre fleume " and to those "which doe hurt the teeth", and so on. "In a cholerike stomache bief is better dygested than a chickens leg".

His second book deals with the quantity which should be eaten. He says that Galen commends pork most highly of all meats, and says
that "the stones and udders both doe increase the sede of generacion.

"The lunges of beasts are more easy to dygeste than the lyver and
lesse nourysheth. All be it the lunges of a foxe is medicinable for
them that have sycknesse of the lunges"

Celsus had said much the same many centuries before. He states
that pork is the lightest or most easily digested of meats, while
beef is the strongest or least easily digested. The larger the wild
animal, the stronger is its meat; the flesh of unweaned animals fur-
nishes little nourishment; fat foods are more nourishing than lean;
newly-killed than stale; stewed than roasted than and roasted than
boiled.

Bullein (1558) also says in speaking of the goodness of Pork.
"Thus I doe ende of Swine, whiche in their Lives be moste vile,
noisome, and never goode untill thei die."

Gratarolus (1550) in treating of the foods most suitable for
different diseases, says that in Melancholy or for the Choleric,
"We ought to prefer that whiche is slippey and moyst before that
whiche is stipticke and harde." He advocates the free use of wine
as an invigorator both of the body and spirit. " He subscribes to
the belief which endured for so long and was with so much diffi-
culty put a stop to, that the flesh of animals exercised or chased
furnished a better article of diet. This idea gave rise to the
barbarous sport of baiting bulls and bears with dogs.

He goes on to say that "Whereas there be many sortes of Milke,
of all others Womans Milke is the excellentest, because it is very
good and beneficial to man's brayne, for it is thought to increase it merveylouslie, and preserveth agaynst consumption.

The juice of Colewartes is cleane contrarie to Wyne. For this cause the Germanes use often to eate cabages and Colewartes at their meat, thereby to avoyde the harme that commeth by excessive bibbyme of Wyne."

Bullein\(^7\) (1558) criyts out against the excessive drinking of wine, saying that it is "A poyse moste venemosus.... It maketh men lyke unto monsters with countenance like unto burnynge coles, and generally killeth as manie as be slain in cruell batailles, the more it is to be lamented".

Elyot had said on the other hand that God had ordained wine as a remedy against the infirmities of age, so that they would seem to return to youth and forget heaviness.

Moffett\(^2\) (1605) states that the older Ox beef is "the worse it is, engendering Quartane agues, leprisies, scabs, cankers, dropsies, etc. The flesh of an old he-goat is tough, hard and unpleasant. His flesh is not to be eaten till he hath been baited like a Bull, to death, and when he is dead you must beat the flesh in the skin.... An old she-goat rather provokes to venery and sharpness of seed than nourishing the body." He goes on to say some remarkable things in regard to cows and human milk.

Bullein has much to say regarding the value of certain meates, as for example, "The tripes and guttes of swyne be holesomer and doth nourish better than any other beasts guttes.... Gravises and crabbes be very good fisshes, the meate of them doth helpe the lunges, but thei be hurtful for the bladder, yet thei will engender seeda."
He tries to explain the relation between complexions and food, remarking "for they that be colde, must have hotte meate and medicines; and they that bee drie, must have moiste thinges. But they that be hotte, must have colde things, for the ardant heate of the fier is quenched with the moistnes of ye water."

Archer (1673) asserts that the Heart of animals when used as food corroborates the Heart by sympathy. (I wonder if this is the real explanation of the good results obtained by some recent investigators who employed cardiac muscle in the treatment of heart disease.) He goes on to say that Lobsters, Oysters, Crabs, Scallops irritate the Belly, but cleanse the Ureters, stimulate Venus and easily generate obstructions and nourish but little.

Slaughtering of Animals. Our forefathers seem to have had little mercy in the method they employed in killing animals for food. Thus Chamberlen says that the best way to kill a pig, was to thrust a knife into his flanks and let him run until he fall down. Another method was to thrust a hot iron into his side.

The ox was baited with dogs in order to make his flesh tender, and fish were choked with a nutmeg or drowned in wine or vinegar. Speaking of the manner in which meat may be made tender, Moffett says that "Patrocles affirmed that if a lion were showed to a strong bull 3 or 4 hours before he was killed, his flesh would be as tender as that of a steer, fear dissolving his hardest parts and making his very heart to become pulpy. . . . . . . . Let us give God thanks for storing us with flesh above all other nations, making our Shambles the wonder of Europe, yea verily rather of
the whole world."

According to Charas (1670) the flesh of Vipers is good and nourishing and so are the bones, but, he says, it is better to crush the latter before eating them. The flesh also helps digestion and prolongs life by making a man young again.... Vipers have a renewing virtue capable of making people young. They clear and strengthen the Eyes and this is probably due to their lively and dazzling aspect...... They are good to cure the itch, Titters, Erysipelas, Measles, Small pox, Leprosy. They beautify the body, thus many ladies in Italy use them in their ordinary food..... The Volatile Salt distilled from their bodies cures bites made from themselves."

Ramesay (1661) has not much good to say regarding mushrooms. I fear much that he confounds fungi in general with the true mushroom. His description bears this out, for he says "they are nothing else but a bundle of cold, moist and viscous vapours and matter of the Earth or Trees on which they grow...... They are very apt to attract and suck in all manner of poisons from Toades, Spiders and other noxious Creatures that do, or may converse about them. Whence those that eat them are as it were Suffocated, strangled or choke, filling their Bellies with Wind, causing the Hiccop, and sometimes Madnesse and Death."

Leeks. Chamberlen gives a quaint reason for the fruitfulness of the Welsh people. He asserts that leeks engender much seed, and as the Welsh are very fond of them, the explanation is obvious.

Nutritive Enemata. The use of these dates back to 1612 when Herophilus advocated their employment. He states that the clyster
may be carried up as far as the stomach, from which the mezeraicall
veines doe draw nourishment."

Boyle Godfrey (1735) upsets almost all our ideas of diet
and dietetics and gives us an insight as to the queer articles
which people ate at that time.
The science of Midwifery seems to have been very late in developing. Even as late as Culpepper's time (1616-54) the ideas relating to pregnancy and parturition were most primitive, as for example, the tests for early pregnancy. The antenatal care of the expectant mother would make our present welfare workers aghast, such as the wearing of amulets, the application of strengtheners to the navel, and so on. The development of the child in utero was not in the least understood.

It seems remarkable that a well-educated man like Culpepper should have believed in such nonsense as he describes, e.g. the detection of a male or a female pregnancy. "you may also strengthen the child at the navel; you may likewise use amulets in her hands and about her neck, and if there be a cacochimy, alter the humours." The fabulous stone Aetitis was credited with miraculous powers, and Culpepper says that "The stone Aetitis held to the privities is of extraordinary virtues and does instantly draw away both child and after-birth, but great care must be taken to remove it presently or it will draw forth the Womb and all for such is the magnetick virtue of this stone, that both child and womb follow it as readily as iron doth the Load stone or as the Loadstone doth the North Star."

To repress the Sexual passion, Gratarolus (1574) advocates the study of Moral Philosophy and of the Scriptures, banishing idleness and forbearing the company of beautiful and amorous women. If a
man use the seed of Agnos Castus he will experience a marvellous effect in repressing his fleshly concupiscence.

To Detect Pregnancy must have been an easy matter formerly if we are to believe what Dr. James Cooke says. (1647). You had only to examine her urine so as to know a breeding woman from one not. For those with child, the sediment is like carded wool and there are little particles much less than a pea and more white than ordinary sediment, but then the woman must be well."

Conception. To favour conception, if Sage be taken both by husband and wife "without a doubt conception followeth." "After a Plague in Egypt, some cities were left almost without inhabitants. They compelled the young women to drink the juice of Sage. Through the virtue of this they conceived with children, having the helpe of men also." (Bullein 1580) This brings to mind the high opinion in which this plant was held by the Salernian School.

Celsus had said long before that if a woman will not conceive she should use Lion's fat softened with oil of Roses.

Leeks, according to Dr. Moffett (1605) engender much blood and seed.... hearing and seeing so much fruitfulness in Wales, that few or none be found barren, and many fruitful before their time, while long use of Lettice causeth barrenness.

Delivery. Many writers assert that the liver of a Viper helped greatly in the delivery of a woman.

"To make a woman have a quicke Birth. The leaves of Dictarius given in a little water to a woman that laboureth, She shall be
delivered incontinent without any great paine or griefe."

Chamberlen (1665) gives several prescriptions to ease delivery, as "a Snake's Skin tied about the thigh or girt about the hedde, I think it no matter where, is good. An Ass's or Horse's Hoof hung about the patient or Bayberries applied to the Navell, as also Myrrh, Castor or Storax are all good. Sliced pippins fried in Oyl of Sweet Almonds eaten in the morning and at 4 in the afternoon constantly for 5 or 6 weeks at the same time anointing the belly with the same oyl is effectual....... If the labour be still delayed use Suffumigation of myrrh, galbanum, castoreum beaten with bull's gall and put on hot coal, and let the woman receive the fume thereof underneath."

We have already seen that Vicary had an implicit faith in the stone Aetitis in hastening delivery. Primrose (1651) on the other hand says that he has tried it without effect.

Malpresentations. If Dr. Wirtzung found a hand or a foot of the child presenting outside the vulva, he never thought of interfering manually. He took pennyroyal, bugwort and brown betony, and having bruised them and boiled them in milk, he laid the concoction under the woman, before the vulva as warm as she could bear and about the member of the child, and "this draweth away the swelling of the neck of the Uterus which causeth the faulty presentation." Again, boiling water might be placed under the protruding part; "When the childe feeleth the warmtn, then doth it draw the member back againe."
After-pains to cure. "To bring away the After-burthen, or many Foulness or a Dead Child and to Cure the After-Throws and Griping, after a Woman is delivered. Take the inner skins (that are wrinkled) of Gizards of Hens that are laying of Eggs: wipe them clean and lay them to dry. When you have need to use them, heat them to subtle powder, of which give one dram for a dose in a little White Wine."

(digby. 1668)

"If the After-birth doth not come away after the Child, put the Viper's skin upon the thigh of the woman, and it will come away within a short time after." (ibid)

Chamberlen advises that "If great dolour and pain doe follow the birth, boyle Rosemary, Camomile flowers and Southerwood and apply them hot to the belly, or bind upon the belly the Skin of a Lamb or a Ram taken fresh and hot off the Lamb or Ram. A Plaister of Onions may be applied to the Belly along with Aniseed and camomile taken inwardly to dispel the Wind."

"As brutes eat the placenta and Membranes, the dried powder of secundines may be given to cure the after-pains".

Flooding. The treatment of this must have been very unsatisfactory if we are to judge by that recommended by Chamberlen as late as 1665. Thus he recommends vegetable mixtures or powders, or anointing the privy members with oils to which amber, musk or civet have been added. Suffumigations of aromatics may be given. The woman may be made to smell burnt feathers, Garlick, etc. Pessaries may be introduced and plaisters applied to the belly. If the secundines cannot be withdrawn with the operation of the hands and nails, Suppuratives must be injected into the Womb, and so on. (q.v.)
Puerperium. Chamberlen advised that after delivery, the woman should be swathed "in the skin of a Sheep flayed alive and put it about her reins hot; and take the Skin of a Hare flead alive and then cut the Hares throat and rub the skin with the blood and apply it as hot as may be to her belly."

Abortion. Boorde (1557) after narrating the causes of abortion, says that he dare not speak of others, "lest any light woman should have knowledge by the which wilfull abhorsion may come of the multitudinesse of the flowers of a woman."

Chamberlen describes "A comforting powder to prevent abortion" which contains Shells of Crevis dryed, amber, burnt ivory, prepared pearles mace, shavings of a Stag's pizzle, etc. Numerous prescriptions for plaisters to be applied to the pubic region are given.

Premature birth." Children born at the 8th Month cannot live (though they can at the 7th.) because in the seventh month the infant stirres itself to come forth, and if it have so much strength it performs its desire, but if not, it changes its position to another part of the Womb, by which it is so weakened that if it should be born at the 8th month, it cannot live." (ibid.)

Jacob of Forli (died 1414) said that no child born at the 8th month could live, "by reason that Saturn rules the uterus in this month, and as is well known he eats up children.

Prolapse of the Womb. Zacutus cured it by tying a Mouse to the thigh of the Woman unknown, and so by the fright, the Womb went up.
Roder, by making as if he would have applied a hot iron to it, which prevailed. Backet tells us that five or six smart blows on the bare buttocks with a strong hand, may reduce it; it being first anointed cum Ol.Ros. Yet I fear not so sure, as it may cause smart sorrow or laughter in by-standers."

Diseases of the Mother. Phaire (1553) treated these by taking "the rasings of Ivory and the rasings of an hartes horne with the hart of a hare, dried and made in poudre, and as much of goaites clawes brent and poudred. Take all these and use to eate them in your porage, or other wise to stop the fluxes of the Matruc."

To Cause the Expulsion of a Dead Child. According to Culpepper (1651) this is best accomplished by giving the mother the milk of the first litter of a bitch.
Sterility. The reasons given by the ancients for what they called "barrenness" are often fantastic. Thus we find it stated that in man the condition is often due to the veins behind the ears having been cut. The seed flows from the brain to the testicles through these veins and so when these vessels have been divided barrenness results.

Chamberlen (1665) says that this condition of sterility may be due to "Not Distempers in the Womb which hinder conception, not nourishing the mans seed, but dispersing it; so that the seed is like corn sowed upon scorching sand, which dieth and withereth away" Again "Moisture in the Womb causeth barrenness, drowning as it were the seed, like corn sowed in a quagmire."

Sterility may be diagnosed according to Wirtzung (1598) in various ways. Here is one of his methods: - Take five corss of wheat, seven barley grains and seven beans. Put them into an earthen pot along with the Urine of the person making the trial. Let it stand for seven days. If the grains begin to sprout, then the person is fruitful. - Another test is to beat Garlic, and lay the woman on her back on it. If she feel the smell in her nose, this is a token of fruitfulnes. I fear that this would give a "positive reaction" in every case now-a-days.

Many of the drugs and substances employed by our ancestors to increase virility or to cure barrenness are analogous to those used in present-day opotherapy. Who knows but that the former were as efficacious as our present preparations?

For Impotency, Boorde (1557) recommends an Aromatic Elec-
tuary or a Confection made of the Stones of a Fox, and in another place he advises the use of "nettles in the Cod-piece about the yerde and stones."

"Let barren women use to eate in powder the Martixe of an Hare or drinke the powder of the stones of a Bore with wine, and let her keepe an order in her meates and drinkes and use no venerious actes after a full stomake." (ibid)

Wirtzung gives several prescriptions to cure Sterility. One confection may be taken by both sexes and from the use of which greate wonders have been seen than from any other. It contains about forty ingredients including testicles, penes and braines of various animals together with an endless variety of vegetable substances.

Vicary (1651) has a paragraph, "To make a barren woman beare Children. Take of these little Sea Fishes called in Latine Pollipoes and roost them upon the coales with oyle, and let the woman eate of them, and it shall profit and helpe very much, having in the meane time the company of a man."

To provoke Venery, Moffett (1605) says that "nothing is more avaleable to engender lust than the eating of certain fishes and sea plants which I had rather in this lascivious age to conceal from posterity than to specify them unto my Countrymen."
The classic writers evidently knew a great deal about surgery. Fractures were treated in a very skilled manner. They had observed that partly divided vessels continued to bleed, and that in order to stop the haemorrhage it was necessary to divide them completely or to ligature them.

Was the following not true until a very short time ago?

"If the Small Intestine be wounded, the case is irremediable. The large Intestine may be sewed not that we may confidently expect a cure; but because a doubtful hope is preferable to certain despair. If either kind of intestine be livid, or pale or black, and consequently devoid of sensation, all treatment is unavailing. If part is natural in appearance, then treatment must be immediate. The patient laid on his back, hips elevated. If the wound be too small to allow of the ready return of the intestine, an incision must be made to widen it. If part be dry, it should be washed with water to which oil has been added. Then while the assistant draws the wound open with his hands or with hooks, the physician reduces it. After reduction, the patient must be shaken gently so as to settle the intestines in their place. This done the omentum must be examined; if any part be black or mortified, it must be cut off with the scissors. The peritoneum is then to be stitched and then the integument." (Hippocrates)

In fact the whole subject of surgery is excellently treated. The operations for scrotal hernia, retention of urine, vesical calculus, are quite up to the standard of a few years ago.
What a falling off do we find as the centuries pass!

Bishop Theodoric, Surgeon to Pope Innocent IV gave this cure for the extraction of arrows. "To extract arrows, repeat three Paternosters and say 'Nicodemus drew out the nails from the hands and feet of our Lord' taking the arrow between the joined hands. It will come out at once." (1250.)

One might almost say that the practice of surgery was non-existent during the middle ages and with a very few brilliant exceptions, it was left in the hands of quacks.

Peter Lowe (1590) was one of these exceptions. Treating of Hernia, he says, "after the patient's hands and legs have been bound, an incision is made and the testicle drawn out, ligatured with a waxed thread and cut off. Care must be taken not to include intestine in the knot; if this should happen the secke voydeth the excrementes by the mouth and so dyeth. I am of opinion with the learned not to attempt this operation, but rather to use a trusse."

The distressing conditions under which surgical procedures had to be carried through is indicated by the following extract from Dr. James Cooke's work (1647). "The Chirurgeon ought to be young, or middle aged. Of Hands strong and steddy; and useful with both. Sight sharp, quick and clear. So Pittiless, as not by clamor, either to over-hasten or forbear his work more than necessity requires in the Cure under hand. The Assistants are not to be displeasing or troublesome to the Patient, but attentive and ready to perform the Chirurgion's commands and withal silent."

Dislocation of the Shoulder inwards. "I have oft reduced
reduced this by first fixing a Clew of Yarn in the Arm-pit, after laid the Arm over a high door, one holding it and the Arm close to the door on the one side; the Party standing on a Stool on the other side, which being suddenly and unawares cast away, the Bone doth slip in."

Dr. Vicary (1651) repeats much the same as to the requirements necessary to a Surgeon. "He should be chosen by his Complexion, and that this be very temperate, and all his members well proportioned...... He must also be a good Liver, and a Keeper of the Holy Commandements of God...... and that his Body be not quaking, and his Hands steadfast, his fingers long and small and not trembling; and that his left hand be as ready as his right, with all his limnesable to fulfill the good workes of the Soule."

For Torn Bladders. "Place a little bag containing some powder of Toads calcined so that the bag lay always upon the pit of the Stomach near the Skin." (Digby 1668)

Antiseptics. This is the name given to substances which hinder the growth of germs, but many of the simpler antiseptics have been used in the treatment of wounds from the earliest times. Hippocrates gives directions for the treatment of ulcers, compound fractures, etc by agents which we might now call 'antiseptics'.

Prosthesis. Our older surgeons did not confine their attentions merely to the repair of wounds, but ventured on the repair of deficiencies. In connection with the making of a new Nose from the tissues of another person, Dr. Cooke warns one to be sure that the donor be longer-lived than the noseless person, "lest they lose what they have got before they dye."
Then there was the most fantastic of all surgical procedures, the use of the Powder of Sympathy for the cure of wounds. No doubt it had existed before the time of Paracelsus, but he was the one who popularised it (1526). Then Dr. Nathaniel Highmore (1642) wrote a "Discourse of the Cure of Wounds by Sympathy", and Sir Kenelm Digby (1658) still further advocated this method. The Magnetic Cure of Wounds was but a variant of the Cure by Sympathy.
Insanity.

We know little as to how lunatics were treated before the Christian era, but in the New Testament we read that a madman lived among the tombs because no man could hold him for he broke the chains and fetters with which he was bound. This gives a denial to the statement which is often made, that it was the advent of Christianity which led to the cruel treatment of lunatics. They must have been cruelly treated before this. Of course when madness was believed to be due to the presence of an indwelling devil, the reason for the stripes and other punishments appears obvious. Would it not be possible by the infliction of physical pain to drive the devil out from the tortured body? No punishment could be too severe to give to an evil spirit.

Whatever be the explanation, the fact remains, the insane during countless centuries had been cruelly and mercilessly tortured, as if the madness in itself were not a sufficient punishment. Did not Cicero ask,

"A diea quidem immortalibus quae potest homini major esse poena, furore atque dementia?"

Surely it was better to leave the insane to their own devices than to confine them in vaults, to chain them to the floor or put them in cages. As the centuries passed so did the tortures inflicted on the mentally afflicted increase in severity. A hundred times better would it have been to have put them to death at once. Their condition during the middle ages must have been indeed deplorable. It moved to compassion the heart of Saint Vincent de Paul to such an extent that he became known as "the liberator".
not only of the galley-slaves but of the insane also. Instead of the latter being confined in prisons, he obtained permission to have them committed to the monasteries. This was about 1617. Unfortunately the unhappy lot of the insane was not greatly improved. Could anything be more at variance than to detain devils in the abodes of the godly? The punishments of the insane continued and it became a routine practice in some monasteries to administer a certain number of stripes to each madman every day with the hope of ultimately driving out the unclean spirit.

The vast majority of the insane were however still kept in prisons, and later in workhouses and poorhouses, and generally under the most appalling conditions. Pinel began his great humanitarian work in 1792 by liberating the miserable creatures from their chains in the Bicêtre in Paris, but it took more than a generation before this beneficent work spread to this and to other countries. Up to 1820 in many instances the miserable creatures were confined in cages, and charges were made to view them as ferocious animals, often made to appear so by starvation, and only feeding them when they were "on view".

To be insane was considered a disgrace not only to the sufferer, but to his whole family. Some dreadful sin must have been committed in order to have drawn down such a punishment. Hence the necessity for concealment of the object on whom the wrath of God had fallen. They were immured therefore in any institution which would take them and handed over to the tenderless mercies of often dissolute attendants. Even if money was paid for their maintenance, the most of it went to other purposes and only a small
sum was expended on the insane inmate. Those who were kept by charity were in a still worse condition, more than half-starved, with hardly any clothing, or even with none, they wandered about the prison or poorhouse, objects of mockery and derision. If indeed there were any beds, the number was totally inadequate and so two, three or four might occupy a single bed. In most cases the bare floor, perhaps covered with a minimum of damp straw had to suffice them. Those who were considered dangerous were barbarously chained down to the floor, to an iron rod or to a bedpost. Many a harmless individual against whom the keeper might have a grudge were so chained and manacled.

It is even stated that perfectly sane people were confined through malice or revenge, and detained there for years; what event would be more likely than that they would become insane, for "Furor fit laesa saepius patientia."

Asylums for the detention of the insane are quite recent institutions. Previous to 1828 there were only twelve counties in the whole of England which had one each. In 1815 there were twelve cells in the Royal Infirmary of Edinburgh set apart for lunatics. There was no classification of the inmates, every variety was herded together, thus sleep was impossible to many by reason of the noise and shoutings which the more active gave vent to.

What treatment was given to the insane had been better withheld. Flagellation was prescribed as a remedial measure, as well as given gratuitously by the keepers. Cullen himself (1777- prescribed so many lashes as a form of treatment. "Surprise Baths" were supposed to act beneficially in active delirium. In these the poor patient was suddenly and unexpectedly plunged into a cold bath and kept there until his struggles ceased and these
only too often only ended with his death. Another form of treatment given to unruly patients was to tie them into chairs which were so mounted that they could be rotated with great velocity. It certainly cured them for the time being, as when released they were in a condition of syncope or coma. In many institutions 'bleeding' was practised periodically twice or three times a year, but in other cases it was employed to quiten any troublesome patient and then blood was allowed to flow until exhaustion supervened. Opiates also were freely used to "soothe" the noisy or over-active patient.

In fact the whole treatment of the insane had not changed (except for the worse) since the time of Celsus. (C. 40 B.C.) This writer said that if the patient was destitute of self-control, punishments were the best form of cure, e.g. starvation, chains, beatings or sudden or violent frights. Excessive sadness on the other hand was best treated by gentle and long-continued frictions twice daily.

Alexis of Piedmont (1559) cured madness by giving four oysters, a certain medicine and an ointment which had to be rubbed over the whole body daily for a month. Then the patient was to be burned with a hot iron over the seam of the head. He was to be spoken to soberly and wiselie, and for this purpose the authority of some fair woman availed much. For the cure of the Phrensie" it is good to shave the head, and to laie upon the same of the croune of the head, quick pigeons, having first left them in the backe and drawn out the entrails; leaving them so upon his head until they waxe colde; or else little whelps of a moneth old, ...
their garbish pluckt out."

"In affectes of the Mynde"? Elyot (1534) says "patients not on
only require the helpe of physicke corporale, but also the coun-
sayle of a man wise and well lerned in moral philosophy."

Is this a forecast of psychotherapy?

Regarding the treatment, Wirtzun9 (1898) says that the dwel-
ling of a frantick man must be more cold than warm. His bed and
chamber should be bestrewed with cold herbs as lettuces, purslane,
willow leaves, water lillies and nightshade, and let him smell roses,
violets, flowers and camfere. The "cures" which he advocates as
"certain" for epilepsy, would undoubtedly make the poor sufferer
worse instead of better.

The cause of insanity is not yet well understood, but Ramesay (1663)
tells us that the eating of some of our common vegetables
is fraught with great danger. "The excessive use of garlick,
Onyons, and Leekes engenders many gross, corrupt and malignant
Humours, and incline to sleeping and Madnesse. Nay, Cardan affirms,
that "even the children that are begotten by such as use to feed
frequently on onyons are much inclined, and prone to madnesse."
Veinection or Cupping.

From the earliest times and amongst all races the practice of bleeding has prevailed. The reasons are various; in early times and with primitive peoples it is performed with the idea of getting rid of the evil spirits which were vexing the body. In a condition of plethora, the escape of blood would give an immediate benefit, and the expulsion of the devil would be obvious not only to the patient but to the observers as well. Again, it might be done as a remedial measure in disease. Primitive man is prone to over-indulging in food when the occasion presents, and bleeding gives an immediate relief to the engorged system. Be the reasons what they may, the practice has been, and still is, almost universal.

Very much the same methods have been employed; a common one was to apply the wide end of a buffalo's horn to the scarified spot and then to apply suction to the pointed end (the extremity of which had been cut off) by the mouth of an attendant. An empty gourd, into which a burning stick had been introduced in order to rarefy the air might be applied instead. Amongst the Romans and Greeks a bronze or copper cup was used. In ancient Egypt, cupping glasses were used and are still found in the ancient graves.

In the ancient Vedic religious books of India careful rules are set out as to the proper veins which should be opened,

The Chinese have practised Acupuncture from the earliest times.

Hippocrates practised venesection close to the seat of the disease. Later, this came to be known as "revulsion."
Even at this time there must have been opposition to the practice, because Celsus replies to the objections of the older practitioners. He explains how it ought to be done and the occasions when it is advisable. The only contra-indication is when there is excessive weakness. He employed cupping both wet and dry. "A doubtful remedy is better than none" he says when speaking of those diseases in which it may be difficult to decide as to whether to do it or no.

Galen practised venesection for the removal of humours, and he bled the patient at a distance from the disease. ("derivation.") If however it was for the purpose of removing stagnated blood, he bled close to the diseased part. ("revulsion.")

Alexander of Tralles (550) said that if one drew blood at any site, the effect was felt all over the body.

Avicenna (c.1000) and other of the Arabian scholars said that it ought to be practised on the sound side and slowly drop by drop, so that slow but lasting effects would follow.

The Venerable Bede (c.700) was of the opinion that the best days for bleeding, purging and drugging were when the moon and the tides were at the full.

In the Regimen Sanitatis of Salernum it is said,

"To bleed doth cheere the pensive and remove
The raging furies bred by burning love."

A great outcry again arose in the sixteenth century against bleeding and as to the proper site for the operation.

Brissot (1525) was the prime mover of the school which believed in bleeding by revulsion. The other school followed the
teaching of the Arabians. The Royal College of Physicians of London adhered to the latter in believing in "diversion."

Elyot (1534) speaking of "Scarifying, called boxyng or cuppyng" remarks that "it should not be done often tymes in the yere, because muche of the vitall spirite passeth forth into the bloud. Therefore the bare partes of the body, as the legges, should be scaryfied."

Bullein (1558) gives much counsel as to how, where, when and on whom the operation should be done. Here is a specimen of his advice. "The doctor then tells the Surgion to prepare lace, staffe, and launce with your unce vessells that I may consider his bloud in order and due quamtitie, further he had no fitte this ten houres. Let him bloud by little and little and although he doe fall into lipothimion it is no matter. Oh lorde how might you live if this bloud should have remained any longer. The worste is paste, this would have been a greate sore or Apostumation; Stop up the vein in Gods name."

"I have cured many amongst them a noble man, he is a goode firi friend of myne, I have twentye pounds yeraly of hym. He sente mee a fatte Bucke upon Mondaie last, and gave me my Mule also, with a velvet foote clothe. He is well learned; he hath read the Apocalips."

Botallus (1583) in his "Curatione per sanguinis missionem," says that the operation restores youthfulness to old men. If ever bleeding kills, it is not from its excess, but because blood is not
drawn off in sufficient amount or at a proper time. A 100,000 men perish for want of bleeding, or from its being used out of time to one who perishes from too much bleeding.

Fioravanti (1583) speaking of the cure of Sciatica says, "let him bloud under the tongue, the whiche is suche a singular remedie, that it causeth the worlde to wonder thereat."

Dr. Peter Lowe (1590) states that there are 41 veins which were usually opened, 17 in the head, 6 in the arms, 6 in the hands, 4 in the fundament and 8 in the legs.

In 1598 Augenius published in two huge quarto volumes, "De ratione Curandi per sanguinis missionem" in ten Arguments.

In the same year Wirtzung wrote "that at Harvest time the blood groweth melancholy, and so must the Veine of the Spleene be opened. It is altogether forbidden to open a vein in March, and in January or February only if necessitie constraine. In April it is always convenient, but not the Median vein." He quotes the directions given by Joachimus Camerarius as to what one ought to do after having been bled. "The Spleene vein or Saluatella lies betw between the little and fourth fingers on the outside of both hands."

Dr. Primrose (1638) says that "no regard is to be had of the stars in the letting of blood and of purging." "Some doe advertise that Cupping-glasses be not applyed in the beginning of the moneth, because the humours are not yet swelled up to the height, but rather that they should be applyed at the middle of the moneth. Though it is wise to adhere to those for the prevention of disease, yet in the sick such precautions cannot be observed without
danger, seeing that diseases do not permit such great delays......

The talk of the Astrologers of Blood-letting is but vain and frivolous, for whatsoever the influence of the Moone be, bleeding is never good for a Flegmatick man. It is good only for Cholerick and Sanguine Complexions, let the Moone be in what signe it will."

There was a long discussion at Gottingen in 1756 presided over by the famous Haller, but as is usual with these, little seems to have been arrived at. Haller stated that enormous amounts of blood are lost spontaneously in bleeding from the nose, and he had measured 9, 12, 18 and even 22 lbs. so shed; while 12 lbs might be lost in vomiting and 22 lbs might come from the lungs.

He knew a young woman who had been bled 1020 times in 19 years for a plethoric condition. Yet all of these people who had shed such large amounts of blood recovered.

Dr. Godfrey in 1673 attacked the custom of bleeding in severe terms, asking, How can we ever hope to cure diseases by weakening the body through Phlebotomy. He affirmed that it was as ridiculous as if one should take away the ammunition from the army of an invaded country. Instead of bleeding, he advocated the use of Spiritual, Valiant and Innocent Healers seconded by a Regular Diet.

Benjamin Rush 1794 (Defence of Bloodletting as a Remedy) stated that physicians were rather timid than rash in the use of bleeding. "Sydenham bled infants and children, I have followed his example. I bled my daughter of six weeks old for convulsions, and a son twice before he was two months old for an acute fever. In both life appeared to be preserved by this remedy. It may be used during menstruation, old age or pregnancy."
Guy Patin bled his wife 12 times for a fluxion in the chest; his son 20 times for a continued fever; Himself 7 times for a cold in the head. Another practitioner tells us that he bled a patient 36 times for a fever, and another invalid 64 times for rheumatism. Many operators were in the habit of giving to their patients copious draughts of water at the same time so as to wash out from their system evil humours.

John Hunter probably did more to break the age-long tradition regarding phlebotomy than any one else. He writes "If blood-letting be considered in a mechanical light, as simply lessening the quantity of blood, I cannot account for its effects; because the removal of any natural mechanical power can never remove a cause which neither took its rise from nor is supported by it." (1770)

In 1815 the following advertisement appeared in the London newspapers: "The Queen's Bagnio in Long Acre, is made very convenient for both sexes to sweat and bathe privately every day, and to be cupped in the best perfection, there being the best and newest instruments for that purpose. Price 5 shillings for one single person; but if two or more come together 4 shillings each. There is no entertainment for women after 12 o'clock at night, but all Gentlemen who desire beds may have them at 2 shillings per night."

The practice of blood-letting in spite of many who greatly advocated its benefits gradually fell into disrepute. This was said to be the result of its being practised by "mere hirelings", with the consequence that it was disparaged by the regular practitioners.
A class of men in most cases without any medical or surgical training took up the occupation of venesectors. They must of course have acted on the instructions of the ordinary medical practitioners. The practice of the art thus fell out of the hands of medical attendants, and we can well understand that they in course of time ceased to recommend an operation in which they were not directly interested. At the same time they probably found that their patients progressed as well, if indeed not better, without bleeding than when subjected to it. Thus in a short time the whole institution of bleeding fell into desuetude.

Thus in the course of a few years, what had been an age-long cult ceased to exist. There have been many fashions in medicine; indeed in our own time we have seen drugs, methods of treatment, etc., enjoy a remarkable popularity for a short time and then fall into oblivion, but I do not know of any one which had such a long ancestry and yet came to naught in so short a time. At various times during the long course of its life, venesection had been impugned but its adherents had always been stronger than its opponents, and so it survived. I think that its decease was largely due to the extravagant use made of it. It was practised in season and out of season; it was the be-all and end-all of many practitioners, and in spite of the assertions made to the contrary, it must have killed more than it cured.

Venesection furnishes a striking example of the deterioration of Medicine in the middle and later ages.
Anaesthetics. We know that the ancients employed a number of
drugs for the purpose of dulling pain and inducing sleep, but with
what success we do not know.

Arnold of Villanova (1235-1312) quotes an Experimentum of
Michael Scot to produce sleep so that the patient may be cut and
feel nothing as though he were dead. Take of Opium, mandragora, bar
and henbane root of each, equal parts, pound them and mix them with
water. When you want to cut or sew a man, dip a rag in this and put
it to his forehead and nostrils. He will soon sleep so soundly
that you may do what you will. To wake him, dip the rag in strong
vinegar. The same is excellent in brain fever, for if he do not
sleep, he will die.

Nicolas Praepositus (II40) speaks of inducing sleep by mak-
ing the patient inhale from his "Spongia soporifica". This was a
sponge dipped in a solution of opium, hyoscyamus, mulberry juice,
lettuce, hemlock, mandragora and ivy.

Avicenna had however long ere this recommended various drugs
to induce unconsciousness. Thus he says that wine should be
given to which sweet-smelling moss or lignum aloes has been added.
If a state of deep sleep be desired, damnum water might be given,
or give the patient fumitory, opium, hyoscyamus, nutmeg and aloes.
Or Black Hyoscyamus should be boiled in water with mandragora
until it becomes red; then add this to the wine.

Though stupefying drugs were used to allay pain, their use
cannot have been general in surgery, for we read of directions
as to how to hold the patient during operations, and that strong men be employed for the purpose. In later times we find artists giving us harrowing pictures of the sufferings of the unfortunate beings who were being operated upon.
Humours, Bile and Phlegm.

We must commence with Hippocrates if we wish to know how the above were classified. Successive authors copied these from one book to another until we come down to the "Isagoge" of Joannitius (or Hunain). This appeared in the Rosa Medicinae of John of Gaddesden, and so we find that the Humours are of Four kinds:

I. Blood, which is hot and moist;
II. Phlegm, which is cold and moist;
III. Red Bile, which is hot and dry;
IV. Black Bile, which is cold and dry.

There are five varieties of Phlegm: - salt, sweet, acrid, glasy, etc.

Members are of four kinds. Some are 'principal' (i.e. substance and fundamental-) brain, heart, liver, testicles. Others do service to these, as nerves to the brain; arteries to the heart; veins to the liver, and spermatic vessels to the testicles.

There are three Spirits; Natural, arising from the liver; Vital, arising from the heart; Animal, arising from the brain.

The four ages of Man are:

Adolescence, from 20 to 30 years of age; hot and moist;
The Prime (juventus) 35 to 40; hot and dry;
Decline (Senectus), 50 to 60, cold and dry;
Decay (Senium) above 60, cold and moist.

The Isagogue continues in this strain.
In the Salernian Rules we get a full description of the different Humours of the body, thus:

"The Sanguin gamesome is, and nothing nyce."

"Like fire doth Choller hot and dry appeare." (q.v.)

Galen had pointed out that a bad action of the humours produced 'dyscrasia', while if they acted well together, 'eucrasia' resulted. A predominance of each one of the various humours gave rise to the different temperaments, sanguine, phlegmatic, bilious or melancholic.

Bullein (1558) describes in an poem the four humours which rule the health of man. He says that the blood which is in the pulse is "Thinner, yealower and hotter than the bloude which is in the vaines." Flewne is white, and is engendied in the Stomake and at length by the vertue of naturall heate, fleame is turned into blud.

Even Sydenham (1660) believed in the Hippocratie theory of concoction of the humours of the body and the subsequent discharge of the materies morbi.

Dr. Archer (1673) tells us how to know our own constitutions. His descriptions are vague and unsatisfactory as we might expect; he says that it is of the utmost importance that we should know what our complexion is, for "according to the Humour of the body so are the conditions of the Mind, and also for food, knowing my Temperament to be Hot and Cholerick, I must avoid these things in Meat and Drink that increase it and use things that do allay and cool heat."
Our forefathers did not seem to have any clear or adequate ideas regarding poisoning. In many cases they were too suspicious, mistaking cases of acute inflammation or epidemic diseases for poisoning, whereas in other instances they undoubtedly missed cases of criminal poisoning. Nor do they seem to have had special antidotes in their minds. Many of their preparations contained so many ingredients that surely some of the drugs must have had an antidotal character. Celsus after referring to the Antidote of Mithridates, remarks that the best treatment for poisoning is for the patient to swallow large draughts of oil and to induce vomiting. This is really excellent advice and was not improved upon until chemistry demonstrated the composition of animal, vegetable and mineral poisons, and so indicated to us the appropriate remedies.

It would be possible to write a whole treatise on the history of poisoning and to discuss those professional poisoners in Italy and France who have made a large part of romantic history. I merely desire to show how large a part superstition had had in the middle ages in the belief in poisons.

Naresay (1661) mentions the breath of Cats, the Basilisk, the Dragon, Toads, Salamanders, Arsenic, Mercury, and Lead. He says that in one case, Sage poisoned several people because of a Toad which had lain at its root and had conveyed to the plant its own poison.

"If a man by a malicious look and an envious look may hurt, disturb and discompose the spirits of another, how much more is it possible for a poisonous Creature by his Venemous Aspect to hurt
or kill." His remarks on the mineral poisons, arsenic and mercury are very good and accurate as far as they go. Used as medicines, he says, they are excellent if given by able and knowing physicians, otherwise they are no better than poisons.

He thinks that it is mere fancy to imagine that poisons could be made to act only after a certain time, or that they could be conveyed in clothing, by shaking hands or by infecting spurs, saddles or boots. This shows that he was a man of some acumen, for poisoning by the means he indicates and by gloves was commonly believed in his time.

Here is what he says about the diamond. "Diamond is rank Poison if taken into the Body in Powder, causing Death itself." Even in those days this must have been a very expensive method of removing an enemy. Ramesay remarks that the Walnut and Yew Tree are so deadly that it is very dangerous even to sleep under them or let the shadow of one of them fall on one.

"Of Cat's Poison and its antidotes. Sennertus and others think there is a venomous quality in these Creatures which infects the Aer. I however rather believe it proceeds from some secret Antipathy. If the Braine of these Creatures be eaten it proves assuredly destructive. It makes such to grow mad and rage...... they become Dolts, grow moped and vertiginous. It is the same in eating the Braines of other Animalls, as Sennertus instances those who have been changed into the very habit and disposition of a Bear, by eating the Braines of that Creature...... In the case of a Maid who developed Epilepsy through seeing a Thief's head cut off, and who was advised to take Cat's blood as a remedy. She soon
degenerated into the nature of this creature and by fits would me
leap, scratch and play as cats do, as also in private catch mice
and contract herself so as to pass through holes, that nobody else
could of her bignesse. The very breathing of cats is by many of
the learned said to be extremely dangerous, consuming the radical
moisture of the body, lungs and the whole man, and so fevers, mar-
asmus and consumption of the lungs have resulted from people
taking them into bed with them. This however is certain that by a
all authors they are condemned as very noxious to mankind, in
spite of which, the late William Laud, archbishop of Canterbury was
wont to have cats walk on his table and about his person.

The crocodile is an outlandish creature also and venemous
He has some amusing remarks about the basilisk. (q.v.)

Charas (1670) experimented largely on vipers and wrote a
book about them and upon his "Exquisite Remedies that may be
drawn from vipers. His conclusion is that patients are best treat-
ed by giving them his theriacal which is the volatile salt of
vipers. He gives a detailed account of how to make this.
Education.

The education of the doctor in bye gone days must have been almost entirely derived from books, and even in their days these volumes must have been ancient, as the great part of them had been composed by the Fathers in Medicine. To be accepted as a practitioner one must have read the works of Hippocrates, Galen, Celsus, Oribasius and others of a like kind.

There must have been however some kind of Apprenticeship, else it would have been quite impossible for them to have recognised different diseases from having merely read descriptions of them. Hospitals and Infirmaries were non-existent as we know them until comparatively recent times. There were institutions for the reception of the diseased as early as 707 A.D. in Damascus, another existed at Cairo in 874 and there were two at Bagdad in 918, but there was no proper teaching carried on in them until one was opened at Salernum about 1100.

It is therefore not surprising to find Elyot (1534) stating that he knew as much medicine as any practitioner because he had read all the recognised works in Greek and Latin.

Andrew Boorde (1557) calls out against the "fooles and incipient persons who enterprise to smatter and to meddle to minister medicines.... O Lord what a great detriment is this to the noble science of physicke that ignorant persons will enterprise to meddle with the ministration of physicke."

Dr. Primrose (1638) remarks that knowledge of the Tongues is not sufficient to make a Physician...... nor do degrees given by universities make a man a good physician, and many universities
(especially foreign) give their degrees almost to any one who asks...... Many Ministers of Religion do seriously and greedily and with much gain to themselves undertake the cure, not of souls only, but of bodies likewise....... These I leave to the judgement of God, to whom they must be accountable one day for all their words and works."

Of women "That meddle in Physick and Surgery, they are not to be worse thought of if they doe their whole endeavour for the good of Mankinde."

"Surgery being a part of Physick, a Physician ought to be knowing in Surgery. Hence it is that whosoever have written anything of Surgery worthy of praise...... have been alwaies Physicians ...... It is an ordinary thing to see men that have practised physick a good space of time, to have notwithstanding no certaine experience of any thing. Many men that practise physick observe the beating of Arteries peepe into Urines and prescribe purges. Yet silly women doe it. And who is able to restraine from laughter when he sees women feele the pulse. Yet there remain above one hundred differences in the pulse to be considered by a physician."

Primrose asks whether "forrraine Physicians and aliens can know the temper of the sick of another countrey."

The education of a Surgeon according to Vicary (1651) must have been very arduous in his time. He says that he ought to know not only Surgery, but Physicke, Natural Philosophy, Grammar, that he speake congruity in Logicke, Rhetoricke, Theoricke that teacheth
him to know things naturall and not naturall and things against Natural. Also he must know the Anatomie. To be well-mannered, he must be no Spouse-breaker, nor no Drunkard, because they live a life beastiall. Likewise, a Chirurgion must deceive no man with his vaine promises, for to make of a small matter, a great, because he would be accounted the more famous. They may neither be Flatterer nor Mockers, nor privie Back-biters of other men. Likewise they must not be proud nor presumptuous, no detractors of other men, nor Covetous nor mo niggard and namely amongst their friends or men of Worship, but let them be honest, courteous and free both in word and deed. Also that they doe their diligence as well to the poore as to the rich. They must also be gracious and good to the poore, and of the Rich take liberally for both. And see they never praise themselves." and so on.

Ramesay (1661) writes that it is requisite that a Physician be well learned in seven particulars:

i. Knowledge of the Tongues, especially Latin and Greek, and if they have Hebrew and Arabick, it were not amiss.

ii. Philosophy. (Our present idea of this is very different from what was understood by this term at this time.) That he may know the subject on which he is to work—mans body, the Elements, Humours, Spirits and Signs, both Diagnosticks and Prognosticks, and the right method of Cure. Without Philosophy a man can never be a good Physician.

iii. Logicks, without whiche Discipline he can never be able to give
a perfect Definition of any Disease.

IV. Astronomy, for the knowledge of Ascension, Culmination, etc.

as a helpe, furtherance and introduction to Astrology.

V. Astrology is the most necessary discipline of all the rest.

Whoever is ignorant of the Causes of the Alterations of the

temperatures of mens' bodies, by which diseases are occasioned,

must needs be ignorant in their Cure. .... Mens' bodies alter in

their Temperatures with the Seasons, which change according to

the Motions and Places of the severall Constellations and Cele-

stiall Bodies whence follow many Infirmities and Diseases.

Astrology, and it only, by the knowledge of the Motions, Nature,

Positions and influence of the Moone, discovers unto us the true

Crisis, in all sharp and violent Diseases...... and as Acute Dis-

eases follow the Moone; so do Chronick, the Course of the Sun.

VI. Chemistry.

VII. He should know the Vegetables and Plants that are to be used.

If those who practise on the lives of Your Majesty's poore

Subjects are not so trained, they are to be accompted Cheats and

Murtherers, and ought to be proceeded against according to Law."

There have been at all times iconoclasts regarding the
doctrines and teaching of Medicine, but towards the middle of the
17th. century they began to be more numerous and vociferous.

Many books were published about this time ridiculing the state of
Medicine and Surgery. One of the most clamant of these was
Noah Biggs (1651) who in his "Mateotechnica Medicinae " (q.v.)
launches insults at the orthodox practitioners and throws their
methods of treatment to the winds. He says that many old soldiers
who, because of their wounds think they have great experience, and some of the Clergy, Priests and poor Scholars, turn and become physicians. The latter think that their Latin and their Coat entitle them to practise. The Schools (universities?) promote their scholars, this man because he hath Latin and Greek; another because he is a Master of Arts and hath heard and read lectures; another because he holds to Euclid's Elements, or that he hath learn'd to dispute or rather scold from Aristotle. To this very day, even the more learned and leading Physicians do anxiously dispute only about the shapes and names of herbs. There heth also arisen other Sects afterwards who observed the Signatures, and so have introduced new fangl'd names and swelling titles, to glose their fopperies. There have not been like wise wanting, who have compris'd the immense Catalogue of Diseases, in the Signs of the Zodiac."

He remarks that the Powder of Pearls, is of no greater profit than flint stones or glass powder...." it will be expedient to speak of that piece of Triery of Washing the Guts with a Clyster ........though any one who speaks against it is considered no better than an Ass. It is to be abhorred as a cruell and beastly remedy. Every Clyster is naturally an Enemy to the Intestines." Biggs goes on to pour ridicule on Simples, Bleeding, Purges but especially on Diet.

That dissatisfaction with the teaching of Medicine was not confined to our own country is shown by the writings of many foreign authors. As a single example, I may take the findings of a Committee of Inquiry set up by the Vice-roy of Italy in order
to put a stop to "The Abuses and Errors daily committed in the
Practice of Physick". The results were summarised by the learned
Leonardo of Capua and these were translated from the Italian into
English by John Lancaster in 1684. It is really a summary of the
History of Medicine up to that time. Many quotations are given
from the classic writers to illustrate how medical men are in
the habit of interring their errors in the grave. The rival schools
of Methodists, Galenists, Rationalists and Arabians are fully dis-
cussed. Vesalius is demonstrated to have shown how wrong Galen and
his followers had been in the subject of Anatomy. Then again
Sylvius attacked Vesalius for publishing this "unworthy, Villanous
and perplex'd Miscellany of Errors, and an abominable Dream of
filthy and wicked Instructions. He called upon the Emperor to
punish the Author severely, and he terms him a Monster of Folly an
Ingratitude. He said that it would be a deed of Charity, if he
totally made him away and strangled him that he might not infect
Europe with his poisonous and Pestilential Breath.

The Committee found that Physicians ought not to place an
unwavering belief in the doctrines which Galen taught.

Even as late as 1736 we find Mr. T. Dawkyns, Surgeon publish-
ing a work entitled "The Midwife rightly instructed with a Pre-
fatory Address to the Married Part of the British Ladies."
In this he says, "There are certainly very improper persons who
are corpulent and have large hands, as are those also who are
lame and decrepit or have crooked fingers or members otherwise
mutilated. Nor would I have any put upon this work who are un-
couth and intractable or obstinate and self-willed, nor such as are slothful or given to sleep, nor rash, hasty and passionate nor such as cannot walk thro' a room without stumbling or at least that tread so hard on the floor as to make the room shake and so disturb the Lying-in-Woman. None should come in to this number who are light, airy and dissolute in their Behaviour, or who have abandoned all discretion and modesty; whose discourse is compounded of lascivious and immodest speeches." and so on.

Dr. Pitt writing in 1702, says that "A Physician is presumed to have collected from the Greek and Latin authors whatever has been observe'd relating to the natural state in Health, and how when alter'd it may be restor'd".

It would seem from a survey of medical writers on the subject of education that what was required was rather metaphysical than practical knowledge. What the student was expected to know was based on the logic of the ancient schools when polemics and arguments were deemed of far greater importance than any working knowledge of disease and treatment.

As long as this continued no progress could be expected in medicine or surgery. The ancient traditions held men in bonds. If there is no progress, then stagnation or deterioration must follow. I think that it has been abundantly proved that Medicine underwent a great degradation during the middle ages from a consideration of the preceding pages.
Medical Ethics.

Hippocrates had laid down the foundation upon which we have reared our code of Medical Ethics. Doubtless his immediate followers acted on what he had taught and we find Celsus saying that to give undue importance to a trivial case, so that one might seem to have accomplished wonders, was to play the part of a mountebank.

As time went on however the relations between medical practitioners grew worse and worse. They made charges one against the other, and not content with verbal recriminations, they went the length of publishing their vituperations. They had not yet learned to take their cases to Court, and the laws of libel and slander were non-existent.

Many practitioners were however men of good report, and as individual experience must of necessity have been limited, they were not averse to consulting with one another.

Henry de Maundeville, (1260 - 1320) the surgeon, remarks that there is great risk in a surgeon who has not already made his reputation, to operate in any way different from that which is in common use.

Fioravanti (1582) was very wise in his own generation: -
"For where a man can not see with the eye, nor touche with the hands, the matter is doubtful whether it bee or no, and therefore it is beste to saie litle."

Andrew Boorde (1557) advises that "in perillous causes one Chirurgion ought to consult with another and to have the counsell of a Doctour of Physick, for there is no man can be to
sure to helpe a man,as God knoweth,who keepe us all. Amen."

Dr. John Hall (1540) recommends each practitioner to seek the advice of at least one, but preferably two, experts. He sets down certain rules of conduct for physicians and surgeons, not only towards their patients but towards one another. By so conducting their practises, people would not have recourse to quacks. He gathers all these rules together into a poem, which he advises all young doctors to read and then put into practice.

In the event of there being no one with whom to consult or no one but "a newly fledged and braggyng boye", Dr. Hall advises the practitioner to pray to God for help, and in order to assist him in making suitable petitions, he adds two or three specimen prayers. He ends his book by exhorting one to thankfulness, "for unthankfulnesse many times is the cause that our prayers are not heard."

What is now understood by the term Medical Secrecy, was unknown to our predecessors. Thus Dr. John Hall, (secundus, 1683) in his book describes not only the diseases of his patients, but does not hesitate to add their names and addresses. Yet he was the author of a "Goodlye Doctrine to be followed by all true Chyrurgiens."

Dr. Clowes (1596) apparently did not mince matters with those who called him in consultation. Thus on one occasion, "I told the surgeon he had not done well...... that he had served an ill saint, which did not learn him to know any better the
nature and properties of his medicines.....I spoke little to him
but willed him to be more diligent in reading of good authors,
and hereafter to be more careful how he applied his medicines."

Either Dr. Clowes was really a very clever man or else he
had a very high opinion of his own abilities, for he relates many
other cases which came into his hands "after having been mis-
handled by other surgeons" and which he cured.

It is hardly to be wondered that there were ethical lapses
when Clowes reveals his own feelings as to his patients as in the
following case. A man had received two gunshot wounds, one of
which had broken the bones of the shoulder into 'shivers', and
Clowes could not remove these because the patient was "A hot
cholerike and raging fellow and would not suffer me to cut them
out or remove them with tentacles, crowes bills or ravens bills.....
Another reason for the wound being troublesome was that this
rusticall, boarish fellow was of a marvellous dogged and churlish
nature.....and delighted to drinke all/sortes of strong drinkes
and meates..... therein he took his greatest pleasamce and delight
and thus he laid gorge upon gorge. I was in despaire of his recov-
ery and many times repented me that ever I enterprised this beast-
ly cure. The naughtines of his disordered body was such that his
very sweates were noisome unto us, for he did smell extreame ramin-
ish like unto a rank bore or goate." and so on.

I fear much that Dr. Clowes must have been of a quarrel-
some or irritable nature for he relates many occasions in which
he had disputes with those who had been attending patients before
he had been called in.
His narrative gives us some idea of how practitioners conducted themselves when called to a patient. Here is an illustration:

A man of some importance had fallen from a gallery in a Bear Garden and had fractured his skull. Calling the patient's friends together, Clowes cited to them the wise sayings of Guido, Tegalthius and other eminent medical authorities, and then stated that the patient was not without danger. He then proceeded with his operation.

Whether this account would lead us to believe that the friends of the patient were people of great learning who could appreciate all the difficulties of the case and the learned opinions upon it I cannot say, but I am strongly of opinion, that if Dr. Clowes really did say all that he says he did say, then he did it merely to impress his own learning on the patient's friends and to demonstrate how wonderful a man he was.
Proprietary Medicines.

Though there are any number of patent or proprietary medicines on the market at the present time, it must not be thought that this method of protecting one's own compositions or preparations is a recent and commercialised innovation. This is by no means the case. In by-gone days a practitioner's reputation often lay in his own special mixture. If he compounded it himself, then the secret was assuredly his own and the preparation his own property. There were no analysts to make public its composition nor any General Medical Council to interfere with its sale or with the reputation of the compounder. It is the nature of unregenerate man to desire to take advantage financially of his own inventions.

Witch doctors of all countries and at all ages have compounded their potions of many secret drugs gathered from certain places and only at special times. In our own country, witches and wise women prepared secret draughts which were only to be taken at stated times of the day and month. As our own profession developed from these early practitioners, it is not difficult to understand why this desire for secrecy has persisted. The composition of many were handed down from father to son and were only to be obtained from them or from their accredited agents.

By reason of this custom so many abuses arose that certain of the older Colleges forbade their Members or Fellows to dispense their own drugs, as for example, the Royal Colleges of Physicians both of London and Edinburgh. Culpepper was constantly at war with the College of Physicians of London over this question. In
one passage he says that the greater part have no more skill in Chemistry than he had in building houses, and that he himself had been a greater teacher of Physick than all the Fellows.

On the passing of the Medical Act of 1838 it was forbidden that any medical practitioner should patent any medicine or appliance for the treatment or cure of any disease. The real difference between a Registered Medical Practitioner and a Quack lies in the fact that the former must employ ordinary known drugs and use recognised methods of treatment, while the quack may do just as he desires, so long as his drugs or treatment do not endanger the life of his patient.

Demetrius Papagomenus, who wrote in the twelfth century, possessed a prescription so wonderful and which excelled all others that "a piece the size of a bean if taken each day would preserve from all diseases, ghosts, demons and witchcraft."

John of Gaddesden, the priest-physician who wrote the famous "Rosa Medicinae" in 1314, seems to have been prone to keep his prescriptions secret for he says "nec debent doceri laicis, quia sunt de summis meis secretis;" and again "Et est electuarium idropicorum milio specialissimum nec debent dari nec administrari nisi accepto salario." His prescription for the stone contains some thirty ingredients and he adds, "ego voco syrupum Raphanimum qui mihi fecit infinitum honorem."

John of Arderne (1360) advises the employment of oysters two or three times each year. These were however to be administered by himself, and were to be given by means of the improved
syringe invented by himself.

Dr. Cary (1583) recounts the virtues of his own potion in doing good to many diseases, but instead of describing its composition, he states that it is on sale at the shop of Maister Graie, in Panchurch street, at six shillings the wine pint and that it will keep good for three weeks or a month—a thing contrary to the nature of other purgers.

Then we find the advertisement of the "Elixir Proprietatis" or the great Antidote of Van Helmont, Paracelsus and Crollius, known by all Physicians to be the greatest Cordial and only medicine in the world for Long and Sound Life, restoring Nature even at the Point of Death, and effectually taking away the Seeds of all Diseases......as also a ready way to Volatile Salt of Tartar, by which this Elixir is truly prepared, written by J.H. (John Hester) (1671). This medicine is to be had at the Tobacco-Bowl, and Spur in Turnstile in Holburn; also John Newport, a spectacle maker on London Bridge, and Francis Smith's Stationer at the Elephant and Castle without Temple Bar.

Dr. P. Anderson, the Scottish physician, wrote a book in praise of his own Grana Angelica. It is entitled "Grana Angelica hoc est Pilularum nujus nominis insignis utilitas. Studio ac labore Par. P. Andersoni Med ac Phys. Edinburgens. propriorum amicorum jussu publici juris conscripta. Edinburgi. Andro Hart. 1635. 21

Angelice quicunque volet producere vitam
Grana Andersoni comparat Angelica.

The author goes on to praise his own composition. The pills
would seem to be able to cure almost every disease and prevent their onset. He ends his work by giving glory and thanks unto God for all his Goodness and marvellous works,"Aparting word to his gentle reader. These Grana are carefully and honestly prepared by us in our own city of Edinburgh and are sold in little wooden boxes and for convenience in travelling in little bags."

That Anderson must have made his reputation on these Grana is shown by the fact that they were on sale in Edinburgh as late as the year 1843.

Dr. John Archer was a Venereal Specialist in 1673 and sold his own specifics, "I know that none hath this secret but myself which I have many times experienced and it hath never yet failed in any." On the fly-leaf of his work which is in the British Museum there is written," The Author is to be spoke with at his chamber in a Sadler's house over against the newes Gate next the Black Horse nigh Charing Cross; his howers there are from eleven to five in the evening, at other times at his house in Knightsbridge."

The famous Dr. William Sermon issued in 1672 an "Advertisement concerning those most famous and safe Cathartiques and Diuretique Pills" wherewith was cured the late Lord Gen. Monck of the Dropsie,...prepared only by W. Sermon." "In the cure of the Dropsie my pills have wrought more wonderful effects than any other Medicines yet have done. Many pretend to cure it with aloes and Sena, etc. infused in Brandy, and the Lungs of an Oxe applied to the Belly, which preposterous Courses have of late Kill'd many, some of good worth."
"Plague may be prevented by taking my Pills. They were wonderfully effective in the last great Contagion; for some hundreds that took thereof, through God's goodness, were not infected, though most of their families that would not be persuaded to take them died.

"If Medicines do not perform the cures promised, it is due to the unskilfulness of those that make up the medicine. Therefore advise those who are about to use them to go to Mr. Ralph Clarke, Apothecary, at the Signe of the Three Crownes in Ludgate Hill in London; where they will be sure to have such as are skilful and honestly made." (Nicolas Culpepper, "Medicaments for the Poor") 32 (2)

Garencières undertakes to cure the fiercest Plague with Venice Treacle and "my Tincture of Coral." (1676) 47
These few extracts will serve to show how common was the practice of keeping the remedy in the hands of the inventor. In most cases the formula only became known after the death of the proprietor, as for example, Dr. Gregory's Powder, Plummer's Pill, Begbie's Mixture.
Astrology and its influence on Medicine.

In the East astrology has been practised almost from time beyond record. This art however only attained its fullest development during the active period of Arabian medicine. Calendars were then drawn up showing when vegetable drugs were to be gathered, when medicines ought to be given or bleeding performed. Thus medicines were not to be administered when the moon was in the sign of the Ram, Bull or he-goat, because these were ruminating animals and consequently there might be a tendency for the medicine to return to the mouth.

The old religious books of India (about 300 B.C.) tell which are the favourable days on which to gather herbs for medicines. It was the same in the Chaldean astrology: medicinal herbs or other materia medica possessed their greatest potency only when gathered during the auspicious seasons and at certain times of the day.

The classical writers of Greece and Rome make no mention of astrology, but on the other hand they gave much attention to meteorology, thus Aristophanes represents the physicians of his time as meteorological imposters, and the enemies of Socrates called him in derision "a meteorologist." Aristotle looked upon the subject from a very different point of view and treats of meteorology in his works seriously. Hippocrates states that certain diseases were induced by sudden and severe periods of cold or heat or bore some relation to certain prevailing or periodic winds.

It was at a much later date and amongst much more superstitious peoples that the moon and the planets were believed to exercise
an influence more or less direct not only on the origin but on the progress of certain diseases and epidemics.

This belief in astrology continued for very many centuries and did much to hinder the progress of medicine, and indeed its influence persisted until comparatively recent times. As we might easily imagine, Paracelsus (1529) was a firm believer in astrology. It is said that he regulated his practice by a study of the heavenly bodies. He affirmed that there was no use in trying to cure a disease as long as a certain star was in the ascendant. He remarks, "let physicians cease to poke their noses into excrements, but rather let them lift their eyes to heaven, and they will see there the fundamental principles of their art and the way of cure."

Our own Sir Thomas Elyot says that the air becomes corrupted through the influence of certain stars (1540), and William Bullein (1558) affirmed that certain stars, called Infortunates, exerted a malign influence on man and animals, causing pestilences, fevers and dropsies in animals as well as diseases in plants, "against ye said influences at Christen men must pray to God to be their defence for they be Gods instrumentes to punish the earth. Then make a fiere in everye chymnaye within thy house and burne sweete perfumes to purge this foule ayre", and again, "Eclipses of the Sunne and Moone are manifest signes of the pestilemce among men or muche Southe or East Winde in the Canicular daies or when birdes forsake their egges or anie dearth goyng before."

Alexis of Piedmont (1559) states that a certain medicine must be gathered in the month of May, and made from herbs infused in dew, but not those which are gathered under sage, for certain poisonous
beasts poison them with their breath there.

Peter Droet (1580) states that the infection of the pestilence is sent down from the stars and planets, while others affirm that the conjunction and opposition of the planets causes the air to become putrefied. The air becomes poisonous during eclipses of the sun or moon and also by the conjunction of Saturn and other evil planets.

Walter Cary (1583) writes that "you may take my potion at any time, but I advise thee to forbear every change and full of the moon in which are contained the eclipses." His ointment may be had for four shillings the ounce.

Peter Lowe (1590) says that when the malady is very grave "we must not stay for the course of the celestial signs (for astrologers say that we must only bleed when the body is governed by certain signs of the Zodiac). Old women must be bled in the old of the moon, and young women in the newe."

Andrew Boorde (1542) in his Breviarie remarks that "A physician must have surely his astronomy to know how, when and at what time everye medicine ought to be ministered. Chirurgions must know the operation and the conjunction of the moon and in what signe the moon is in everye day, and to know what signes be attractive, what signes be receptive or expulsive or digestive."

Christopher Wirtzun (1598) relates that amongst the causes of Plague are earthquakes, floods, stench from dead bodies and so on, but the most certain cause is the wrath of God. He sends such afflictions as plague, war, hunger and shedding of blood; these
are his rods and scourges to chastise the wicked world.

James Primrose (1638) was of the opinion that bleeding might be performed at any time without regard to the stars or to the state of the moon.

Nicholas Culpepper (1651) believed that all Epidemicall Diseases proceeded from the Air, corrupted by Planetary influences.

William Ramesay (1663) says that Astrology and Astronomy were of great value to medical practitioners.

Thomas Sydenham (1666) affirmed that diseases were not due to any influence of the stars but rather to that of the earth. He said that epidemic diseases arose and spread because of certain secret and inexplicable alterations in the bowels of the earth. He believed also in the "epidemic constitution of the air", that is contagious diseases were due to cosmic atmospheric influences and that miasms arose from the earth.

John Archer (1673) believed that each plant was under the dominion of certain planets as Mars, Saturn, Jupiter, Venus, and that plants were only to be gathered when the particular planet was at its full strength. If you gathered the plants in their planetary hour, you might expect to do wonders, otherwise not.

These extracts show that there was gradually developing an unbelief in the powers of the heavenly bodies to influence diseases, and this rapidly spread largely because the church was losing its hold over the educated and thinking part of the people. More rational ideas regarding the origin and spread of disease were developing and superstition was giving place to reason.

A late survival however appeared in 1784 in the shape of
a work entitled "On the Influence of the Moon in Fevers." It was written by a surgeon to the East India Company, Francis Balfour, M.D., and was reprinted by the desire of the famous Dr. William Cullen and dedicated to Warren Hastings. The author states that in the dry areas of India the moon's influence seems to be exerted to an uncommon degree. He firmly believed that in the Bengal region fevers of all kinds were connected with and affected by the revolutions of the moon. The crises of fevers were closely related to the full and change of this satellite. He could prognosticate in certain cases the return of the fever at the full or change. It was the same with smallpox and many other diseases. In smallpox he always inoculated on the 20th or 3rd day of the full and change so that the eruptive fever might always happen in the intervals. At the change and full there was always some uncommon or adventitious state or quality of the air which increased fevers or disposed to an unfavourable termination or crisis.
Quacks,

I suppose it is natural (though not always creditable) for folks to despise the lowly origin from whence they may have come, and the more likely is this to be the case when they have sprung from the ignorant and superstitious.

There is no doubt but that the medical profession had its first beginnings amongst the 'medicine men' of primitive peoples. The most intelligent of these began to read and to study diseases and how best to cure them, and so by a slow process they commenced to separate themselves from their more ignorant fellows and to build up a new profession devoted to the treatment of disease.

This may therefore account for the extreme antipathy which has all along been manifested by the medical profession towards those whom they have termed quacks, quack salvers, mountebanks, etc. Doctors had however for many centuries vaunted that they could 'cure' certain diseases, either by their own methods or by the use of special medicines made up by themselves. We know that it is very seldom that we can go the length of promising a certain cure, so our predecessors must still have retained the term 'cure' from their early progenitors, whom they now called Charletans.

That these 'medicine men' continued their work long after the recognised practitioners had formed themselves into a profession is seen in the writings of Hippocrates. He expresses his contempt for such quacks and boasts of his freedom from superstition. This was a bold statement for him to make at that time, for all believed in the intervention of the Gods in the natural
world as well as in the affairs of men.

In much later times we still find the profession railing against quacks, thus Andrew Boorde (1557) writes:

"The properties of plants, etc. few or none doth knowe them except Doctours of Physicke. Therefore let all men beeware of vagaboundes and runnagates, that will smatter with phisicke, for by such person many sicke men have beene deceived, the more pitie, God knoweth who helpe us all now and ever. Amen."

John Hall (1565) wrote an entire book dealing with the "beastlye abuses" of his time. He gives many instances of the disgraceful modes of life of quacks. Addressing them, he says:

"Ye maye bragge, lye and face, tyll ye have murdered or destroyed suche as credyte you, and then are ye gone, ye shewe your heles, and that is onely your defence." he says that those who came to Maidstone were ignorant, drunken, immoral, liars and murderers, and he relates some discussions which he had with them.

Primrose writing in 1638 says that most of the Vulgar Errour were upheld by the ignorant runnagate Quacksalvers and Empyricks with which the nation abounded. "There is another sort of man up sprung up for a Mocking-stock of Art, which call themselves Empyricks, the English and Italiens call them Mountibanks, the French, Chartalans. They are men of no esteem in other countries, but if they travail the country here, they are accounted in great honour and are sometimes equallized with Physicians, Mountibanks are far from the learning of the ancient Empyricks and sell the
common remedies at a dear rate. Their principall remedy is against poysons, but as they are so rarely used, there is no great need of their remedy. I dare be bold to say that a draught of Cowes milk can do more against Arsenick and Sublimate than all their Antidotes."

Ramesay (1661) appeals to the King to rectify the abuse which "makes divers of your Majesty's suffering subjects and servants sick at the very Heart. This is the more than ordinary Abuse of that most noble Art of Physick by Illiterates, Quacks, Mountebanks and Empiricks, that have been, are and will be, if not prevented, the Ruine of more of your Majesty's Loyall and Faithfull Subjects, than either the Sword or Plague."

"Astrology, which is the most necessary Discipline of all the rest. Not as it is commonly practised by Broaken Mechanicks and Illiterate Novices bringing shame and contempt upon the noble Art, they under that colour, Deceive men of their Money, and fool them out of their Lives. There being more Empiricall Imposters, pretending to Astrology, that are very Ideots, Cheats, Illiterates, and of the Vulgar Sort, then of any other kind whatsoever. . . . . . . Why should we then seek to Angels, Saints, Devils, Magitians, Conjurers, Witches, Imposters, Empiricks, Cheats, Ignoramusses, when we may walk in God's way, by using the lawful measures he hath appointed by the Hand of the Physician."

Matthew Mackail, the Scottish doctor (1664) has a long accusation against quacks or Cheaters as he calls them. He is of
opinion that the people have been very ungrateful to their Maker "who hath furnished their native country with such an abundance of most able and skill ful physicians and excellent remedies as well."

As late as the year 1702 unlicensed practitioners must have flourished, for Dr. R. Pitt then drew the attention of the public to "The Craft an Eouis of Physic expos'd with instructions to prevent being cheated and destroy'd by the Prevailing Practice."

Through the action of Quacks, the Faculty of Physic had declin'd in the Public Esteem, he said, but it had suffered much more from the Impudence or Ignorance of many of the Physicians. " Indeed three or four of them have declared that they are the only Physicians as compared with all the rest. Far too much medicine was prescribed to the patients, and thus he was put to great expense. It was said that the patient had succumbed to the disease, but really in many cases it was due to the numerous doses he was made to swallow.............The greater part of the College had detested and abhorred this inhuman treatment of its Sick. When the Apothecary neglects the business of his trade and undertakes to advise in all Distempers, he becomes an Empiric, and invades a Profession, which he cannot be suppos'd to understand. He impresses the People by calling attention to the Excellence of his Remedies and by the Greatness of their Prices and by great words he tries to show off his learning and Abilities...........His medicines are usually burning Cordials and the Attendants who judge of their goodness by the Warmth they give to their own Palates, applaud the
virtues of the drug. When he apprehends danger, he calls in the Physician, who cannot discern the Distemper because the symptoms are not from the natural motion of the Humours, but the Heat and Violence of the Cordials. The Empiric shall then kill great numbers of Children and the more feeble Patients, before he happens to think of changing the Method.

These matters are kept from the knowledge of the People by the Physicians, who must support their credit and Reputation, because our pretended Apothecary hath the power of the Keys committed to him, of keeping and shutting out, what Physicians he pleases, and recommends those only who will give the highest Encomium of his Skill and Judgment and justify the use of many doses by appointing more.

From this cause only, the present Disgrace of the Profession the Complaints of the vast Expense of the Bill, and the frequent Deaths from too much Physic, may very clearly be deriv'd.

To end this odious Debate, receive the sovereign Remedies, which Providence (in the shape of the College) has bestow'd, within the Reach of the Poor as well as your own, Pay the Apothecary cheerfully the best prices for the best Medicines. You may be as generous as you please. We would only divert you from the present Practice of magnifying the Prices of the cheapest Medicines.

The unhappy People suffer themselves to be Delud'd and cheaped of their Lives and their Mony. The Rich think themselves very fortunate that they can purchase the Alexipharmic, which may make their lives almost immortal.
Ramsay in his book against quacks had said that "To use Prayer only, that God would help them without the means by the Hand of a lawful Physician, is a tempting of God and his Goodness. Again to use the means appointed by God for Restoration of the Health, and not to crave a Blessing from him is prophane, presumption and a sin in a high Nature. Both together is therefore best."

Dr. Clowes (1696) tells us of a discussion he had with a most impudent and ignorant Bloud-letter, which did prick the sinew in stead of the liver-veine......he said that he cared neither for Galen nor Tagalthius for he had done as good cures as the best of them. To this Clowes replied, "I am ashamed of thy impudence and beastly boldnes." Then with unseemly behaviour and rude speeches which are unworthy the rehearsal, he departed."

Irregular practitioners, Clowes calls, treacherous runnagates, counterfeiterers, land-lopers, Sophisticall mounty-banks, cosening Quacksalvers and such like juggling deceivers. He adds a poem about them.

Dr. Alexander Russell in 1712 published a work by the Authority of the College of Physicians of Edinburg. It was entitled "An Essay of Medicine, Detecting the unaccountable Arrogancy of Quacks, and the deadly Credulity of their Patients." He says that his motive was 1. To baffle the cruel and blind arrogance of Quacks; 2. To demonstrate that a knowledge of medicine was absolutely necessary for safe practice; 3. To advertise Patients of the hazard of being treated by Buffoons, sneaking Pretenders, vain-glorious Scolds and the peevish Men of Design with which this
misering World is perplex'd. They undertake the cure of Diseases which they neither understand, nor make an endeavour to understand. If he succeed, it is meer chance indeed, as the Fool speaks a wise word by chance.

He was of opinion that when medical works were published in our Mother-tongue and not in Latin, they should be confined to the Libraries of Physicians. "Quacks often steal in upon other Men's labours, and often they do more Hinderance in one day than was gain'd in a whole Moneth. They confine Bleeding to Spring and Harvest under protest of good Skill, but Necessity has no Law."
Cosmetics,

The use of Cosmetics has been common to people of all ages and climes. The puff box was perhaps as common in ancient Egypt and Assyria as it is now in our own country. Whether or not the physicians of these countries gave their advice as to their employment, one cannot tell. In the middle ages and down to a comparatively late date, medical writers devoted much space to a consideration of cosmetics. They treated of such subjects as "How to make the Hair grow," "To remove pimples", "To preserve the Complexion," etc.

Aldebrandin (1234) writes on 'How to keep the teeth white', 'How to keep the Complexion fair' and to give it a beautiful colour, etc. Thus for example, "To make the Hair grow. Take three quicke frogges and burne them alive in a pot. Then mix the ashes with tar. The place where there is no hair is to be anointed with this, and in a short space it will grow abundantly."

John of Gaddesden (1314) treats of Cosmetics under the heading of " De Decoratione."

Alexis of Piemont (1559) gives a large selection of recipés, dentifrices, Good savours. Many of these are similar to those of Aldebrandin.

Bullein (1558) recommends garlick and Beares Grease to make the hair grow, but remarks that it is a "groase kinde of Medicine,"

Chamberlen (1665) says that in his time ladies spent much money on spots and paints for their faces, and tells them that if they gave this money to provide food and medicine for the poor, they would get a better return for their money.
Dentifrices or Rubbers for the Teeth. I suppose that there is no doubt but that the teeth of our forefathers were much harder than those of the present generation. At least it is to be hoped so, for such a dentifrice as the following must have tried them sorely; "Take red coral, shardes of galey pots, cuttlefish bones, pumice stone and grind them all up with cloves, cinnamon, pearles, etc." This was recommended by Alexis of Piemont.

To make the Hair grow. The same author advises that "one must take three quicke frogges and burne them alive in a pot, and mingle the ashes with honey or with tarre, which is farre better, and rub the place where no haire groweth, and in a short space it will grow abondantly."

Combing the Head, cutting the hair, paring the nails, cleansing of the Ears, are not onely comely and honest, but also wholesome rules according to Bullein.