

Mrs. L. Kolisko: Glimpses of Her Life and Work
by
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MANY readers of THE PRESENT AGE will be greatly interested in Dr. Vreede's story of her visit to Asia Minor to view the total eclipse of the sun. And certainly many will be looking for the promised account of the investigations carried out on that occasion fellow traveller, Mrs. L. Kolisko.

I was privileged to be one of those present at Mrs Kolisko's lecture on this subject which she gave at Bangor when she showed slides of such absorbing interest, and surely of such vital import to natural science that I could not rest until I had persuaded her to tell me more of the scientific investigations she had been carrying on for many years—investigations concerning which much has been published in Germany, but very little known in England.

Perhaps I should explain that I had arrived at the Summer School in Bangor because I sought to know more of the work of Rudolf Steiner, whom I had recently come to recognize as one of the greatest scientists and teachers of modern times. For years I had read widely - science, psychology, philosophy - trying to fashion from these, in my humble way, my own world-conception, and then came to discover in the writings of Rudolf Steiner all this indeed, besides a very great deal more that I had feared must always remain hidden behind doors closed to human understanding.

Most of us will agree with Sir Arthur Eddington's apt definition of man as "A being to whom truth matters" and it was from this standpoint that Mrs. Kolisko began her experiments. She said: "I heard Rudolf Steiner make certain statements and thought to myself that if these ideas of his were true they could be proved through practical investigation and research in the laboratory.

And so I came to undertake those experiments which I and others have continued throughout many years, and we are now in a position to say that many of his statements - statements which will revolutionize the present conceptions of natural science – have been proved true in the most exhaustive and rigorous experiment and investigation."

One of these statements, spoken before a group of scientists some years back, was as follows: "So long as substances are in a solid state they are subject to the forces of the earth, but as soon as they enter into the liquid state the planetary forces come into play. This means, for instance, that metallic iron or any iron salt is subject only to the earth forces, but when iron salts are dissolved in water, in solution they are subject, not only to the forces of earth, but also to the planetary forces of Mars, to which we owe the origin of iron on our earth. It means we may say, with the sober assurance of proved scientific knowledge, that the metals are the deeds of the planets upon earth." It means that our knowledge of material substances, which have long been stripped by science of every vestige of materiality and reduced to manifestations of energy, may now advance one step further through the recognition that this energy is the manifestation upon earth of the formative powers of the heavenly bodies; for example, gold is formed by the sun, silver by the moon, iron by Mars, tin by Jupiter, and so on.

It is impossible to do anything like justice in a short space to the experiments for which the seed thoughts were given by Dr. Steiner; one can only indicate here some of those by Mrs. Kolisko through which she was able to prove such momentous statements as, for instance, that planets,

metals, plants, animals, and man were intimately linked together, each dependent upon and shaped by the interaction of each on the other, not an abstract theory which posits a universe, a multiplicity in unity, but in a most concrete and real way such as modern science will come to accept if she will lay hold of all the facts of being, and not isolate certain aspects which appeal to her mathematical mind. One can only try here to give a most inadequate résumé of the work in this field of Mrs. Kolisko and trust those who are awake to its significance will take steps to get a more complete knowledge for themselves.

Briefly, then, her first years were devoted, as has been indicated, to experiments proving the relation of each of the seven chief metals with one of the heavenly bodies of the solar system. Experiment showed, for example, that gold behaved quite differently, according to the movement of the sun in the heavens, the reaction of the other metals remaining unchanged.

The method used in these experiments is simplicity itself. A solution of 1 gramme of chloride of gold in 100 cubic centimetres of distilled water is placed in a vessel consisting of two glass cylinders, one within the other, leaving only space between the two to carry the liquid and the filter paper which gradually absorbs the metallic solution, and in so doing reveals the formative forces which lie hidden in the metal. Chloride of gold always shows a picture of most varied and exquisite shades of colour-ranging from yellow to purple. Nitrate of silver, to take another example, shows a picture brownish in colour, but of most varied and interesting forms; and, again, the picture revealed by nitrate of silver varies according to the movements of the moon in the heavens, while, as always, the solutions of other metals remain entirely unchanged by the moon forces but respond each to another planet. Experiments were made both in day and night, both in the open and in a dark room, and the interesting fact was established that the formation of the picture does not at all depend on the intensity of light. For example, in a silver-iron series of pictures the greatest amount of form was in the experiment carried out in the dark night, rather less in the dark room in the day, in the open during the night, and least of all in the full daylight.

Experiments were carried out, too, when the planets stood in every conceivable relation to the other heavenly bodies those being especially arresting which were made in the conjunction and opposition with other heavenly bodies of the planet under observation. And always it must be emphasized that while one metallic solution responded to the movements of the planet to which it had relation the other metals remain entirely unresponsive to that planet. As Mrs. Kolisko points out, she is now able to get known results in every conjunction and opposition of any two planets.

A question that naturally arises in the mind of the seeker after knowledge is, "What of other metals? To what influences do they respond?" It seems that the mixed influences of several planets are at work in metals other than the seven chief metals and account for their various properties.

Mrs. Kolisko had during many years carried out exhaustive experiments concerning the relation of the metals gold and silver to the sun and moon, but she had never had an opportunity of testing their behaviour during a total eclipse. It was for this reason that she made her expedition to Asia Minor last June.

On this occasion one series of pictures was obtained from filter papers dipped in chloride of gold and revealed the following:

Twenty-four hours before the eclipse the usual brilliant colouring had given place to a pale yellow

picture, showing that already something had happened in the heavens. As the eclipse proceeded the gold solution showed only ever darkening brownish-purple shades, which gradually lightened as the eclipse passed. Finally, twenty-four hours after the eclipse, the normal gold reaction was shown, yet even lovelier than its wont, a truly entrancing picture of exquisite and delicate colours and shades. It is interesting to notice that during this eclipse, owing to the conjunctions and oppositions of many of the planets, the formative forces revealed by the solutions of other metals show most striking results.

Another series of pictures obtained during this eclipse from a solution of chloride of gold and nitrate of silver are perhaps of almost more absorbing interest. One sees, as the eclipse proceeds, the brown characteristic of the silver gradually rising up and overpowering and finally mastering the normally brilliant colours of the gold until during the totality of the eclipse the silver triumphantly covers the whole of the picture, only to recede and weaken as the heavenly bodies draw apart, and each regains its accustomed characteristics individually.¹

One stands amazed and awed before these pictures of which my poor words can give so inadequate a description, and wonders at the strange destiny by which this investigator has been led to these pregnant discoveries.

And one learns that as a girl she had an intense desire to become a doctor. But in response to the wish of her parents she entered the commercial world, which she gladly quitted at the outbreak of war in order to become a nurse at a military hospital. There she met Dr. Eugen Kolisko, her future husband.

During the war years the need arose for a worker in the research laboratory of the hospital to undertake experiments in connection with blood and urine tests for malaria and other diseases from which the soldiers suffered. Mrs. Kolisko volunteered for this work and continued in the laboratory till the close of the War years when she married and also began her medical studies.

She soon found herself at work in the laboratory in Stuttgart, which was afterwards to become known as the "Biological Institute of the Goetheanum in Stuttgart. There she carried out experiments in connection with a remedy suggested by Dr. Rudolf Steiner for foot and mouth disease, then rampant among the cattle of South Germany. This work soon develop into a collaboration wherein he indicated new and fruitful lines for the experimental research which Mrs. Kolisko found more and more absorbing.

Finally it proved impossible to unite the last period of study for the medical degree with the ever-increasing work in the laboratory, and, as has been said, she relinquished with much sorrow and regret the achievement of a lifelong personal dream.

This tireless investigator was soon at work on another wide field of research which is of the greatest importance to medicine—the effects of higher potencies of substances which, I believe I am right in saying, until her experiments had only been seen through the effects of homoeopathic remedies tested on the patients. This was a phase of Mrs. Kolisko's work of which I knew years

1 Mrs. Kolisko's book, recording these experiments made by her in Asia Minor during the total eclipse of the sun, will shortly be published in English.

Other books of hers which have already been translated are the series "The Working of the Heavenly Bodies in earthly Substance": (i) Saturn, (ii) The Sun, (iii) Jupiter and tin. All may be obtained from the Rudolf Steiner Bookshop, 35 Park Road, N.W.

ago, and it has always seemed strange to me that homoeopaths have not more generously acknowledged the importance of these investigations which were surely of the greatest value in helping to establish their approach to the art of healing on a proved scientific basis, approached from the side of natural science.

The first experiments concerned the effects of the different potencies on wheat. One should perhaps explain for the uninitiated that a potency means one part of the substance concerned added to nine parts of water, the second consists of one part of this first potency with again nine parts of water, and so on. One can readily see what infinitesimal amounts of substances are present in the higher potencies.

Grains of wheat were then watered with each potency, and a curve of growth was thus obtained, a maximum growth occurring generally about the 7th, 21st, 35th, 49th and 63rd potencies, and a minimum growth about the 14th, 28th, 42nd, 56th and 70th potencies. This established the amazing fact that a less than infinitesimal quantity of a substance can produce results equal in magnitude to, or exceeding, results produced by comparatively large quantities of the same substance. This fact has been explained by the statement that the qualities of substances transfer themselves to the solution in a negative direction. Do not such investigations open up an entirely new approach to the the origin and nature of matter?

Mrs. Kolisko published these results in a book called "The Physical and Physiological Effects of Smallest Entities" and then proceeded to apply them to further investigations concerning the relation of plant metal and planet.

One example of the result of this fascinating research must suffice. Rudolf Steiner had said that the sunflower should be called the Jupiter Flower - it had relations with the planet Jupiter. Mrs. Kolisko therefore took flower seeds and watered them with different solutions, e.g. gold, tin, mercury. The metal of Jupiter is tin; therefore, if this statement were correct, a solution containing tin should show the best result. The average height of sunflowers in Stuttgart that year was 2.60 metres; the sunflowers watered with different potencies of tin solution showed as their maximum height 3.65 metres. The plant watered with the seventh potency had seventy blossoms and was 3.20 metres in height. The plants watered with the different potencies of tin solution had stems that were flexible, strong and healthy—those watered with mercury, for example, were about equal in height, but bore poorer blossoms and had thin, brittle, lifeless stems. The sunflowers reared on various potencies of gold solution (the sun metal) showed the poorest result of all.

Experiments with solutions of both plant and metal showed that if the filter paper were in the solution of the plant juices no formative forces visible, but if the paper was allowed afterwards to take up the right metal solution these forces were revealed, and revealed in such a way that cognate structures were seen in the metals and in the plants to which they had relation. And in this connection too the plant like structures of molten metals embedded in other minerals throw fresh light on this relationship.²

The indefatigable explorer had also carried out researches in connection with the organs of the human body. One of her early investigations concerned the functions of the spleen. Dr. Steiner had said there was a relation between the spleen and the rhythm of nourishment. It was found by varying the rhythm of nourishment in certain persons the blood platelets immediately changed in

2 Mrs Kolisko's book entitled The Influence of the Moon on the growth of plants has just been published in an english translation by the Anthroposophical Agricultural Foundation.

size, colour, and quantity. As these platelets were known to be connected with the spleen, light was thus thrown on at least one of the functions of this somewhat mysterious organ.³ Later Mrs. Kolisko renewed her investigations concerning blood and urine in the light of mature knowledge, seeking to prove that the organs of the body were also linked with the rest of nature in this awesome oneness of being. To quote only one example: It was found that experiments with urine established quite clearly that the function of the kidney had relation to copper and to silver—that is, to the formative forces of Venus and the Moon and it has been proved in the medical practice which arose from the ideas of Dr. Steiner that those metals and the plants which also have relation to them are of the greatest efficacy in healing diseases of the kidney. (It is also interesting to recall in this connection the rather incomprehensible detail that copper malachite always takes the form of a kidney.) Other research work has been carried out in various quarters which indicates that diseases of various organs tend to show the same periodicity as the planet to which this organ has relation.

Such experiments as these (and they are manifold), taken in conjunction with those relating to planet, plant, and metal, open up the way to a whole new science of physiology and medicine, and point to the possibility of working, not empirically, but through the assured knowledge of the inner relationship existing between the human organism minerals to which man looks for healing. Do they not, moreover, suggest the almost undreamed of possibilities which might result from a close collaboration between the sciences of astronomy, chemistry, botany, physiology and medicine?

More, very much more, might be told did space permit, but there are also findings of deep import which, perhaps, will always remain hidden in the soul of this great woman. "There are many things," she said thoughtfully, "which one may never tell human morality shall equal human knowledge. I may not speak, for instance, of some of the secrets I have discovered in the human blood - for knowledge gives power; and when one sets free such knowledge in the world one accepts responsibility for the evil that may arise out of its abuse. That is a responsibility one may only take for oneself."

And so the question trembles on the threshold of the future—Will natural science accept the offerings brought by this retiring and all too little known collaborator? Will natural science realize the momentous import of the investigations now being carried on by devoted and gifted scientists as the result of the light shed upon the whole subject by the genius of Rudolf Steiner?

And this knowledge not only has practical applications in medicine, in agriculture, in applied science - applications perhaps almost unrealized in extent and significance - but it must eventually bring to man a new world outlook.

Man has been well-nigh overwhelmed in his struggle against the sense of futility which possessed he believed himself an isolated unit in a material universe, a wisp on the stream of time. He will find new stores of energy and courage and power in the understanding of a universe, the outpouring of God into myriad forms which yet are at one, linked up and interwoven and interdependent for their evolution, for their very existence, each upon the other.

It was Rudolf Steiner who pointed the way back through matter to spirit: it was he who said that science and art must again unite for the healing of mankind.

³ See also Mrs. Kolisko's book entitled *The Functions of the Spleen and the Question of Blood Platelets*, 1922.

And it is faithful work such as that described here, carried out in the impartial, selfless spirit of strict scientific investigation, and recorded with the joy of an artist in sheer beauty - it is such work that is helping to lay the foundation for a spiritual conception of man and of the universe.

Without this conception man must come to utter chaos. With it he can climb the next step on the ladder of evolution, draw yet a little nearer to the truth of being.