

WHITHER SCIENCE?

1. HOW MUCH DOES IT KNOW?

—by Candor

"Oh! how beautiful!!" — you exclaim on seeing a large rose with rich red colour.

But that exclamation is not scientific. In the language of modern physical science, your seeing a rose is an event or a phenomenon, and its scientific description will be something like this "The pigments in the petals of the rose absorb all the wave-lengths of the visible light except red; the red light is reflected from the petals and strikes a cone in the retina of your eyes which is sensitive to red; hence you see the red of the rose".

"And you can verify this by experiment", Science continues. "Illuminate the rose by a mercury lamp which can emit light only in blue and green; the rose will appear black; because it can reflect none of the light that falls on it. See? That is our scientific method — observation, experiment, inference, verification."

But what about the **beauty** of the rose? and the **feeling** it inspired in you? Has that no place in the scientific description? Keats said "Beauty is truth and truth is beauty". If that is true, does not science exclude truth by excluding beauty from its realm?

Oh! that is only poetic imagination, you may be tempted to say. Science is the **real** thing!

But, poetic imagination apart, the saying that science excludes truth comes also from eminent scientists of this century. For instance, the startling discoveries about the interior of an atom prompted Sir James Jeans to say in his "Mysterious Universe" that **science is not in contact with ultimate reality**; it is dealing with a shadow-world; the reality throwing the shadow-projections is beyond science. Eddington and

Einstein spoke similarly in different words. And their reason for saying so was not merely the exclusion of beauty by science; it was the result of a long and strict journey on the road of science.

How has this happened? And has it really happened? After all its fantastic and marvellous achievements, to say that science is playing with shadows, is perhaps an act of lunacy.

But that is not so. It is an act of profound wisdom!

KNOWLEDGE ABOUT NATURE

In 17th century, several intellectual humans formed a "Royal Society", and declared that its main object was "the improvement of natural knowledge". Philosophers and scientists joined it. They desired to know more and more about the nature around man by following the scientific method.

The method began to yield very rich fruits. Phenomena after phenomena were studied and their "secrets" revealed. How does nature work? What is matter? What is life? What is in the sky? And what is in man? These questions were asked and purported to be answered. By the end of the last century it seemed as if science had understood much of the world around us and what was left would be caught up very soon. In particular, the science relating to matter made great advances and explained the machinery of nature in simple terms. And in all this, not only beauty but also God was not necessary. When Laplace, a famous scientist, explained a mechanism of the physical world to Napoleon, he asked, "Where does God

come in here?" The scientist replied, "Sir, I have no need of that hypothesis".

THE INTELLECTUAL EARTHQUAKE

But the twentieth century in its very first two decades began to send mild tremors below the magnificent structure of science. And by the time the first quarter was gone, the structure shook tremendously.

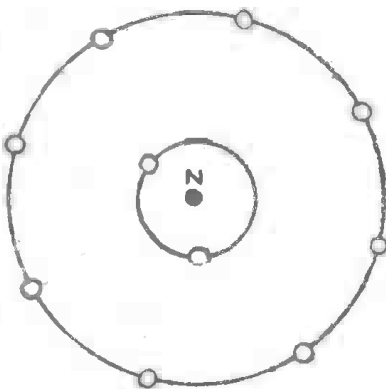
To-day, it is gloomily revealed that science has not understood even a speck of dust. The simple explanations of older science are found to be too simple to be true. Every branch of science, after a long and arduous journey arrives at a barrier beyond which lie wonder and mystery and the barrier has become impenetrable.

To appreciate this, let us have a swift glimpse of a few fundamental branches of science.

SCIENCE OF MATTER

Old Physics thought that all matter was composed of 92 elements. Any material object was made of one or more of these elements. These elements were called 'atoms'. An atom was the ultimate **indivisible** particle of matter.

But later it was found that atom was not indivisible. Each atom had an interior formation like a miniature solar system. Around a central particle called nucleus whirled one or more



other particles called electrons in specified orbits. The number of electrons in an atom determined its identity. Thus an atom of Hydrogen had one electron in it and Uranium, 92 electrons.

WHAT IS AN ELECTRON?

The fiasco began when the nature of electron was inquired into. It behaved as if it was a very small electrically charged particle occupying definite space; but suddenly it became a wave spreading in all directions and dimensions! This wave-particle dilemma (as it was nick-named) led mathematically to a monstrous proposition that the real nature of electron is **unknowable** by man's scientific methods; and to a further horrifying proposition that the universe is a matter of mere probabilities and there is nothing like "cause and effect"!

Here was then a stage in the history of man's intellect that the very basis of reason — cause and effect — was questioned. The reason questioned reason itself!

WHAT IS A PROTON?

And what about the central particle — nucleus — the central 'sun' of the atom's "solar system"? Its study developed into a vast Nuclear Physics which, to-day, reads like a chapter on mysticism and magic. Inside the nucleus, there is an electrically charged particle 'proton' along with several other particles and forces. The figure expressing the radius of the proton in centimeters requires about 16 zeros after the decimal point. Yet to know what is a proton or what is in a proton, a huge two mile long structure called "electron accelerator" is built! And that huge machine indicates that inside protons there are "point entities". That means although something seems to be there, that something is just nothing! (This point entity is called 'Parton').

WHAT IS AN ELECTRIC CHARGE?

Throughout the searches and researches in the interior of an atom, 'electric charge' has a most

prominent place. Electron has a "negative" electric charge, proton has a "positive" electric charge. And all our electric and electronic devices like lamp and door bell and fan and radio and all others are based on the working of an electric charge. But in spite of all its theories and work taken from electric charge, its exact nature is not known to science! Surprised? Read about it in the very modern "Dictionary of Science":

"Electric charge: Science is unable to offer any explanation regarding the nature of an electric charge, but it is able to describe in some detail the properties of matter that is so charged. The elementary particle called an electron is said to be negatively charged with electricity and the proton is said to be positively charged to an equal but opposite extent. These entities represent the basic units of electrically charged matter These positive and negative convention are purely arbitrary, but much of science is based upon them " — Dictionary of Science — by E. B. Uvarov, D. R. Chapman, Alan Isaacs — ELBS edition 1972.

Can TRUTH depend upon purely arbitrary conventions?

SCIENCE OF LIFE

Let us switch over from science of matter to science of life.

The whole of life-cycle on earth depends upon the growth of plants and trees. But the process by which green plants produce their food (carbohydrates) "is not fully understood" (ibid). The process is called photosynthesis and involves partly chemical and partly mystical reactions between atmospheric carbon-dioxide, water, a green substance called chlorophyll and sunlight.

WHAT IS A CELL?

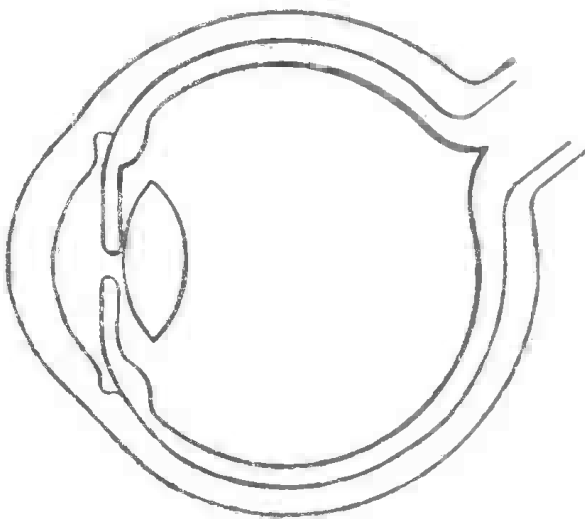
All living things are made up of cells. The body of a normal adult human being is made up of

about 60 billion cells. Each cell is a very complex unit. It is like a most efficiently organised city with its turnings and windings, streets and structures, mills and factories, export and import machineries and even a military force to ensure the entry of right substances and exit of wrong ones! Science has understood the chemical composition and working of each constituent of the cell. But the nature of the force that imparts the characteristic of 'life' to the cell is not known to science.

And the most wonderful component of a cell is its DNA. It is a large molecule in the central core of a cell which is responsible for all the hereditary characteristics and functions of the living being. Each of the 60 billion cells in your body (except the red blood cells) has DNA of the same kind and chemical composition. Yet they work in thousands different ways and the forces beneath their amazing performances are not known and understood. As to 'how' cells and DNA behave, science knows a little; as to 'why' they so behave, science does not know at all!

HOW DO YOU 'SEE'? — PERCEPTION

You may think, "what is there in seeing?" But when in a tiniest fraction of a second you see an object and become conscious of it being there, many events happen that they touch a variety of



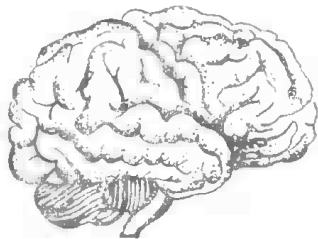
sciences. Some chemistry occurs in the eye; it is called "biochemistry of vision", and it inquires into the question: "How is the image formed on the retina?" The next question is: What is that electrical activity which occurs in the retina and carries the message to the brain? This is "neuro-physiological basis of perception." How we become conscious of the object is another question, and touches psychology. Other allied sciences relate to illusions and extra sensory perception.

Now in each of these sciences, there are more questions than answers. Some years back Sri Venkateswara University in Andhra Pradesh had conducted a seminar on 'Perception' i.e. the act of seeing things. The Report of the Seminar was published as a book. After all the papers on various sciences were read and discussions held the conductor Dr. Saraswati summed up the proceedings. She referred to the various questions dealt with during the seminar and said.

"In providing answers to these questions we have come across a highly fundamental conclusion that things are not what they seem!!!"

HOW DO YOU 'KNOW'? — THE BRAIN

And seeing is a part of knowing. You are living on a globe — the earth, moving around in half a dozen ways. You know about the world around you and within you by means of a "messy substance shut in a dark warm place" — a pinkish grey softball, weighing about three pounds, situated at the top of you — the brain. How much does science know about it? It is a curious at-



tempt to know about a thing which itself makes known all things to us. Yet there is no other way. You have to use your brain to know what the brain itself is! It is the actor and spectator at the same time.

Science knows much about the brain. Thousands of pages are written on it and thousands of operations are performed on it. Yet that knowledge is well known to be so little that the brain is described as "the darkest continent of the 20th century"!

The most human part of the human brain is 'Cortex'. It is the brain's outer layer occupying the top-position over-spreading the brain like a dome.

It contains 9000 million nerve cells. It is the thickest and most densely overgrown part of the jungle in the brain and contains mysterious and inaccessible regions. "No single scientist or a group of scientists can understand the whole cortex and it may take years to explore an area no bigger than a postage stamp". (Pifer on "Human Brain")

And mind you, a nerve cell itself has electrical activity. What is electricity is not fully known! How does the cell behave as it does is not fully known. And to top it all, a cell is composed of a few atoms of matter and the interior of an atom is declared to have regions which are not only unknown but unknowable! That applies to all living cells.

ANIMAL WORLD

We have on our mother earth, a vast world of animals. What variety and what colour? Does science know all about it? Oh, please, No. Science tries to explain the variety on the theory of evolution, but numerous things do not simply fit in. Termite, a creature stated to be lower in the ladder of evolution, is recently declared by a Noble Prize winner scientist as the master architects and civil engineers. ("Animal Architecture")

— by Von Frisch—Harcourt Brace Jovanovich (1974). They can build their homes 25 feet high! Some African species bore holes down to water under ground at a depth of 130 feet equivalent to 12 storeyed modern building)! Their sense of direction is so complete that scientists have begun to think that some unknown force operates on them. A recent Rario Science Report revealed that scientists have found unmistakable connections between the behaviours and even appetite of ants and termites and the phases of the moon and sun spots'!

The bower-bird decorating its nest like a seasoned artist with brightly coloured flowers and

teachers and glass bits and other glittering things honey bees building their combs with super craftsmanship; fishes giving electric shocks and talking with their bones; birds travelling thousands of miles — these are events beyond any complete scientific explanation.

And there are many many more events, existences, things, phenomena, which modern science has found out but failed to explain.

Science knocks the door of mysticism but is not allowed to enter.

That is the second point we shall deal with hereafter.

(To be continued)

WHITHER SCIENCE ?



Limitations of Senses and Science of Man



A Peep in the Science of ESP.

Why the Prophets?

BY : CANDOR



Cleve Backster was feeling tired. He had just finished his all night session of teaching his specialised art and science to detectives and police-men from all over the world.

He was an expert in the use of polygraph lie detector. Sitting before a person suspected of a crime with small rods fitted to his body; asking him tactful questions; observing the movements of the needles in a gadget caused by his mental reactions to the questions, and finding out whether he spoke the truth, was an intelligent and challenging job. But doing one thing, howsoever challenging, day in and day out, is also monotonous and boring.

That night just to break the feeling of monotony

and boredom, Backster thought: why not try his detection on a plant? People sometimes said plants had feelings; so why not substitute a plant for a human in his tests, just for the fun of it?

He attached the electrodes of his gadget to a leaf of a dragon-plant in his office.....and there started an extra-ordinary adventure in the mysterious and unknown interior of the plant world.

EMOTION RECORDING MACHINE

The principle of polygraph lie detector is that certain changes are caused in a human being when he is emotionally upset; in particular his brain emits some abnormal waves. When he is speaking

a lie, there is some conflict in his mind and his mental images become disturbed and confusing. This causes certain peculiar vibrations in him. These are sought to be recorded by the lie-detector. Electrodes are joined to the suspect's body; a weak electric current flows in; he is then questioned; the mental disturbance in him causes fluctuations in the current, which are reflected in a gadget joined with the electrodes. The needle on a pen inside the gadget moves; and the movements are traced on a moving graph of paper. A great expert is required to interpret these graphs and to tell the state of the mind and mental images of the suspect, and how much he is emotionally disturbed and whether the disturbance is caused due to his mental efforts to hide the truth.

Of course, there was no question of the plant 'speaking a lie'. But the lie detector was sensitive enough to record any emotional or sentimental disturbance. Backster's experience with

the humans was that the graph showed a peculiar type of tracing when his subject's well being was threatened. So why not try that on the plant?

"I'll burn a leaf with a match stick and see how the plant feels", he thought. He was startled to observe that no sooner that thought passed in his mind, the pen of the decetor jumped and moved almost in a similar pattern of a human, who is physically threatened! And this happened even before his hand could go into his pocket for taking out the match box!

The plant was reading his mind!

When he thought, "I will just pretend that I will burn the leaf, though in fact I will not" and took out the match box, the graph did not indicate any reaction in the plant.

The plant seemed to be aware that he was just pretending and did not mean any harm!!

This was in 1966.

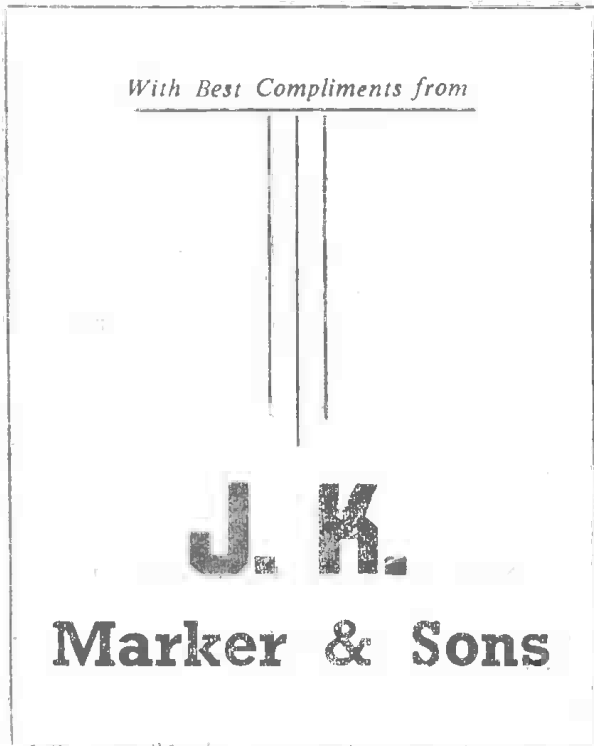
BETTER PERCEPTION IN PLANTS ?

Backster then set up a laboratory, went on experimenting, found that the plants had emotions, they could read the human mind even from far away, they could store information, they had memory, they could perceive better than the human eyes!

He published his experiments and results in a scientific paper "Evidence of Primary Perception in Plant Life" in the International Journal of Parapsychology (1968-Vol. X). The paper attracted world wide attention. Money and encouragement came. There is now a Backster Research Foundation Inc., and a tremendous progress in this new scientific field.

AN-EGG EMOTIONALLY DISTURBED!

The later researches of Backster were further



startling. One day he broke a raw egg to feed his dog and the pen of a polygraph attached to the nearby plant jumped! The plant was emotionally disturbed at the breaking of the egg!! It did not perhaps like a life being destroyed. Is not the egg the beginning of a life?

That led Backster to another by-way of research. He found that an egg had a rhythm the tracing of which was similar to the heartbeat of a chicken embryo and that was much before the egg had formed any physical structure!

And the climax was reached when he took two eggs, put one at the end of the room on a 'cardiograph' and dumped another in scalding water. The cardiograph pen jumped, indicating that the first egg was disturbed by the death of its partner!!!

THOUGHT TRANSMISSION

One of the most important indications of Backster's experiments is that plants can read the human mind or in other words they can catch human thoughts! They must have a special faculty for this amazing feat. This leads to a further inference that in nature there must be some means of thought communication other than the normal human method of speaking, writing or gesturing; and nature must have some realms not known to man by his five senses or his common sense or its highest culmination, physical sciences. It is very likely that nature does not come to an end where our senses and sciences fail to register it.

But has mankind any indirect experience or evidence of such unknown realms and regions in nature?

Yes, it had and it has. Of course, Backster research came across such evidence through plant life. But the humans have experienced such abnormal phenomena very often and since ages.

Quite apart from the miracles in the lives of Prophets, Saints and Sages, common people have often come face to face with many curious and inexplicable events, which defy our sense and science.

A FEW "ABNORMAL" INCIDENTS

When the child was in distress, the far away mother startled from her sleep and became extremely restless. A boy could guess correctly the page numbers of books chosen at random by another person.² Two persons, having strong emotional bonds, could in some mysterious way communicate thoughts between them. Some people had 'vision' of something actually happening hundreds of miles away. Some 'psychics' (as they are called) have helped the police in finding out murderers by giving descriptions of them and even telling the police of the hidden weapons used in the killings.³ Some people were found to get flashes in their minds informing them about some future events! A lady actually read in a letter information which it did not contain but which was afterwards found to be correct.⁴ Some people are recorded to have experienced some unseen conscious being following them or always 'with' them.⁵

If such abnormal phenomena are observed or experienced, should not the men of science explore them, experiment on them and try to find out how they occur and what inference they force us to draw?

Yes, they should, and several of them did and are doing it. In 1882, some noted scientists, formed a Society of Psychical Research (SPR) at Cambridge. A few of them were famous in their own branches of physical science, as, Sir William Crookes, Prof. J. J. Thomson, Lord Rayleigh, Fredric Meyers and Prof. Henry Sidgwick (President).

They used the expression "Psychical Research" for the inexplicable events and phenomena,

since they relate not to physical objects but to mental and 'spiritual' events. (Psychical means "of the soul or mind"; or "of phenomena and conditions apparently outside the domain of physical law and therefore attributed by some to spiritual or hyper-physical agency". - Readers' Digest Dictionary).

The subject is also known as "Para-psychology" or "Extra Sensory Perception"—shortly, ESP.

A few years after the foundation of SPR, a sister society was formed in America. William James a noted philosopher honoured it by becoming its member.

CLIMATE OF CONFIDENCE

But to found such societies in those days was a direct act of hostility against the then "scientific" atmosphere. The later half of the 19th century was a period of serene but superstitious confidence for Science. "Man has understood nature and is now on his way to master it"; "there is no mystery in the universe, every event and thing has a simple scientific explanation". Those were the confident utterances of the last decades of the 19th century.

This confidence (later to be proved to be an illusion) mainly emanated from Physics, the science of matter and material objects. The whole universe was composed of about 92 different kinds of atoms. Each atom was an indivisible ultimate particle of matter. You can explain anything and everything on the basis of these simple atoms. Even life was a special structure of atoms, which goes on "evolving" by 'accidents' and starting from amoeba arrives at man through an ape. "A pond of amoeba converted by senseless accidents into an academy of scientists"—that was the sarcastic description of Darwinian evolution by Bernard Shaw.

And up in the sky, the same atoms were whirling whether it was the sun or a planet, or a star.

"From now on there is no mystery left in the universe", declared an eminent chemist Marcelin Berthelot.

Prof. Gabriel Lippman, a physicist advised a brilliant student to take up some other line of research as 'the subject of physics was exhausted, over and done with'.

In this climate, to talk of uncanny supernatural non-existent ESP and other unthinkable and inexplicable phenomena, and to do that in the name of science, was to invite heavy hostility. As the President of SPR Sidgwick summarised the situation very aptly, "We were told somewhat roughly that, being just like the other fools who collected old women's stories and solemnly recorded the tricks of imposters, we only made ourselves the more ridiculous by assuming the aims of a scientific society and varnishing this wretched nonsense with technical jargon".⁶

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THE SHAKING CONFIDENCE

But in spite of this "scientific" opposition, ESP marched on, slowly but steadfastly. On the other hand, the solid confidence of physical science in its "understanding" of matter and life was slowly shaking. In the last week of the century,—the Christmas week of 1899—a German physicist landed on an unassuming idea and a very simple equation ($E=hf$). Within a few years and now in the 20th century, that simple idea and equation began to develop into an intellectual monster who threatened mercilessly to shatter the illusory confidence of Physics.

The "indivisible" atom was found to be divisible and to contain in its deep interior tinier electrical particles — electrons and protons and neutrons, each of which displayed amazing mysteries; and each mystery pointed towards another and deeper mystery.

CONFIDENCE LOST

The loss of confidence was tersely described in 1950 by Louis De Broglie, a pioneer of the new physics and Noble Prize winner, in the following words:

"We must never forget how limited our knowledge must always be".⁷

And further

"Nuclear physics in running up against the limits of resistance of matter, could therefore also run up against the limits of **comprehension of our mind.....** (and) of our **conceptual faculties**".⁸

"Limits of resistance of matter"—these means there are inherent and inescapable limitations in the very act of observing matter and material particles. This is expressed in certain mathematical equations known as "uncertainty equations". The message of these equations is that nature is disturbed in very act of observation

by man! You throw light on an elementary particle of matter to 'see' it; but light is also made up of energy particles which give a push to, the material particle and you therefore won't know what it was doing before the light was thrown on it!

"Limits of comprehension of mind and of conceptual faculties"—this means that there are inherent limitations to the five human senses and to the human mind's ability to perceive nature.

HELL AMONGST HUMANS

That is the end product, if not the end, of physics. And Oh Lord! what toil and turmoil, agony and misery, sweat and blood, the humans have passed through in arriving at this truth regarding the limitations of their sense and science? Between the last half of the 19th century and the first half of the 20th century—between the pompous confidence and shaking of the illusions—two bloody wars were fought; the famous philosophising physics was used in wiping out Hiroshima and Nagasaki. The earth has become an arsenal of nuclear and biological weapons. Secret infra-sonic weapons are in the offing.⁹ If a mad man strikes the match, the whole humanity will be on fire! Is that the prize the humans have to pay for arriving at a truth which was facing them all along since centuries? Why did the Prophets and Avatar's come to us? Did not each of them teach that human mind is weak, not only in its ability and understanding but also in being swept away at the onslaught of the faults of the flesh? And that the only way of expanding the horizons of mind's ability and of making it free from the sins and the evil is the way prescribed by Religion?

But woe to humans! They have yet not understood; they keep their eyes closed to the messages of their own Physics and Prophets. They still have the hang over of their illusory

confidence of "understanding everything". They are on a quick march to self-destruction.

But the Divine Force which sent Prophets to teach man the Truth is not exhaustible, It may be preparing to send "Somebodies" to shake the humans out of their illusory pursuits and put them on the Divine Path, so that they may then say "Nearer to Thee, my Lord!"

But let us come back to ESP. The end product of Physics namely the realisation that the faculties of our conception and perception are limited was, as you must have seen, the **beginning** of the science of ESP. Besides the normal senses which all humans have, some humans show the presence of some abnormal faculties - telepathy, clairvoyance, precognition. And that is the subject of the science of ESP.

We shall hereafter have some idea about the methods and conclusions of this science and try to judge their effects on the spiritual disciplines taught in the Zoroastrian Religion.

Till then, au revoir!!

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5. "Exorcism".
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WHITHER SCIENCE?

Limitations of the Senses and Sciences of Man ESP INCIDENTS IN REAL LIFE

BY CANDOR

It was a class room of graduate students in a large American University. The professor, a scientist of international reputation and highly respected by his students, was teaching his subject with his usual excellent ability. Somehow he landed on a personal experience, which he had when he was a boy and which had nothing to do with the branch of science he was teaching. He said, "Our family was awakened late one night by a neighbour who wanted to borrow a horse and buggy to drive nine miles to a neighbouring village. The man said, apologetically, that his wife had been wakened by a horrible dream about her brother who lived in that village. It had so disturbed her that she insisted he drive over at once to see if it was true. He explained that she thought she had seen this brother return home, take his team to the barn, unharness the animals, and then go up into the hay-loft and shoot himself with a pistol. She saw him pull the trigger and roll over in the hay, down a little incline into a corner. No reassurance could persuade her that she had only had a nightmare. My father lent them a buggy (it was before the day of telephones) and they drove to her brother's house. There they found his wife still awaiting her husband's return, unaware of any disaster.

"They went to the barn and found the horses unharnessed. They climbed to the hay-loft, and there was the body

in the spot the sister had described from her dream. The pistol was lying in the hay where it would have fallen if it had been used as she had indicated and if the body had afterwards rolled down the incline. It seemed as though she had dreamed every detail with photographic exactness. I was only a boy then, but it made an impression on me I've never forgotten. I can't explain it and I've never found anyone else who could." (1)

The students heard the story with surprise. There was no question about the honesty and integrity of the narrator. No doubt his experience was true.

There was one student in the class who was impressed the most and puzzled too. The occurrence described by the professor was extraordinary; and yet, the student thought, why did the professor allow it to go unexplained? As a scientist he was an indefatigable worker in his own branch. Here he had come across a curious fact. His scientific make-up should have induced him to collect and investigate such abnormal events. But he had done nothing about it.

The scientific curiosity of that keen-eyed student was set on fire. How could the sister's mind catch up the incident of her brother's suicide happening miles away? By what channel of communication did the incident arrive in her mind? At the time

when the story was told (probably in 1917), it was a common assumption of the learned that nothing entered the human mind except by way of the five senses, and no reality could be experienced except through those senses. But here was a clear indication that this assumption might not be true. There might be some other unknown and unexplored channels in the human mind. Why should this be left out of the field of scientific investigation?

The name of the puzzled student was **J. B Rhine**, who was later to become one of the renowned pioneers of the new branch of science and name it "extra sensory perception" or ESP, which means perception by the human mind through some channels beyond the normal five senses.

It was not that by 1917 other scientists had not given a thought to such abnormal looking events. There was already a Society of Psychical Research (SPR) formed in England in 1882 and several famous scientists were its founders and members. But the classical scientific world was equating them with "the fools who collected old women's stories and solemnly recorded the tricks of imposters." (2).

The difficulty was that such events were mainly personal experiences of a few individuals. The then scientific discipline required that all investigations should be capable of being tested in the laboratory and the results and readings should be uniform in the same set of experimental conditions. Both these elements were missing in the study of these abnormal phenomena. You could not plant a sister in the laboratory and plan her brother's suicide miles away without informing her! You could not have rabbits and

guinea-pigs to experiment upon, because the subject matter here is specifically the mind of man, which is stated to be far more advanced and evolved than the mind of mice, pigs, rabbits or even monkeys. All that could be done was to invite people to narrate their ESP experiences supported by some evidence for their veracity and then try to analyse and theorise. That was what SPR was doing.

Several of such experiences involve dramatic incidents like death or injury or accident and some even touch "life after death." Before I tell you how ESP was attempted to be brought in a scientific laboratory by Rhine and others, I shall narrate a few other authentically recorded ESP experiences in real life.

1. "Dropped Dead"

Two sisters were having a chat. One was doing some trivial household work. Suddenly she said "Mr. G. has just dropped death." That Mr. G was an old rector of the parish church and had left the district some years back.

"Whatever made you say that?", the other sister asked. She was unable to give any explanation. She stated in her narration :

"But I couldn't give her any explanation. I just saw in a flash, like a photograph the old gentleman dropping down on to the pavement. Later that some evening my sister called again to show me a local evening paper. It gave the news that Rev. D. B. G. had died suddenly in the street that morning." (3).

2. "Wept uncontrollably"

Here is another incident as described by J. B. Rhine himself in his

earlier book "New Frontiers of the Mind" (first published in 1937).

"A banker in a western state whose father was living in Alsaca went to his office one morning and told the assembled board of directors the following story: The evening before, at about eight o'clock, he had picked up Willa Cather's "Death Comes for the Archbishop." He had read the novel before, but now he turned, for no specific reason, to the description of the death of the archbishop and reread it. As he read, tears came to his eyes, and he was overcome by uncontrollable weeping. This seemed strange as he had not been so moved when he read the book the first time. He then remembered that the only other time he had wept since childhood had been at the death of his mother. He thought it might mean that his father had died, though he had no reason to imagine that there was any special danger of that happening. Nevertheless, he made a notation of the exact time this conviction came over him. It was ten minutes past eight.

After relating the experience to his board of directors he wrote to his son, in another city, telling him about it and giving his own interpretation. When, later, he was notified of the death of his father and learned the exact time he found that, with proper correction for longitudinal differences, the day was the same and the time within a quarter of any hour of his notation of the experience." (4).

3. "My child in danger"

But it is not always death that crops up in real life ESP experiences. It may be accident too.

The wife of a college professor was playing bridge at her friend's house. All of a sudden "she had an impulse to interrupt the game, go to the telephone, and call up her maid to ask if her baby was all right. She felt that she should not even finish the hand she was playing, but could think of no excuse to justify an interruption to her fellow players. With a severe struggle she was able to keep herself under control until the hand was finished. Then she excused herself hurriedly, rushed to the telephone, called her maid, and asked anxiously about the baby. The maid replied that the child was all right. Comforted she returned to the game. When she got back to her house a short time later she found a number of neighbours there. The maid, very apologetic, met her at the door, uneasily explaining that there was nothing wrong with the child but that, a moment before the telephone call came, she had fallen from her carriage, been caught by her heels, and was hanging head downward. How long she had hung there no one knew exactly, but a policeman had happened by and rescued her. The neighbours, attracted by the accident, had advised the maid to say nothing over the telephone that would disturb the mother, since the child was actually all right by that time." (5).

In each of the above incidents, the message was received at the very time when the death or accident was taking place far away. It seems this mode of communication has nothing to do with the distance. It appears to arrive at the same instant of the occurrence. Is it something like electromagnetic waves or something subtler and travelling much faster? Or has it no finite speed?

But here comes the most surprising element. Sometimes the message is received even **before** the incident occurs! Here is one narrated in the Journal of American Society of Psychical Research (A.S.P.R.).

4. "My child in 'future' danger"!

Mrs. Harriet Raynor (pseudonym) of New York had sent her daughter Jessie to her grandparents at California. One afternoon Mr. Harriet heard Jessie call her as if she were terribly frightened. "My first impulse" she wrote, "was to run to the door, but I resisted the urge for a second or two, thinking, "How ridiculous!" However, the feeling was so compelling that I went to the back door and looked down the walk leading to it. Of course she wasn't there.

"I was quite distressed for I suddenly knew for certain that she was in extreme danger....

I told my husband of the sequence of events...

What happened: while on a fishing trip with her grandparents (that same afternoon), Jessie had to return to the car for something. Apparently she couldn't resist the temptation to drive it. She managed to release the emergency brake causing the car, parked on a hill, to start down. The folks were about a block away and did not reach her until the car, with \$300-\$400 damage, came to a halt on rocky terrain, flinging Jessie out as it did so. She was stunned, bruised, and scratched, and there was the possibility of internal injuries."

Afterwards, when the time of the accident and the time the mother heard Jessie's voice were compared, it was found that the accident to the child had occurred a few hours **after** the mother had received the message!!(6).

It was the transmission of a **future** message! The incident was yet to occur but the mother was made to know its frightfulness **beforehand!** What extraordinary channel is this? "Some seconds after" or even "at the same instant" is all right; but the fear-message from California to New York first and accident **afterwards**, is not merely extra sensory perception but extraordinary sense of perception!!

How can such events be brought down in the laboratory of modern science?

It is not always that ESP deals only with accidents, deaths, injuries and such terrifying events. It often gives innocent messages also. And it may be possible to evolve some conditions in the laboratory which may record ESP through harmless incidents.

J. B. Rhine proceeded to set out such laboratory conditions. He made a serious scientific attempt to transit "from experiences to experiments" (as he puts it in his earlier book "New Frontiers of the Mind").

We shall in the next issue see some innocent working of ESP and then enter the laboratory.

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4. 1 above.
5. 1 above.
6. 3 above page 217-3.