



THE CONTRIBUTION OF
HOMCEOPATHY
TO THE
DEVELOPMENT OF MEDICINE

DR. O. LIESER

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Memorial Lecture
at the centenary of the death of
CHR. FR. SAMUEL HAHNEMANN

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Chr. Fr. SAMUEL HAHNEMANN
10th April, 1755—2nd July, 1843

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FOREWORD

These three lectures are an English version of those given before the Free German Institute for Science and Learning in London in the autumn of 1943.

The reproduction on the frontispiece is from a plaquette made by A. Straube in 1833. It represents Hahnemann at the age of 78.

The original is now in my possession.

O. L.

High Wycombe, Bucks.

July 1945.

Q. Jordan
20.11.73

IN our days of crisis of human civilisation, the centenary of the death of Hahnemann, the founder of Homoeopathy, has passed without commemoration and almost without recognition. On 2nd July, 1843, at the age of more than 88 years, this German physician, born at Meissen (Saxony) departed this life in Paris. 7

All over the world, though in a minority in the medical profession, there are followers of his teaching who see in him one of the great reformers in the science and art of healing. Few are conscious that his thinking and working are far from having run their historical course, but now, 150 years later, still point to a future Medicine which can be visualised in close conformity with the new development before us of pure and applied science.

It is not my purpose to dwell unduly upon the past, not more than seems desirable for appraising the present situation and its trend. Nor do I advocate any hero-worship, be it even in the field of great human thought and achievement. Hahnemann shared some limitations with the period in which he lived. Being a strong personality, obstinate in his ardent convictions, often vehement in argument with his opponents, he may appear intolerant; certainly he had not the equanimity to tolerate fools. Searching deeper, one recognises him as one of the enlightened humanists of the Goethe epoch, above any nationalistic limitations, and from his 22nd year onwards a Freemason; thus, if still alive, he would to-day be in a German concentration camp, though he was not a Jew.

• We need not concern ourselves with Hahnemann as a stupendous linguist, nor with his remarkable knowledge of the chemistry and botany of his day.

Extraordinary talent and hard work, mostly under precarious conditions, prepared him to become, not a successful doctor with pleasant bedside manners, but an outstanding physician. Not every statement or interpretation in his voluminous writings will stand the test of another 150 years of experience and research. Were it not for something essential in the work of the creative period of his life, from his 35th to 60th year approximately, something with a portent for the future of scientific medicine, I should not feel justified in claiming your attention and indulgence for three hours.

Hahnemann's legacy consists in the conception of *Homoeopathy*. This strange term was coined by him from the Greek ὁμοιος=similar, and πάθος=suffering, disease, illness. It should convey a pragmatic principle, viz: choose for curing a diseased person that substance or agent which is known to evoke from healthy persons manifestations similar to those observed in that particular case of disorder. "Similia similibus curentur" is a time-honoured catch-phrase.

Now, this definition wants a good deal of explaining. There is a disease we are called upon to cure. "Is there, however, such a thing as a disease—say pneumonia? Of course not. Any "disease" is a concept in our mind, a diagnosis abstracted from a variety of case observations. What we have actually to deal with is a person in a particular disordered state of his life process. Let us not be trapped at the outset by hair-splitting distinctions, such as subjective and objective symptoms, structural signs and functional symptoms; they are, like body and mind, only dual aspects of one and the same whole, made to meet certain conveniences!" Again, "we are dealing with persons whose balance of life-processes within their environ-

ment is upset to a degree that symptoms become manifest; that they suffer; or, what amounts to the same, we find persons in a situation in which their adaptative processes show themselves at fault."

On the other hand, we have at our disposal an unlimited number of substances capable of acting upon human beings. We shall restrict ourselves here to so-called medicines or remedies, as provided by and prepared from substances of the mineral, plant and animal kingdom. Homoeopathy requires that their potential actions on man should be known beforehand! That sounds reasonable enough, even a commonplace. Yet, it implies a new scientific approach to such knowledge of the actions of medicinal substances, to *materia medica*, if we may call it by the old name; for "pharmacology" and "pharmacodynamics" are liable to convey the narrower current view of a specialised field of research. The need for a better, more accurate and reliable knowledge on this subject led Hahnemann to his first innovation, viz., that it should be obtained by planned and appropriate experiment, by having any prospective remedy tested in advance on healthy human persons. These experiments, 'peculiar to homoeopathy', will be referred to in the following discussion by the technical term of "provings."

This particular task and the method of pursuing it have far-reaching implications for pure and applied science. It is to this that we are going to devote the rest of this lecture. The two following lectures may, however, be anticipated here briefly: in the second we shall have to deal with the application in Medicine of the knowledge so obtained; we shall have to explain how far the reactions of persons to a substance, when similar to or concurrent with those manifest in a diseased

person, can be expected to help in restoring the normal balance. In the third and last lecture some technical consequences of the general method will be discussed, especially the famous homoeopathic dosage and the peculiar ways of preparing medicinal substances.

The provings required by homoeopathy are biological experiments on normal persons. They are simple in plan and execution. The substance to be investigated is given, in suitable preparation, dose and frequency, to a number of persons, male and female of varying age and constitution. The persons — "provers," as we may call them—do not know what they are taking, but usually the responsible experimenter takes part in it. Cautious procedure can easily preclude any real danger. After all, it is not intended to provoke serious derangements. Where such may be expected from a drug, they are mostly well enough known already from cases of poisoning. Of course, "whether a substance acts as poison depends not only on its chemical quality, but also on its physical state and on the dosage, as well as upon the constitution of the person taking it, his susceptibility." "One man's meat is another man's poison." Our deliberate provings are so planned as to find out just those subtler reactions which would not develop or be noticed under the impact of poisoning. From provings we want to learn the distinctive symptoms with which persons react to just that particular substance. "Those altered sensations, emotions and impulses which can adequately be described only in many words are by no means less but, on the contrary, more characteristic than those perceived from outside. One cannot expect dumb animals to express their feelings distinctly and that is why human provers are indispensable."

Now what is likely to happen in such experi-

Altered Sensations, emotions & impulses

ments—say, on twenty persons? A number of them will not react at all; they can be disregarded altogether. Others will respond with very common and general symptoms, e.g., headache, nausea, diarrhoea or coughing, without being able to detect and describe any more distinctive features. Their results are of limited value; they may contribute to indicate the affinity of the substance with certain organs or tissues, but most of that could have been found out from animals as well. First and foremost, we are seeking the specific human reactions. Only a few of the provers may provide them. "They are those with a delicately poised balance of just those processes to which that particular substance has the highest affinity. They are the most valuable provers, because they bring forward the first, most subtle and best qualified symptoms, so desirable for distinguishing the sphere of action of one substance from that of another." "Obviously, one expects these symptoms to emerge from the highest level of differentiation in man, the nervous control centres with the psychic functions. What may be summarized as mental symptoms have often that distinctive value, but not necessarily and exclusively so. (The furious excitation of a man poisoned with belladonna is not more characteristic of that drug than the inflammation of the throat of another man.) (The one set of symptoms (syndrome) refers to the brain, the other to a mucous membrane; but that of itself does not make the former more valuable than the latter. Only such mental symptoms which, by their accuracy and distinctiveness, qualify the whole set of reactions are those with a high mark of value. The point is that they enable us better to determine and discriminate the mode of interaction between a particular substance and particular persons.' Such qualifying criteria are appropriately

called *modalities*. They may equally refer to the pains of an inflamed joint as to coughing and so on.

{ As stated, mental and physical, functional and structural, subjective and objective, are nothing more than (sometimes convenient) dual aspects of one and the same entire event in our experience.

“Natur hat weder Kern noch Schale alles ist sie mit einem Male” (Goethe.) (Nature has neither kernel nor shell, she is all in one, entire.)

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“The modalities specify certain conditions under which the reactions become manifest, the symptoms increased or diminished, worsened or relieved. As these conditions may either be environmental circumstances or belong to the particular constitution of the reacting person, the modalities are of a twofold kind. Some of them state how the reactions are influenced by outside circumstances, such as warm and cold, dry or damp weather; their reactions to sun, dim light or darkness, the time of day or night, rest or movement, surrounding persons or objects, etc. Others describe in detail the more or less susceptible types, such as torpid and slow or irritable and quick, plump or lean, melancholic or sanguine, dull or highly strung, pedantic, irascible, mild, meek, haughty, etc. Again, such separation of outer and inner conditions is something artificial, for convenience. Actually we are dealing with the results of continuous interaction, for a person cannot be separated from his environment.”

a)

b)

“Modalities are pointers qualifying the observations which result from such biological experiments as our provings; pointers not only to knowing but also, as we shall see in the next lecture, to using the tested substances.” It is because of their significance towards understanding the new advance in science which these complex experiments represent that I venture to claim your special attention for

this unfamiliar subject. One must first see the new before one can appraise it.

Let us take some examples. Provings of Bryonia (white bryony) reveal stitching pains, dry cough and many other symptoms. Pains, coughs, etc., are localized near a part which, on examination, may show signs of inflammation of certain mucous or serous membranes. The structural signs of disorder, i.e., tracks impressed on cells, tissues or organs by the disturbed balance of functions, may be hardly noticeable in the beginning from mild action; they may become very pronounced under prolonged and strong action. Pains, coughing or whatever the symptoms may be and from whatever disordered parts and processes they may arise, are all found to be aggravated by movement. Now, “movement” is an adventitious, subsidiary condition in the experiment, which primarily concerns the complex Bryonia in relation to the complex whole of a person. Out of the numerous casual conditions by which the outcome of such an experiment might be influenced, “aggravation by movement” proves itself significant in respect of all manifestations and is one dominating modality of Bryonia. Now take Rhus toxicodendron (poison sumach). On testing it in the same way, pains, coughing or whatever the symptom may be, are found to be worse during rest and better from continued movement. (This modality enables us to distinguish with greater precision the actions of Rhus from those of Bryonia, though the reacting parts and their structural signs of disorder may hardly allow any distinction in a particular case.)

Arsenic, Veratrum album and the snake venom Lachesis are all able to provoke inflammation of mucous membranes of the throat and intestines, but the symptoms of arsenic are worse in the hours just after midnight; those of Veratrum in the

early morning about five a.m., and those of Lachesis immediately on awakening in the morning. This assists in distinguishing the three. If, in addition, the symptoms of arsenic are found worse from cold drinks, but those of lachesis from warm drinks, that serves even more to discriminate between the two. One could go on enumerating such details, established with more or less certainty and accuracy by observations in provings.

As to the constitutional modalities, in the provings of phosphorus one cannot produce lean, delicate, sensitive persons of fair complexion with reddish-blond hair; nor plump, sluggish people by testing graphites; nor tight and tough ones with dark complexion by giving nitric acid. Yet, if such types show themselves particularly susceptible to the action of the respective substance, one rightly notes this fact as a valuable pointer to the constitutional conditions.

You will have realized by now that the aim of these provings is not achieved by juxtaposition of the resulting symptoms, nor by accumulation of facts. So, if you should read in homoeopathic books about the "totality of symptoms" do not be misled by that inadequate phrase. The provings can and should do far more than add disconnected pieces of knowledge. (Casual observations in poisonings or in experiments on animals supply much fragmentary knowledge which is not to be disparaged and by no means to be neglected. Still, the results from provings not only supplement such knowledge with those details which can be obtained only from human beings but also provide the best opportunity for integrating all the pieces into one organised form. The tested substance is, as it were, mirrored by an entire person. We speak of a "drug picture." For each test substance, its own picture has to be elaborated.)

Some conform to this or that organ or tissue only; the one evokes reactions from the nervous system or parts thereof only; the other, say, from the urinary organs. The action, too, may be more or less transient. Other substances, however, will show long-lasting effects on the whole personality, e.g., if they interfere with the endocrine balance. The same unity in diversity has always to be brought to the fore, which marks every organ as well as the whole of a person. Characteristic traits, such as the modalities, denote the principal trend of the disturbed balance of processes.

Ordinarily our experience of any substance is restricted to the impressions from its action on our sense organs. But all living cells are potentially sensitive and irritable. In experiments like our provings the substance may irritate any cell, organ or system to which it has an affinity. The reactions, if truly observed in their organic connection, are bound to transcend the experience obtained from our sense organs. 'If foodstuff, including air, in proper quality and quantity interacts with the organism, the normal balance of life processes is upheld. Substances able to disturb the balance of these processes are characterised by the manifestations of the reactions set in motion to regain the balance. With the purpose of making these faculties known the substance is tested on man.'

Considering the innumerable substances in nature which could be subjected to this investigation by experiment on man, and the very great number of those which, owing to their known medicinal properties, call for fuller elucidation by this method, the task appears formidable. No single drug picture, no matter how many provers have contributed to it, can ever be complete and perfect; let alone a materia medica consisting of hundreds of them.' However, once recognized as

highly fertile and fruitful, this seed will grow and is worthy of cultivation by earnest workers. For practical purposes, a high degree of consistent and reliable knowledge is well within reach.

What, then, has homoeopathy done about it so far? Hahnemann himself has laid down provings of approximately a hundred medicines. In this he was assisted by his immediate disciples whom one could call the Leipzig School, for it was mainly at Leipzig, where Hahnemann lived and lectured a) at the University from 1812-1821, that he gathered a number of physicians and students around him. Few, but very careful, provings and re-provings b) were made about 1840-1850 by an Austrian School; more numerous ones, especially of American c) plants, in the following decades in U.S.A. Later, the work became more sporadic. Many excuses can be found for the paucity of original work at the end of the last and the beginning of this century. Homoeopaths were comparatively few; those scientifically minded scarce; most were busy practitioners; there were no proper institutions for teaching and research in Europe. These are, however, only surface signs of the relative decline of homoeopathy during that period. The causes lie deeper, as we shall see presently. The main current of science in that era was running against Hahnemann's conception of life, disease and healing, and against his principal method of research. The generally accepted conception was materialistic, Hahnemann's immaterialistic and dynamic, increasingly so with advancing years. To us, in our present situation, both are one-sided aspects, and, as such, inadequate. The general trend of research at that time was analytical, towards smaller and smaller parts, to be weighed and measured in quantities. Hahnemann's method was primarily synthetical, towards wholeness. In

analysis it went no further than could be reconciled with a view of the whole, in respect of which, not measure and number, but quality and tendencies to act are essential. Thus the gulf was too deep. The real issue is not a controversy on philosophical conceptions, but one of fundamental *method*. Method is a matter of ways, means and ends; plans and their execution must be adequate to the subject under research, in our instance to life, disease and healing processes. The question, whether one method is more adequate than another, fortunately is answered by examination, within experience, not by abstract dispute. Initiation of a method, if it proves to be fundamental, is a major event in the growth of science. Such a method must first be visualized and demonstrated. Hahnemann has done that, and it is for his sure vision, the élan with which he acted on it, and his remarkable achievements that we acknowledge him as a reformer in medical science."

Any cardinal reform, to become fully effective, has to wait for its proper time. I suggest that for homoeopathy, that time in the development of medical science is near. That is a prognosis; it has to be substantiated by a diagnosis of the present situation, and, to form that as correctly as possible, the essentials of the past development have to be assessed. I therefore invite you to a bird's-eye view of the history of medical science.

All Medicine has to be viewed against the background of adaptation sought by living organisms, under extraordinary conditions, leading to disorder. A pine-tree heals its simple wound with the means at its disposal, as we heal a wound with ours. (The extra effort of adaptation available may restore the normal balance—health, even improved health (e.g. specific immunity)—or it may be

insufficient—prolonged disorder—or it may fail altogether—death.

The next plane, but still only a background to Medicine, is the instinctive cure. A cow does not usually touch *Colchicum autumnale*, the meadow saffron, but when, in autumn, she is afflicted with a kind of dysentery, she takes the flowering herb and is cured. One may interpret this surprising change of adaptation to the environment thus: normally the cow dislikes the odour or taste of the plant and avoids it, but the inflammation of her intestines has changed her cravings, and now she likes the smell and taste, and the food agrees with her. We infer such an interpretation from our own experiences. A dish which smells attractive when we are hungry may be disgusting when we have had enough of it. Unwonted and even perverted cravings are frequent during pregnancy and illnesses. Instinctive adaptation, through sensing, liking or disliking to act, is, however, not yet Medicine.

Medicine implies conscious behaviour to facilitate self-adaptation, under disordered conditions, towards the best possible result. Consciously knowing that something is helpful takes the place of, but not to the exclusion of, immediate sensing that it is agreeable. Thus, knowledge enters into Medicine and the progress of knowledge is affiliated to that of the art or craft of curing.

Man as part of Nature finds himself in an increasingly complex situation, hence the urge to understand his situation. In some fields instinct no longer suffices and, no longer being exercised, deteriorates or is even lost. Objects and their changes, as observed and recognised by conceiving the impressions of the senses (perceptions), increase and become more complex. In adaptation, to order and master them, reasoning processes have

to reach further and further. ^Both, receptive observing and conceptive ordering have to work hand-in-hand to produce knowledge. † In climbing the rope of knowledge, at one time the one hand and at another time the other hand may reach higher; observation may be ahead of understanding for a while, then be grasped by reasoning; or reasoning may be ahead and its predictions be confirmed later by observation. Both work for scientific knowledge, but only together do they make knowledge, science.' "

Observations derive from an infinite diversity of objects and events, reasoning tends towards unity of order. Self-sufficient reason produces pure mathematics, numbers and formulae, an ideal of exactness and certainty, but void of content. Where numbers and formulae are applicable to occurrences in Nature, a maximum of exactness is paid for by a minimum of diversity in qualities. It is important to bear this correlation in mind, especially in regard to the more recent stages of science.

[The growth of knowledge is marked by the extension of observations, whether unaided or aided by instruments, on the one hand, and, on the other, by the increasing conformity attained through connecting and ordering them. For each epoch or representative of it, the achievements have to be discerned from the scientific attitude and the general method employed.

In the naive epoch of all simple peoples, immediate and precise observations are made; the few we have received surprise us, who have no longer the sharp senses of aborigines, by their closeness to Nature. As regards the connection between causes and effects, however, they appear primitive to us, e.g., diseases are evil ghosts to be expelled. Those to-day who see disease as an entity befalling

man, and to be taken away by the doctor or his medicine, have not progressed far from that naive state. We have learnt and can still learn about medicines, their actions and uses, from Red Indians and other primitive peoples. Chinese, Indians, Egyptians and others through the centuries advanced experience immensely, consolidated it and created a tradition laid down in writing. What knowledge survived was obtained by the simple empiric method.

It is the same with the ancient Greeks. If we turn to such highlights as Hippocrates of Kos, it is because, in this comprehensive school-tradition, accurate observation is found to be so well matched with reasoning, and a minimum of extra- or super-natural speculation. Many of his detailed observations are still unsurpassed; e.g., the description of the so-called facies Hippocratica: "nose sharply pointed, deep-set eyes, hollow temples, ears cold and shrunken, ear-lobes turned backwards, brittle skin on the face, tense and dry face yellow or darkish, bluish or leaden coloured." The circumstances under which this ominous picture proves fatal are equally well described, obviously from very extensive experience. That is only one example from a wealth of observations which remain valid. Theories, the product of ordering reason, on the other hand, can be judged in the light of experience at the time of their creation, or any following period, and much depends upon interpretation. For instance, when Hippocrates thinks the life of an organism is constituted of the four elements of Greek nature-philosophy, Fire, Water, Air and Earth, that appears primitive at first sight; but if one sees Fire representing what we should call dissimilation, Water assimilation, and Air and Earth-grown food sustaining the co-operation of the two comple-

mentary kinds of processes, his thoughts come much nearer to present-day views. Equally, if according to Hippocrates the four elementary processes so work together that four basic humours are produced, humours implying fluid structures and temperaments and kinds of behaviour, and, further, if health is seen as harmony and disease as disharmony among the four, that again makes sense, though it over-simplifies matters to us.

Hippocrates was, of course, pursuing ordered knowledge not for its own sake, not as pure science. As a physician he observed and thought in order to apply what he had found. We are not concerned here with his, or any other, practical principles of such application of knowledge; we shall come to that in our second lecture. In the present context, however, it must be pointed out what part the application plays in the growth of knowledge. With every new trial the previous observations and deductions therefrom are tested as to their accuracy. Eliminating error by casual trials is bound to be a slow process. Nevertheless, the three steps from observation through deduction to testing by further observation remain the fundamentals of the empiric method of science. It is the stem of the tree of knowledge, and no new branch can get away from it.

Observations have enormously multiplied since Hippocrates' day, though by no means steadily. There were long periods of stagnation, even of oblivion, but, after the lapse of centuries, surprisingly old and correct experience is unearthed. Our senses have been extended by instruments (telescope, microscope, etc.), measuring has become more and more exact, trials more accurate. All this involves no principal change of method.

One modification of the scientific attitude, however, has profoundly influenced the course of

development of knowledge, so much so that we are inclined to mistake the new branch for the stem.

“What used to be called “modern science” up to recent decades was started, at the beginning of the

modern science
seventeenth century, by the work of Galileo Galilei. This new turn in scientific method cannot be described by one simple term; it is analytical, experimental and mathematical in its plan. The utmost certainty and exactness, such as mathematics provide, is the aim; to achieve it, the complex objects and events in Nature are split up into more and more elementary parts—analysis; experiments are designed so as to detect the relations between isolated observations, and to fix them by measure or mathematical formulae. Analytical procedure brings with it experiments on models, which represent as closely as possible only the relation to be examined, for only in this isolation can it be determined quantitatively.

The immense advantages of this mode of research need hardly be stressed. They have been made manifest by the triumphal advance of physics and chemistry during the last three centuries. Discoveries, i.e., new observations, are rapidly turned into inventions. Analysis and experiment combine to calculate the conditions of objects or events, thus enabling the effects to be reproduced and predicted more and more accurately. Man seemed on his way to dominate—nay, to conquer Nature. The fact is that physics and chemistry dominated the era—made it the era of technology.

(The objects and events in our world of experience which one is accustomed to separate as inorganic, inanimate or non-living, lend themselves readily to this quantitative analytical treatment.) The knowledge of living organisms, or biology, had to yield to the allurements of exactness, the accepted criterion of modern science. Processes in the

living organism were examined in isolation, so as to become measurable. In Medicine, too, the disordered processes were subjected to quantitative analysis, and considered to be known only so far as they answered to that enquiry. (However, so many mental reservations forced themselves upon biologists, who did not succumb to the general spell of quantity and number (arithmania!) and could not reconcile completely the current physico-chemical conceptions with matters biological, that they preferred to accept an unbridgeable gap between the physical and the living world; a wholly unsatisfactory position for obtaining consistent knowledge of the one world in which we find ourselves.)

(The revolution of our whole scientific outlook was caused by physics at the beginning of this century.) It is still so recent that comparatively few realize its full portent. All the fundamentals upon which science had built since Galileo and Newton have been shaken, one after the other. Space, time and matter had been taken as absolute, like independent pillars; the relations of masses in motion through space and time were governed by an absolute law of causality. Now, Einstein found that a more exact observation of events required interdependence of space and time; yes, that this four-dimensional form had to adapt itself to mass, to become curved. Planck arrived at individual units of action, quanta, for which causality no longer proved absolute. The producers of quanta, electrons, jumped spasmodically and unpredictably from one orbit into another, and behaved like self-willed individuals. Neither particles nor waves described them adequately, now one aspect and now another has to be assumed.) Probability increases, uncertainty decreases, with accumulation or massing of action units, and this

assumes for the mass-events of ordinary physics such an overwhelming statistical probability that it amounts in effect to certainty.

(Such are the terminations of consequent exactness. Interdependence, adaptation, individuality, probability, a two-fold aspect of events, material (structural) and immaterial (functional)—that is a new language to the rigid physicist of the last century, but so familiar to the biologist. Indeed, physics, by its own logic, has pulled down artificial barriers which obstructed a consistent scientific attitude to the one world of living and non-living things.) It is not without humour that scientific isolationists, instead of taking full advantage of the newly-found unifying course, try, rather, to establish new partitions within physics; one for sub-atomic, one for medium (on the human scale), and one for astronomical magnitudes. That is a last stand to uphold the claims of absolutism—at least in the sphere familiar to man. Nobody will deny that, under assumptions taken as absolute during the past three centuries, enormous achievements have been made by the quantitative—analytical—experimental method, and that the future will doubtless bring many more. "The point is that, with the absoluteness of its fundamentals, the absolute reign in science of that one-way guide to knowledge has been shattered. Now that the equal right of the "other-way" guide—let us call it synoptic—has been sanctioned, it is the more apparent how the face of science has been, and still is, distorted under the exclusive rule of quantitative analysis. In a scientific epoch this loading of only one scale was bound to have far-reaching repercussions on civilisation in general; discomfiture in the wake of all the stupendous achievements, and it will take time to regain the balance.)

However, we are not concerned here with sociology, but with biology and medicine.

The knowledge of living organisms could never be swayed altogether by the old physico-chemical conceptions, though the absolutists thought it must and would be done in the future, and meanwhile considered biology as a sort of backward science. "A living individual has first to be recognised as a whole, in a continuous process of interaction with its environment. This synopsis, or seeing together, involves a major task of observation for any biological research; it is essential for putting sensible questions to Nature. It works in the opposite direction to analysis. Nor is it concerned with quantities, but with qualities.) (Now, terms like qualities and properties have become worn out; what we mean is potential actions.) They cannot be comprehended by numbers and formulae. The new physics itself has penetrated to their elements, to quanta of action. In fact, they are as significant in physics as in biology, only the old physics treated them as an unfortunate appendix, while for the immense diversity and complexity of biological objects they are of paramount importance—the essence of organisation as it were. The old physicists would have us believe that "red colour" is something absolute transmitted on a certain wave-length, while, of course, it is a potential action of that rhythm-producing "red" only under the conditions of our receptive optical system. (The new science has made us free to develop the synoptic branch with the same confidence as the over-cultivated analytic branch; both serve the growing tree of knowledge. Potential actions require accuracy in observing the conditions under which they become manifest, just as deductive formulae for possible actions require exactness.)

In Medicine this restoration of balance between the two branches, two diverging ways of tackling its basic knowledge, is overdue. On both sides the planned experiment has come into use, an innovation for improving on the casual ways of pursuing knowledge. "Hahnemann started first with his provings, experiments to discover the potential actions of whole substances on whole persons under accurate observation of the conditions under which such actions become manifest. Experimental analytical pharmacology came later, aiming at quantitative exactness?" In conformity with the general trend of science in the past century it almost usurped this particular field of research. Retrospectively, "it appears that the development of Medicine would have been sounder if the Hahnemannian branch of materia medica had been cultivated more fully, prior to the analytical studies of pharmacology on animals; at least, if the latter branch had taken due and constant notice of the former." Alas, history shows that Man takes curious and not always straight ways to grapple with the world, not only in science.

If I interpret the present situation of science correctly, "the reform initiated by Hahnemann will play an important part in the future development of Medicine." That is much to say of a physician who died a hundred years ago.

II

OUR first lecture was concerned mainly with the position of homoeopathy in pure science. "The so-called "provings" were shown to be experiments to discover the potential actions of medicinal substances on persons; they involved accurate observations of the conditions under which the actions become manifest. Once realised, such methodical research into the actual virtues of Medicine seems just the thing.) It tackles the task in the most direct way, at the very level where the knowledge is wanted and where it can be comprehended as an organised whole, like the reacting person. "Greift nur hinein ins volle Menschenleben, und wo ihr's packt ist es interessant" (Goethe). ("Just seize at man's full life and wherever you grasp it, it is abounding in interest.") (Indeed, "it is a fascinating task, somewhat of an art, to discern in the diversity of observed symptoms those which are essential from the less distinctive, common ones, and so to arrive at a more and more characteristic picture of a substance, mirrored by the life activities of a whole person.) Such is the materia medica, the arsenal of the physician, which Hahnemann not only envisaged but created. This innovation, which, one regrets to say, is still novel to the medical profession, possesses just that trend which, to judge from the recent developments in science, appears to be greatly needed for balancing the distortions due to one-sided exactness.)

Now let us assume that material knowledge and turn to its application in Medicine. Without practical urge, for its own sake, this research

would probably never have been undertaken ; indeed, Hahnemann started from a very concrete problem of medical experience ; why does cinchona bark cure malaria ? Instead of speculating about it, he investigated the actions of the bark on himself and experienced a series of symptoms which struck him as very similar to those, well known to him, of malaria fever. Apparently there was a connection worthy of further investigation. So he made more provings with other medicines, the good effects of which in certain disorders were known. Only after six years of experiments was he convinced that his intuition was more than conjecture, and in 1796 he made his method known to the profession in a paper entitled " Essay on a New Principle to discover the curative virtues of medicinal substances." Thus he deduced and proposed an empiric principle for discovering actions which, when applied to diseased persons, would give a greater certainty of cure. That is exactly how empiric knowledge is pursued, attained and extended. " Every practical method has a plan ; whether it is good or not is shown in the working. Such a plan is not an absolute law, nor a dogma to be believed in. We have seen the kind of research that is required before the knowledge so obtained can be applied in accordance with this plan. Now we have to examine more closely the plan or principle of choosing the appropriate medicine for patients. "

The principle of symptom similarity is in the centre of the homoeopathic method, and has given it its name. To repeat : in a particular case choose that medicine which is known to be able to évoke symptoms as similar as possible to those presented by the diseased person. To those steeped in " exact thinking," similarity is just one of those vague terms, unless it means something mathemati-

cal such as the similarity of triangles : (similar is what is equal in some respects and different in others ; but we are dealing here with qualities, with actions. An action is unique ; it cannot repeat itself twice in the same way. There is no ideal equality amongst actions, nor difference in parts, but when they become manifest by any reaction—say in our sensory organs—then an *image as if they were the same* is formed, and it is the similarity of such images that we are discussing.)

It springs from a very deep-rooted feeling that things which are to fit each other must have some sort of similarity. Let us go back to our cow, with her craving for colchicum when she has bloody diarrhoea. Apparently she likes the scent of it only when she is ill in that way ; she recognises the agreeable thing immediately, takes it and it agrees with her. She might well laugh at us who have to find out the aptness of colchicum to cure that sort of diarrhoea. She would utterly fail to connect the fact that colchicum can produce a similar diarrhoea in her normal days with her feeling that it is good for her in such disease. She cures herself by a kind of reflectory homoeopathy. Our cumbersome experiments would seem to her to make the simplest thing as complicated as possible. To us, her immediate way of associating the remedy with her need looks like a lost paradise, but then we have no longer the " good green meadow " around us, the remedies before our noses, nor the sense of smell for discerning the harmful from the helpful things in the changing conditions of life.

When the Red Indian has tried cinchona bark for fever with success, we find it primitive when he recognises the bark as Red Bark, and associates it with fever, and then calls it " kina-kiná " (the good bark). This comparison of qualities in the crudest form, from a few sensory impressions lead-

ing to the use of a substance, has given rise to the old (signatura rerum : the doctrine that things in Nature indicate by their colour, smell, taste or shape how they may serve man, especially in illness.) There is always a grain of truth in a bushel of chaff! Modern orthodox medicine has very little reason to ridicule these naive reflections while it still expounds general statements such as that the bitter substances are tonics for the stomach, or, to make it more difficult, that the group of Amara are stomachico-tonica!'

In the case of the bitter cinchona bark, the theory of its curative action was on the same level. Text-books in Hahnemann's days tried to explain the action in malaria from that tonic action. He could not agree that one could deduce the useful actions from mere sense impressions of the substances, but, to discover them, he introduced the planned experiment—the provings—which have been discussed. At the same time he had an intuition that the similarity between action and reaction might prove a reliable guide to the appropriate remedy. Hahnemann has been blamed for having made a thought the principle of a system—well, even a doctor may sometimes have a thought, especially if it is a good one! But Hahnemann did not make it a system of speculative thought, independent of experience. He was far too sober an observer of actual processes; he founded a practical method upon it, which is a very different thing. A method without thought and plan is a contradiction in terms. Why the substance most similar in symptoms should show itself helpful, which is an interpretation of the underlying principle of similarity, was a matter of secondary importance to Hahnemann. Some of his arguments were on poor ground, but that is of no significance compared with the all-important

question whether such method is verified by experience. Cinchona bark has cured malaria despite fallacious, even nonsensical, speculations.

We can now, after another 150 years of biological thought, see more accurately into those relations of similar actions and reactions which we will touch upon presently. It is not much use to dwell upon Hahnemann's endeavours to interpret the principle of similarity, the more so as his views changed considerably with the years, as one can see from the six editions of his main work, the "Organon," from 1810 to 1842.

Certainly Hahnemann did not discover the principle of similarity for the first time in Medicine, but he was the first to base it upon reliable observations, and to use it methodically. The principle itself had been stated 2200 years before by Hippocrates, and Hahnemann quotes him verbatim: "Another therapeutic method is as follows: as illness is caused, so by agents similar to the disease the patient recovers." Paracelsus said the same thing 1800 years later, but in more picturesque language. The great difference is that Hahnemann, living in another era, put the principle to practical test.

The principle of similarity will become clearer when one understands the meaning of "symptoms." Are the symptoms of a patient his illness, or are they only the perceptible signs of a disordered life process? Evidently the latter. This applies not only to symptoms when artificially or deliberately provoked by a poison or medicinal substance, but equally to the symptoms which manifest themselves spontaneously in illnesses under morbid conditions. To which side do these signs of disordered processes belong? To the noxious agents, or to the organism; to the disturbers or to the disturbed? Of course, to both.

They are signs or signals of interaction between the two. This interaction is specified by the kind of disturbing agents—let us call them poisons—and by the defence activities of the organism. Of all these immensely complicated interior processes we can know very little; at best we can only follow them up separately as isolated details of knowledge. Only all the symptoms together can convey an adequate picture of the processes as a whole, and they are manifestations which we can observe, not theories or speculations. We have to rely on observations, not on deductions from parts of the processes, however exact. We have seen how such a characteristic picture of symptoms can be elaborated from the result of provings, and the same applies, of course, to the spontaneous manifestations of a diseased person. The more characteristic the two pictures, the better use we can make of them.

Our purpose is, of course, to assist the defence of the attacked organism in case it is incomplete. The symptoms are neither friends nor foes; only signals of the struggle going on; but who sends these signals? The organism, of course. Whom do we want to assist in this struggle? Again, the organism. So the symptoms indicate where and how the organism, in that particular instance, is forced to conduct the defence. Do we want to increase or diminish these activities? On this answer the ways divide. There are cases where it may be useful to inhibit the defence activities of the organism—namely, when one cannot expect a successful conclusion to them, e.g., if a gall stone is too big to pass through the ducts the painful colics are evidently in vain, and we can expect nothing from increasing the contractions. Hence, we may suppress them for the present and later consider other measures—say, elimination of the

stone by surgery. In suppressing the colic pains we are temporarily assisting the patient, but we do not introduce the medicine into the course of his spontaneous defence processes. If we should proceed thus, in cases where the defences of the organism had every chance of success, we might get rid of the signs of the defensive struggle, but should be likely to make the situation of the reacting organism worse.

It is here that the suppression of symptoms, or palliative treatment, may well prolong and even frustrate the defence activities, and hinder the recovery of balance. Old Hippocrates appears to have formed a fairly good idea of this, too. He says: "What changes and disturbs the natural condition causes the pains (complaints, symptoms). Removed, on the other hand, are the pains (complaints, symptoms) by employing the opposite (counteracting) agent." Note that he does not claim more for this method than the removal of symptoms, while in his formulation of the homoeopathic principle he speaks of the recovery of the patient.

What, after all, can one do with symptoms, those images of abnormal processes? By themselves they have, of course, no opposite, unless their non-appearance can be considered as such. What is the opposite of cough? But there are many agents capable of stopping for a time the processes which throw those images on to the screen of our perception; they may temporarily paralyse or neutralise some of the upset processes. The sleepless, whether troubled by fever, pains or ideas, can be put to sleep; the heart-burn, from excess of acids in the stomach, can be neutralised chemically, and so forth. This is a short-term policy and a narrow view; short, because it does not reckon with the reactivity of the organism after such

troublesome processes have been cut down, for one expects life to go on after the attempt. The defensive processes have to start again, if possible with increased vigour. Subdue them again for a short while and their task will become more difficult with every attempt. For the perpetrator it is comparatively easy to increase his blows.

Such cunning devices against the defence by drugging are so commonly employed by modern civilised man that one cannot show them up without a feeling of shame. It speaks for the wisdom, the resilience and adaptability of the organism, that it keeps things going in spite of everything. The rare, legitimate exceptions for palliation, when time presses and one has a better plan in reserve, or where no alternative is left in face of the inevitable, have already been mentioned. Besides, in single instances, there may be other circumstances justifying leniency if the processes temporarily subdued play no essential part in the defence. One cannot be sure of that. Nevertheless, narrowly viewed the plan remains all the same. "It takes account only of those processes which are responsible for one prominent symptom—pain, cough, sleeplessness, sour rising, etc. All the other concomitant symptoms, and all their modalities, are disregarded; no need for exploring them, less trouble for the adviser, short relief for the advised, but very likely more trouble to come. So much for opposing symptoms."

Now what about using the symptoms according to similarity? Degrees of similarity, more or less similar—that is all we can say about such images. The more accurate details we get, and the better they are fitted into a picture of the whole, the better can comparison be made and the similarity be judged. We need not repeat the story of the forming of such a mental picture, and how impor-

tant the modalities are as characteristic lines. In the same way as explained for the actions of substances can such a picture be elaborated by accurate observations of the symptoms of a diseased person. So we obtain two pictures, and the best we can do is to compare them. Supposing we find the medicine-picture almost a copy of the picture presented by a patient, and there is nothing surprising in such happenings, for both are produced by the human organism and that has a finite sphere of manifesting its reactions. Numerous instances could be given where it would be well-nigh impossible to distinguish a case of poisoning, by the symptoms alone, from an illness developed from known or unknown causes. Now let us give the substance which is able to copy that peculiar symptom-picture of a diseased person. What is likely to happen? The symptoms will be increased. Let us disregard for a moment the possible discomfort for the patient, for we shall see later how that can easily be avoided. The symptoms are neither friend nor foe, only indicators from and to processes struggling to recover their balance. Just these processes, too, are likely to be increased or accelerated. Is it then desirable or undesirable? Obviously it depends upon the situation. Certain it is that these processes are enforced by circumstances, and we assume here circumstances beyond our immediate control; for we shall come to the possibilities of dealing with the causes later. If those strained processes appear to be successful within a short time—and we can judge that from experience—no interference at all is required. When the struggle is prolonged, the simile—as we may call the medicine chosen for its symptom-similarity—is likely to speed up the process. When the efforts of the organism are too feeble, the extra push will

be all to the good. It may make all the difference between speedy recovery and chronic ailment. Yes, the spontaneous efforts when left alone may tend towards the stable equilibrium of death; then they are certainly not too strong, and proper stimulation may make them just strong enough to turn the corner. But are there no situations where the efforts of the organism are already too strong and vehement? Of course, they can be too strong for the circumstances which hinder their resulting in restoration of health. We have already mentioned such cases where medicines might be used for temporarily subduing fruitless processes in order to gain time for other measures. If circumstances permit restoration, however, these defensive processes can hardly be imagined too strong, for an organism does not usually waste such efforts.

In conclusion, there are cases where stimulation is not required, and others where it would be in vain, but very many where it is desirable, and some where it is vital. And for stimulation we can use the symptoms only on the principle of similarity. The better the medicine is able to copy the picture of the patient's symptoms, the closer it fits, the more likely it is to stimulate the processes involved in the particular case. Obviously less of the stimulating agent is required, but that will be discussed later.

It might be stressed once more that, in the application of the principle of similarity, there is no room for sophisticated speculations, but only for accurate observations. Though in matters biological we must always be conscious that we are dealing with probabilities, only death is certain. In assisting the patient we can only increase the probabilities of recovery, and by using the manifest symptoms there seems no better way than to

act on the principle of similarity in its full implications.

But why all this business about symptoms? Surely they are not the disease. Why not go straight to the causes? Yes, if it were as simple as it sounds nobody would care about symptoms, and would walk what Hahnemann called the "royal road." Unfortunately, there are considerable and insurmountable difficulties on that road. First, there is seldom a single cause responsible for the disorder, such as a poison still accessible so that it can easily be dealt with. The causes mostly belong to the past, and we have to deal with the sequels. A great many happenings usually come together to interfere with the normal life processes. Even prevention cannot deal with them all. Anxiously to avoid all wind and rain in case one might catch a cold, which might even give rise to pneumonia, is evidently not healthy. On the contrary that attitude leads to a decline of life. We live in and by our environment, which we can only change slightly without ourselves being the sufferers. Life has to steer a middle course. Furthermore, part of the happenings which lead to disorder are in the organism, its constitution. Past events, whether from inside or outside, cannot be tackled directly. As to the indirect approach in dealing with their sequels, we shall come to that presently. Foremost in the minds of those who cannot but think on simple lines of necessity between cause and effect, instead of probability in the sequence of events, are the living enemies, the microbes. In infectious diseases, surely, the enemy is still in the midst of the struggle; the life processes of microbes are still in conflict with the life processes of the human organism."

In the majority of cases the person, more highly

organised than the microbes, comes out victorious. There are, however, still enough situations in which the virulence and enormous propagation of some microbes is such that man is beaten, though the microbes within him do not survive either. In the face of these acutely dangerous situations, it is reasonable to try to kill or damage those microbes in the most direct way. Ingenious plans have been devised, since Ehrlich initiated the so-called chemotherapy, to destroy microbes in the host-organism without doing irretrievable harm to the latter. For some time the good effect of cinchona bark in malaria was attributed to this direct mode of action, but more and more evidence showed that it was not a straightforward affair between the two combatants, malaria plasmodium and cinchona bark (or its alkaloid, quinine). The processes in the human body, and in the red blood corpuscles particularly, are seen to play a considerable part in the outcome of the struggle. Most of the details are still obscure to this very day, but from what is known it can be said that the guidance to these processes by the similarity of symptoms between cinchona and malaria is much more reliable than any assumption of internal disinfection. The case of arsenic compounds, salvarsan or arsphenamine, against the parasites of syphilis (spirochaetae) is somewhat different, but here, too, the original assumption of Ehrlich of direct internal disinfection can no longer be upheld. What is known so far of the actual processes points to competition between the defence activities of the host organism, stimulated by the arsenic compound, and those of the parasites against poisoning by the arsenic. In the recent example of chemotherapy, so much in the news just now, a certain kind of bacteria, causing various inflammatory processes, is tackled with

sulphur in bond with a derivative of aniline (sulphanilamides). Again, the drug does not kill the bacteria in the organism, but it hinders their growth and reproduction. One of the modes by which this happens is fairly well known. The drug competes with a substance (aminobenzoic acid) produced in ordinary human metabolism; both have an affinity for an enzyme essential in the life process of these bacteria. The drug has partly the same chemical structure as that ordinary metabolite of which the bacteria make use for their life processes. The bacteria enzymes get the wrong substrate; their own processes become disordered and they are inactivated. The usual defence processes of the human body then have a much easier task. It is of great interest that simpler sulphur compounds (sulphides), used on the principle of symptom similarity, have long proved to be efficacious in purulent inflammations, as provoked by the same kinds of bacteria. The rapid effect, so desirable in some dangerous generalized infections, cannot however be expected from them. Hence, the introduction of these sulphanilamides, though originally on the wrong assumption, is of valuable assistance in certain cases which, formerly, had bad prospects of recovery. On the other hand, these drugs, being by no means harmless, must be used with great discrimination, and must be reserved for the acute, dangerous, situations in well-defined infections. The use of the sulphanilamides against the life processes of bacteria, in order to facilitate the human body's defence efforts, and the old homoeopathic use of sulphides against the same kinds of bacteria, have apparently an actual connection, though the approach to discover these actions was totally different. The problem awaits further investigation. It would be solved if the sulphides

were shown to promote the formation of organic sulphur compounds of similar structure to that of the sulphanilamides. "The latest example of chemotherapy, penicillin, started from the discovery that the growth of a certain mould, penicillium notatum, interferes with the growth of a group of bacteria. So here, too, competition for vital substances seems to be at the bottom of its successful use. The detailed mode of action is, however, not known at present."

The described method of direct interference with the life conditions of germs can thus facilitate the task of the defence processes of the body, possibly without stimulating them. Its application is limited to cases where germs are still present. Even then, stimulation of the defence appears preferable, when it can be achieved to a sufficient extent in time, because it avoids the risk of weakening the life processes in the human body.

One can also use parts or products of germs to stimulate the defence processes against that particular infection (immunotherapy). This method comes so near to homoeopathy that it needs only cursory mention. The similarity of processes and symptoms is then deduced from the similarity of the agents. Of course, the sphere of this method is even narrower.

With the increase in knowledge of abnormal physico-chemical processes in the body, it becomes alluring to normalize them quantitatively. When a substance is found deficient one tries to add; when in excess, to neutralize. In cases where an organ is not functioning, e.g., the thyroid gland destroyed or the endocrine organ of the pancreas degenerated, the regular substitution of the product is, of course, an effective palliative. Some successes of such organo- or hormone-therapy, though of a palliative nature, have encouraged

application of this quantitative-analytical thinking in Medicine. It can easily be seen that all the faults of methodical symptom suppression, through shortsightedness, are encountered not less but even more on this road. The cutting out of the immense complexity of inter-linked processes is even more misleading, for the isolated symptoms are at least reflecting groups of disturbed processes.

"The scientific value of such elaborate detailed research is not questioned. (Every glimpse into the smooth or disrupted working in the vast laboratory of a person within its environment is welcome. But isolated facts, however exact and measurable, become fallacious, and failure looms ahead, when active intervention is based upon them, while their part in the whole is left to guess-work.) The sterility of achievements from this one-sided scientific attitude bears witness to this. There is no greater contrast to the homoeopathic approach of observing, thinking and acting, always aiming at wholes."

It is beyond the scope of this discussion to go into those methods of treatment which employ other agents than medicinal substances, such as physio-therapy and psychotherapy. Parallels in their theory and practice would emerge, and it may be submitted that they would benefit from reflections on analogous lines. The tools are different, but the task is the same: to put a whole person right within his environment, so far as our knowledge and the circumstances permit. It goes without saying that the homoeopathic method has no claim to exclusiveness."

Yet homoeopathy, though complementing the other methods, involves a change in the general attitude to the task in Medicine. It is novel in the scientific approach, in the pertinent knowledge so far attained (and to be pursued further), its

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materia medica, and in the methodical application of such knowledge on a principle which is not only plausible but appropriate and promising. (The measure of a homoeopath is his knowledge of the tools, materia medica, and his faculty of correlating them with observations derived from his individual object, the diseased person. The measure of homoeopathy as a method is not merely its reliance on accurate observations and consistency of thinking and acting in accordance with an adequate conception of processes in Nature, but both must prove themselves to be so in actual experience. The hard core is that such judgment can be given only by those who have that knowledge and know how to apply it.) Suggestive assertions bear little weight. All homoeopathy does legitimately claim is that it should be properly known, properly tested, and then judged, not the other way round.

To quote the famous first sentence of the aphorisms of Hippocrates, "Life is short, art long, the proper moment is speedily missed, trial is elusive, judgment difficult." Our life is short, but the development of the medical art is interminate. Each generation feels itself at the top, but rare are those who see the present and future development in its proper light, even rarer those who, like Hahnemann, open up a new way. Proper timing of intervention is one of the greatest arts in Medicine. Trial is elusive when the plan is vague, but accurate observation and sound, practical principles can do much to limit the uncertainties inherent in life processes. Judgment remains difficult.

What are the criteria for judgment on the results in Medicine? The grateful patient may assert that the cure was due to the medicine; the doctor, too, is inclined to be partial, and to

jump to the same conclusion: "after that medication of mine the improvement set in; therefore the improvement was due to the medicine." The best way to make certain seems, as usual, to have recourse to the great number, to statistics. What kind of certainty does it provide? Why does one see so often that, in the field of such complex events as life presents, all, and yet nothing, can be proved by statistics? If statistics are so good a criterion, how can one account for the uncertainties and fluctuations in assessing the curative value of medicines, so obvious to anyone who looks back over a period of only two or three decades? For a short while remedy No. 1 is praised as almost infallible in disease A; in the next few years the remedy is forgotten—obsolete. (Statistics need common denominators, but diseased persons are individual cases; their situation changes, cannot be fixed as the same throughout the individual process. Abstracted disease-diagnoses are inadequate for treatment and assessment of the results, and the errors arising therefrom are only multiplied by statistics. All exactness derives its virtues and its vices from the abstraction it implies, and as unique individual events, actions and characteristics cannot be comprehended by numbers, statistics can give us only the less interesting half of the truth we are seeking.) A remedy may be condemned as obsolete, because it was successfully given once in the appropriate situation of a patient, and nine times under inappropriate conditions. Nor does it follow that a remedy which has given good results with eight out of ten people with the same diagnosis, but in ten very different situations, is the correct treatment. In another dose, or at another stage of the disorder, it might have benefited just the two refractory patients, and been ineffective in the other eight cases. It makes no difference

Statistics

whether you multiply these numbers by ten or by 100. If it now comes to judging say, 500 remedies, the prospect of coming nearer to the truth by statistics alone becomes very feeble.

Judgment of the results needs backing from another quarter. It comes from accurate observation of actual events, not from exactness in numbers. If, from curative planning, a certain course can be predicted, observation of that course is the criterion. As already mentioned, one expects, after giving the appropriate medicine on the principle of similarity, first an increase in just those symptoms which it fits. If that happens within the time approximately known from experience, and the improvement of the symptoms follows afterwards as planned, then it becomes highly probable that the remedy has played its part in the cure. Whether that part was decisive or not may still be a matter of opinion, which is formed from the experience of the observer, but the remedy has worked according to plan with a high degree of probability. That is as far as one can go. In complex processes, only paralysing effects can be predicted with great probability, and death with certainty. Thus, because a definite plan is tested just on the most complex processes, prediction of the course of events supplies a good criterion in individual cases. Trial can be less elusive in the days of planned experiment than Hippocrates thought, and judgment better substantiated.

The initial aggravation is not always noticeable when the fitting remedy has been employed, for one can, and usually does, provide against it by certain measures, especially by reducing the dosage, as we shall discuss in the next lecture. If it occurs, however, it is a strong point for becoming more convinced of the efficacy of the remedies so

employed. Then conviction is consolidated, and grows with accumulation of individual cases accurately observed; statistics of abstracts cannot convey that.

Obviously, chronic diseases would provide the best opportunity for making such accurate observations; their drawn-out course can be followed more closely than the vehement and rapid events in acute diseases would permit. In chronic diseases the initial aggravation is often seen to take astonishing shapes. After a fitting remedy, an old and quite forgotten complaint may break out. Now the patient remembers that this complaint had suddenly disappeared, perhaps a skin eruption after it had been treated with ointment; instead of that, for years he never felt quite well, until a very different disorder forced him to seek treatment. After the outbreak of the old syndrome the later substitute disappears, and afterwards the primary disorder. To call the later complaint a substitute for the first implies an interpretation that seems justified by often repeated experience of similar courses. The psycho-analyst is familiar with analogous experience. He sees frequently the whole confusion of neurotic distortions disappear when the original psychic conflict has been laid open. He, too, speaks of the neurosis as a substitute for the suppressed or unsolved conflict. Similar courses of events, after a slight stimulus with the fitting remedy, are not less impressive. Here, briefly, are two examples:—

A writer, aged about fifty, suffers from neuritis in arms and legs, so far unrelieved by various treatments, including physiotherapy and homoeopathy. No special causes can be ascertained. A small patch of eczema on one leg calls for attention—almost forgotten by the patient, who says that it is the remnant of a generalized eczema in his

childhood. Sulphur, in a preparation and dosage adjusted in accordance with homoeopathic principles, is given. Then, for approximately six months, a moist eczema spreads over the whole surface, while the neuritis subsides. At the end of that period the eczema has completely disappeared and he feels better than he has done for years.

A man in his twenties comes with asthma. On interrogation he asserts that the attacks started after he had got rid of the sweating of his feet by walking barefoot on a cold stone floor. After taking Silicea the feet become sweaty again, and the asthma disappears.

There is no point in discussing here why sulphur or silicea were chosen in the respective cases. That could not be done without assuming some knowledge of their actions on the human system. It can be understood without further comment that a few such observations have an import very different from that of statistics. Set against it, say, 1,000 cases of eczema treated with sulphur ointment; averages of short-term results are computed, which involve extreme abstraction and remoteness from the actual happenings in the course of each individual case.

Yet "observations" like those briefly recorded give food for more positive thought as well. They "show that the principle of similarity can be applied, not only to the present symptom-picture of a patient, but can extend its reach into his past." It is not always easy to find the salient point in the history of a chronic patient, the events marking a past disorder from which the present situation (often very different in its manifestations) has developed. Hence the unusually thorough quest a homoeopath has sometimes to pursue, besides his seemingly all-too-detailed investigation into the present com-

plaints. It is the search for the best point wherein to insert the lever of his medicine, so as to unhinge the whole of the processes which have gone wrong. "The patient is not only a whole in his present state of disturbed activities, but he is also one with his past development."

"So we come across a new dimension in the disorder of a patient—the depth, as it were. One speaks of deep-seated illness, meaning deep-rooted in the person's past. "One of the revolutionary accomplishments of the homoeopathic method is that it can deal appropriately also with the history of a patient." The knowledge of the potential actions allows application of the principle of similarity also to remote observations in the past, which appear responsible for the present situation."

These possibilities of improving on his method to make the cure of chronic diseases more thorough and complete could not escape the searching mind of Hahnemann. When in his 62nd year, he started pondering on that issue of changing and alternating disease manifestations, searching for a basis. Only at the age of 73, in 1828, did he publish his findings in the first volume of his work, "Chronic Diseases, their peculiar nature and homoeopathic cure." This book incurred even more misunderstanding and violent controversy than his two previous main works, the "Organon" and the "Pure Materia Medica." It must be admitted that, in pursuing this important extension of his method, "Hahnemann made the same mistake of rash generalization" which formerly he had rightly censured. He asserted that all chronic diseases could be traced back to three main causes, "miasms" in the old terminology, to psora, syphilis and sycosis; the vast majority to psora, suppression of skin eruptions such as itch. Not much purpose is served by explaining these theories

and by trying to sift the wheat from the chaff; the latter has whirled up plenty of dust already, and the wheat can be found by observation and experience only, not by speculation. The essential issue remains, that a new avenue to fuller knowledge of the patient, and to making use of it, has been shown. After another century one may regret that it has been obscured by the accessory, overhanging growth; but then, how little has the principal reform been understood and applied up to the present day? The improvement in the treatment of chronic diseases according to the homoeopathic principle cannot be appreciated unless the implications of the method itself are realised. That will only come to pass when homoeopathy flows into and influences the course of Medicine.

In the expectation that the appropriate time is not far distant, we venture here to recall Hahnemann's contribution, and to examine it in the light which the present phase of development permits.

III

OUR previous reflections on homoeopathy might be put in a nutshell like this: It is a method of employing agents so as to stimulate processes in a diseased person. These agents are tuned in to the particular patient with the help of his signals (symptoms) pictured as a whole from his present situation and, where possible, also from essential events in his history. A pre-requisite of such a method of cure is a ready knowledge of the potential actions of the substances which are to serve as medicines, and these "drug pictures" are obtained from appropriate experiments, provings.

Now we come to certain technical implications of this method of curing. They concern the preparation and the dosage of medicinal substances, for to such agents we have restricted our discussion. Those who want a quick answer to the question, "what is homoeopathy?" may well be disappointed that they had to listen for two hours on the mere outlines before coming to the famous "homoeopathic doses." These innocent people who know nothing more of homoeopathy than that it is a matter of applying medicines in very small doses know indeed less than nothing about it, their view being erroneous. One cannot discuss or understand technical details before knowing the purpose which is served, the connection for which they are designed. One would not harness the horse at the tail, funny though the tail may look at first sight!

Thus the technique must suit the purpose. With the same substance you can achieve very different results.¹⁾ With nitroglycerine one can blow up a

rock or provoke changes in the blood circulation of an organism either so that a person suffers a severe headache or, under other circumstances, is relieved of a similar headache after its use. What the particular substance can do obviously depends not solely upon the quantity which is used but also upon the physical state in which it is, or into which it is changed for the action. For an explosion, an appropriate quantity of nitroglycerine is ignited because the sudden expansion into gas is wanted. For medicinal use, be it in a proving or for curing a patient, we have to consider not only the suitable quantity but also the suitable preparation of the substance. Furthermore, the two, quantity and preparation, are closely interlinked. As a matter of convenience, however, we shall have to discuss them separately.

As regards the quantity, we assume that a certain substance is used in a suitable preparation. The suitable quantity then will depend upon what the substance is required to do. In the case of provings, where one intends to elicit reactions from persons in a balanced state of health, the question of the suitable quantity is clearly answered by experience. 'The quantity required varies according to the susceptibility of the prover.' It may be recalled that for obtaining distinctive, well-qualified symptoms, the provers are the more suitable the more susceptible they are to the action of the particular substance. 'There are instances of extreme susceptibility to certain substances well known under the term of idiosyncrasies, e.g., a man may have an attack of asthma every time the pharmacist next door opens a bottle containing the powdered root of a Brazilian shrub, Ipecacuanha. Numerous instances could be given, such as skin inflammation from the presence in the room of certain Primula species, or from the slightest

contact with the leaves of poison sumach (*Rhus toxicodendron*), all the symptoms of an acute cold from the slightest traces of Iodine, and so forth.' It might be difficult to find somebody without extreme susceptibility to one or the other of the multifarious agents in the world; a person cannot be supposed to show himself fully adapted to all and sundry. 'Still, idiosyncrasy is an extreme, the opposite to an almost complete indifference to the action of a certain substance.' The quantities involved may appear infinitesimal, but what is to be said of the "quantity" of scent which enables a dog to trace a familiar person through the streets of a crowded city? Surely, quantity becomes merely a relative aspect of such events. However, under no circumstances must one lose the firm ground of observation and we are concerned with potential actions of medicinal substances. The smallest amount which is found to provoke reactions in a particular prover is the most suitable to detect the more distinctive symptoms. A series of provings is, therefore, likely to provide us with a certain range of data for a particular substance. The scale cannot be predicted but must be found by observation. It is only to give an idea of the possible range that numbers may be recalled here, e.g., that "certain sulphide compounds, like mercaptan, affect our not very acute sense of smell in concentrations of one part in one billion parts of air, that is $1 : 10^{-12}$; that pharmacologists have graphically registered effects on the blood circulation in animals from camphora, one part to 1000 billion parts of diluent, that is $1 : 10^{-15}$."

What, then, is the position when it comes to using the potential actions of a medicinal substance for a diseased person? Under the guidance of the principle of similarity, an extra push is intended to be applied just to those reactions which have

*Fitting
the
power* been summoned¹¹ for regaining the balance out of the disorder. Obviously this requires less energy than eliciting reactions out of normally balanced provers. It may, therefore, be broadly assumed that the quantity required should be below the range ascertained by the provings. Further, the better the medicine appears to fit the case, the less energy would be required, nor is any excess desirable. The situation may be likened to that between key and lock, a very complicated lock, yet, the more accurately the key fits, the easier the unlocking, whilst forcing, with a badly fitting key, leads to damage.¹² Any such reflections are only of preliminary account. Observation is the unfailing test. As has been pointed out, the medicine employed on the homoeopathic principle is likely to increase, for a short while, the symptoms of a patient, a welcome indication that it is working on the expected lines. This initial aggravation should be as slight as possible. It follows that the observation of this temporary increase in symptom intensity allows us to gauge the quantitative range. The adequate quantity of a preparation would thus appear to be the smallest amount which still acts manifestly, shown in a particular case from the slight initial aggravation. Indeed, this is exactly what Hahnemann gave us to go by as a general rule: "the dose which shows a slight, just noticeable response by a short increase of the symptoms, is the appropriate one." Thus observation answers the query regarding quantity, but it can only be answered in a particular case after dosing. However, one can make certain inferences as to the probable range of suitable doses from past experience with the same preparation in provers and patients. Appraising then a new patient's situation on its own merits, one is not likely to be altogether off the mark. Thus by observation one can narrow

down the uncertainties inherent in events under such complex conditions.

The question asked in homoeopathy is thus not what is the smallest dose which may still work under ideal circumstances, but what is probably the adequate dosis in a particular case. We cannot expect more than indications gathered from experience. In general terms the quantitative side of the dosis question can be answered thus: "It should be the smallest amount which procures the desired effect." As explained, it can be expected to be below the range of dosis which has given results in provings; further, the better the preparation appears to fit the case, the smaller the dose to be chosen. All this seems to point to smaller and smaller dosage, in fact experience had led Hahnemann and those who followed him to use extremely small doses. Where is this scaling down to end? Before we can attempt to consider that problem, the connection of quantity with the physical state of a preparation has to be taken into account.¹³ Anyhow, a tendency towards small doses appears inherent in the homoeopathic method. There is always a danger that such tendencies may run wild, that is away from experience; the small dosis then becomes an absolute principle, the smaller the better, the smallest the best, an end in itself! Homoeopathy is then identified with the use of infinitesimal doses, a primitive but common view. Whatever may have been said by others, such one-sided teaching is not in accordance with the homoeopathic method, nor with Hahnemann's conception. It is true that Hahnemann, in the course of his experience used ever smaller, in his later years incredibly minute, doses, and eventually proclaimed for many medicines the 30th potency (a term which will be explained presently) the best one. There he halted because, as he said, "one

has to stop somewhere." Experience is not to be confined to one man's, be it even Hahnemann's. There are not, and cannot be, any fixed and limiting rules as to dosis; every homoeopath is free to make and to follow his own experience, he will then soon find that what suits one case will not suit another. Situations, not the prejudice of a prescriber, must determine the dosis of a given preparation. Fortunately, the adaptative processes of an organism can turn to good use doses that vary considerably in range, and the sensible and attentive prescriber will find the choice of dosis much less difficult than the choice of the appropriate medicine. (It cannot be stated too often that infinitesimal doses are not a principle, let alone an article of faith, in homoeopathy and it must be emphasised always that the choice of the dosis follows after consideration of the patient's situation and of the preparation.) Often enough the doses have to be quite substantial because the level of reactivity is so low that no mild stimulus evokes a response. Also the various substances do not all work on the same level, some have an affinity for peripheral tissues or organs, others for hormonal or nervous centres. The former need more massive, the latter more subtle dosage. In short, indications from many quarters can be found for the choice of a proper dosis, but there are no cut-and-dried rules; life does not lend itself to quantitative ruling. "Just as "the more the better" is absurd in matters biological, e.g., if 1 mg. of arsenic produces good results, how much better would be 2. So the reverse (negative arithmomania!). "The less the better, the infinitesimal the best" is sheer doctrinairism.)

(Quantity alone, as a gauge of action, is meaningless.) In our case of medicinal action we could only hint at the enormous diversity of substances and

situations of the patient which have a decisive bearing on the choice of dosis. (Dosis itself implies something apart from quantity and that, though of great consequence, is often overlooked. Everyone knows that the same substance may be inactive in one physical state but very active in another, that for one purpose the liquid state, for another the gaseous is required, say, of water driving an engine. Yet, for medicines such discrimination is often neglected, the chemical substance only being considered. Actually the preparation of a substance to serve as medicine is of the greatest significance.)

There is an old saying that 'substances do not act unless they are dissolved.' That makes sense only when applied to certain chemical actions, as experience shows; but as we have restricted our discussion to chemical substances serving as medicines, we may well start from such branch of experience. (Seeing the importance of solubility for chemical action, Hahnemann once more had an idea, acted upon it and put it to the test. If substances are unfit for medicinal action because they are insoluble, perhaps they can be made soluble.) That idea led Hahnemann to a technical discovery. He found that insoluble substances like chalk, flint, etc., by a procedure of triturating them intensely with another substance, such as milk sugar crystals, could be changed into another form and then show themselves able to act as medicines on organisms. Nowadays it is generally realised that solubility is a relative term. It not only needs to be qualified as to the medium in which a substance is soluble but solution must be defined by the degree of subdivision of the substance. One not only speaks of molecular solutions, where the substance is assumed to be dispersed in molecules, but also of colloidal solution, where the

Peculiarities
of colloidal
forms

particles are aggregates of molecules but below a fixed size, small enough to remain suspended in the medium.) In this colloidal dispersion substances show a great many peculiar properties. The knowledge of colloids has grown so as to form a new branch of physico-chemistry. (What Hahnemann discovered was that this physical state showing new potential actions could be achieved by mechanical subdivision—namely, by his device of triturating a substance with a suitable vehicle like milk sugar. Hahnemann did not call this new state "colloidal," but he clearly saw that new properties were developed by the procedure and claimed this to be his discovery. "Indeed, had he not been the founder of a method of Medicine all too advanced and strange for the views of the conservative majority of his era, he might well have been celebrated this 2nd July as the discoverer of colloid chemistry, giving him priority to Graham. Again, the discovery was the result of very practical motives—namely, to develop the medicinal virtues of insoluble substances.")

It is necessary to give an accurate description of Hahnemann's procedure so as to appreciate its portent. One grain, i.e., 0.06 grammes of the substance is triturated with 99 grains (approx. 6 grammes) of milk sugar in a mortar for one hour (we may leave out the exact time given for alternate rubbing and for scraping mortar and pestle). The result of the first hour's work is 6 grammes of what is called the first potency of the particular substance. "The term "potency" has acquired a two-fold meaning. Mathematically the attenuation of the substance 1 : 100 can be expressed as 100^{-1} , i.e., the first negative power of 100. At the same time Hahnemann wanted to indicate by potency that the actual power of the substance had been increased (not, of course, by

Potency
a)
b)

an exact measurable amount, for action is an event dependent on the circumstances). Of this 1st potency one grain is taken and treated in the same way with 99 grains of fresh sugar of milk for another hour. The result is the 2nd potency. One grain of that 2nd potency triturate is again subjected to the same procedure with 99 grains of fresh milk sugar for a third hour. That yields 6 grammes triturate of the 3rd potency. The attenuation of the original substance is easily calculated as 1 : 1,000,000 or 100^{-3} . At this stage Hahnemann considered the particles sufficiently small to become soluble in water—at least, he could detect no trace of them on dissolving the preparation. Even when examining the solution under the microscope we can only confirm that his statement is correct in respect of practically all substances, even heavy metals, provided the manipulation has been adhered to strictly as described. The purpose of making ordinarily insoluble substances soluble has been achieved. In the intermediary stages the subdivision of particles can be shown to have more or less progressed through the colloidal state, and it would be of no practical consequence if, for certain substances, a solution of the 3rd potency would still have to be called partly colloidal and not a genuine molecular solution.

It should be noticed that not just the proportion 1 : 100 has been given, but exact and very small weights of substance and vehicle and the exact working times. That is essential if the desired result is to be achieved. Evidently the same subdivision would not be attained if ten times the stated quantities were triturated in a bigger mortar for ten times as long. Surface of mortar and pestle, sugar crystals and manual power all work together, the outcome cannot be adequately described

arithmetically, it can be stated only in technical terms.

What matters is the degree to which subdivision of particles is attained. There is no need for calculating the increase in the number of particles in cubic progression and of the total surface in squares; the latter would be offset by the attenuation progressing in squares but the former would come to ten times the number of particles against that of the preceding potency. Such calculations are ideal in the abstract, the actual results are dependent on the technique. Equally, one need not dwell on all the physico-chemical concepts, such as surface action or motility of particles. One might as well assess the new possibilities arising from subdivision by simple reflections, such as that the particles, bearers of potential action, can penetrate cell-membranes only when they have been sufficiently subdivided so that new interactions with cells may arise from such preparation.)

Anyhow, it is apparent that weight is utterly inadequate for gauging the potential actions of different preparations of the same substance. Chalk, flint, iron, copper, the spores of club moss (*Lycopodium*), the inky juice of the cuttlefish (*Sepia*) and many more, have no noticeable effect on the organism when applied in bulk quantities, but prepared in a manner like that described, their power of interaction with an organism is enhanced—at least, within a certain range—in proportion to the subdivision, and even in reverse proportion to mass and weight. As a practical consequence, a great many simple products of nature have become valuable medicines by this kind of preparation which liberates their potential for action. (To a shallow one-track mind it would seem absurd that such an ordinary and necessary ingredient of our food as common salt, sodium

chloride, could be an active medicine in quantities of weight far below the usual intake. Yet it is quite plausible that common salt can be prepared so that an irritable cell is confronted by something entirely unaccustomed, something to which it does not react in the normal way. Quite special circumstances must obviously concur for such abnormal stimulation; a susceptible state of the cell processes, their balance in a delicate poise towards sodium chloride; but active particles of the salt, too, must be in a different state from those in the ordinary solution which flows round the cells.) No speculations, however, about what exactly is the physical state of the sodium chloride in the special case can take us any further. It might be argued that the molecules could hardly have greater freedom of motility than in a salt solution such as exists round the cells; (but it would be rash to assume that a triturate or derivates therefrom in alcoholic solution would behave in all circumstances in the same way as the ordinary solution.) Only by testing these preparations on the organism can the question be decided.) Therefore the scientific critic must condescend first to study the elaborate provings of sodium chloride (in homoeopathy usually termed *Natrium muriaticum*) and then to try these peculiar preparations on patients whose symptoms indicate susceptibility to the salt so prepared. The findings of such unbiased tests have to be accepted.

A preparation triturated to the 3rd degree, or potency, appears to comply with the demand for solubility. The discovery of new medicinal faculties of otherwise inert substances invited, quite naturally, experiments to find out how far subdivision could be pursued and used for special curative purposes. Hahnemann dissolved one grain of the 3rd triturate in 99 drops of dilute

alcohol so as to fill two-thirds of a phial; this well-stoppered bottle was then subjected to succussion by ten powerful strokes of the hand holding it against a pliable object, such as a leather-bound book. That gave the 4th potency. One drop of this solution added to 99 drops of alcohol in a fresh bottle treated in the same way yielded the 5th potency, and so forth. It seems pedantic to relate these detailed rules of Hahnemann, but if we are to judge the results we shall do well to follow his advice: do the same but do so accurately. We may argue later. Anyhow, Hahnemann went higher and higher up the scale of potencies—"higher" meaning, in the homoeopathic terminology, more diluted (lower in concentration). When he found the 6th potency still able to provoke undesired aggravation he chose the 12th, then the 18th where he halted for some years, but later still he favoured the 30th for most of the remedies he had tested.

Imagine the effect of these promulgations on his contemporaries. It was too much. Pamphlet after pamphlet ridiculed the "Arch-priest of diluting." This was clear evidence that the whole system must be nonsense; even many of those who had followed him so far, disowned these new teachings as absurd. Imagine, on the other hand, old uncompromising Hahnemann, completely disillusioned by the bitter experience of some 30 years, now perfectly indifferent to the lack of comprehension and the abuse of his fellow physicians. He simply trusted his observation that he had seen these potencies working and asked for accurate trials. It would not be surprising to find that he had generalised too much or too rashly from his necessarily limited experience. Nobody can be expected to accept his word without testing and proving for himself, and it is reasonable to contend

that the issue is not yet settled by the positive assertions of some thousand followers or the negative results of a smaller number of others who did try. Nor is there much point in stating my own opinion that I have seen instances of the 30th potency being effective. We may well leave the issue in abeyance pending more extensive investigation.

Of course, Hahnemann was fully aware that his new assertions sounded incredible, and he reasoned about the possible explanations. Now he would consider matter to be divisible infinitely; now he thought it unlikely that any material parts of the substance could be left in these high potencies and be held responsible for the action; he therefore assumed transformation of matter into forces, free of material in the common interpretation as, say, light or thought, which, nevertheless, are seen to act. That is what he called dynamic or spirit-like action, but his, or any speculation on this point is of secondary importance. In homoeopathy the appropriate and effective dosis is a matter of observation, not of speculative thinking. Without, however, anticipating the verdict of future experience one may wish to examine the problem in the view of present-day physico-chemistry. It is now known that the divisibility of any substance is limited by the size of its molecules. Molecules are a complex of atoms, their volume in relation to their weight has been ascertained. (According to the established constant (Loschmidt's constant) only one molecule, say of hydrogen, can be expected in an attenuation of approximately $1 : 10^{-22}$ parts. Translated into the described terminology of homoeopathic potencies that would be equal to $1 : 100^{-11}$, i.e., the 11th centesimal potency. In this region then we should find ourselves confronted with the last molecule of

the original substance which was subjected to attenuation on the centesimal scale of progression. Thus we should come to the conclusion that here we have reached the utmost limits of material action, such as chemical action is understood to be.) It may be recalled that those actions seen in experiments on animals from camphora in dilution of 10^{-15} are well within the said limits; such dilution would still contain the appreciable number of approximately 10^7 , i.e. 10,000,000 molecules.

There seems to be no escape from the exact deductions fixing the last possible action of a substance as a specific whole around the 11th centesimal potency. Of course, plenty of actions are transmitted from one substance to another without disintegration of the molecules. A molecule is not a static particle but an organised whole of processes; it takes in and gives off energy. Only if we have to assume that the material molecules are used up in the action, does the limitation as inferred from the molecular theory hold good; that is to say, if nothing else has happened in the process of potentising but regular subdivision of particles up to the last molecule, and that at least one molecule of the original substance must be used up for an action which could be considered specific for that substance, there seems no way out. These premises are implicitly understood in the calculation.

Let us assume, however, that specific action of the 30th potency of a substance had been established beyond doubt. One might then content oneself by saying there is no explanation, as there is none for so many other events which happen. A high-handed statement that the observations are incorrect, because they do not accord with an undoubtedly correct calculation on a certain physico-chemical theory of matter, should appear

ludicrous. We would have to find out why that theory does not apply in the circumstances. If I venture into the field of hypotheses for a change, I wish to make it perfectly clear that they are nothing but hypotheses and as such have no direct bearing on homoeopathy as a method based on observation and experience. What could happen in the process of potentising a drug in a vehicle of milk sugar or alcohol? If the vehicle itself were transformed in a way specific to the drug at certain stages, say, when its molecules are torn asunder and separated by wide spaces of the medium, the vehicle itself might assume new properties induced by the drug. Each part of the vehicle would then transmit the change, representing specific potential action, to the next stage. How could the drug impress its molecular activity on the vehicle? Formation of new chemical compounds can be dismissed, as this would encounter the same difficulty of finite divisibility of matter. The only way out seems induction of the specific rhythm of the drug substance into the vehicle by radiation. This way of energy transfer is quite familiar to physical theory, even considered as universal. Numerous examples could be given of physico-chemical transformation effected by radiation, to think only of the synthetic reactions effected by light rays in molecular structures of plant cells or of ergosterol acquiring the properties of vitamin D by radiation of certain wave-lengths. There is, furthermore, nothing strange in supposing radiation to become more manifest as the effect of mechanical interference of the kind described for potentisation.) Indeed, certain substances have been seen to become luminescent, i.e., radiating light, under intense trituration, a phenomenon called tribo-luminescence. Yet one considerable difficulty remains: all the actions transmitted by

radiation are seen so far to be unspecific for the emanating substance, they derive their specificity from the receiving substance. In the case of a drug potency, however, we would have to assume that the rearrangement produced amongst the milk sugar or alcohol molecules corresponds to or copies the molecular action of the drug substance as a specific whole. It is at this point that we have so far no model in our experience to which we can refer. Nevertheless, a verdict of "impossible" in the name of science would appear to be nothing more than a poor conception of science which has the task of conforming thought to observation—not the reverse.)

This brief excursion into hypotheses may well be disregarded as unessential. It can and will decide nothing about the validity of observations as to the efficacy of potencies beyond the 11th. Meanwhile, let nobody be denied the liberty of making his own observations in this field; certainly not in the name of science!

Let us then come back to the technical aspect of homoeopathic preparations. So far we have considered only minerals which, up to a certain grade, have to be triturated because they are insoluble—or, if soluble, give better results when undergoing subdivision by the dry method. The majority of medicinal substances used in homoeopathy come, however, from plants and animals—roughly, 800 as against approximately 200 minerals. From these plants and animals, or parts of them, alcoholic extracts are made. Certain variations in the details of technique, required by the nature of the material, need not concern us here. More essential, and of some consequence, is another point, viz., that in homoeopathy, wherever possible, fresh material is used for those extracts, or mother tinctures as they are called. Once more, the

tendency of orthodox pharmaceuticals in the past century has been in the opposite direction, and still is; dried plant or animal material is preferred and, even more so, substances isolated therefrom—the so-called active principles. That is quite in line with the general trend of exactness. It seems, indeed, desirable that the substances to be employed should be known, and defined as to their chemical structure, if possible by a formula. For scientific research one has to know the substance one has to deal with as exactly as possible, and in that case simplifying and isolating the all-too-complex material is justified. The demands of practical therapy, however, do not necessarily coincide with those of research. A formula may help to explain the actions which have been observed, but first they must be observed. A method which isolates one action, say pain suppression by a definite chemical, say morphine, simplifies research into the physico-chemical mode of action. The high degree of probability in using morphine to that end derives, however, not from the knowledge of any intermediary physico-chemical processes, but from the narrow limits in which action is sought. The full drug opium, which contains morphine besides many other active constituents, has another and wider sphere of action. Analysis is made difficult beyond measure, but that does not hinder accurate observation of the facts. We have to rely on these, anyhow, for using a medicine. The homoeopathic method which, as we have seen, prefers to have the most comprehensive picture of the potential actions for comparative application, is independent in its research from any motive to simplify the complex; it can make use of a full drug with the same—indeed, a greater assuredness—than of an exactly defined chemical product. One thing is wanted: the drug

should be, as far as the material and its preparation allow, always the same in quality, and particularly the same as the preparation which has been used for the provings. Thus, demands of exact physico-chemical research do not interfere with the type of biological research needed for homoeopathic use of a medicinal substance.

Moreover, a great number of plant and animal materials decrease in, or even lose, their medicinal properties by drying. By always seeking the natural products at their best for acting on the living organism, homoeopathy makes use of extracts from fresh material at the height of its medicinal power. That is why in homoeopathy so many plant remedies have upheld their ancient reputation, which has been enhanced by new rational methods for finding the appropriate cases for their use. Such remedies common in homoeopathy, like aconite, bryony, pulsatilla, conium, hypericum, arnica, thuja and dozens more, are almost forgotten, and have become obsolete in orthodox modern Medicine. That is only to be expected if the preparation itself is at fault. The old pre-homoeopathic indications for the use of such plants were certainly vague; rheumatism, wounds, paralysis, skin eruptions and the like permitting no discrimination, the results were bound to be haphazard. Yet this age-long empiricism, however crude, contains some valid and useful experience; it needs improvement, not neglect. "By suitable preparation, and by assigning to each remedy its proper sphere, homoeopathy has been able to ripen fruits from a field left fallow by modern Medicine. The continuity with the experience of all the ages, of so many peoples, has been better preserved. That in itself may prove no mean contribution to the development of Medicine, which is all too inclined to live from hand to mouth; that is to

say, the latest literature going out of fashion after a decade or two."

With regard to these alcoholic extracts from plants or animals, one may be in doubt whether much can be gained by subjecting them to the process of potentisation described. As they are already in fluid form, there seems little need for further subdivision of the bearers of medicinal action. In some cases that proves to be so; it all depends on the kind of medicine and the purpose which it has to serve. As has been pointed out, (homoeopathy does not dilute on principle, for sheer doctrinairism. When required by the circumstances, in order to avoid too intense an aggravation of symptoms, mere attenuation seems to meet the case.) Yet, when delicate impulse, not massive impact, of a stimulant tuned in to a susceptible person is demanded by the circumstances, the range of potencies is extended with the great advantage of being able to choose the most suitable. In the first stages, the low potencies, the effect of mechanical subdivision by succussion is fairly evident, though not so easily demonstrated as for the particles of a triturate.⁹ A mother tincture is by no means a simple solution; it has to be considered as a very complicated structure of constantly changing conglomerates of colloidal and molecular particles. There is every chance that subdivision and regular distribution of the particles will be assisted by administering at every consecutive stage those powerful strokes mentioned before. That can be done efficiently only by manipulating small amounts at a time. It makes all the difference whether you pour a glassful of plant extract into a tub with 40 gallons of alcohol, or whether you forcibly succuss one drop of the extract in a small phial with 99 drops of alcohol to the first potency, and then do the same with one drop of that

preparation to make a second potency. You may calculate the attenuation to be roughly the same in both cases, but the preparation will not, in fact, be the same. Such trivial circumstances as the air space above the fluid and the narrow walls of the closed bottle all play their part when those movements are enforced upon the mixture. Only within narrow limits is it possible to demonstrate the static effect under the microscope or in the test tube; the difference is better appraised in action. No better indicator of the effect can be found than a susceptible person.

All the preparation of a medicine means is to have it prepared for the deployment of the desired action in an appropriate situation, and at the proper time. So much should be clear: "If one speaks of a homoeopathic medicine, that means in the first place a medicine chosen according to symptom similarity. The technical preparation to make a substance more suitable for the particular task comes second. The third and last consideration is the purely quantitative side of dosage. That is not to say that it is of no importance how often a dose is repeated. There, again, no generalisations can be made. It must depend on continued observation of the reactions. In acute processes of disease, the intervals between the doses can be expected to be short; in chronic disorders, long. It is certainly a very wise rule given by Hahnemann that another dose should not be given as long as improvement after the first dose continues, nor to interrupt such progress by another medicine."

The patient, as well as the prescriber, should realise that a medicine chosen to intervene in disordered conditions is not a food-stuff destined to sustain normal life-processes. It cannot be regarded on the same level even as the minutest vitamin. "The nearest analogy to the role of a

medicine is that of a catalyst, familiar from physico-chemistry: the mere presence, in whatever small amount, brings about or furthers processes waiting, as it were, for that mediating impulse."

Furthermore, from all that has been said, it follows that in accordance with the homoeopathic method only one single remedy at a time should be used. Any mixing of medicines not only confuses the plan—or, rather, shows vagueness instead of a well-laid plan—but also increases enormously the difficulties of appraising and deciding upon the following course of events. The simplicity of medication in homoeopathy has often enough been favourably contrasted with the old mockery of artfully mixed odd compositions. Nowadays there is, happily, less need for this, because such fallacy is almost universally recognised and abandoned.

Simplicity of action springs from a clear plan and from mastering the appropriate implements. The technical details which we have discussed can claim interest only within the frame of the entire method. All preparation, including the peculiar procedure which is termed "potentising," serves the sole purpose of bringing a medicinal substance to the highest pitch of its potential activity and to keep it there, ready for the crucial moment of intervention. As the opportunities vary considerably with the situations to be met, it is desirable to hold a wide range of such preparations at the disposal of the prescriber. Amongst them he may choose, at his own discretion, high or low potencies, guided by all the available indications shown by the individual case.

In the end the whole method boils down to individual treatment by medicines. Now everybody would agree that it is a fine and desirable

thing to treat a patient as an individual whole. This is easily stipulated, but it is quite another matter to be in the position and to have the means of conforming with such a postulate in practice. It comes easily, almost spontaneously, in psychotherapy. In a case where that kind of intervention is appropriate, the method has the advantage of using matter-free, adaptable means, by nature extremely flexible. Fitting a substance, however, to an individual patient so that his disordered processes as a whole are helped thereby to regain the normal balance obviously involves some additional preliminaries: adequate knowledge and suitable preparation of that substance. If individualisation in medicinal treatment can be achieved even as well and with less effort than required by Hahnemann's devices, let it be said and shown.

You may well ask whether in these days of mass production such a painstaking method, as homoeopathy apparently must be, is not out of date. There are, of course, opportunities for generalising in Medicine too, and we have touched upon their utilisation, especially with regard to microbic infections. No claim of exclusiveness has been advanced for homoeopathy. However, a moment's reflection will convince that there is, and always will be, an abundance of cases which do not submit to and will never respond to generalising methods. Individualisation, as psychotherapy and homoeopathy practise, will always have its legitimate place. Moreover, the emphasis on generalisation for the sake of exactness, though undisputed for technological advance, has in our times been revealed as one-sided doctrinairism for the progress of science. You may recall this point from our first lecture.

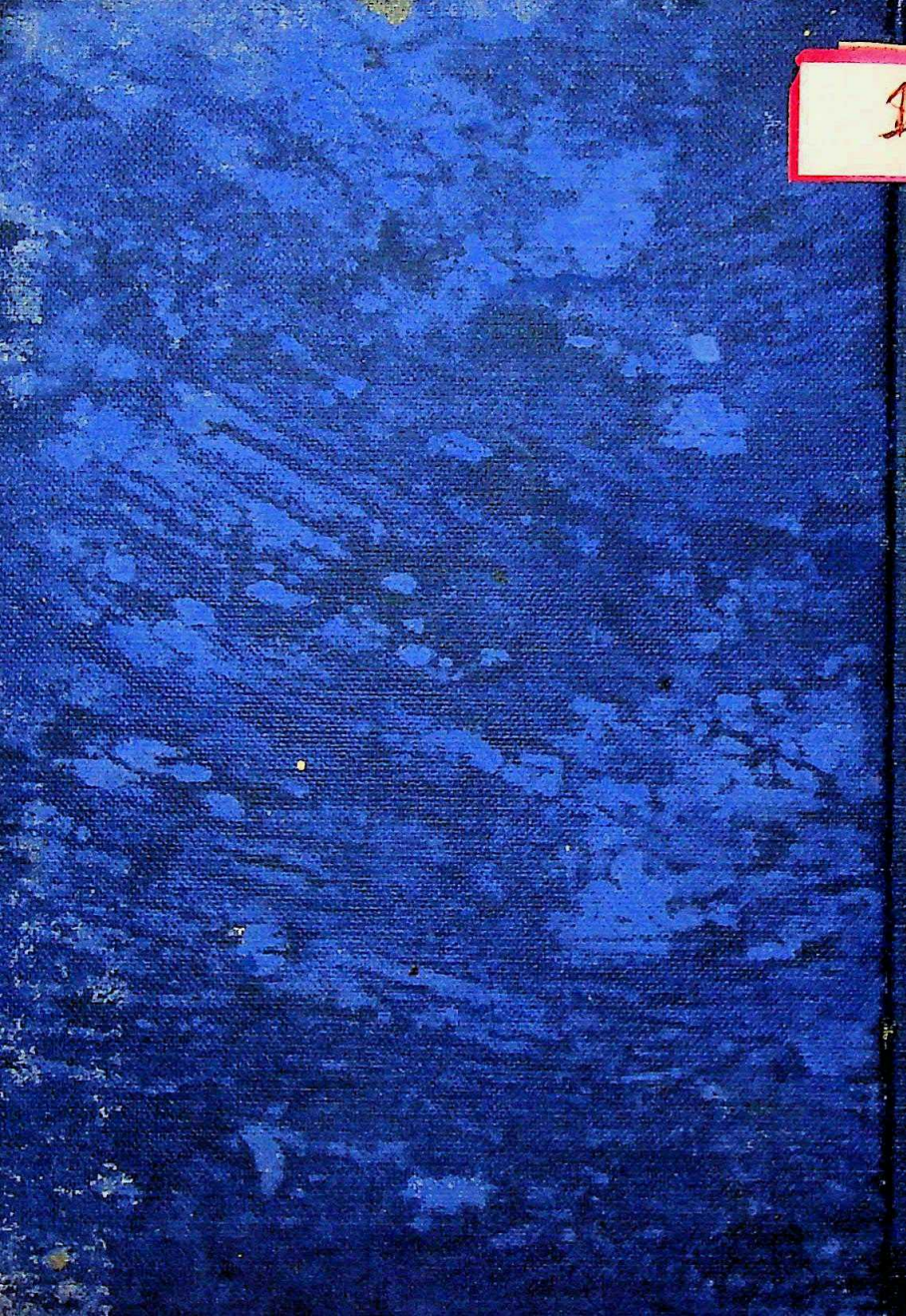
"The progress of Medicine and that of the

physician is towards freedom from doctrinairism. That is what philosophy meant to Hippocrates when he extolled the physician-philosopher. Science and philosophy, in following separate courses, have each become imbued with their own brand of doctrinairism. Medicine which has to apply science at a very high level has, conceivably, at any epoch to overcome a time lag; the modern revolution in science has not yet been realised in Medicine. The philosophy of science, at last free from all "isms," has set fair the signs for a new advance which, no longer merely technological, will apply to Medicine too. The reform inaugurated by Hahnemann 150 years before the time was ripe for it, seems destined to make its full contribution in the era ahead.

Hippocrates begins his rules for physicians as follows: "The medical art is the noblest of all arts; but owing to the ignorance, partly of those who practise it, partly of the people who can form only a superficial view of medical men, this art now already lags far behind all others."

Let it not be said, a hundred years after Hahnemann's death, that the progress of the medical art was retarded by ignorance of his work.

R. Jordan
9.12.73



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