HISTORY OF MEDICINE

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The history of Medicine can be roughly divided into following periods:—

(1) Pre-Historic; (2) Hippocratic; (3) The Alexandrian; (4) The Galenic & Post-Galenic; (5) The Renaissance; (6) Eighteenth century medicine of theories and speculations ending with Edward Jenner (1749-1823); (7) The modern period.

History of Ancient Medicine:—

(1) Man, since his appearance in the world, seems to be victim of diseases. The researches of paleo-pathologists corroborate the fact. The first chapter in the history of medicine might be found in the evidences left by cave men.

(2) Our earliest definite information with regard to medicine comes from Egypt, as early as 3,200 years before Christ. According to Dr. Klein who discussed the medical features of the Ebers Papyrus in some detail in the Journal of the American Medical Association, over 700 different substances are mentioned as of remedial value in the old time medical work. There is scarcely any disease of any important organ with which we are familiar in the modern time that is not mentioned there.

(3) The medicine of the Hebrews is one of the most important chapters in the ancient history of medicine.

The Hippocratic period:—

(1) Scientific medicine began with Hippocrates (460 B.C.). He lived in the great Periclean age of Greece. Garrison says of him "All that a man of genius could do for internal medicine with no other instrument of precision than his own open mind and keen senses, Hippocrates accomplished and with these reservations his best descriptions of disease are models of their kind to-day." Hippocrates virtually founded that bedside method (clinical method) which was afterwards employed with such signal

ability by Sydenham, Heberden, Laennec, Bright, Addison, Charcot, etc., etc.

In the works of Hippocrates two modes of procedure in the therapy stand out. As stated "The complaints of diseases are cured through a method of treatment which opposes it. This holds true for every disease.... A different way (for therapy) is this! The disease is produced by influences which act similar to the healing process and the disease condition is removed through remedies which produce similar symptoms to the disease". These statements actually represent one of the earliest recorded enunciations of the Contraria and the Similia principles. The Hippocratic school was entirely dependent upon pure experience as a basis for its thinking, which forces us to conclude that these concepts represented inductive analysis of such experiences. His medically trained eye did not see these two therapeutic possibilities in opposing fighting positions, as in the last century. The first of the two rules for therapy laid down by Hippocrates and his school seemed so self-evident as to be axiomatic.

The Alexandrian Period:—

(2) From Greece the centre of interest in medicine passed over to Alexandria. We find the names of Erasistratos, who contributed much to the study of Anatomy, described the convolutions of brain and the nerves leading to and from them, divided the nerves into sensory and motor, described the valves of the heart, etc. Herophilus who described the choroid plexus, differentiated between the portal and chyle vessels, named prostate, retina and arachnoid, duodenum, gave detailed description of torculœ (Herophili) named after him, the calamus scriptorius etc.

(3) It is an irony of history that the careful experimental science of Hippocrates was totally ignored in the centuries immediately following. Healing was never more confused than in the middle of the second century. The numerous schools developed after Hippocrates—dogmatics, empiricists,

herophilism, erasistraterism, pneumatists—fought bitterly with each other.

The Galenic Period and The Post Galenic Period:—

(1) Galen flourished in the second century (130-200 A.D.). He again reintroduced the importance of observation and experiment in the field of medicine. He was the greatest physician after Hippocrates in ancient times. He deeply influenced the medicine of the world for 1500 years. He was a great anatomist. He was the first to describe the plantaris and palmaris longus and the interossei of the feet and hands. He brought the medical ideas together into one system.

As to therapeutics, Galen definitely advocates the first Hippocratic rule—Contraria Contrariis Curentur—and weaves this into his conceptions of the four elements, four characteristics of matter and four basic humours. He makes no mention of the second rule, though undoubtedly cognisant of its presence in the writings of Hippocrates. Most probably his theories are nothing but the distorted versions of the 'Tridosh theory' of the Indian system of Medicine.

The beginnings of Ayurveda, the Indian System of Medicine, lie deep in unrecorded history; but the traditional date is about 3000 years ago. A study of the early literatures of Ayurveda *e.g.* Charaka-Samhita and Sushruta-Samhita, shows the heights and extent of medical knowledge in all its various departments, which can stand favourably with what are considered to be recent advances in modern medicine. Its greatest achievement, however, was the much maligned and much misunderstood, "Tridosh theory", which, according to some competent authorities may serve to harmonise the two antagonistic recent theories—the cellular and the humoral. (Vide-Introductory: Report of the Committee on the Indigenous Systems of Medicine 1948). In Ayurveda is found the most comprehensive description of different categories of treatment. It arranges all possible

modes of treatment (chikitsa) of all times—past, present and future. Firstly, it states that two-fold are methods of treatment namely "Vipareetha Chikitsa" (Treatment by contraries) and "Tadarthakari Chikitsa" (Treatment by similars). Each of these show a natural three-fold sub-division as indicated below:

(A) Vipareetha Chikitsa or Treatment by Allopathy in the sense of treatment by contraries or opposites. This is of three kinds, namely:

(1) Hetu Vipareetham or treatment by measures—Medicine (Ausadha), Diets (Anna) and Life activities (Vihara)—which are contrary to Hetu or cause of disease and operate for its removal;

(2) Vyadhi-Vipareetham or treatment by measures which are contrary to Vyadhi or disease (which is the effect) and operate for its removal;

(3) Hetu-Vyadhi Vipareetham or treatment by measures which are contrary to both Hetu (cause) and Vyadhi (disease) and operate for their removal.

In certain cases, the cause may disappear only after producing the effect namely disease. In other cases it may persist and make for continuance or recurrence of disease. In the former case, only the disease has to be dealt with. In the latter case both cause and disease have to be dealt with.

(B) Tadarthakari or Vipareetharthakari Chikitsa or *Treatment by Homœopathy in the sense of treatment by similars.* This again is of three kinds, namely:

(1) Hetu-Tadarthakari or treatment by measures which are similar to the cause (Hetu) and operate for its removal;

(2) Vyadhi Tadarthakari or treatment by measures which are similar to Vyadhi (disease) and operate for its removal;

(3) Hetu-Vyadhi Tadarthakari or treatment by measures similar to both Hetu (cause) and Vyadhi (disease) and operate for their removal.

It will thus be seen that the classification given above is all-inclusive and valid for all times and provides ready made niches or mansions, to which fitting welcome may be extended, as stated before, to any form of treatment of proven utility that may be known already—whether it bears the specific label Allopathy, Homœopathy, Naturopathy or any other.

About the beginning of the Christian era Ayurveda had reached its apogee and had spread far and wide influencing deeply the systems of medicine in Egypt, Greece, Rome and Arabia. The influence of the Hindu Medicine was not confined to ancient and mediæval periods alone. Through its influence on Greek Medicine and through the influence of the Greek on Arabian medicine and of the Arabian on the medicine in Europe, the Ayurvedic system can well claim to be the chief, though remote source, from which the mighty river of Western Medicine has had its beginnings.

(2) After a period of very high development decadence gradually came over medicine and continued to decay until the end of the Roman Empire and thus represented a lamentably sad beginning for the medicine of the middle ages.

(*a*) During the middle ages, commonly known as Dark Age, we find few names like Cassidorus of the Southern Italy, Actius, Alexander of Tralles, Paul of Aegina, etc., who tried to base the practice of medicine on observation and experiment.

(*b*) During Muhammad's time (632 A.D.) the Arabs prospered and spread right up to Spain. They were brought into contact with Greek medicine and became the leaders in medical thought as a consequence. Amongst the Arabs of the East we find names of Rhazes, Ali Abbas and Avicenna; and amongst the Spanish Arabs known as Moors,

there were great writers on Medicine like Abulcasis, Avenzoor and Averroes.

The Arabs introduced polypharmacy and calendar prescriptions with its long lists of drugs. They were the bearers of the Greek traditions but not always happily.

(c) There were a series of great Jewish physicians who were leaders in medicine *e.g.*, Moses Ben Maimune, one of whose famous saying is—"Teach thy tongue to say that I do not know."

(*d*) The Arabs and the Jews continued to be leaders in medicine till the establishment of the University of Salerno and the Medical School of Mont Pellier.

Salerno is best known to the modern world by its famous 'Manual of Health' which was printed in no less than twenty editions before 1500 A.D. They were keenly interested in Hygiene. According to a very old tradition, Salernitan Faculty were frank in declaring that the three best physicians for ailing people were Doctor Quiet, Doctor Diet and Doctor Merriman.

It is during their time that the great Hospital movement started under the aegis of Pope Innocent III.

There were some development in Surgery as evidenced by the publication of text books of Surgery published at Salverno, at Bologna, at Paris and Mont Pellier. Operations on the head for tumour and for a abscess, on the throax and on the abdomen were practised mentioned in the books.

The practice of Ophthalmology, Laryngology and Rhinology were carried on.

(*e*) The first hint on the physical and accurate methods in diagnosis came just as the middle ages were closing. Cardinal Nicholas of Cusa was a great name of that period. He suggested the counting of pulse as a valuable means of studying diseases. Within twenty years of Cusa's death all the great men of Renaissance period were alive.

The Renaissance Period:—

(1) During this period, which starts from the date of the discovery of America by Columbus, persons of outstanding merit were born in every parts of Europe. Poets and Philosophers, Painters and Musicians, Mathematicians and Scientists appears in numbers and swept off age-long superstitions and dogmas from the minds of the people and pointed to an age of reasoning and rational approach to the problems of humanity. But the greatest liberator of human reason from the fetter of academic scholasticism appeared in the person of Lord Bacon of England. He, through his inductive Logic and "Novum Organum", inaugurated the modern scientific era. But the field of Medicine was not yet illuminated by the new Light. The old Galen still seemed to rule the medical section of the human activity. Eighteenth century medicine was dominated by theories and systems, by cults and creeds. Though royal touch was fast losing its therapeutic efficacy and witchcraft and astrology were slowly but surely giving way to more humane and rational explanations as to the theory and causations of diseases, blind respect for traditional authority, the weaving of fantastic and one sided theories, "Shot-gun" prescriptions and loathesome mixtures, blood letting and cupping and other crude and torturesome therapeutic practices were in vogue and advocated by leaders of the medical profession of that time. Two names stand out in the sixteenth century, that of Paracelsus and Pari, who showed some originality of mind in the practice of medicine. There was absolute chaos, no general principles, no laws guiding therapeutics, no planned method for investigation of action of drugs on the healthy or the diseased—though great advances in Science sattelite to medicine (*e.g.*, Anatomy, Physiology, Pathology, etc.), were made by Vesalius, the anatomist, Varolii (of pons Varolii fame), Rolando (of fissure of Rolando fame), Guid Gidi Vidus (of Vidian canal fame), Botallis Eustachius (Eustachian tube), Fallopius (aqueduct of Fallopius and Fallopian

tube), Corti (Organ of Corti), Malpighins (Malpighian bodies in spleen and Malpighian corpuscles in the Kidney), Scarpa (Scarpa's triangle), Steno (Steno's duct), Hivini, Riffini, Fontana, Morgagni, Valsalva, Giacomini, Pacini, Pacchionius, Golgi, etc., etc. Thus sixteenth and seventeenth century saw development of not only Anatomy, but also of pathology and physiology.

(2) Two great English physicians of the sixteenth century are worthy of being noted—Linacre, the founder of the Royal College of Physicians and John Caius, the founder of the Caius College at Cambridge.

(3) Next comes the greatest medical scientists of the English speaking countries—William Harvey (1578-1657), the discoverer of the circulation of blood.

(4) After Harvey appeared Marcello Malpighi (1628-94) who has been proclaimed as the father of Histology.

(5) The first to show how the use of microscope was to revolutionise medicine was the scholarly Jesuit Father Athanasius Kircher (1602-80). He was undoubtedly the first to state in explicit terms the doctrine of a "Contagium animatum" as the cause of infectious disease. In his Physiologia Kircheriana, he was also the first to record an experiment in *hypnotism*.

(6) In the next generation Leewenhoek, the Dutch scientist used the microscope to such a good advantage that he has rightly been called the father of microscopy. He described for us the Spermatozoa. Swammerdam, his contemporary, was the first to describe the red blood corpuscles.

(7) Santorio, the professor at Padua, made use of a clinical thermometer. He devised instruments for removing stones from the bladder and foreign bodies from the ear. He also made a special trocar and cannula and made studies regarding metabolism, His contemporary Jean Baptiste Van Helmont (1577-1644), the pupil of Paracelsus, introduced the gravimetric method in the analysis of urine.

(8) The three great centres of medical education in the seventeenth century were Leyden, Paris and Montpellier.

(9) During the Renaissance period in the 16th century, the idea of scientific societies originated in Italy and spread all over Europe. The first journal of medicine was published at Paris in 1679.

(10) In the 17th century came the beginning of American Medicine.

Eighteenth Century Medicine:—

Though this century may rightly be called a century of theories and systems, cults and creeds, some definite advancements are noted in every branch of medicine *e.g.*

(1) Anatomy and Physiology.
(2) Embryology and Comparative Anatomy.
(3) Chemistry—General and Physiological.
(4) Pathology and Bacteriology.
(5) Materia Medica and Therapeutics.
(6) The Practice of Medicine.
(7) Surgery—General and Operative.
(8) Gynæcology and Obstetrics.
(9) Hygiene and Preventive medicine.
(10) The Disease of the Eye and Ear.

The Modern Period:—

Though there were further notable advancements in all auxiliary branches of medicine, the art of healing remained in the same chaotic state as before. Torture-some therapeutic practices were still in vogue; Venesection gradually went out and leech came in. There appeared medical scientists busy in applying the scientific method for investigation of many things. But when it concerned the field of actual medical practice, irrationality and blind obedience to traditional authority and confusion of ideas dominated and clouded the minds of the physicians. There were tremendous advances in the knowledge of physical sciences. The medical men tried to apply the concepts and investigating methods of physical science in the field

of medicine which is really a department of Biology. The nineteenth century is marked by the solution of two most important problems of disease: its basis in the body, cellular pathology developed by Virchow, and its causation, which Pasteur (1822-95), followed by Koch (1883-1910) was to demonstrate as due mainly to microbic activity. Valuable facts were observed but proper biological inferences were not drawn from them in all cases. Imperfect observations and hasty generalisations vitiated the whole aspect of medicine especially as regards the conception of disease and causation of disease and consequent therapeutic practice. The grave error was committed by Sydenham in the 17th century when he declared that diseases like plants, should be classified. Taking the clue of classification from Linneas, the Botanist and Cuvier the Zoologist, there was a plethora of publications of medical Nosolgy *e.g.* Vogel (Gottingen 1772), David Mc Bride (Dublin 1722), William Cullen (Edinburgh 1785), P. Pinel (Paris 1798), Thomas Young (1813), Mason Good (1817) and James Copeland (1822). But the constant changes in any formal classification that are necessitated by the numerous advances are probably, in part, responsible for this recent loss of interest in the academic exercise. The cardinal factor for the error lies in the fact that disease is not a "Morbid entity"—it is any deviation, whether obvious or latent, from what is believed to be the normal average condition in appearance, structure or function, of sufficient degree to cause considerable pain, trouble or hindrance in persuing the ordinary objects in life.

The eighteenth century is marked by a plethora of theories and hypothesis concerning the nature of disease, the causation of disease and consequently methods of therapeutic practice were as numerous and diverse as the theories propounded. But all those theories suffered from two great defects—incomplete and partial observations and hasty and imperfect generalisations. The ordinary cannons of logic were not followed by the medical men of

that period. Each was fighting for his own side of the shield and not a single medico was rational enough to look to the two sides of it. During this chaotic period, we find the solitary figure, in the person of S. Hahnemann, who was head and shoulders above all his contemporaries and who followed the strict principles of logic and scientific investigational methods to throw light on the knotty problems of medicine. He was the man to point out that medicine belonged to the category of Biology which is different from that of physical sciences and hence suitable biological concepts should be applied for investigating facts concerning life, health, disease and action of drugs on living beings and not merely physico-chemical ones. Accordingly he proposed a new method for ascertaining the effects of a drug on a living being, based on observation and experiment. His contribution to the field of physiology, pharmacology, and pathology and therapeutics were strikingly original. It was Hahnemann (1755-1843) who urged the medical profession of his time, to pay sufficient attention, in considering the cause of disease, to both the (*a*) Soil or the constitution of the patient and (*b*) the seed, such as germs or worms as we know it now, but which was designated by him as 'miasms', acute and chronic. Amidst the chaotic state of medical opinions at the time, Hahnemann was conducting his investigations of the subject. His researches resulted in propounding the most startling, revolutionary and far-reaching theory in the history of medicine, namely *the parasitical nature of infectious and chronic diseases.* In a strong protest (1830), against the then current, terribly pernicious atmospheric-telluric theory of the nature of Cholera, which occurred in a severe epidemic form in the whole of Europe, Hahnemann with his keen analytical mind, phenomenal intuition, logic and reasoning powers, boldly declared about the existence of *'infectious, contagious, excessively minute, invisible living creatures'* in association with the origin and spread of the Cholera Epidemic. Hahnemann had no microscope but it

is easy to grasp that he meant precisely by the term 'miasma' what we mean today when we use the terms of bacteriology to express the same idea. Here we have an anticipation by more than fifty years of Koch's discovery of the "comma" bacilli of cholera. Modern Bacteriological science, founded by Louis Pasteur (1822-95) and Robert Koch (1843-1910) has transformed both medicine and Surgery. Pasteur's works on the micro-organisms greatly impressed Lister, who put them into practical application in the evolution of antiseptic treatment of wounds, especially those made in the course of operations, from which the later aseptic surgery was a natural development. The Bacteriological science has accomplished much in the way of prophylaxis, sanitation and hygiene and paved the way for the science of immunology and recognition of allergic disease. But the profession at large has failed to follow Hahnemann's logical and practical deductions in regard to the cure of these diseases, or to discover a means of cure for itself. In this respect modern medicine is not much further advanced than it was in Hahnemann's day. With the occular demonstrations of specific germs or Hahnemanns' miasma, the somewhat intangible factors of diathesis and constitution, thus contrasted with visible micro-organisms and Hahnemann's wider implication in 'Psora' theory, became overshadowed and until recently neglected. Hahnemann's assertions about the objective existence of Life-principle and the disease-cause but not that of disease, which is merely an altered condition of life proved too difficult for the crude materialistically-minded medicoes of his days and still remain the stumbling block for the modern medicine-man for proper comprehension of Homœopathy, which Hahnemann claims to be a rational art of healing. Disease has often been regarded by the modern medicine as synonymous with the supposed cause, and indeed often so spoken of now; for example, a patient may be said to have infection such as tuberculosis, but this is to confuse the cause with the effect or reaction.

The history of medicine shows that at first it contented itself with the practical problem of relieving the sick by empiric recipes. It realised only in recent times that the most effective method of preventing or curing illness is to acquire a complete understanding of the normal and diseased body—that is, to construct the sciences that are called Anatomy, Physiology, Biological Chemistry, and Pathology. But the fundamental oversight is that we have to deal with bodies which are living; and the proper appreciation of this single fact makes a tremendous difference in the outlook and approach to the study of these abstracted sciences. The recent advances in these sciences satellite to the medicine proper are towards the amazing progress in the study of physico-chemical aspect of the living beings, 'pari passu' the progress of study in Physics and Chemistry. This is because the physico-chemical aspects of human beings are almost as easy to investigate as those of other objects of the terrestrial world. Such is the task which general physiology succeeds in accomplishing. There is very little advance in the study of the truly physiological phenomena which belong to the domain of life. The mystery of life remains unexplored and scientific study of the manifestations of life initiated by Hahnemann was soon overshadowed and well nigh lost sight of in the welter of discoveries of physical sciences. Man is an indivisible whole of extreme complexity. No simple representation of him can be obtained. There is no method capable of apprehending him simultaneously in his entirety, his parts and his relations with the outer world. He is at the same time corps dissected by the anatomists, a machine studied by the bio-chemists and bio-physicists, a living being observed by the biologists and the consciousness, intelligence and reason apprehended by the psychologists, and some thing more transcending each of these aspects. Modern science in general and modern medicine in particular try to apply to this indivisible compound-whole the concepts that have proved useful in the realm of physics, chemistry and

mechanics. Such an attempt does not meet with much success, because we can be reduced neither to a physico-chemical system nor to a spiritual entity. We find an intermediate plane of life to which concepts belonging to the other planes cannot be applied adequately. It must also develop its own. Hahnemann is the first personality in the whole of Europe, to point out this to the medical profession. The modern medicine with all its progress in diverse side tracks and by ways, has not proceeded much in the main track to fulfil its important or (according to Hahnemann) the most important mission *viz.*,—to heal the sick. Science of life is as fundamental as the sciences of the molecules, atoms and the electrons.

History of Homœopathy:—

The origin of Homœopathy as a scientific method of treating diseases dates from Samuel Hahnemann's publication of his findings in 1796. In contrast with a plethora of vain speculations indulged in by the medical men of the middle of the eighteenth century, one is refreshed to find persons like Bell, Hunter, Green, Hufeland—whose minds could not be stultified by such dogmas and who could attach themselves to the actual and the true in the field of medicine unfettered by preconceived dogmas. Hufeland's introduction to the first issue of his Journal of Practical Medical Art and Wound Healing (1796) contains the following memorable lines:—"Without doubt the history of medicine during all the periods call to us: The closer one attaches himself to nature and pure experience the more complete his observations and successes, but the greater the number of despotic rules, names, opinions and different sects, the more faulty, limited and unnatural has always been the condition of medicine." The same Journal in the same issue introduces us to the work of the first individual to test the effects of drugs on healthy human beings. Samuel Hahnemann's labour for six years have appeared under the title "Experiments concerning a new

principle for the discovery of the healing forces of drug substances besides a short review of what is known so far."

Hahnemann was born at Meissen, near Dresden on the 10th April 1755. He was a genius. He received a M.D. degree in 1779. Soon he established himself as one of the leading physicians of his time. During the next ten years he did much original works in Chemistry, edited a great book "The Apothecaries' Lexicon", published original articles on "On the treatment of chronic ulcers" (1784), "Instructions to Surgeons concerning the Treatment of Venereal Diseases". By 1790, he was accepted by Hufeland, the leading physician of the day as "One of the most distinguished physicians of Germany, a physician of mature reflection and experience." He was acquainted with almost every ancient and modern language, with the literature of medical profession of his own and ancient times. He was a great Chemist, a Minerologist and Botanist, a sanitarian and an experienced, practical physician, an all round scientific man. But a great change was coming upon him. He got so much disgusted with the irrationality, uncertainty and harmfulness of the current medical practice that he gave up the practice altogether and started maintaining himself and his family by his work as a writer and translator of Scientific books. A chance experiment revealed to him a more promising path to real physicianship. Translating Cullen's Materia Medica, he was dissatisfied with the explanation given for the cure of ague by Cinchona bark. Eager to elucidate the matter, he decided on the rational scientific course of testing drugs upon a healthy person—to wit, himself; and this course if not unprecedented was not unusual notably. The effect of the Cinchona bark on him was to produce all the symptoms of an attack of ague, not only the chill, heat and sweating, but several of the minor phenomena also. He found that the drug which was the best agent to cure ague, produced upon him the symptoms of ague. He investigated the records of the past and began to treat

diseases with the similar diseases for six years before he gave to the world the smallest hint of his discoveries in the above-mentioned article in Hufeland's Journal. He derived the name of Homœopathy from the statement of Hippocrates as to his own observed experience that, at least occasionally, a drug could cure the condition it could cause. From 1796 to 1810 Hahnemann held on his own way, experimenting, proving drugs, becoming more and more sure that he had discovered a genuine law of medicine. In and around 1800 he began to teach his doctrine that has been so prominently associated with Homœopathy—namely that drugs, like natural causes, produce diseases, drugs are active and most suitably administered in quantities immesurable by ordinary methods; and diseases are nothing but morbid vital process etc. He promulgated that the central law of Homœopathy is that governing the choice of practice for curative purpose. In 1810 Hahnemann published the Organon of the Rational Art of Healing, his greatest book on Homœopathy, wherein was elucidated systematically the new method and principles of medical treatment which he had given the name of Homœopathy. This book aroused a storm of opposition not so much on account of the tenets therein contained, but because in this book Hahnemann mercilessly criticised the then universal practice of bleeding and his advocation of small doses of single drugs immediately aligned every practising apothecary against him and Homœopathy—a condition which has lasted for obvious reasons ever since. In successive editions of the Organon, he incorporated the results of his riper knowledge, but the law of Homœopathy remained expressed therein unchanged and true for all time and are only now beginning to be appreciated.

Shortly after publishing Organon, Hahnemann applied to the University of Leipsic for permission to teach. Being granted the request he quickly gathered round him a circle of very excellent men, professors, lecturers, enthusiastic students and open minded physicians and taught them for

eight years. It is here, we find the names of the earliest and best provers of our medicine—Stapf, Gross, Franz, Ruckert, Hartmann, etc. Publication of the "Materia Medica" in six volumes, followed his life, at Leipsic, where he had an extensive practice. Up to this time, he had no thought of separating himself from the established school, and it was none of his doing that the split in the school took place. The opposition took the shape of prohibiting him to dispense his own medicines by an executive order of the State. Hahnemann did not attempt to evade the law. He left Leipsic. After long wandering from state to state, he got a shelter at Coethen, where he remained for 14 years. From there in 1829 appeared his work on Chronic diseases and new edition of the Organon and Materia Medica Pura. His book on chronic diseases was not universally acclaimed by his avowed disciples but there is nothing in it that takes away from the central law of Homœopathy. In it was the elucidation of further refinements of study and additional evolution of its principles. Although its theories have been questioned, its practice have been largely followed. In 1835 he moved to Paris. His presence there was also a great aid to the establishment and development of a new school at France. He practised at Paris for 8 years and died on the 2nd July 1843. He lived to see his labour crowned with wonderful success—the practice of Homœopathy was thoroughly established throughout both the Hemispheres of the world.

In the realm of public health, in his teaching and practice with regard to infection and management of epidemics, he anticipated the most modern general ideas, guided not by bacteriology but by careful observations and sound deductions from experience.

The fundamental tenet on which Homœopathy is based is the following:—

The drug which is most likely to cure or relieve a case of disease is that drug which when administered to a healthy person, has shown itself capable of producing

symptoms which most closely resemble those of the case of disease. In brief, likes should be treated with likes—Similia Similibus Curentur.

There are two subsidiary rules, also:—

(1) That drugs must be treated on healthy in order to obtain a pure materia medica.

(2) That it is desirable to give the 'like' remedy in a small dose especially sub-physiological dose.

Spread of Homœopathy:—

Following Hahnemann, a group of men, some of whom were his pupils took the the task to practice of Homœopathy all parts of Germany. Austria-Hungary followed soon—Homœopathy came to be practised there as early as 1819. As Austria received the Homœopathy from Germany, it transmitted to Italy. It was from Italy that both France and England received Homœopathy. Dr. Quin, a graduate of Edinburgh (1820), eventually went to Leipsic to learn Homœopathy from the Master himself, and came back to London in 1832 to practise Homœopathy. In 1844 he, with seven others, founded the 'British Homœopathic Society'. In 1850 the London Homœopathic Hospital was founded and dispensaries sprang up wherever converts settled for practice. England has produced some of the greatest homœopaths since Hahnemann, *e.g.* Dudgeon, Dyce Brown. Hughes, Pope, Burnett, Clarke etc. Though Homœopathy was brought into *India* in the fourth decade of the nineteenth century, by Honigberger, Tonnier, Berigny—its real history begins with the conversion of Dr. Mahendra Lal Sircar M.D. (Cal.), in 1867 under the influence of Rajendra Lal Dutta. In 1891 he was able to report that there were thirty qualified homœopaths in Calcutta and its suburbs, and as many as many more in other parts of the country. Since then Homœopathy is ever on the march in India. *Canada* first reported about Homœopathy in 1881. Homœopathy was introduced into *Sidney and Melbourne* about 1851. Homœopathy spread into *New Zealand* as early as 1853.

Its spread to South Africa at about 1876. Spanish Homœopathy can be traced as early as 1829-30. We find Homœopathy practised in Spanish America as early as 1847. Portugal also welcomed Homœopathy and in 1839 Hahnemann was made an honorary member of the Society for Medical Sciences, Lisbon. Brazil can claim Homœopathy from 1837 and by 1876 there were about 75 practitioners of the new healing art. Russia's association with Homœopathy dates from 1823, when the Russian physician Dr. Adaen, a prover of Carbo Veg., conducted by Hahnemann himself, settled at St. Petersburg to practise the new system. Homœopathy spread to Norway, Sweden and Denmark between 1876-1896. In 1896 we hear of Homœopathy at Holland. Belgium had Homœopathic practitioner as early as 1829. Near about 1876 there were 33 Homœopathic practitioners in Switzerland and a Hospital at Basle. Homœopathy was not at all slow to cross the Atlantic and take its root in America. The earliest Homœopath was Dr. Gram, a converted medico, who practised at New York at about 1825-1840. On Constantine Hering, the mantle of Hahnemann fell in America. Under his auspices Philadelphia became a second centre of Homœopathy in America a college was founded to teach it, provings were made to supply materials for its practice and the American Institute was organised. Since then Homœopathy is having a triumphant march in that country.

Thus Homœopathy, often claimed to be dying, is more alive than ever, but remains the faith of a minority unable to make good its claims to more than a very limited hearing. The reason is not far to seek. The high philosophy, the subtle logic, the extreme simplicity of medicine, the inconceivably small doses of medicines employed and above all the apparent paradoxicality of the law of cure were and are still too much for the crude materialistically-minded physicians of the dominant school to accept them in toto. Homœopathy is primarily a rational art of healing; but not until late in the nineteenth century did it

make the force of the principle underlying it felt in the laboratory.

(1) Schulz, Professor of Pharmacology at the University of Griefswald while studying the effects of formic acid on the activity of yeast cells and after working with a number of other medicinal agents, formulated the generalisation that

Strong stimuli destroy or inhibit cellular activity, while moderate stimuli may inhibit or have no effect on cellular activities and still weaker stimuli may enhance cellular activity.

Schultz's generalisation then offers a rational experimental basis for Homœopathic proceedures.

(2) Only very lately the scope of Schultz's work has been broadened by Kotschau and Rentz. Their work brings much of value to the underlying Homœopathic rule from the laboratory standpoint. Kotschau has pointed out the following:—

As a general rule it may be stated that most poisons are double and polyphasic only in very definite middle concentration while small and large amounts respectively, are primarily uni-phasic and have an opposing action each other.

Througout his works Kotschau pleads again and again for the abandonment of causalistic research until the true course of events themselves is thoroughly studied. Today the search for cause has vitiated research in medicine to a dangerous degree. Kotschau has chosen to call such research causalistic by which he implies the formation of conclusions from insufficient study of phenomena.

Pure observations of the course of biological processes is absolutely necessary before one can attempt to support or imitate such processes in the application of healing art. It is significant in this connection that the Similia principles of Homœopathy grew out of such experience and observation. It attempts to explain nothing, it appears a plan of investigation and, as Kotschau remarks, a plan is just as necessary for investigation as it is for a war.